



Registration of a Charge

Company name: **Goldman Sachs International**

Company number: **02263951**



X59RRPHV

Received for Electronic Filing: **23/06/2016**

Details of Charge

Date of creation: **14/06/2016**

Charge code: **0226 3951 0266**

Persons entitled: **CITIBANK, N.A., LONDON BRANCH
CITIBANK EUROPE PLC, ORGANIZACNI SLOZKA
CITIGROUP GLOBAL MARKETS DEUTSCHLAND AG
BANK HANDLOWY W WARSZAWIE SA**

There are more than four persons entitled to the charge.

Brief description:

Contains fixed charge(s).

Authentication of Form

This form was authorised by: **a person with an interest in the registration of the charge.**

Authentication of Instrument

Certification statement: **I CERTIFY THAT SAVE FOR MATERIAL REDACTED PURSUANT
TO S. 859G OF THE COMPANIES ACT 2006 THE ELECTRONIC
COPY INSTRUMENT DELIVERED AS PART OF THIS APPLICATION**

**FOR REGISTRATION IS A CORRECT COPY OF THE ORIGINAL
INSTRUMENT.**

Certified by:

RHODRI LEWIS



CERTIFICATE OF THE REGISTRATION OF A CHARGE

Company number: 2263951

Charge code: 0226 3951 0266

The Registrar of Companies for England and Wales hereby certifies that a charge dated 14th June 2016 and created by Goldman Sachs International was delivered pursuant to Chapter A1 Part 25 of the Companies Act 2006 on 23rd June 2016 .

Given at Companies House, Cardiff on 24th June 2016

The above information was communicated by electronic means and authenticated by the Registrar of Companies under section 1115 of the Companies Act 2006



Companies House



**THE OFFICIAL SEAL OF THE
REGISTRAR OF COMPANIES**

Save for material redacted pursuant to s859G of the Companies Act 2006,
I certify that this is a true and complete copy of the original seen by me

Name:

RHOADS LEWIS

Title: Solicitor

Date:

17 June 2016

Hogan Lovells International LLP (Ref: F8/4MT)
Atlantic House, Holborn Viaduct, London EC1A 2FQ

CUSTODIAN

AND

GOLDMAN SACHS INTERNATIONAL

EXCHANGE TRADED SERVICES SCHEDULE

(SUPPLEMENT TO THE PRINCIPAL AGREEMENT DCSA)

CONTENTS

Clause	Page
1. Interpretation.....	2
2. Appointment	5
3. Rules	6
4. Credit Management.....	7
5. Total Margin Cap	10
6. Margin Requirements And Contributions To Guarantee, Clearing And Compensation Funds.....	12
7. Security Interest And Ownership Of Purchased Securities.....	14
8. Guarantee	17
9. Representations, Warranties And Undertakings	17
10. Customer Assets.....	19
11. Voluntary Termination.....	19
11. Events Of Default And Automatic Early Termination Events.....	19
12. Effect Of Termination.....	21
13. System Termination.....	22
14. Disclosed Principal Election	22
15. Assignment	25
16. Miscellaneous Provisions.....	25
17. Governing Law And Jurisdiction.....	26

This EXCHANGE TRADED SERVICES SCHEDULE (this "**Schedule**") is made on 14th JUNE 2016 by and between Goldman Sachs International organised under the laws of England and Wales, (the "**Client**"), each Custodian (as defined in the Addendum hereto) and the Clearing Member (as defined in the Addendum hereto).

INTRODUCTION

- (A) The Client and the Custodian have entered into a Principal Agreement (as defined below) pursuant to which the Custodian acts as custodian or clearing agent for the Client and provides custodial, clearing, settlement and/or other associated services to the Client. The Principal Agreement may be amended, supplemented and modified by one or more Country Schedules between the Client and the Custodian. This Schedule supplements the Principal Agreement and is itself a Country Schedule for the purposes of the Principal Agreement.
- (B) Citibank, N.A., London Branch enters this Schedule for itself and as agent for certain of its branches and affiliates as set out in the Principal Agreement and this Schedule.
- (C) This Schedule provides for the Custodian to be granted a security interest in respect of all the Client's obligations owed in connection with the Principal Agreement and this Schedule.
- (D) This Schedule is accompanied by a Master Annex. In the Master Annex, the Parties choose whether and how certain optional features (whether referred to in this Schedule, set out in the Master Annex itself or an Annex) will be integrated into this Schedule between them.
- (E) In Part II of the Master Annex, the Systems are identified in respect of which services will be provided under Clause 2 and a Gross Purchase Cap or a Net Transaction Cap and/or a Total Margin Cap are to be applied. Those Systems are identified by the inclusion of amounts in respect of the Gross Purchase Cap or a Net Transaction Cap and/or the Total Margin Cap applicable to such Systems. In circumstances where a client is acting as an agent for various underlying customers on a disclosed basis the relevant Systems, Gross Purchase Cap or a Net Transaction Cap and/or Total Margin Cap will apply upon a per customer basis (i.e. the information in Part II of the Master Annex is specific to each underlying customer and a separate version of Part II of the Master Annex will need to be completed in respect of each underlying customer).
- (F) Part III of the Master Annex contains certain supplemental provisions which apply to the settlement arrangements between the Custodian and a particular client depending upon whether that client enters into, or settles transactions through, one or more of the Systems to which such supplemental provisions relate.
- (G) Part IV of the Master Annex contains information about the different account structures available as a result of EMIR in relation to GCM Systems and the treatment of any applicable Margin Collateral and any Additional Margin.

IT IS AGREED AS FOLLOWS:

1. INTERPRETATION

Capitalised terms not otherwise defined in this Schedule have the meanings specified in the Principal Agreement. In the event of any inconsistency between this Schedule and the Principal Agreement, this Schedule will prevail. In the event of any inconsistency between this Schedule and any of the Annexes, the relevant Annex will prevail.

The Client selects and appoints each Custodian by placing the Client's signature next to the name of the Custodian in Part I of the Execution Addendum attached hereto. A Custodian accepts the appointment by placing its signature in Part I of the Execution Addendum attached hereto. The Client selects and appoints each Clearing Member by placing the Client's signature in Part II of the Execution Addendum attached hereto. A Clearing Member accepts the appointment by placing its signature in Part II of the Execution Addendum attached hereto. The Client may select and appoint Custodians and Clearing Members subsequent to the date hereof by signing a supplemental Execution Addendum, subject to the relevant Custodian and/or Clearing Member's acceptance of the appointment by signing the Supplemental Execution Addendum. The appointment will be effective between a Custodian and/or Clearing Member as applicable and the Client as of the date the Custodian and/or Clearing Member countersigns the Execution Addendum (including any supplement or amendment).

As used in this Schedule including in the Introduction:

"Accounts" means the Cash Account, the Clearing Account or the Custody Account and any other account maintained by the Client with the Custodian in connection with the Principal Agreement;

"Additional Margin" has the meaning specified in Clause 6.3;

"Annex" means any annex agreed between the Parties in writing which is intended to supplement and or modify this Schedule;

"Authorised Person" means, subject as otherwise expressly provided in this Schedule, any person (including any individual or entity) designated, from time to time and in accordance with the provisions of the Principal Agreement, to send Instructions or do any other thing on behalf of the Client;

"Automatic Early Termination Event" has the meaning specified in Clause 12.2;

"Business Day" means a day on which the relevant System and the Custodian are open for business;

"Clearing Member" means an affiliate of Citibank, N.A., London Branch acting in the capacity of a participant in relation to the clearing of Transactions on a System which acts as a central counterparty;

"Client File" means the file on a System evidencing the Transactions entered into by the Client;

"**Confirmation**" means a confirmation relating to the successful conclusion of a Transaction communicated through the systems operated by the relevant System to the Custodian, whether directly by the Client or on its behalf by an Authorised Person;

"**Customer**" means each customer identified as such in a Master Annex;

"**EMIR**" means Regulation (EU) No 648/2012 on OTC derivatives, central counterparties and trade depositaries,;

"**Event of Default**" has the meaning specified in Clause 12.1;

"**FCA**" means the UK Financial Conduct Authority or its successor;

"**GCM System(s)**" mean any System in respect of which the Client has requested to receive general clearing member services by marking the relevant box in Part II of the Master Annex;

"**Gross Purchase Cap**" means the aggregate value of the purchase Transactions that the Client may execute for a particular Trade Date on a relevant System, which is initially in the amount indicated in the Master Annex but subject to modification as set out in Clause 4 (*Credit Management*);

"**Irrevocable Commitments**" has the meaning specified in Clause 7.3;

"**Loss**" has the meaning specified in Clause 6.13;

"**Mandatory External Agreement**" means any supplementary agreement required by any Rules to be entered into by persons including the Client, the Custodian and/or the Clearing Member which relates to the services provided under this Schedule;

"**Margin Collateral**" has the meaning specified in Clause 6.1;

"**Missing Securities**" has the meaning specified in Clause 3.7;

"**Net Transaction Cap**" means the net value of the purchase and the sale Transactions that the Client may execute for a particular Trade Date on a relevant System, which is initially in the amount indicated in the Master Annex but subject to modification as set out in Clause 4;"

"**Parties**" means the Client and the Custodian and "**Party**" means either of them;

"**Principal Agreement**" means the Direct Custodial Services Agreement together with any Country Schedules thereto (including this Schedule) between the Parties or the Master Clearing Agreement with any Country Schedules thereto between the Parties (including this Schedule between the Client and the Custodian);

"**Rules**" means the laws, rules, regulations and statements of practice and/or procedure promulgated by a System, the provisions of any relevant Mandatory External Agreement and any market practice arising in relation to any of the foregoing, as amended from time to time, provided by the Custodian to the Client separately in the form of a document or a web link set out in the Master Annex, in the form of a Mandatory External Agreement

agreed directly between the relevant Party and the relevant System, or otherwise, as they are applicable to the Parties;

"Secured Assets" means all of the Securities, cash, rights, entitlements, claims and other assets secured by the Client in favour of the Custodian in accordance with the terms of this Schedule;

"Secured Obligations" has the meaning specified in Clause 7 (*Security Interest and Ownership of Purchased Securities*);

"System" means the trading platform, exchange, clearing house, central securities depository or settlement system on or through which Transactions are effected, settled or cleared;

"System Instruction" has the meaning specified in Clause 3.9.1;

"System Termination Date" means the date on which the Client was withdrawn or suspended or expelled (either in whole or part) from a System or the effective date as of which the Client is to cease to receive services under the Principal Agreement in relation to the System or the date on which a written agreement is entered into as described in Clause 14.1;

"Termination Date" has the meaning specified in Clause 13.1;

"Total Margin" means the aggregate of initial margin and variation margin as calculated by the relevant System for the Clearing Member in respect of the Client in the manner contemplated by its Rules;

"Total Margin Cap" means the aggregate value of Total Margin that the Client may incur on a relevant System, which is initially in the amount indicated in the Master Annex but subject to modification as set out in Clause 5 (*Total Margin Cap*);

"Trade Date" means the day on which the relevant Transaction was entered into;

"Transaction" means any transaction in Securities which are to be settled by the Custodian to the extent that such transactions are entered into on or to be settled through a System, whether directly by the Client or on its behalf; and

"Written Notice" includes notice by SWIFT, facsimile, telex and letter.

References to:

- (a) the Custodian include references to the clearing agent (if clearing services are applicable under the Principal Agreement) and the Clearing Member (if a general clearing member is appointed under this Schedule);
- (b) a Clause are to a clause of this Schedule unless the context otherwise requires;
- (c) this Schedule, the Principal Agreement or an Annex (including the Master Annex) are to this Schedule, the Principal Agreement or that Annex as modified from time to time;

- (d) this Schedule include the Master Annex and any other Annex;
- (e) any statute or regulation shall be construed as references to such statute or regulation as in force at the date of this Schedule and as subsequently re-enacted or revised; and
- (f) the Rules are to such Rules as amended, renewed, supplemented, replaced or otherwise altered from time to time.

Where Clause 15 (*Disclosed Principal Election*) applies, references to:

- (a) the "Gross Purchase Cap" means the Gross Purchase Cap in relation to the relevant Customer as set out in the Part II of the Master Annex applying to that Customer;
- (b) the "Net Transaction Cap " means the Net Transaction Cap in relation to the relevant Customer as set out in Part II of the Master Annex applying to that Customer
- (c) the "Total Margin Cap" means the Total Margin Cap in relation to the relevant Customer as set out in the Part II of the Master Annex applying to that Customer;
- (d) the Cash Account, the Clearing Account or the Custody Account and the Accounts are references to the applicable accounts of the Client which are designated for the relevant Customer; and
- (e) the Client appointing the Custodian means the Client, acting as agent for each Customer, appointing the Custodian.

2. APPOINTMENT

- 2.1 Without prejudice to the duties and responsibilities of the Custodian under the Principal Agreement and subject to the terms and conditions set forth in this Schedule and the Rules, the Client appoints the Custodian to settle Transactions on a particular System.

The Custodian accepts such appointment.

- 2.2 Subject to the terms and conditions set forth in this Schedule and the Rules, the Client appoints the Clearing Member as its general clearing member in relation to the GCM Systems. For the avoidance of doubt references to general clearing member include references to general clearing participants or any equivalent term under the Rules of the relevant GCM System.

The Clearing Member accepts such appointment.

- 2.3 The Client acknowledges that the appointments contained in this Clause are exclusive in relation to the particular System or GCM System and it agrees that it will not appoint any other institution to settle Transactions as long as the Custodian or Clearing Member is appointed as such.

- 2.4 The Client acknowledges that the Custodian has no responsibility for determining whether a Transaction is suitable or appropriate for the Client.

3. RULES

- 3.1 The Client undertakes at all times to (1) comply with all applicable Rules, and (2) to the extent that the provisions of the Rules are intended to impose duties and responsibilities upon the Client, act in accordance with such duties and responsibilities.
- 3.2 The Client shall at its own expense execute all documents and do all such assurances, acts and things as the Custodian and/or any relevant System may reasonably require for the purposes of the Client's compliance with Clause 3.1.
- 3.3 If and to the extent that the Rules are abolished, amended, renewed or otherwise altered, the Custodian's duties under this Schedule will be deemed to be varied accordingly in order to ensure that this Schedule is consistent with such amended, renewed or otherwise altered Rules.
- 3.4 The Client acknowledges and agrees that in circumstances where the Custodian is entitled to exercise a power, discretion or authority under any applicable Rules, subject to the terms of this Schedule, the relevant Rules and any applicable law, such power, discretion or authority will be deemed to have been exercised properly by the Custodian; and give rise to binding rights and obligations between the Parties provided that it has been exercised in accordance with the standard of care set out in clause 11.1 of the Principal Agreement in place between the Parties and the applicable Rules.
- 3.5 The Client acknowledges and agrees that the Rules may contain wide powers in case of emergency, default and other situations to close out transactions, to invoice back, to set off and take other action. The Client agrees that if any System takes any action (including suspending or ceasing to recognise a Transaction) which affects a Transaction, then the Custodian may, reasonably, take any steps in relation to that Transaction or otherwise which in its discretion is desirable to correspond with such action.
- 3.6 The Client acknowledges and agrees that the provisions of the Rules and/or of any Mandatory External Agreement may result in a System having rights and claims against it.
- 3.7 If there is a shortfall in Securities (the "Missing Securities") available for delivery in settlement of Transactions, the Custodian is authorised to negotiate securities loans and to buy in securities for and at the expense of the Client.
- 3.8 Where any Rule requires that a full quota of Securities be delivered in settlement of a Transaction:
- 3.8.1 the Client hereby acknowledges and agrees that the Custodian does not guarantee its ability to obtain part or all of the Missing Securities and, accordingly, that the Client does not have the right to rely on the Custodian's ability to obtain the Missing Securities; and

- 3.8.2 the Custodian may borrow or buy in securities on such terms as it sees fit acting reasonably and in good faith (which shall be binding on the Client) and may use the Client's cash, Securities or other assets as collateral or otherwise for the purpose of that borrowing or buy in.

3.9 With respect to any Transaction:

- 3.9.1 The Custodian shall be entitled to access, directly or indirectly, the Client File to retrieve information for the reconciliation of data for settlement purposes by means of the technical-operational links which will be made available to it by the relevant System. The Custodian may treat a System and each of its officers as an Authorised Person and may treat as an Instruction, information on trades executed by the Client through a System (a "**System Instruction**"), notwithstanding that the formalities for appointing Authorised Persons in the Principal Agreement have not been complied with, the Principal Agreement being hereby varied to this extent.

- 3.9.2 The Client irrevocably authorises the Custodian to accept System Instructions provided the Custodian complies with such processes and checks as it would do had such an Instruction been provided by an Authorised Person.

- 3.9.3 Where the Client has sent the Custodian an Instruction which is inconsistent with a System Instruction, the Custodian shall notify the Client promptly when it becomes aware of the inconsistency and shall use reasonable commercial endeavours to work with the Client and the system to resolve the inconsistency. In cases of continuing discrepancy, the Custodian will inform the Client by Written Notice or telephone, but, the System Instructions shall prevail.

- 3.10 In the event that by any deadline specified by a System for cancelling or rejecting Transactions or for confirming Transactions, there are not sufficient cash or Securities held in the Cash Account and the Custody Account or Clearing Account, respectively, to settle all Transactions, then the Custodian shall have the right to cancel, reject or not to confirm any Transactions still to be settled.

4. **CREDIT MANAGEMENT**

Under the Rules, the Custodian is contractually required to ensure that each Transaction is cleared irrespective of whether or not the Client has failed to meet its obligations under the Schedule. Therefore, the limits set out in Clauses 4, 5 and 6 below are required to assist the Custodian in managing its credit risk in relation to the Client.

4.1 **Gross Purchase Cap**

- 4.1.1 The Custodian and the Client shall, from time to time, agree a Gross Purchase Cap with regard to each relevant System. The initial amount of each such Gross Purchase Cap will be recorded in the Master Annex.

- 4.1.2 The Client undertakes that it shall not, without the prior approval of the Custodian, enter into any Transaction or series of Transactions if the entering

into of such Transaction or series of Transactions would result in a position which exceeds the relevant Gross Purchase Cap.

- 4.1.3 The Client hereby acknowledges and accepts that the Custodian may (1) upon the basis of Confirmations and such other information as it deems reliable determine that a Gross Purchase Cap has been breached or is likely to be breached without authority (2) accordingly, designate this breach as an Event of Default and cancel or cause any System to cancel or not to settle unsettled purchase Transactions and (3) the Custodian may by immediate Written Notice require that until further notice the Client enter into Transactions only of a kind specified in the notice to the extent necessary to prevent the Gross Purchase Cap from being breached or to restore compliance with the Gross Purchase Cap. The requirements of the notice will become effective on the Trade Date immediately following such notification (unless otherwise stated in such notification).
- 4.1.4 If the Custodian in its absolute discretion upon the basis of such information as it reasonably deems conclusive determines at any time that the Client's financial condition has adversely changed so as to materially endanger the performance of any of its obligations under this Schedule, the Custodian may modify a Gross Purchase Cap at any time by giving Written Notice to the Client setting out the new Gross Purchase Cap and making it clear that (in contrast to a Gross Purchase Cap temporarily increased in accordance with Clause 4.1.5) such new Gross Purchase Cap is to apply to the relevant System on an ongoing basis until such time (if at all) as it is once again modified by the Custodian in accordance with this Clause 4.1.4. The new Gross Purchase Cap will become effective on the Trade Date immediately following such notification (unless otherwise stated in such notification). Where the Custodian makes such a determination in connection with this Clause 4.1.4, it will (whenever reasonably practicable) notify the Client where it intends to modify the Gross Purchase Cap and (without prejudice to this Clause 4.1.4) it will where practicable endeavour to discuss with the Client the rationale behind any such determination prior to effecting a modification.
- 4.1.5 Notwithstanding Clause 4.1.3, on any Trade Date, the Custodian may decide to increase a Gross Purchase Cap on a temporary basis for that Trade Date only. Such increase will be advised by the Custodian to the Client. For the avoidance of doubt, this temporary increase shall not change the Gross Purchase Cap for any other Trade Date (as this may only be modified in accordance with Clause 4.1.4 above).
- 4.1.6 Any Written Notice given pursuant to Clause 4.1.4 above or temporary increase of a Gross Purchase Cap in accordance with Clause 4.1.5 above shall be treated as a variation of the relevant Gross Purchase Cap as initially set out in the Master Annex, previously modified pursuant to Clause 4.1.4 and/or temporarily increased pursuant to Clause 4.1.5 (as the case may be).

- 4.1.7 The Custodian may monitor, by means of technical operational links to the System or otherwise as it deems fit the Client's compliance with the Gross Purchase Cap and retrieve information relating to the execution of Transactions.
- 4.1.8 If the Custodian in its absolute discretion upon the basis of such information as it reasonably deems conclusive determines at any time that the Client's financial condition has adversely changed so as to materially endanger the performance of any of its obligations under this Schedule, the Custodian may by immediate Written Notice require that until further notice the Client enter into Transactions only of a kind specified in the notice. The requirements of the notice will become effective on the Trade Date immediately following such notification (unless otherwise stated in such notification). Where the Custodian makes such a determination in connection with this Clause 4.1.8, it will where practicable discuss with the Client the rationale behind any such determination prior to effecting a notification under this clause.
- 4.1.9 If action under Clause 4.1.3 is not sufficient or practicable to rectify a breach or likely breach of the Gross Purchase Cap as contemplated by this Clause 4 (*Credit Management*), the Custodian may sell Securities relating to Transactions to be settled to the extent necessary to rectify such breach.
- 4.1.10 Without limiting the obligations of the Client set out in this Schedule in any way, the Custodian will notify the Client as soon as reasonably practicable after the Custodian becomes aware that the aggregate value of purchase Transactions for any Trade Date exceeds 70 per cent, 90 per cent or 100 percent of the Gross purchase cap in relation to any System.
- 4.2 *Net Transaction Cap*
- 4.2.1 The Custodian and the Client shall, from time to time, agree a Net Transaction Cap with regard to each relevant System. The initial amount of each such Net Transaction Cap will be recorded in the Master Annex.
- 4.2.2 The Client undertakes that it shall not, without the prior approval of the Custodian, enter into any Transaction or series of Transactions if the entering into of such Transaction or series of Transactions would (or if there is a material chance that it would) result in a position which exceeds the relevant Net Transaction Cap.
- 4.2.3 The Client hereby acknowledges and accepts that the Custodian may (1) upon the basis of Confirmations and such other information as it reasonably deems reliable determine that a Net Transaction Cap has been breached or is likely to be breached without authority and (2) accordingly, designate this breach as an Event of Default and cancel or cause any System to cancel or not to settle unsettled purchase Transactions to the extent necessary to prevent the Net Transaction Cap from being breached or to restore compliance with the Net Transaction Cap.
- 4.2.4 If the Custodian in its absolute discretion upon the basis of such information as it deems conclusive determines at any time that the Client's financial condition has

adversely changed so as to materially endanger the performance of any of its obligations under this schedule, the Custodian may modify a Net Transaction Cap at any time by giving Written Notice to the Client setting out the new Net Transaction Cap and making it clear that (in contrast to a Net Transaction Cap temporarily increased in accordance with Clause 4.2.5) such new Net Transaction Cap is to apply to the relevant System on an ongoing basis until such time (if at all) as it is once again modified by the Custodian in accordance with this Clause 4.2.4. The new Net Transaction Cap will become effective on the Trade Date immediately following such notification (unless otherwise stated in such notification). Where the Custodian makes such a determination in connection with this Clause 4.2.4, it will (whenever reasonably practicable) notify the Client where it intends to modify the Net Transaction Cap and (without prejudice to this Clause 4.2.4) it will where practicable endeavour to discuss with the Client the rationale behind any such determination prior to effecting a modification.

- 4.2.5 Notwithstanding Clause 4.2.3, on any Trade Date, the Custodian may decide to increase a Net Transaction Cap on a temporary basis for that Trade Date only. Such increase will be advised by the Custodian to the Client. For the avoidance of doubt, this temporary increase shall not change the Net Transaction Cap for any other Trade Date (as this may only be modified in accordance with Clause 4.2.4 above).
- 4.2.6 Any Written Notice given pursuant to Clause 4.2.4 above or temporary increase of a Net Transaction Cap in accordance with Clause 4.2.5 above shall be treated as a variation of the relevant Net Transaction Cap as initially set out in the Master Annex, previously modified pursuant to Clause 4.2.4 and/or temporarily increased pursuant to Clause 4.2.5 (as the case may be).
- 4.2.7 The Custodian may monitor, by means of technical operational links to the System or otherwise as it deems fit the Client's compliance with the Net Transaction Cap and retrieve information relating to the execution of Transactions.
- 4.2.8 If action under Clause 4.2.3 is not sufficient or practicable to rectify a breach or likely breach of the Net Transaction Cap as contemplated by this Clause 4, the Custodian may sell or purchase Securities relating to Transactions to be settled to the extent necessary to rectify such breach.
- 4.2.9 Without limiting the obligations of the Client set out in this Schedule in any way the Custodian will notify the Client as soon as reasonably practicable after the Custodian becomes aware that the aggregate value of purchase Transactions for any Trade Date exceeds 70 per cent, 90 per cent or 100 percent of the Net Transaction Cap in relation to any System.

5. TOTAL MARGIN CAP

- 5.1 The Custodian and the Client shall, from time to time, agree a Total Margin Cap with regard to each relevant System. The initial amount of each such Total Margin Cap will be recorded in the Master Annex.

- 5.2 The Client undertakes that it shall not, without the prior approval of the Custodian, enter into any Transaction or series of Transactions if the entering into of such Transaction or series of Transactions would result in a position which exceeds the relevant Total Margin Cap.
- 5.3 The Client hereby acknowledges and accepts that the Custodian may, upon the basis of such information as it deems reliable (including information provided by any System) (1) determine that the Client has breached a Total Margin Cap without authority to do so; (2) demand immediate deposit of sufficient Margin Collateral to meet the relevant margin call and (3) demand that the Client enter into such Transactions on the same Trade Date to the extent necessary to restore compliance with the Total Margin Cap until further notice. Failure to restore compliance by the time that the next Total Margin call falls due may be treated by the Custodian, in its absolute discretion, as an Event of Default.
- 5.4 If the Custodian in its absolute discretion upon the basis of such information as it reasonably deems conclusive determines at any time that the Client's financial condition had adversely changed so as to materially endanger the performance of any of its obligations under this Schedule, the Custodian may modify a Total Margin Cap at any time by giving Written Notice to the Client setting out the new Total Margin Cap and making it clear that (in contrast to a Total Margin Cap temporarily increased in accordance with Clause 5.5) such new Total Margin Cap is to apply to the relevant System on an ongoing basis until such time (if at all) as it is once again modified by the Custodian in accordance with this Clause 5.4. The new Total Margin Cap will become effective on the Trade Date immediately following such notification (unless otherwise stated in such notification). Where the Custodian makes such a determination in connection with this Clause 5.4, it will (whenever reasonably practicable) notify the Client where it intends to modify the Total Margin Cap and (without prejudice to this Clause 5.4) it will where practicable endeavour to discuss with the Client the rationale behind any such determination prior to effecting a modification.
- 5.5 Notwithstanding Clause 5.3, on any Trade Date, the Custodian may decide to increase a Total Margin Cap on a temporary basis for a given period of time. Such increase and the relevant time period will be advised by the Custodian to the Client. For the avoidance of doubt, this temporary increase shall end by the time the next Total margin call falls due at which time the Client must have entered into such Transactions to the extent necessary to restore compliance with the Total Margin Cap.
- 5.6 Any Written Notice given pursuant to Clause 5.4 above or temporary increase of a Total Margin Cap in accordance with Clause 5.5 above shall be treated as a variation of the relevant Total Margin Cap as initially set out in the Master Annex, previously modified pursuant to Clause 5.4 and/or temporarily increased pursuant to Clause 5.5 (as the case may be).
- 5.7 The Custodian may monitor, by means of technical operational links to the System or otherwise as it deems fit (including, with the consent of the Client, by agreement with any intermediary), the Client's compliance with the Total Margin Cap and retrieve information relating to the execution of Transactions.

5.8 If the Custodian in its absolute discretion upon the basis of such information as it reasonably deems conclusive determines at any time that the Client's financial condition has adversely changed so as to materially endanger the performance of any of its obligations under this Schedule, the Custodian may by immediate Written Notice require that until further notice the Client no longer enter into any Transactions, or enter into Transactions only of a kind specified in the notice. The requirements of the notice will become effective on the Trade Date immediately following such notification (unless otherwise stated in such notification). Where the Custodian makes such a determination in connection with this Clause 5.8, it will where practicable endeavour to discuss with the Client the rationale behind any such determination prior to effecting a notification under this clause.

5.9 If action under Clause 5.3 is not sufficient or practicable to rectify a breach or likely breach of the Total Margin Cap as contemplated by this Clause 5, the Custodian may sell Securities relating to Transactions to be settled to the extent necessary to rectify such breach.

5.10 Without limiting the obligations of the Client set out in this Schedule in any way, the Custodian will notify the Client as soon as reasonably practicable after the Custodian becomes aware that the aggregate value of purchase Transactions for any Trade Date exceeds 70 per cent, 90 percent or 100 per cent of the Total Margin Cap in relation to any System.

6. MARGIN REQUIREMENTS AND CONTRIBUTIONS TO GUARANTEE, CLEARING AND COMPENSATION FUNDS

6.1 A Party may be required to post collateral (whether securities or cash) ("**Margin Collateral**") to the Clearing Member or to a System, pursuant to the relevant Rules. In order to meet obligations under the Rules, the Client shall provide such Margin Collateral to the Clearing Member as the Clearing Member may determine in its reasonable discretion at any time the Clearing Member reasonably determines.

6.2 The Clearing Member is entitled in its own discretion to request from the Client additional cash margin (the "**Additional Margin**") above the margin required by the CCP where it reasonably determines this is necessary. The level of Additional Margin will be the percentage above the margin required by the CCP recorded in the Master Annex which shall be limited to a maximum amount of 100% of the margin required by the CCP.

6.3 Where the Clearing Member accepts securities as Margin Collateral or Additional Margin, the securities must be in a form acceptable to the Clearing Member. The value of any securities and the proportion of that value to be taken into account for collateral purposes shall be determined by the Clearing Member in its reasonable discretion.

6.4 Margin Collateral and Additional Margin shall be immediately due and payable (or deliverable) by the Client promptly upon demand or otherwise in accordance with the Rules and (other than as provided for in Clause 6.5) Margin Collateral and Additional Margin must be transferred by the Client no later than 12 noon (London time) on the same Business Day on which the Clearing Member makes a demand for the Margin Collateral and/or Additional Margin provided that the Clearing Member shall provide, at

least 1 hour's notice to the Client in respect of any such demand. The Clearing Member is irrevocably authorised to direct the Custodian to debit the relevant Accounts to satisfy such obligations.

- 6.5 If the Clearing Member makes a call for Margin Collateral or Additional Margin after 11 am (London time) on a Business Day, the Client must transfer such Margin Collateral or Additional Margin to the Clearing Member no later than one hour after the relevant demand is made by the Clearing Member.
- 6.6 In order to meet obligations under the Rules as contemplated by Clause 6.1, the Client shall provide such Margin Collateral and Additional Margin to the Clearing Member as the Clearing Member may determine in its reasonable discretion at any time the Clearing Member reasonably determine. Where such Margin Collateral and Additional Margin is cash, the Client transfers full ownership of the cash to the Clearing Member (hereinafter "**Cash Margin Collateral**").
- 6.7 The Clearing Member receives full ownership of the Cash Margin Collateral and does not hold the Cash Margin Collateral as banker or subject to the client money rules of the Financial Conduct Authority, and the Client has no proprietary claim over the Cash Margin Collateral.
- 6.8 The Client authorises the Clearing Member to debit the account at the Custodian nominated by the Client for payment of Cash Margin Collateral.
- 6.9 The Clearing Member has and will record in its books that it has a contractual obligation to pay to the Client an amount equal to the Margin Collateral and Additional Margin transferred by the Client to the Clearing Member, subject to and in accordance with the terms of the Schedule and such other terms as agreed between the Client and the Clearing Member from time to time.
- 6.10 The Clearing Member will have no obligation to pay to the Client the amount calculated in accordance with Clause 6.9 until the Clearing Member has determined that the provision of Margin Collateral or Additional Margin by the Client to the Clearing Member is no longer necessary, subject to and in accordance with the terms of the Schedule and such other terms agreed between the Client and the Clearing Member from time to time.
- 6.11 Failure to post Margin Collateral or Additional Margin when it falls due, in accordance with Clause 6.4 may be treated by the Clearing Member as an Event of Default under Clause 12 (*Events of Default and Automatic Early Termination Events*).
- 6.12 If the Clearing Member in its absolute discretion upon the basis of such information as it reasonably deems conclusive determines at any time that the Client's financial condition has adversely changed so as to materially endanger the performance of any of its obligations under this Schedule, the Clearing Member may modify the Additional Margin amount at any time by giving Written Notice to the Client setting out the new Additional Margin amount. The new Additional Margin amount is to apply to the relevant CCP on an ongoing basis until such time (if at all) as it is once again modified by the Clearing Member. The new Additional Margin amount will become effective on

the Trade Date immediately following such notification (unless otherwise stated in such notification).

- 6.13 If the Clearing Member suffers any cost (including, where applicable, reasonable legal fees), expense, claim, demand and/or liability (a "Loss") vis-à-vis a System by reason of calls on any guarantee, clearing or compensation fund as a result of the fact that the System has applied such fund against losses incurred in connection with the failure of one of its participants, the Client will be required to make a payment to the Clearing Member in respect of such Loss. The amount to be paid by way of such contribution will be calculated on a fair and reasonable basis determined by the Clearing Member, having regard to the proportion that the Client's business on the relevant System (the "Client's Business") bears to the total amount of business cleared by the Clearing Member on that System. In calculating the payment to be made by the Client to the Clearing Member in respect of such Loss, the Clearing Member will consider factors such as the impact of the Client's Business on the Clearing Member's total guarantee, clearing or compensation fund liability, as a proportion of the Clearing Member's total liability to the System, and calculate the Client's share of the Loss on a similar pro rata basis. The Clearing Member's calculations will be based upon those followed by the relevant System when calculating total guarantee, clearing or compensation fund liability of the Clearing Member.
- 6.14 The Client agrees that the Clearing Member's obligation to pay to the Client an amount equal to the Margin Collateral transferred by the Client to the Clearing Member as calculated in accordance with Clause 6.9, is limited by and contingent on the return by the System to the Clearing Member of the related Margin Collateral. The Clearing Member will only be obliged to perform its payment obligations to the Client, in respect of the return of Cash Margin Collateral, to the extent that the System actually performs its payment obligations to the Clearing Member in respect of the return of Cash Margin Collateral.
- 6.15 The Clearing Member will give notice in writing to the Client of any deduction, withholding or other reduction from any payment of Cash Margin Collateral effected under this Clause 6, in each case as soon as reasonably practicable following the relevant event.

7. SECURITY INTEREST AND OWNERSHIP OF PURCHASED SECURITIES

- 7.1 As continuing security for the proper payment and discharge of all of the Secured Obligations (as defined below), the Client hereby agrees to pledge and grant by way of a first priority fixed right of security and pledge in favour of the Custodian (and the Custodian hereby accepts such pledges and security interests) all rights it has or may have now or in the future in respect of:

7.1.1 Cash credited to any Cash Account held in the name of the Client and

7.1.2 Securities credited to any Custody Account or Clearing Account held in the name of the Client;

(any Cash and Securities referred to in Clauses 7.1.1-7.1.2 above being the "Secured Assets").

For the purposes of the security interests created by this Clause 7 the term "**Secured Obligations**" means any obligations owing to any Custodian by the Client in connection with services under the Principal Agreement, whether present or future, actual or contingent, (and whether incurred by the Client alone or jointly, and whether as principal or surety or in some other capacity) which are (i) obligations of the Client to reimburse a Custodian in respect of Irrevocable Commitments (as defined in Clause 7.3); (ii) other present and future obligations of the Client to repay a Custodian including, but not limited to, daylight and overnight overdraft lines and reversals of provisional credits; and (iii) obligations of the Client under the indemnity provided to the Custodian in the Principal Agreement.

- 7.2 The Client hereby agrees that the security interests created by this Clause 7 constitute a "security financial collateral arrangement" for the purposes of the Directive 2002/47/EC of the European Parliament and Council of 6 June 2002 on Financial Collateral Arrangements, and that the Secured Assets are designated so as to be under the control of the Custodian. For these purposes, the Client hereby specifically agrees that the Custodian shall not be obliged to act on a demand for the withdrawal or transfer of any Secured Assets made by the Client if the Custodian considers, in its discretion, that as a consequence of such withdrawal or transfer there are insufficient Secured Assets (taking into account any Secured Assets held by any Custodian) to cover the Secured Obligations owing to the Custodian as a result of providing services to the Client pursuant to the Principal Agreement.
- 7.3 In carrying out Instructions of the Client to clear and/or settle Transactions, the Custodian may incur irrevocable commitments to pay for or deliver Securities ("**Irrevocable Commitments**"), and the Client shall reimburse the Custodian in respect of Irrevocable Commitments and any costs incurred in providing services under the Principal Agreement. The Client's reimbursement obligation shall arise when Irrevocable Commitments are incurred, regardless of their maturity.
- 7.4 If an Automatic Early Termination Event has occurred and without prejudice to the operation of applicable law, ownership of purchased Securities will be transferred upon purchase by the Client only upon the credit by the Custodian of such Securities to the relevant Custody Account or Clearing Account. The Custodian is not obliged in such circumstances to credit purchased Securities to the relevant Custody Account or Clearing Account in circumstances where the Custodian has funded the purchase price and the Client has not reimbursed such price with finality. Securities in respect of which ownership has not passed to the Client are excluded from the security interests provided for in this Schedule; and the Custodian's obligations in respect of a Transaction which settles after an Automatic Early Termination Event without the transfer of ownership of purchased Securities to the Client shall be limited to accounting to the Client for the value of such Securities when received, less the amount paid by the Custodian for them.
- 7.5 If an Event of Default occurs and has not been waived by the Custodian or an Automatic Early Termination Event occurs, the security interests vested in the Custodian from time to time pursuant to this Clause 7 shall become immediately enforceable and the Custodian expressly reserves and may, upon Written Notice to the Client, immediately exercise any right or remedy available to a pledgee or secured creditor under applicable

law, including, but not limited to, the right to sell the Secured Assets as soon as reasonably possible in accordance with applicable law.

- 7.6 The Client shall, by exercising of all powers, authorities and discretions vested in it, and at its own expense, promptly execute and do all such assurances, acts and things as the Custodian may reasonably require for perfecting or protecting the security interest granted or intended to be granted over the Secured Assets or any part thereof, and to enable the Custodian to exercise and enforce its rights and remedies in relation to the Secured Assets, including, but not limited to, facilitating the realisation of the Secured Assets or any part thereof.
- 7.7 Without limiting the foregoing pledges and security interests and to the extent permitted by applicable law, the Client also agrees that the Custodian may, upon Written Notice to the Client, immediately set off any payment obligation, reimbursement obligation, or the value of any delivery obligation owed to it by the Client in connection with the Principal Agreement or this Schedule against any payment obligation or the value of any delivery obligation (whether or not matured and whether or not related to the redelivery of Margin Collateral) owed by it to the Client in connection with the Principal Agreement or this Schedule regardless of the place of payment, delivery and/or currency of either obligation (and for such purposes may make any currency conversion necessary). If any obligation is unliquidated or unascertained, the Custodian may set off an amount estimated by it in good faith to be the amount of that obligation. The Custodian will endeavour to notify the Client following the exercise of any such right of set-off.
- 7.8 The Custodian expressly reserves any statutory security interest and statutory set-off right available to it under applicable law.
- 7.9 Insofar as is necessary to ensure the effectiveness of the Custodian's rights of set-off, the exercise of such rights shall take place (to the fullest extent permitted by law) before the computation of the amount of the Secured Obligations. The Custodian shall not be obliged to enforce any security interest in place of exercising any right of set-off.
- 7.10 Upon the security interest becoming enforceable pursuant to clause 7.5, the Custodian shall have the right, to appropriate all or any part of the Secured Assets in or towards discharge of the Secured Obligations. For this purpose, the Parties agree that the value of such Secured Assets so appropriated shall be, in the case of the Securities, the market price of such Securities determined by the Custodian by reference to the primary public index on which such Security is listed or, to the extent such public index is unavailable for the purposes of such valuation, by such other process as the Custodian may reasonably select, including independent valuation. The Parties further agree that the method of valuation provided for in this Clause 7.10 shall constitute a commercially reasonable method of valuation. For the avoidance of doubt, when valuing the Secured Assets the Custodian will do so in accordance with the standards and practices of a professional custodian in the market.
- 7.11 The Client and the Custodian agree that in respect of Clause 7, the Custodian shall pay for any reasonable filings and administrative fees it may incur on its own account to enable the Custodian to exercise and enforce its rights and remedies under this Deed. The

Client shall be responsible for any other expenses it may incur in connection with this Decd.

7.12 As security for the performance of its obligations to the Custodian, the Client hereby irrevocably appoints the Custodian as the Client's attorney in fact, with full authority in the place of the Client and in the name of the Client to perform or cause performance of the obligations of the Client under this Clause 7.

7.13 The restrictions contained in Sections 93 and 103 of the Law of Property Act 1925 shall not apply to this Schedule or to any exercise by the Custodian of its right to consolidate mortgages or its power of sale.

8. GUARANTEE

Where more than one Custodian or the Clearing Member provides services to the Client, it is the intention of the Parties that each such Custodian or the Clearing Member have the benefit of all available security, through the indemnity given by the Client in the Principal Agreement together with the cross-guarantee set out below.

8.1 In consideration for the provision of clearing and settlement services by the other Custodians and the Clearing Member, the Custodian unconditionally guarantees the payment of any sum from time to time owing to any of the other Custodians or the Clearing Member (contingently or otherwise and whether or not due and payable and whether or not demand has been made for it) by the Client pursuant to the terms of the Principal Agreement or this Schedule.

8.2 The Custodian's liability under this guarantee shall be limited to the aggregate value of any assets and cash balance held by it for the Client in any Account together with and to the extent not credited to an Account, where applicable, the value of any securities of the Client held by it in a System on the date of demand on the Custodian after taking into account the value of any Secured Obligations.

8.3 The Custodian shall be liable to each of the other Custodians and the Clearing Member as if it were the sole principal debtor and not merely a surety, but without affecting the Client's obligations.

8.4 The Client acknowledges and confirms that any amounts paid by the Custodian to any of the other Custodians or the Clearing Member pursuant to the guarantee provided by this Clause 8 shall serve to reduce the amount standing to the credit of the relevant Account(s).

9. REPRESENTATIONS, WARRANTIES AND UNDERTAKINGS

9.1 The Client hereby represents, warrants and undertakes to the Custodian as follows:

9.1.1 Except in respect of those Events of Default that are at the discretion of the Custodian, no Event of Default or Automatic Early Termination Event has occurred and is continuing in respect of it; and

9.1.2 any information provided by it pursuant to the terms of the Principal Agreement or this Schedule is accurate and not misleading in any material respect.

- 9.2 The representations, warranties and undertakings set out in Clause 9.1 above, together with the representations, warranties and undertakings contained in the Principal Agreement, are repeated by the Client in relation to its entry into this Schedule and on each day that a Transaction is entered into.
- 9.3 The representations, warranties and undertakings of the Custodian contained in the Principal Agreement are repeated in relation to its entry into this Schedule.
- 9.4 Citibank, N.A., London Branch represents and warrants that it has the power and authority to bind and sign on behalf of its affiliates and branches as set out in the Addendum.
- 9.5 The Clearing Member hereby represents and warrants that at the date this Schedule and any service is used or provided that (i) it has the legal capacity under its constitutional or organisational documents and authority to enter into this Schedule, (ii) it has obtained and is in compliance with all necessary and appropriate government and regulatory permissions, consents, approvals and authorisations for the purpose of its entry into and performance of this Schedule, including all necessary memberships, permissions and authorisations from all relevant market infrastructure bodies to provide services contemplated by this Schedule, (iii) its entry into and performance of the Schedule will not violate any applicable law or regulation and (iv) it has in place policies and procedures reasonably designed to ensure compliance with applicable economic sanctions programs including but not limited to those administered or promulgated by Her Majesty's Treasury of the United Kingdom, the office of Foreign Assets Control of the U.S. Department of the Treasury, the European Union and the United Nations Security Council; and (v) in connection with this Schedule it has not, as far as it is aware at the date of this Schedule, breached or violated the UK Bribery Act 2010, save as disclosed in its public disclosures and reporting, and has policies and procedures in place that are reasonably designed to prevent conduct prohibited under the UK Bribery Act 2010 as amended or supplemented, or any successor piece of legislation.
- 9.6 The Clearing Member further represents that it has arrangements in place to manage conflicts of interest. If the Clearing Member deems that the arrangements are not sufficient to reasonably prevent risks of damage to the Client, the Custodian shall clearly disclose the general nature and/or the sources of the conflict of interest to the Client before undertaking the relevant business with or for the Client.
- 9.7 The Clearing Member hereby represents and warrants at the date of this Schedule and any service is provided by it under this Schedule that it has undertaken the due diligence on the GCM System as would be expected from a professional clearing member performing those services.

10. CUSTOMER ASSETS

- 10.1 The security interests and set-off rights created by this Schedule as supplemented by the local security provisions (the "EMEA Annex") shall not apply to Accounts which are identified by the Client in accordance with Clause 10.4 below as containing securities or cash to which customers of the Client are beneficially entitled. The exclusion provided in

this clause shall include any securities or cash transferred to such Accounts subject to the terms in Clause 10.4 below.

- 10.2 The Client agrees that it will promptly upon execution of this Schedule instruct the Custodian in writing to amend the title of any Account that is to fall outside the scope of this Schedule pursuant to Clause 10.1 above.
- 10.3 The Client is not permitted under applicable law or agreement to permit the security interests created by this schedule to apply to such Accounts or the securities or cash held in the Accounts.
- 10.4 At the time the Client provides such Instruction to transfer or deliver securities or cash to any Account identified as for the exclusive benefit of customers of the Client as provided in this clause, the Client is deemed to represent and warrant as part of the Instruction that the Client, at or before close of business in the relevant market on the settlement date of such transfer or delivery, will have transferred to the Clearing Agent sufficient cash in immediately available funds in the required currency to cover the cost to the Custodian of effecting receipt of that security on behalf of the Client. Provided the Client had provided the Instruction in accordance with this clause, the Custodian shall not refuse to transfer the relevant security to the relevant account established for the exclusive benefit of the Client's customers.
- 10.5 If the Client provides any Instruction to effect a delivery or transfer of any security held in an Account identified as for the exclusive benefit of the Client's customers, in effecting such delivery or transfer, the security shall not be subject to any security interests and set-off rights created by this Schedule as supplemented by the EMEA Annex.

11. VOLUNTARY TERMINATION

Any Party may terminate this Schedule by giving not less than sixty (60) days' prior Written Notice to the other Parties/Party. In the event that there is a reduction in the Gross Purchase Cap pursuant to 4.1.4 or Net Transaction Cap pursuant to 4.2.4 of more than 10% in the Gross Purchase Cap or Net Transaction Cap respectively that existed immediately prior to such reduction, the Client shall have the right to terminate this Schedule by giving 14 Business days' prior written notice to other Parties/Party.

12. EVENTS OF DEFAULT AND AUTOMATIC EARLY TERMINATION EVENTS

- 12.1 The occurrence at any time with respect to the Client of any of the following events (including any acts or matters which reasonably appear to the Custodian to be likely to lead to any of the following events) constitutes an event of default (an "Event of Default"):
 - 12.1.1 a failure by the Client to make, when due, a payment or delivery and/or to comply with and perform any other obligation imposed upon the Client pursuant to the Principal Agreement or this Schedule provided, however, that it shall not be an Event of Default for the purposes of this sub-clause 12.1.1 if any failure to pay or deliver by the Client is due to a technical problem or administrative error and such problem is capable of being remedied or rectified within one (1) Business Day of the relevant failure to pay or deliver, as the case may be;

- 12.1.2 a representation, warranty or undertaking made or repeated or deemed to have been made or repeated by the Client in the Principal Agreement or this Schedule proves to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated;
- 12.1.3 the Client consolidates or amalgamates with, or merges with or into, or transfers all or substantially all of its assets to, another entity and, at the time of such consolidation, amalgamation, merger or transfer: (1) the resulting, surviving or transferee entity fails to assume all the obligations of the Client under the Principal Agreement or this Schedule by operation of law or pursuant to an agreement reasonably satisfactory to the Custodian, or (2) the benefits of any security interests fail to extend to the performance by such resulting, surviving or transferee entity of its obligations under the Principal Agreement or this Schedule;
- 12.1.4 the Client is suspended or expelled (either in whole or part) from a System;
- 12.1.5 a breach or likely breach by the Client of a Gross Purchase Cap which is designated by the Custodian to be an Event of Default in accordance with Clause 4.1.3; or
- 12.1.6 a breach or likely breach by the Client of a Net Transaction Cap which is designated by the Custodian to be an Event of Default in accordance with Clause 4.2.3
- 12.1.7 a breach or likely breach by the Client of a Total Margin Cap which is designated by the Custodian to be an Event of Default in accordance with Clause 5.3.
- 12.2 The occurrence at any time with respect to the Client of any of the following events constitutes an Automatic Early Termination Event (an "**Automatic Early Termination Event**") with respect to the Client:
 - 12.2.1 the Client (1) is dissolved (other than pursuant to a consolidation, amalgamation or merger); (2) becomes insolvent or is unable to pay its debts or fails or admits in writing its inability generally to pay its debts as they become due; (3) makes a general assignment, arrangement or composition with or for the benefit of its creditors; (4) institutes or has instituted against it a proceeding seeking a judgement for relief under insolvency or bankruptcy law or other similar law affecting creditors' rights, or a petition is presented for its winding-up or liquidation, and, in the case of any such proceeding or petition instituted or presented against it, such proceeding or petition (A) results in a judgement or insolvency or bankruptcy or to entry of an order for relief or the making of an order for its winding-up or liquidation or (B) is not dismissed, discharged, stayed or restrained in each case within 30 days of the institution or presentation thereof; (5) passes a resolution or has a resolution passed for its winding-up or liquidation (other than pursuant to a consolidation, amalgamation or merger); (6) seeks or becomes subject to the appointment of an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official for it

or for all or substantially all its assets; (7) has a secured party take possession of all or substantially all its assets or has a distress, execution, attachment, sequestration or other legal process levied, enforced or sued on or against all or substantially all its assets and such secured party maintains possession, or any such process is not dismissed, discharged, stayed or restrained, in each case within ten (10) days thereafter; or causes or is subject to any event with respect to it which, under the applicable laws of any jurisdiction, has an analogous effect to any of the events specified in sub-clauses (1) to (7) above (inclusive);

12.2.2 the Client (1) loses the regulatory authorisations and/or licences which are necessary to lawfully perform its obligations under this Schedule, or its membership of relevant regulatory or self-regulatory organisations or official registers relevant to performing its obligations under this Schedule, or (2) is restricted or prevented from carrying on its or any part of its business by any order made by any such body or any other supervisory or regulatory authority that is necessary to carry out its obligations under this Schedule; and/or

12.2.3 the Principal Agreement is terminated.

12.3 If an Event of Default and/or an Automatic Early Termination Event occurs in relation to the Client, the Client shall immediately give Written Notice thereof to the Custodian, specifying the relevant Event of Default and/or Automatic Early Termination Event. Neither the existence nor the non-existence of such notification by the Client shall prejudice the rights and remedies available to the Custodian under this Schedule or applicable law.

12.4 If an Event of Default occurs in relation to the Client, the Custodian may by Written Notice to the Client (specifying the relevant Event of Default) designate a day not earlier than when the Written Notice is effective in accordance with Clause 17.4, as the date of termination. If, however, an Automatic Early Termination Event occurs in relation to the Client, the relevant date of termination will occur immediately and without notice.

13. EFFECT OF TERMINATION

13.1 If a date of termination occurs in accordance with Clause 12.4 above (a "**Termination Date**"), without prejudice to the rights of buy-in, sell-out, set-off, lien and retention and other remedies available to the Custodian under this Schedule, the Rules and applicable law:

13.1.1 this Schedule shall be terminated as of the Termination Date;

13.1.2 all the outstanding obligations between the Parties under this Schedule to pay cash amounts or deliver securities shall be accelerated and become immediately due as of the Termination Date and shall be payable on such Termination Date;

13.1.3 to cover an open position or other obligation under a Transaction, the Custodian may:

(a) borrow, buy or sell any securities; or

- (b) continue to settle other Transactions under this Schedule or a transaction under the Principal Agreement.
- 13.1.4 the Custodian is entitled, but not obliged, to revoke or bring about a revocation of any Mandatory External Agreement; and
- 13.1.5 the Custodian may if practicable in accordance with the Rules, cancel outstanding Transactions or cause the System to cancel or not to settle outstanding Transactions.
- 13.2 As of the Termination Date the Client shall not enter into new Transactions.
- 13.3 The Client or the Custodian may immediately send Written Notice to any relevant System or other third party or any other replacement or equivalent competent authority if a Termination Date has occurred.
- 13.4 Termination of this Schedule by the Custodian or the Client in accordance with Clause 12 may relate to one or more Systems (as appropriate) and shall only terminate the contractual relationship established by this Schedule. Termination of this Schedule hereunder shall not affect the Principal Agreement.
- 14. **SYSTEM TERMINATION**
 - 14.1 Where the Parties agree in writing or the Client withdraws or is suspended or expelled (either in whole or part) from a System (the "**Relevant System**") and without prejudice to the rights of buy-in, sell-out, set-off, lien and retention and other remedies available to the Custodian under this Schedule, the Rules and applicable law:
 - 14.1.1 this Schedule shall be terminated only in respect of the Relevant System as of the System Termination Date;
 - 14.1.2 all the outstanding obligations between the Parties under this Schedule to pay cash amounts or deliver securities in relation to the Relevant System shall be accelerated and become immediately due as of the System Termination Date and shall be payable on such System Termination Date; and
 - 14.1.3 as of the System Termination Date, the Client may not enter into new Transactions on the Relevant System.
 - 14.1.4 the Client or the Custodian may immediately send Written Notice to the Relevant System or other third party or any other replacement or equivalent competent authority that a System Termination Date has occurred.
 - 14.2 If the Client fails to immediately pay on demand sums due under Clause 14.1.2, the Custodian and/or the other Custodians shall be entitled to exercise their rights under Clause 7 in respect of the Secured Obligations which relate to the Relevant System.
- 15. **DISCLOSED PRINCIPAL ELECTION**

This Clause 15 applies only where the Client has elected to include Customers under the Master Annex and the Client will instruct the Custodian on behalf of the Customers and will open and operate the Accounts designated for such Customers ("**Disclosed Principal Election**"). The respective rights and obligations of the Custodian, the Client and each Customer in relation to the

clearing and settlement of Transactions are set out in this Clause 15. The provisions of this Clause 15 supplement and modify this Schedule where necessary to give effect to the Disclosed Principal Election.

General

15.1 This Schedule shall take effect as a separate agreement between the Custodian, the Client and each Customer. It is a precondition to this Schedule taking effect in relation to each separate Customer that the Client has provided the Custodian with such information and confirmations as it may reasonably request in relation to the identity and standing of each such Customer.

15.2 References to the "Client" are, or include, references to the relevant Customer (as the con-

text requires) except in relation to Clauses 13 and 17.1.

15.3 When the Client enters into a Master Annex with the Custodian on behalf of a Customer, the relevant Customer is deemed to be agreeing to the terms of this Schedule with effect from the date of the relevant Master Annex. The Client may propose that a new or existing Customer accedes to further clearing and settlement arrangements for a System, provided that the Custodian consents to such changes.

Security Interest

15.4 The pledges, security interests and lien granted pursuant to this Schedule shall operate over: (1) the assets of a particular Customer (including the relevant Accounts) in respect only of the Secured Obligations of that Customer (and not in respect of the Secured Obligations of any other Customer); and (2) assets which belong to the Client or in which the Client is interested only in respect of Secured Obligations of the Client; and the term "Secured Assets" shall be construed accordingly.

15.5 In the case of any particular Customer, the Custodian's right of set-off in this Schedule shall operate in relation to: (1) payment, reimbursement or delivery obligations owed by the Client or that Customer to the Custodian in respect of Secured Obligations relating to that Customer or its Transactions against (2) payment or delivery obligations owed by the Custodian to the Client or that Customer, in respect of Secured Obligations relating to that Customer or its Transactions, and not in relation to the rights and obligations of any other Customer.

15.6 Notwithstanding the provisions of Clause 15.5 above, the Client and each Customer acknowledge and agree that the entitlement to each cash balance comprised in any particular

Cash Account is vested exclusively in the Client, without regard to the designation applied to the Cash Account or Custody Account in question and that the Client's indemnity obligations under the Principal Agreement relate to all Losses regardless of the identity of the Customer.

15.7 For the purposes of exercising its rights in the under Clause 7 (Security Interest and Ownership of Purchased Securities) or Clause 13 (Effect of Termination), the Custodian may merge, consolidate or combine all or any of the Client's proprietary accounts with the Accounts so as to extinguish or diminish Secured Obligations.

15.8 The Client agrees that any security interest (including any lien or pledge) or right of set-off which it may enjoy over the rights, Securities and monies of a Customer shall be postponed to the security interests created under this Schedule (as supplemented or modified by this Clause 15 (Disclosed Principal Election)) and to other rights of the Custodian under this Schedule, so that the Custodian's rights shall in no way be adversely affected or impeded by any such security interest of the Client. The Client agrees that the Custodian shall be subrogated to the Client's rights in respect of any security interest of the type mentioned in this Clause 15 and the Client shall enforce any such security interest at the direction of and for the account of the Custodian to the extent necessary to satisfy a Secured Obligation in relation to a Customer or its Transactions.

Representations, Warranties And Undertakings

15.9 In addition to the representations, warranties and undertakings contained in Clause 9

15.9.2 The Client undertakes to the Custodian that it shall:

(Representations, Warranties and Undertakings):

15.9.1 The Client also represents and warrants to the Custodian that:

(a) the Client shall procure that each separate Customer has executed all requisite documentation which any relevant System and/or the Custodian reasonably requires and/or as mandated by any relevant System and that the obligations, agreements and acknowledgements and other provisions given or made by or relating to a Customer in this Schedule shall be fully and effectively performed;

(b) the Client is irrevocably authorised to act on behalf of each Customer, to enter into, amend and supplement this Schedule, to send any Instructions and to give receipts and discharges on behalf of each such Customer for monies, securities and other property received;

(c) the Client is subject to the Money Laundering Regulations 2007 (or is otherwise a person covered by the Money Laundering Directive 2005/60/EC or similar legislation) and it maintains (a) evidence of the identity of the Customers, and (b) procedures in compliance with such Regulations (or similar requirements pursuant to such Directive);

(a) notify the Custodian forthwith upon its becoming aware that its authority to act on behalf of a particular Customer has been terminated or limited; and

(b) ensure that all actions which are necessary or expedient are taken by it and each Customer in relation to all Transactions and in relation the services provided by the Custodian under this Schedule.

15.9.3 The Customer represents and warrants to the Custodian that:

(a) it has the capacity and authority to appoint, and has duly appointed the Client to enter into this Schedule on its behalf and, when repeated, such authority has not been terminated;

(b) the Customer shall be the only person who will authorise the sending of, or the receipt of, Instructions and notices by the Client on its behalf for all purposes of this Schedule; and

(c) the Custodian is at all times entitled to treat the Customer as principal.

15.10 The representations and warranties contained in Clause 15.9 are repeated by the Client and the Customer on each day that a Transaction is concluded by the Client or Customer (as the case may be) and on any day when this Schedule is amended or supplemented.

Termination and Effect of Termination

15.11 The Custodian may terminate the participation of one or more Customers in this Schedule (each an "Affected Customer") as follows:

15.11.1 if the Client terminates its relationship with any particular Customer, the Client is obliged to give the Custodian Written Notice of such termination. Following the receipt of such Written Notice, the Custodian may terminate this Schedule in respect of the relevant Customer with effect from the date notified by the Custodian to the Client;

15.11.2 if an Event of Default occurs in relation to a Customer, the Custodian may by Written Notice to the Client, specifying the relevant Event of Default, terminate this Schedule in relation to that Customer;

15.11.3 if any Automatic Early Termination Event occurs in relation to a Customer, this Schedule will terminate immediately and without notice in

supplemented by this Clause 15), the Custodian may elect to terminate this Schedule in relation to the Client and all Customers where an Event of Default or Automatic Early Termination Event occurs only in relation to the Client. The Custodian may elect to terminate this Schedule in relation to a single Customer in relation to a default in connection with that Customer only.

As of the relevant Termination Date: (1) the Client and each Affected Customer shall not enter into new Transactions; and (2) the Client shall promptly notify any Intermediary and relevant System of the termination of this Schedule with respect to itself and each Affected Customer.

If this Schedule is terminated as a result of circumstances affecting the Client, such termination shall apply to the Client and all of the Customers so that Clause 13 (Effect of Termination) shall affect all Customers and their Transactions, rights, assets and entitlement to commit the Custodian to clear Transactions. If this Schedule is terminated in relation

relation to that Customer; and

15.11.4 in addition to the termination rights set out in this Schedule (as modified and

to certain Affected Customers only, Clause 13 (Effect of Termination) shall affect the Client in relation to its dealings with those Affected Customers and the Client's and those Affected Customers' respective Transactions, rights, assets and entitlement to commit the Custodian to clear Transactions but not those of other Customers.

Other

15.12 The Custodian will not treat Customers as "clients" of the Custodian for the purposes of the rules of the FCA or any other relevant regulatory body or any relevant regulatory legislation.

15.13 The liability of the Custodian and/or a particular Customer in relation to the indemnity under the Principal Agreement shall be determined by the Custodian on a fair and reasonable basis having regard to the proportion that the relevant Customer's business on the relevant System bears to the total amount of business cleared by the Custodian on the System in question.

15.14 The Client shall be jointly and severally liable with each Customer in respect of obligations owed by that Customer to the Custodian under this Schedule but so that Customers shall not be jointly and severally liable amongst themselves.

15.15 A Customer shall not have rights under the Contracts (Rights of Third Parties Act) 1999 in relation to this Schedule or the Principal Agreement except insofar as this Schedule or the Principal Agreement confers rights and obligations on a Customer.

15.16 Upon reasonable request of the Custodian, the Client and each Customer shall provide records and information to enable the Custodian to attribute Transactions, Securities, and monies to interested parties.

15.17 Any legal proceedings taken in relation to this Schedule against the Custodian shall be taken by the Client and not by a Customer.

15.18 Any service of a Written Notice upon the Client in accordance with Clause 17.4 shall be deemed to be effective delivery to the relevant Customer.

16. ASSIGNMENT

This Schedule and the rights arising thereunder cannot be assigned or transferred to a third party without the prior written consent of the other Party except that the Custodian may assign or transfer its rights and obligations under this Schedule to another branch or affiliate of the Custodian, provided always that any such an assignment or transfer does not have a material adverse effect on any of the services provided to the Client hereunder.

17. MISCELLANEOUS PROVISIONS

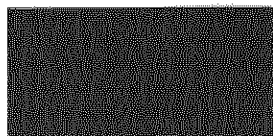
17.1 No person other than the Custodian and the Client shall have rights under the Contracts (Rights of Third Parties Act) 1999 in relation to this Schedule or the Principal Agreement except insofar as this Schedule or the Principal Agreement confers rights on any other Custodians or the Clearing Member.

17.2 The Clearing Member or Custodian (as applicable) shall keep records of all Transactions in relation to the Client in accordance with the Clearing Member's or the Custodian's internal compliance procedures or documentation policies.

- 17.3 The Client shall perform any obligations it has or may from time to time have vis-à-vis the Custodian in connection with the Principal Agreement or this Schedule in full without withholding, set off or counterclaim except as may be required by applicable law.
- 17.4 Written Notice served under this Schedule shall be deemed to be effective as follows: service by personal delivery shall be deemed to be effective upon delivery; service by post shall be deemed to be effective on the second Business Day (or, if by airmail, on the fourth Business Day) after the day of posting, and service by SWIFT, telex or facsimile shall be deemed to be effective as at the time of successful dispatch or transmission.
- 17.5 If any provision of this Schedule is adjudged to be illegal or unenforceable, the continuation in full force and effect of the remainder of the provisions will not be prejudiced.
- 17.6 No failure to exercise, nor any delay in exercising, on the part of any Party of any rights set out in this Schedule shall operate as a waiver, nor shall any single or partial exercise of such rights prevent any further or other exercise of that or any other right.
- 17.7 The Client acknowledges that as a United Kingdom branch of a national banking association of the United States of America, the Custodian is required to observe laws and regulations relating to sanctions issued by the United States government and/or the European Union. The Client further acknowledges that these laws or regulations may require the Custodian to block, return or withdraw from certain Transactions, as appropriate.
18. **GOVERNING LAW AND JURISDICTION**
- 18.1 Except where expressly stated to the contrary, this Schedule and all non-contractual obligations arising from or connected with it are governed by English law.
- 18.2 The courts of England and Wales have exclusive jurisdiction to settle any dispute arising from or in connection with this Schedule (including a dispute relating to non-contractual obligations arising from or in connection with this Schedule, or a dispute regarding the existence, validity or termination of this Schedule or the consequences of its nullity) (a "Dispute").
- 18.3 Each Party waives any objection it may have at any time to the laying of venue of any Dispute brought in the English courts, waives any claim that such Disputes have been brought in an inconvenient forum and further waives the right to object that such court does not have jurisdiction over such Party.
- 18.4 The Client irrevocably waives, to the fullest extent permitted by applicable law, with respect to itself and its revenues and assets (irrespective of their use or intended use), all immunity on the grounds of sovereignty or similar grounds from (i) suit; (ii) jurisdiction of any court; (iii) relief by way of injunction, order for specific performance or for recovery of property; (iv) attachment of its assets (whether before or after judgement); and (v) execution or enforcement of any judgement to which it or its revenues or assets might otherwise be entitled.

SIGNED on behalf of
CITIBANK, N.A., London
Branch

)
)
)
)
)



Duly Authorised Representative
name:
title: **Alex Todd**
Director

SIGNED on behalf of
Clearing Member

)
)

Refer to Execution Addendum

SIGNED on behalf of
Goldman Sachs International

)
)

Refer to Execution Addendum

SIGNED on behalf of
Each custodian

)
)

Refer to Execution Addendum

EMEA ANNEX TO THE EXCHANGE TRADED SERVICES SCHEDULE

This EMEA Annex ("**Annex**") is entered into as a deed on 14th JUNE 2016

BETWEEN

- (1) The Custodian;
- (2) The Clearing Member; and
- (3) Goldman Sachs International (the "**Client**")

INTRODUCTION

- (A) The Client, the Clearing Member and the Custodian have entered into an Exchange Traded Services Schedule dated 14th JUNE 2016 (the "**Schedule**") for the purpose of clearing and settling Transactions via certain Systems, as defined in the Schedule.
- (B) By this Annex, the Custodian, the Client and the Clearing Member wish to supplement the Schedule in relation Accounts held in EMEA.

IT IS AGREED AS FOLLOWS:

1. Interpretation

- 1.1 Unless otherwise defined in this Annex, capitalised terms in the Schedule have the same meaning in this Annex.

"EMEA" means Europe, the Middle East and Africa; and

"Secured Parties" means the Custodian and the Clearing Member.

- 1.2 For the avoidance of doubt this Annex is an "**Annex**" for the purposes of the Schedule and forms an integral part of the Schedule.
- 1.3 References to a Clause are to a Clause of the Schedule unless the context otherwise requires.
- 1.4 References to a section are references to sections of this Annex unless the context otherwise requires.

2. Local Security

Insofar as is necessary to give effect to the provisions of this section 2, all defined terms in this section shall be governed and construed in accordance with the system of law governing the relevant Accounts. These jurisdiction specific provisions are only intended to supplement or replace the security interests set out in Clause 7.

- 2.1 **Czech Republic:** The following sections only apply to Accounts opened and maintained in the Czech Republic:

2.1.1 Section 1 of the Schedule is amended with the following definition

"Czech Securities" shall mean at any time all book-entry Securities (in Czech: *zaknihované cenné papíry*), dematerialised Securities (in Czech: *imobilizované cenné papíry*) or other similar Securities whether issued under Czech or foreign law (and all rights, benefits and proceeds attaching to, arising from, or in respect of, such securities) held in the Accounts, provided, however, that any such Securities must always qualify as either book-entry securities, dematerialised securities or other securities within the meaning of Act no. 89/2012 Coll., the Civil Code, as amended, and/or investment instruments within the meaning of Section 3 (1) (a) to (c) of the Act no.256/2004 Coll., the Capital Markets Act, as amended.

2.1.2 Section 7.1 of the Schedule is hereby amended to read:

"7.1 As security for the proper payment and discharge of all of the Secured Obligations (as defined below), the Client hereby agrees to conclude a separate security agreement with the Custodian and the Clearing Member, through which the Client will create security (by a way of lien) on any Custody Account or Clearing Account held in the name of the Client on which any Czech Securities are held (any Czech Securities referred to herein and other Securities being the **"Secured Assets"**).

For the purposes of the security created by this Clause 7 and the security agreement mentioned herein, the term **"Secured Obligations"** means any monetary obligations owing to any Custodian and/or the Clearing Member by the Client in connection with services under the Principal Agreement, whether present or future, actual or contingent, (and whether incurred by the Client alone or jointly, and whether as principal or surety or in some other capacity) which are (i) obligations of the Client to reimburse a Custodian in respect of Irrevocable Commitments; (ii) other present and future obligations of the Client to repay a Custodian and/or the Clearing Member including, but not limited to, daylight and overnight overdraft lines and reversals of provisional credits; and (iii) obligations of the Client under the indemnity provided to the Custodian in the Principal Agreement"

2.1.3 For purposes of Section 7.10 the Parties agree that the value of Secured Assets for the purposes of appropriation described therein shall be ascertained as of the moment of such appropriation.

2.1.4 Clause 7.13 shall not apply.

2.1.5 Section 9.1 is hereby amended by inserting the following text at the end thereof:

"9.1.4 the Account, on which any Czech Securities are held, is maintained for the Client as the owner of the Securities registered in the Account and that the Account and the Securities are not subject to any encumbrance or third-party rights (other than the security arising hereunder or under security agreement mentioned in clause 7.1 of this Schedule); and

9.1.5 except in circumstances where the Clearing Member is unable to operate the Account where Czech Securities are evidenced or unless approved by the Clearing Member in writing, the Client will not seek to operate and/or dispose with that Securities Account itself or authorise anyone else to do so but that rather all operations in respect of such Securities Account shall be by the Clearing Member in accordance with Instructions and subject to the provisions of the Principal Agreement (as amended by the Schedule and this Annex)."

2.1.6 This section 2.1 shall be governed and construed in accordance with Czech law.

2.2 **Germany:** The following sections only apply to Accounts opened and maintained in Germany:

2.2.1 The Client hereby pledges to the Secured Parties the present and future credit balance of each of its present and future Cash Accounts including all interest payable thereon, together with all ancillary rights and claims associated with such Cash Accounts as well as Securities and equivalent values (*Wertpapiere und entsprechende Werte*) including interest-coupons, fixed interest-coupons and profit participation-coupons (*Zins-, Renten- und Gewinnanteilscheine*) and talons (*Erneuerungsscheine*) as well as warrants (*Bezugsrechte*) and bonus coupons (*Berichtigungsscheine*) which are credited to the Custody Accounts or Clearing Accounts presently and in the future (together, the "**Pledge**") to secure the Secured Obligations.

The Client pledges all rights and claims, including but not limited thereto its right to demand delivery and possession (*Lieferungs- und Herausgabeansprüche*), in connection with and relating to any Securities credited to the Custody Account or Clearing Account which are located abroad (im Ausland ruhende Wertpapiere).

The Secured Parties accept such Pledge.

2.2.2 The Secured Parties are entitled to enforce the Pledge and realise the Secured Assets if the Secured Obligations are not performed when due. To the extent that, but for this provision, § 1277 of the German Civil Code would apply, the Secured Parties are entitled to enforce the Pledge without obtaining an enforceable judgement or other instrument (*ohne vollstreckbaren Titel*). In all other cases the Secured Parties shall notify the Client in writing of the intention to enforce their Pledge and to realise the Secured Assets (*Verwertung der Pfandgegenstände*) with a period of notice of no less than 5 (five) Business Days. The Secured Parties shall be entitled to freely sell the Secured Assets having a market or exchange price at their current price by itself or through third parties and shall have the right to appropriate all or any part of such Secured Assets, upon realisation (§ 1259 of the German Civil Code).

2.2.3 At any time when the total value of the aggregate security granted by the Client to secure the Secured Obligations which can be expected to be realised in the event of an enforcement of the Security (*realisierbarer Wert*) exceeds 110% of

the Secured Obligations (the "**Limit**") not only temporarily, the Secured Parties shall on demand of the Client release such part of the Security (*Sicherheitenfreigabe*) as the Client may in its reasonable discretion determine so as to reduce the realisable value of the Security to the Limit.

2.2.4 In relation to Clause 7, only 7.1, 7.5, 7.6, 7.7 and 7.8 will apply.

2.2.5 This section 2.2 shall be governed and construed in accordance with German law.

2.3 **Hungary:** The following sections only apply to Accounts opened and maintained in Hungary:

2.3.1 Clause 7.1 of the Schedule is hereby amended to read:

"7.1 As continuing security for the proper payment and discharge of all of the Secured Obligations (as defined below), the Client and the Custodian hereby agrees to create a pledge under § 5:95 of the Civil Code (in Hungarian "óvadék") in favour of the Custodian on:

7.1.1 all the Cash credited now or in the future to any Cash Account held in the name of the Client and

7.1.2 all the Securities credited now or in the future to any Custody Account or Clearing Account held in the name of the Client;

(any Cash and Securities referred to in Clauses 7.1.1-7.1.2 above being the "**Secured Assets**").

For the purposes of the security interests created by this Clause 7 the term "**Secured Obligations**" means any obligations owing to any Custodian by the Client in connection with services under the Principal Agreement, whether present or future, actual or contingent, (and whether incurred by the Client alone or jointly, and whether as principal or surety or in some other capacity) which are (i) obligations of the Client to reimburse a Custodian in respect of Irrevocable Commitments (as defined in Clause 7.3); (ii) other present and future obligations of the Client to repay a Custodian including, but not limited to, daylight and overnight overdraft lines and reversals of provisional credits; and (iii) obligations of the Client under the indemnity provided to the Custodian in the Principal Agreement."

The Client shall be entitled to dispose freely of the Secured Assets before the occurrence of an Event of Default. Such disposal shall include, without limitations, withdrawals, transfers, instructions and any other transactions in respect of the Secured Assets. In relation to any such disposals the Client shall not consult or seek the consent of the Custodian.

2.3.3 Clause 7.13 shall not apply.

2.3.4 This section 2.3 shall be governed and construed in accordance with Hungarian law.

2.4 **Italy:** The following sections only apply to Accounts opened and maintained in Italy:

The Client hereby creates the following charges in favour of the Secured Parties as security for the payment and discharge of all of the Secured Obligations:

- (a) a pledge (*pegno*) over all of the Accounts, pursuant to Articles 2800 et seqq. of the Italian Civil Code and the relevant provisions of Italian Legislative Decree No. 170 dated 21 May 2004 implementing Directive 2002/47/EC on financial collateral arrangements ("**Decree 170**"); notice is hereby given to the Secured Parties of the pledge (*pegno*) over all of the Accounts created hereunder; and
- (b) a charge on Securities from time to time deposited in the Accounts (*vincolo sull'insieme degli strumenti finanziari registrati sul conto*) pursuant to Article 83-octies of Italian Legislative Decree No. 58 of 24 February 1998 ("Financial Services Law"), Article 38 of the Bank of Italy - Consob Joint Regulation on central depository systems dated 22 February 2008 ("**Bank of Italy/Consob Regulation**") and the relevant provisions of Decree 170.

2.4.1 In the case of the Securities held and recorded in the Accounts, it is understood and agreed that the Secured Parties shall:

- (a) take any necessary action and steps required, under Article 38 of Bank of Italy/Consob Regulation and any other relevant provisions, to ensure that the Accounts constitutes an account intended to create a charge on the Securities registered in it (*conto destinato a consentire la costituzione di vincoli sull'insieme degli strumenti finanziari in esso registrati*), for the purposes of Article 38 of Bank of Italy/Consob Regulation and carry out all perfection formalities to be agreed between the Parties for the purpose of perfecting the financial collateral in accordance with the provisions of the Financial Services Law, Bank of Italy/Consob Regulation and Decree 170 ;
- (b) operate the Accounts in accordance with the instructions given from time to time by the Client, or on its behalf, **provided that** the Secured Parties shall no longer follow the instructions given by the Client, or on its behalf, upon the occurrence of an Automatic Early Termination Event or an Event of Default which has not been waived by the Custodian.

2.4.2 This section 2.4 shall be governed and construed in accordance with Italian law.

2.5 **Poland:** The following sections only apply to Accounts opened and maintained in Poland:

2.5.1 Pursuant to Clause 7.6, the Client hereby undertakes and agree to:

- i. enter with the Custodian into a Financial Pledge Agreement under which a financial pledge (Polish: *zastaw finansowy*) will be established in favour of the Secured Parties, as security for the payment and discharge of all Secured Obligations, over the present and future credit balance of each of its present and future Cash

Accounts, including all interest payable thereon, together with all ancillary rights and claims associated with such Cash Accounts, as well as Securities which are credited to the Custody Accounts or Clearing Accounts presently and in future to secure the Secured Obligations, within the meaning of the April 2, 2004 Act on Certain Forms of Financial Collateral (Journal of Laws of 2012, Item 942, as amended), implementing Directive 2002/47/EC on financial collateral arrangements;

- ii. grant the Secured Parties an irrevocable power of attorney with full power to exercise all or any of the rights, powers and privileges attaching to the Secured Assets in such manner and on such terms as the Secured Parties shall in their absolute and unfettered discretion see fit in order to protect the interests of and enforce the rights granted to it in respect of the Secured Obligations.

2.5.2 Under the Financial Pledge Agreement referred to in clause 2.5.1 (i), the Custodian, acting on behalf of the Custodian or the Secured Parties, will be entitled to enforce the Pledge if the Secured Obligations and secured obligations relating to the Client's Customers or its Transaction are not performed when due; the Agreement will provide for the ways of enforcement of the financial pledge and other terms and conditions required by the Act on Certain Forms of Financial Collateral.

2.5.2 Section 9.1 is hereby amended by inserting subsection 9.3 with the following wording:

"9.1.3. it shall ensure that sufficient cash or Securities are available to the Custodian to enable it to perform its obligations to any System in consequence of Transactions."

2.5.3 The representations, warranties and undertakings contained in section 2.5.2 are repeated by the Client on each day that a Transaction is entered into.

2.5.4 Clause 7.13, 15.12 and 15.15 shall not apply.

2.5.5 Clause 9.4 shall have the following wording:

"9.5. The Clearing Member hereby represents and warrants that at the date this Schedule and any service is used or provided that (i) it has the legal capacity under its constitutional or organisational documents and authority to enter into this Schedule, (ii) it has obtained and is in compliance with all necessary and appropriate government and regulatory permissions, consents, approvals and authorisations for the purpose of its entry into and performance of this Schedule, including all necessary memberships, permissions and authorisations from all relevant market infrastructure bodies to provide services contemplated by this Schedule, (iii) its entry into and performance of the Schedule will not violate any applicable law or regulation and (iv) it has in place policies and procedures reasonably designed to ensure compliance with applicable economic

sanctions programs including but not limited to those administered or promulgated by the office of Foreign Assets Control of the U.S Department of the Treasury, the European Union and the United Nations Security Council”

2.5.6 Clause 10.1 shall have the following wording:

“10.1 The security interests and set-off rights created by this Schedule as supplemented by the local security provisions (the “EMEA Annex”) shall not apply to Accounts which are identified by the Client in accordance with Clause 10.4 below as containing securities to which customers of the Client are beneficially entitled. The exclusion provided in this clause shall include any securities transferred to such Accounts subject to the terms in clause 10.4 below.”

2.5.7 Section 15.4 is hereby amended by inserting the following text at the end thereof:

“For the avoidance of doubt assets of a particular Customer do not refer to the cash.”

2.5.8 Section 15.9.3 is hereby amended by inserting subsection d) with the following wording:

“d) the Customer is not a retail client within the meaning of Article 4 section 1 subsection 11 of MiFID.”

2.5.9 This section 2.5 shall be governed and construed in accordance with Polish law.

2.6 **Greece:** The following sections only apply to Accounts opened and maintained in Greece:

The Client as sole, full and exclusive owner and possessor of the Secured Assets hereby irrevocably and unconditionally and for the purpose of securing the due and timely repayment, discharge and performance of the Secured Obligations grants in favour of the Secured Parties, a pledge (*παροχή εμπράγματης χρηματοοικονομικής ασφάλειας - hrimatoikononimiki asfalia*) over the Secured Assets, pursuant to Greek Law 3301/2004 (articles 1-10), as in force, implementing the Directive 2002/47/EC on financial collateral arrangements as amended by Directive 2009/44/EC (the “Law”).

2.6.1 It is understood and agreed that by recording (“flagging”) an Account as pledged, in the books of the Custodian or in the Dematerialised Securities System of the Hellenic Central Securities Depository S.A., (“ATHEXCSD”), the Secured Assets are “provided” to the Custodian, as defined in article 2 paragraph 2 of the Law.

2.6.2 If an Event of Default occurs and has not been waived by the Custodian or the Secured Parties or an Automatic Early Termination Event the Custodian has the right to sell all or part of the Securities in accordance with Clause 7.5 of the Schedule and the Law and/or acquire the full and undisputed ownership of all or

part of the Securities in accordance with Clause 7.10 of the Schedule and the Law.

2.6.3 Clause 7.5 and 7.10 of the Schedule shall be deemed incorporated in this section 2.6.

2.6.4 Without limiting the security interest provided in Clause 7 of the Schedule as well as in section 2.6.1. of this Annex, the Client hereby assigns by way of pledge and transfers to the Custodian pursuant to Article 455 of the Greek Civil code, as Security for the proper payment and discharge of all of the Secured Obligations, all the Client's claims (whether present or future, contingent or otherwise) arising from any accounts of the Client held in the System (such claims including, but not limited to, claims against the company under the name "ATHEX's Transactions Clearing S.A.", acting as central counterparty (CCP) and operator of the System ("ATHEXClear") for the return of any margin and/or any other guarantees given for the coverage of the Client's obligations relating to the clearing.

2.6.5 This section 2.6 shall be governed and construed in accordance with Greek law.

2.7 **Spain:** The following sections only apply to Accounts opened and maintained in Spain:

Specific provisions applicable to the statutory financial collateral under article 96 of the consolidated text of the Securities Market Law approved by Royal Legislative Decree 4/2015, of 23 October ("Securities Market Law")

2.8.1 Statutory financial collateral

Pursuant to article 96 of Securities Market Law, the Custodian and the Clearing Member shall have a statutory (*ex-lege*) right of security financial collateral (*derecho de garantía financiera pignoratícia*), as governed by Royal Decree-Law 5/2005, of 11 March (the "**RDL 5/2005**") over the Secured Assets (as by article 96 of Securities Market Law) and as security for the performance of the Secured Obligations (as defined by article 96 of Securities Market Law). This statutory financial collateral is without prejudice and in addition to the security interest created by virtue of clause 7 of the Schedule.

For the purposes of enforcement and in accordance with the provisions of article 11.2 of RDL 5/2005, it is expressly agreed that enforcement may be carried out by appropriation of the Secured Assets and applied in or towards discharge of the Secured Obligations.

The Parties expressly agree that any such appropriation shall be carried out in accordance with RDL 5/2005 and that the value of the securities comprised within the secured assets shall be 100% of their official closing price on the trading date preceding such appropriation. The Parties agree that this method of valuation constitutes a commercially reasonable valuation method.

For the avoidance of doubt, the Custodian and the Clearing Member may exercise the right of appropriation in accordance with the provisions of Clause 7.4 of the Schedule.

The provisions of Clause 7.5 as amended by Clause 2.9.4 below shall apply to this statutory pledge.

The statutory pledge is without prejudice to the unlimited personal liability (*responsabilidad patrimonial universal*) of the Client, which according to Article 1,911 of the Spanish Civil Code (*Código Civil*) shall not be limited or restricted in any manner or way by reason of the statutory pledge.

Specific provisions applicable to the security interest created by virtue of clause 7 of the Schedule

2.8.2 Clause 7.1 of the Schedule shall be replaced by the following:

As continuing security for the proper payment and discharge of all of the Secured Obligations (as defined below), the Client hereby creates a first priority right of security and pledge (*derecho real de prenda de primer rango*) in favour of the Custodian and the Clearing Member in respect of:

- 7.1.1 any Securities credited to/annotated in any Custody Account or Clearing Account held in the name of the Client;
- 7.1.2 all rights, claims and actions arising for the Client from the relevant Custody Account or Clearing Account; and
- 7.1.3 any Cash amounts deposited in/credited to any Cash Account held in the name of the Client at any given time, and all rights, claims and actions arising for the Client from the relevant Cash Account.

(any Cash, Securities and rights or receivables referred to in Clauses 7.1.1 to 7.1.3 above, collectively, the "**Secured Assets**").

For the purposes of the security interests created by this Clause 7 the term "**Secured Obligations**" means any obligations owing to any Custodian and/or the Clearing Member by the Client in connection with services under the Principal Agreement, whether present or future, actual or contingent, (and whether incurred by the Client alone or jointly, and whether as principal or surety or in some other capacity) which are (i) obligations of the Client to reimburse a Custodian in respect of Irrevocable Commitments; (ii) other present and future obligations of the Client to repay a Custodian and/or the Clearing Member including, but not limited to, daylight and overnight overdraft lines and reversals of provisional credits; and (iii) obligations of the Client under the indemnity provided to the Custodian and in the Principal Agreement.

The Custodian and the Clearing Member hereby accepts such pledge and security interest.

The Custodian and the Clearing Member undertakes to register the creation of this Pledge in the relevant book-entry registry (*Registro de Detalle*) or accounting registry, as the case may be, in respect of the Secured Assets.

The pledge is granted without prejudice to the unlimited personal liability of the Client which, according to Article 1,911 of the Spanish Civil Code (*Código Civil*) shall not be limited or restricted in any manner or way by reason of the constitution of the pledge.

2.8.3 Clause 7.2 of the Schedule is hereby amended as follows:

By replacing the first part of the paragraph (immediately before the first full stop) with the following:

It is expressly acknowledged that the pledge and security interest referred to in this Clause 7 has been created in compliance with the provisions of **RDL 5/2005**, constitutes a "security financial collateral arrangement" (*acuerdo de garantía financiera pignoratícia*) for the purposes thereof and has been duly recorded/annotated by the Custodian and/or the Clearing Member in the relevant book entry and/or account registry of the relevant Account.

By adding the following paragraph at the end thereof:

It is expressly agreed that the crediting, posting, delivering or transferring (as the case may be) of any amounts, cash, assets, securities and investment to any of the Accounts under the custody or otherwise kept by the Custodian and/or the Clearing Member shall amount to the transfer of possession (*traslado posesorio*) and contribution (*aportación*) of the relevant assets so as to be in the possession and under the control of the Custodian and/or the Clearing Member for the purposes of Article 12 of Securities Market Law, Article 8.2 of RDL 5/2005, Article 1863 of the Spanish Civil Code and Article 14 of Royal Decree 878/2015.

2.8.4 Clause 7.5 of the Schedule shall be replaced by the following:

If an Event of Default occurs and has not been waived by the Custodian and/or the Clearing Member or an Automatic Early Termination Event occurs, the security interests vested in the Custodian and/or the Clearing Member from time to time either be statutory or pursuant to this Clause 7 shall become immediately enforceable and the Custodian and/or the Clearing Member expressly reserves and may exercise any right or remedy available to a pledgee or secured creditor under applicable law, including, but not limited to, the right to appropriate or sell the Secured Assets as soon as reasonably possible in accordance with applicable law. The Client is not entitled to, nor is the Custodian and/or the Clearing Member required to give, any prior notice of default or a prior notice of the sale, but the Custodian and/or the Clearing Member shall endeavour to give notice of such sale either prior to or after such sale as soon as reasonably practicable.

2.8.5 Clause 7.13 of the Schedule shall not apply.

2.8.6 The following paragraph will be added at the end of Clause 12.1.2 of the Schedule:

“The parties agree and acknowledge that this Schedule creates a mercantile current account (*cuenta corriente mercantil*) between the parties and accordingly agree that upon the occurrence of a Termination Date:

- (i) all of the obligations between the parties to pay cash amounts which have been accelerated pursuant to this sub-paragraph 12.1.2 shall be automatically satisfied and discharged and replaced by an obligation upon the party by which the larger aggregate cash amount would have been payable to pay the other party the excess of the larger aggregate cash amount over the smaller aggregate amount;
- (ii) all of the obligations between the parties to deliver the same securities which accelerated pursuant to this sub-paragraph 12.1.2 shall be automatically satisfied and discharged and replaced by an obligation upon the party by which the larger aggregate amount of those securities would have been deliverable to deliver the other party the excess of the larger aggregate amount over the smaller aggregate amount; and
- (iii) for the purposes of the above provisions:
 - (1) the Custodian and/or the Clearing Member shall be entitled to prepare the relevant calculations which is binding on the parties absent manifest error;
 - (2) the Custodian and/or the Clearing Member may convert any obligation to another currency at a market rate determined by the Custodian and or the Clearing Member;
 - (3) if an obligation is unascertained, the Custodian and/or the Clearing Member may in good faith estimate that obligation and net it in respect of the estimate, subject to the relevant party accounting to the other when the obligation is ascertained; and
 - (4) for the avoidance of doubt, any amounts determined and payable pursuant to this sub-paragraph 12.1.2 will be subject to set-off pursuant to other sections of this Schedule.”

2.8.3 In addition to its acknowledgment in paragraph 16.6 of the Schedule, the Client further acknowledges that the Custodian and/or the Clearing Member is also required to observe the laws and regulations relating to sanctions issued by the United Kingdom and/or Spain and that these laws or regulations may require the Custodian and/or the Clearing Member to block, return or withdraw from certain Transactions, as appropriate.

2.8.4 This section 2.8 shall be governed and construed in accordance with Spanish law.

3. **Additional Amendments**

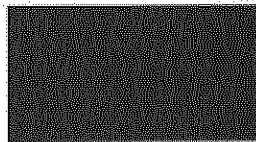
- 3.1 The right to sell in Clause 7.5 includes all or any of the powers, authorities and discretions conferred by the Law of Property Act 1925 (as varied or extended by this Annex)
- 3.2 The power of sale or other disposal Clause 7.5 shall operate as a variation and extension of the statutory power of sale under Section 101 of the Law of Property Act 1925.

4. **Governing Law**

Except where expressly stated to the contrary, this Annex and all non-contractual obligations arising from or connected with it are governed by English law.

IN WITNESS WHEREOF, the parties hereto have caused this deed to be executed by their respective officers thereunto duly authorised.

SIGNED on behalf of)
CITIBANK, N.A., London)
Branch)



) Duly Authorised Representative
) name:
) title: **Alex Todd**
) **Director**

SIGNED on behalf of)
CLEARING MEMBER)

) Refer to Execution Addendum
)

SIGNED on behalf of)
each CUSTODIAN)

) Refer to Execution Addendum
)

SIGNED on behalf of)
GOLDMAN SACHS)
INTERNATIONAL)

) Refer to Execution Addendum
)

**MASTER ANNEX
TO THE EXCHANGE TRADED SERVICES SCHEDULE (the "Schedule")**

Part I - Disclosed Principal Election

Goldman Sachs International (as Client)



	YES	NO
The Client will be acting on behalf of Customers ¹ :	[X]	[]

CUSTOMER LIST

No.	Name of Customer(s)
1.	Algo Engineering
2.	
3.	
4.	

¹ Therefore, Clause 15 (*Disclosed Principal Election*) of the Schedule will apply.

Part II - Trading Platforms, Gross Purchase Caps and Total Margin Caps
Goldman Sachs International (as Client)

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>Australia</u>						
ASX						
<u>CCP.A Cleared</u>						
Wiener Borse						
<u>CC&G Cleared</u>						
<i>Equities:</i>						
MTA		100,000,000		20,000,000	Yes	
<i>Fixed Income:</i>						
MTS Italy						
MTS France						
Euro MTS		5,000,000,000				
BrokerTec Italy		3,500,000,000				
EuroTLX						
MOT						
<i>Derivatives:</i>						
IDEM		300,000,000				

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>Italy Non CC&G Cleared</u>						
Bank of Italy Auctions						
<u>Spain</u>						
BrokerTec Spain						
Euro MTS Spain						
BME Exchange		200,000,000		55,000,000	Yes	
Primary Dealer		3,000,000,000				
<u>ATHEXClear Cleared</u>						
Athens Exchange				***		
*** note that in the case of Athexclear, this represents Total Trading Cap and not Total Margin Cap						
<u>Greece Non CCP Cleared</u>						
Euro MTS Greece						
MTS Greece						
BrokerTec Greece		65,000,000				
HIDAT						
Primary Dealer						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
LCH.Clearnet Ltd -Cleared						
<i>Equity Clear Markets:</i>						
BATS Europe						
Chi-X Europe						
Equiduct						
LSE-SETS						
LSE-IOB						
Oslo Bors						
Swiss Exchange- Blue Chips						
Swiss Exchange- Small & Mid Caps						
Traiana						
Turquoise						
<i>Repo Clear Markets:</i>						
RepoClear (Belgium)						
RepoClear (Portugal)						
LCH.Clearnet SA -Cleared						
<i>Equities</i>						
Euronext Amsterdam N.V.		100,000,000				
Euronext Brussels S.A./N.V.						
Euronext Paris S.A.						
Euronext Lisbon S.A.		5,000,000				
Equiduct						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>Fixed Income:</u>						
BrokerTec Belgium						
MTS Belgium						
BrokerTec France						
Euro MTS France						
MTS France						
MTS Italy						
MTS Spain						
<u>Eurex Clearing Cleared</u>						
Deutsche Börse Xetra		250,000,000				
Irish Stock Exchange						
<u>Germany Non CCP Cleared</u>						
Deutsche Börse Xetra		25,000,000				
<u>SIX X-Clear Cleared</u>						
<u>Equities:</u>						
BATS Europe						
Borse Berlin Equiduct (Germany)						
Borse Berlin Equiduct (Switzerland)						
Burgundy						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
Chi-X Europe						
Liquidnet						
LSE - SETS						
LSE - IOB						
NYSE Arca Europe						
Smartpool						
Swiss Exchange- Blue Chips						
Swiss Exchange- Small & Mid Caps						
Traiana						
Turquoise						
UBS MTF						
<i>Fixed Income:</i>						
Swiss Exchange						
 <u>Switzerland – Non CCP cleared</u>						
Scoach Schweiz AG						
SIX Swiss Exchange International Bonds						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>KDPW CCP S.A. Cleared</u>						
<i>Equities</i>						
Warsaw Stock Exchange		USD 50,000,000		PLN 10,000,000	Yes	
<i>Fixed Income</i>						
Bond Spot – RRP						
ATS WSE						
ATS BondSpot						
<u>EUROCCP NV Cleared</u>						
BATS Europe						
Burgundy						
Chi-X Europe						
Equiduct						
NASDAQ OMX Copenhagen						
NASDAQ OMX Helsinki						
NASDAQ OMX Stockholm						
NYSE Arca Europe						
SigmaX						
Smartpool						
Trarana						
Turquoise						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as Applicable)	Additional Margin %
UBS MTF						
<u>TASECH Cleared</u>						
<i>Equities:</i>						
Tel Aviv Stock Exchange						
<i>Fixed Income:</i>						
MTS Israel						
Tel Aviv Stock Exchange						
<u>KELER CCP Cleared</u>						
<i>Equities:</i>						
Budapest Stock Exchange		10,000,000		CHF 350,000	Yes	
MTS Hungary						
<u>South Africa (on CCP Cleared</u>						
Johannesburg Stock Exchange						
<u>Sweden Non CCP Cleared</u>						
NASDAQ OMX Stockholm						
<u>Czech Republic Non CCP Cleared</u>						
Prague Stock Exchange		USD 21,500,000				
MTS Czech						

*In circumstances where the Client is acting as agent on behalf of various underlying customers, a separate version of Part II of the Master Annex will need to be completed in respect of each such underlying customer (this is in contrast to Parts I and III of the Master Annex, both of which apply on a per Agreement/ per Client basis in all circumstances)

**Combined Limit

Re: Algo Engineering (as Customer)

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>Australia</u>						
ASX						
<u>CCP A Cleared</u>						
Wiener Borse						
<u>CC&G Cleared</u>						
<u>Equities:</u>						
MTA		100,000,000		400,000	Yes	
<u>Fixed Income:</u>						
MTS Italy						
MTS France						
Euro MTS						
BrokerTec Italy						
EuroTLX						
MOT						
<u>Derivatives:</u>						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
ITEM						
<u>Italy Non CC&G Cleared</u>						
Bank of Italy Auctions						
<u>Spain</u>						
BrokerTec Spain						
Euro MTS Spain						
BME Exchange						
<u>ATHEXClear Cleared</u>						
Athens Exchange				***		
*** note that in the case of Athexclear, this represents Total Trading Cap and not Total Margin Cap						
<u>Greece Non CCP Cleared</u>						
Euro MTS Greece						
MTS Greece						
BrokerTec Greece						
HDAT						
Primary Dealer						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
LCH Clearnet Ltd - Cleared						
<i>Equity Clear Markets:</i>						
BATS Europe						
Chi-X Europe						
Equiduct						
LSE-SETS						
LSE-IOB						
Oslo Bors						
Swiss Exchange- Blue Chips						
Swiss Exchange- Small & Mid Caps						
Traiana						
Turquoise						
<i>Repo Clear Markets:</i>						
RepoClear (Belgium)						
RepoClear (Portugal)						
LCH Clearnet SA -Cleared						
<i>Equities</i>						
Euronext Amsterdam N.V.						
Euronext Brussels S.A./N.V.						
Euronext Paris S.A.						
Euronext Lisbon S.A.						
Equiduct						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>Fixed Income:</u>						
Brokertec Belgium						
MTS Belgium						
BrokerTee France						
Euro MTS France						
MTS France						
MTS Italy						
MTS Spain						
<u>Eurex Clearing Cleared</u>						
Deutsche Börse Xetra						
Irish Stock Exchange						
<u>Germany Non CCP Cleared</u>						
Deutsche Börse Xetra						
<u>SIX X-Clear Cleared</u>						
<u>Equities:</u>						
BATS Europe						
Borse Berlin Equiduct (Germany)						
Borse Berlin Equiduct (Switzerland)						
Burgundy						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
Chi-X Europe						
Liquidnet						
LSE - SETS						
LSE - IOB						
NYSE Area Europe						
Smartpool						
Swiss Exchange- Blue Chips						
Swiss Exchange- Small & Mid Caps						
Traiana						
Turquoise						
UBS MTF						
<i>Fixed Income:</i>						
Swiss Exchange						
<u>Switzerland – Non CCP cleared</u>						
Scotch Schweiz AG						
SIX Swiss Exchange International Bonds						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Tick as applicable)	Additional Margin %
<u>KDPW CCP S.A. Cleared</u>						
<i>Equities</i>						
Warsaw Stock Exchange						
<i>Fixed Income</i>						
Bond Spot – RRP						
ATS WSE						
ATS BondSpot						
<u>EUROCCP NV Cleared</u>						
BATS Europe						
Burgundy						
Chi-X Europe						
Equiduct						
NASDAQ OMX Copenhagen						
NASDAQ OMX Helsinki						
NASDAQ OMX Stockholm						
NYSE Arca Europe						
SigmaX						
Smartpool						
Traiana						
Turquoise						

Trading Platform	Trading Member Firm ID	Gross Purchase Cap (EUR unless otherwise stated)	Net Transaction Cap (EUR unless otherwise stated)	Total Margin Cap (EUR unless otherwise stated)	GCM Service (Ticks as applicable)	Additional Margin %
UBS MTF						
<u>JASECH Cleared</u>						
<i>Equities:</i>						
Tel Aviv Stock Exchange						
<i>Fixed Income:</i>						
MTS Israel						
Tel Aviv Stock Exchange						
<u>KELER CCP Cleared</u>						
<i>Equities:</i>						
Budapest Stock Exchange						
MTS Hungary						
<u>South Africa (on CCP Cleared</u>						
Johannesburg Stock Exchange						
<u>Sweden Non CCP Cleared</u>						
NASDAQ OMX Stockholm						
<u>Czech Republic Non CCP Cleared</u>						
Prague Stock Exchange						
MTS Czech						

Part III - Supplemental Provisions
Goldman Sachs International (as Client)

The provisions set out below are required to effect Transactions on particular Systems, or in a particular country, and are supplementary to the terms of the Schedule. Terms not otherwise defined in this Master Annex have the meanings specified in the Schedule.

Germany

In relation to a Client entering into floor-traded Transactions in Germany, Transactions on Xetra, Transactions in German equities on multilateral trading facilities (the "German Transactions") and Derivative Transactions on Eurex Deutschland (together the "Relevant German Transactions") the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

- (a) The Client acknowledges that in relation to German Transactions, the Clearing Member has agreed with Clearstream Banking Aktiengesellschaft Frankfurt/Main (together with any successors, "CBF") to be subject to the *Positivverfahren*, i.e. that all trades communicated to the Clearing Member by *Lieferliste Online* ("LION") are "blocked" until the Clearing Member gives instructions via LION to CBF to unblock the trades.
- (b) It is expressly agreed that, if there is an Event of Default (for the avoidance of doubt, including but not limited to, a breach of a Gross Purchase Cap) or an Automatic Early Termination Event, the Clearing Member will be entitled, but not obliged, immediately and for good cause (*aus wichtigem Grund*) to revoke settlement bank arrangements with CBF in relation to the Client.

Greece

In relation to Clients transferring cash margin the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

The Client hereby acknowledges and agrees that it will pay Cash Margin Collateral to the Clearing Member on the basis of a title transfer collateral arrangement (παροχή χρηματοοικονομικής ασφάλειας με μεταβίβαση τίτλου – *metavivasi titlou*), as provided in Clause 6 of the Schedule and pursuant to Greek Law 3301/2004 implementing the Directive 2002/47/EC on financial collateral arrangements as in force.

Part III - Supplemental Provisions
Goldman Sachs International (as Client)

The provisions set out below are required to effect Transactions on particular Systems, or in a particular country, and are supplementary to the terms of the Schedule. Terms not otherwise defined in this Master Annex have the meanings specified in the Schedule.

Germany

In relation to a Client entering into floor-traded Transactions in Germany, Transactions on Xetra, Transactions in German equities on multilateral trading facilities (the "German Transactions") and Derivative Transactions on Eurex Deutschland (together the "Relevant German Transactions") the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

- (a) The Client acknowledges that in relation to German Transactions, the Clearing Member has agreed with Clearstream Banking Aktiengesellschaft Frankfurt/Main (together with any successors, "CBF") to be subject to the *Positivverfahren*, i.e. that all trades communicated to the Clearing Member by *Lieferliste Online* ("LION") are "blocked" until the Clearing Member gives instructions via LION to CBF to unblock the trades.
- (b) It is expressly agreed that, if there is an Event of Default (for the avoidance of doubt, including but not limited to, a breach of a Gross Purchase Cap) or an Automatic Early Termination Event, the Clearing Member will be entitled, but not obliged, immediately and for good cause (*aus wichtigem Grund*) to revoke settlement bank arrangements with CBF in relation to the Client.

Greece

In relation to Clients transferring cash margin the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

The Client hereby acknowledges and agrees that it will pay Cash Margin Collateral to the Clearing Member on the basis of a title transfer collateral arrangement (παροχή χρηματοοικονομικής ασφάλειας με μεταβίβαση τίτλου – *metavivasi titlou*), as provided in Clause 6 of the Schedule and pursuant to Greek Law 3301/2004 implementing the Directive 2002/47/EC on financial collateral arrangements as in force.

In relation to a Client entering into Transactions on Euro MTS Greece, MTS Greece, BrokerTec Greece, HDAT and the Primary Dealer the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

- (c) The Client hereby authorises the Custodian to notify the Bank of Greece ("BoG"), notwithstanding all other contractual provisions concerning the confidentiality of transactions, of any delivery event which would cause an insufficient balance in the Client's account.
- (d) In relation to any provisions contained in any Mandatory External Agreement entered into between the Parties and the System according to which in the event of inconsistencies between the Mandatory External Agreement and this Schedule the former shall prevail, the Parties agree that such undertaking shall have exclusive effect vis-à-vis the other market participants and the Bank of Greece as the manager of the System, but that any further restriction provided by the Schedule shall be binding between the Parties and any violation thereof shall give rise to contractual liability and/or right of indemnification.
- (e) On the Business Day (or at other dates or times specified by Written Notice to the Client) preceding a settlement date, the existing Securities balance will be checked by the Custodian to ensure that sufficient Securities are held to settle the relevant Transaction. If there are Missing Securities, the Custodian will:
 - (i) identify if there are other (off-exchange) instructions for purchases of Securities that equal the Missing Securities for the relevant settlement date, then,
 - (ii) if the Custodian cannot identify other (off exchange) instructions for purchases of Securities that equal the Missing Securities for the relevant settlement date, this constitutes evidence of short-selling. In such event, the Client shall be obliged immediately to provide the Custodian with evidence satisfactory to the Custodian of whether the Client will be able to deliver the Missing Securities on the relevant settlement date and to notify the Custodian whether the Client wishes that the BoG shall proceed with the optional "buy-sell back" auction procedure in respect of the Client's Missing Securities, under the terms and in the manner specified in the Operating Regulation for Monitoring Transactions in Securities in Book Entry Form, as in force from time to time (the "Auction Procedure"), which is the mechanism used in order to purchase Securities for an amount equal to the Missing Securities through the Electronic Secondary Securities Market. Notification has to be received by the Custodian by 16:00 p.m. Athens time of the same day.
- (f) If, on any settlement date and at the time specified in the Operating Regulation for Monitoring Transactions in Securities in Book Entry Form of the BoG, from time to time, the Client does not have a sufficient amount of Securities in its Accounts [opened and maintained with the Custodian in Greece to settle the Transaction], the Custodian, if it has received from the Client (in the manner agreed under paragraph c (ii) above) a notification to proceed with the

Auction Procedure, shall notify, by Written notice the BoG to proceed with the Auction Procedure in respect of the Missing Securities. The cost of obtaining the Missing Securities through an Auction Procedure shall be borne by the Client. If the Custodian has received a notification from the Client that the Client does not wish to participate in the optional Auction Procedure, or if the Custodian has not received in time any notification from the Client with regard to the Auction Procedure, the relevant Transactions shall be cancelled according to the Operating Regulation for Monitoring Transactions in Securities in Book Entry Form, as in force from time to time. All consequences and costs thereof shall be born exclusively by the Client.

- (g) If, after the completion of the Auction Procedure there are still Missing Securities, BoG may, but is not obliged to, proceed with any other transactions and/or procedures in order to procure the Securities necessary to cover the Client's position at any cost. The cost of any such transactions and/or procedures shall be borne by the Client.
- (h) If at 11:00 am Athens time on the settlement day the Client does not have sufficient funds in its account with the Custodian to settle Transactions, the Custodian may, but is not obliged to, enter into any transactions it deems necessary, with third parties or with itself, to procure the funds necessary to cover the Client's position at any cost; the cost of any such transactions will be born by the Client; the Custodian shall not be liable for any loss caused to the Client due to such transactions, unless such loss is caused by gross negligence or wilful misconduct of the Custodian.

Italy

1. MTS Italy non-GCM: Payment Participant Arrangements

In relation to a Client entering into Transactions executed on MTS Italy in circumstances where the general clearing member charged with clearing such Transactions in LCH.Clearnet SA is not an affiliate of the Bank, the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

- (i) With regards to the issue and settlement of margin payment instructions by Citibank International plc, Paris branch (the "Payment Participant"), which holds a central payment account with the Banque de France, the Client acknowledges that:

- (i) the Payment Participant has authorised LCH.Clearnet SA ("Clearnet") to issue debit/credit instructions to the Payment Participant's central payment account with the Banque de France;
- (ii) the Payment Agreement, entered into between the Payment Participant and the Client pursuant to a requirement imposed by Clearnet, defines the terms and conditions under which the Payment Participant accepts the debit/credit instructions to its central payment account. The Client acknowledges that the payment limit set out in Annex 2 of the Payment Agreement can be amended unilaterally by the Payment Participant notwithstanding the provisions of Article 4 of the Payment Agreement.
- (j) The Client authorises the Clearing Member to debit (or credit, as the case may be) the Cash Account with any amounts debited (or credited) to the central payment account of the Payment Participant. The Client hereby authorises the Clearing Member to access the Clearnet website of the Client to retrieve information relating to such debits or credits and agrees to provide separate access authority to employees of the Clearing Member approved for such purpose.

2. Borsa Italiana S.p.A. (the "Exchange") And Cassa Di Compensazione E Garanzia S.p.A ("CC&G") ("Borsa Italiana CC&G")

In relation to a Client entering into Transactions executed on Borsa Italiana CC&G the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

- (k) Pursuant to Article 12.1 of the Mandatory External Agreement, the Client and the Clearing Member agree that the Mandatory External Agreement shall be construed in accordance with English law and the parties hereto submit to the non-exclusive jurisdiction of the English courts, as set out in Clause 18 of the Schedule.
- (l) The Custodian rather than the Clearing Member shall act as settlement agent for the Client with respect to Transactions to be cleared through the CC&G.
- (m) The Client hereby appoints the Custodian as paying agent for the CC&G Margin (meaning any margin payable by the Client to the Clearing Member in relation to Transactions executed on certain market segments of the Exchange by the Client and to be cleared by the Clearing Member via CC&G under the applicable Rules) and the Custodian accepts such appointment.
- (n) If the Client is declared market insolvent by Consob, this shall be an Automatic Early Termination Event.

(e) For the avoidance of doubt, Clause 6.13 of the Schedule shall be read as including any costs, expenses, penalties, claims, demands and liabilities incurred by the Custodian or the clearing Member vis-à-vis the CC&G.

(p) The Client's authorised persons for the purposes of Article 7.1 of the Mandatory External Agreement are specified in below:

Authorised person (name)	Title	Telephone No.	Fax No.	Email
ISABELLE HENNEBELLE	MS	0207-051- 0972		gs-brmi-ln@gs.com

3. **IDEM**

In relation to a Client entering into Transactions executed on IDEM, the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

- (q) Termination of the Mandatory External Agreement shall not cause the termination of the Schedule.
- (r) [Upon delivery or receipt by the Custodian of the advance notice of voluntary termination provided for in Clause 11 of the Agreement, the [settlement agent], also in the name and on behalf of the Client, shall notify the Termination Date (as determined in the above-mentioned advance notice) of the [Outline Agreement] to Borsa Italiana S.p.A. and the CC&G by fax followed by registered mail, return receipt requested.]

4. **BANK OF ITALY AUCTIONS**

In relation to a Client entering into Transactions in Italian government bonds allotted by Bank of Italy to the Client in the auctions that take place at Bank of Italy, Monetary and Exchange Policy Department, Public Debt Division and settled through the Italian clearing and settlement system Express II managed by Monte Titoli, the following supplemental provisions will apply and be deemed to be incorporated into the Schedule:

[Upon the occurrence of an Automatic Early Termination Event, Transactions will not have been inserted in the System as defined in Article 2 of Legislative Decree April 12, 2001, No. 210 and the Bank of Italy Regulation issued in agreement with Consob on September 30, 2002.]

Poland

In relation to a Client entering into Transactions executed on the Warsaw Stock Exchange and/or Regulowany Rynek Pozagieldowy (RRP), the Poland Specific Annex to the Exchange Traded Services Schedule must be completed and those provisions will, to the extent they are relevant, apply and be deemed to be incorporated into the Schedule.

BME Clearing

Article 9 of the BME Clearing Rule Book and Article 6 of the Equity Segment General Conditions expressly require that, in those scenarios where the Clearing Member acts as General Clearing Member, the agreement to be entered into by the latter with its clients includes specific provisions set out in the Rule Book and in the Equity Segment General Conditions.

The sections below include such provisions.

Except for the terms "Clearing Member" and "Client" which shall have the meaning ascribed to them in the Schedule, capitalised terms appearing and not otherwise defined in this BME Clearing Supplemental Provisions shall have the meaning ascribed to them in the Rule Book and in the Equity Segment General Conditions. In the event of any inconsistency between the Schedule and this BME Clearing Supplemental Provisions, the latter shall govern.

Type of account opened by the Client

The Client hereby represents that it has been informed of the available segregation models (and the risks associated thereto) and has opted for and requested the opening of the following type of account:

Omnibus segregated account

Undertaking of the Client

The Client hereby undertakes to have knowledge of and comply with the Rule Book, the General Conditions, the Circulars and the Instructions approved by BME Clearing, as amended from time to time. The Client herein expressly accepts and undertakes to be subject, in relation with its activities as Client in the CCP, exclusively to the above mentioned rules and regulations and applicable Spanish legislation (including, without limitation, the Spanish Securities Markets Law and the rules of conduct provided for therein).

PART IV: EMIR ANNEX

Goldman Sachs International (as Client) *

This EMIR Annex has been created in accordance with EMIR articles 39.5 and 39.6 as the Clearing Member is required to obtain written confirmation from the Client of the account structure to be adopted and the way that excess margin should be treated. The Clearing Member's Disclosure Document can be found at http://www.citibank.com/transactionalservices/home-securities_sves/ditcustody.jsp

Central Counterparty	OSA Account** Required	ISA Account** Required	Location for Excess Margin***
Athex Clear			
BME Clearing	✓		
CC&G	✓		
CCP.A			
EuroCCP NV			
Eurex Clearing			
KDPW_CCP	✓		
Keler CCP	✓		
LCH Clearnet Limited			
LCH Clearnet SA			
Oslo Clearing ASA			
SIX Xclear			

⁴In circumstances where the Client is acting as agent on behalf of various underlying Customers as provided under Clause 14 (Disclosed Principal Election), a separate version of the EMIR Annex will need to be completed in respect of each such underlying customer

^{**} OSA refers to Client Omnibus Segregated Accounts and ISA refers to Client Individual Segregated Accounts. For further information on the different account structures please refer to Clearing Member Disclosure Document as referred to above.

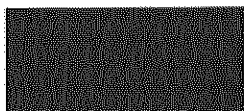
^{***}Only applicable where an ISA account structure is selected. Where an ISA account structure is used and the Client uses multiple CCPs, the Client may elect for Additional Margin to be consolidated and deposited at one CCP, or deposited at multiple CCPs on a pro rata basis.

Algo Engineering (as Customer)

Central Counterparty	OSA Account** Required	ISA Account** Required	Location for Excess Margin***
Athex Clear			
BME Clearing			
CC&G	✓		
CCP.A			
EuroCCP NV			
Eurex Clearing			
KDPW CCP			
Keler CCP			
LCH Clearnet Limited			
LCH Clearnet SA			
Oslo Clearing ASA			
SIX Xclear			

This Master Annex is effective as of 14th June 2016 and supersedes any previous Master Annex.

SIGNED on behalf of)
CITIBANK, N.A., London)
Branch)



Duly Authorised Representative
name: **RYAN MARSH**
title: **AUTHORISED SIGNATORY**
Direct

SIGNED on behalf of)
THE CUSTODIAN)

) Refer to Execution Addendum

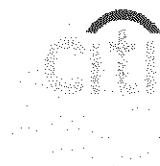
SIGNED on behalf of)
GOLDMAN SACHS)
INTERNATIONAL)

) Refer to Execution Addendum

SIGNED on behalf of)
THE CLEARING MEMBER)

) Refer to Execution Addendum

EXECUTION ADDENDUM TO EXCHANGE TRADED SERVICES SCHEDULE,
MASTER ANNEX AND EMEA ANNEX



Client: **Goldman Sachs International**

By executing this Addendum, the Client, each Custodian and each Clearing Member as applicable agree to be bound to the terms of the Exchange Traded Services Schedule, the Master Annex and the EMEA Annex dated 14th June 2016

PART I – CUSTODIAN SELECTION

Custodian Selection Name and Address	Client Signature	Custodian Signature
Australia Citigroup Pty. Limited Level 16, 120 Collins Street Melbourne, VIC. 3000, Australia	_____ Name, Title & Date	_____ Name, Title & Date+++
Austria Citibank, N.A., Milan Branch (*) Via dei Mercanti, 12 20121 Milan Italy	_____ Name, Title & Date	_____ Name, Title & Date
Belgium Citibank Europe Plc, London Citigroup Centre, Canada Square Canary Wharf, London E14 5LB	_____ Name, Title & Date	_____ Name, Title & Date
Brazil Citibank, N.A., Brazilian Branch Avenida Paulista 1111 São Paulo, S.P. Brazil 01311-920	_____ Name, Title & Date	_____ Name, Title & Date
Canada Citibank Canada, Citibank Place 123 Front Street West Toronto, Ontario M5J 2M3	_____ Name, Title & Date	_____ Name, Title & Date
Chile Citibank, N.A., New York Offices 388 Greenwich Street, New York, NY 10013 United States of America	_____ Name, Title & Date	_____ Name, Title & Date
Colombia Cititrust Colombia S.A. Sociedad Fiduciaria Carrera 9A No. 99-02 Piso 3 Santa Fe de Bogotá, Colombia	_____ Name, Title & Date	_____ Name, Title & Date

Each Custodian's signature is by Citibank, N.A., New York Offices, London Branch, Hong Kong Branch or Singapore Branch as authorized signer except for a Custodian identified by (*) on this Execution Addendum, whose signature is by an authorized signer of such Custodian.



EXECUTION ADDENDUM TO EXCHANGE TRADED SERVICES SCHEDULE,
MASTER ANNEX AND EMEA ANNEX

Client: Goldman Sachs International

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Czech Republic

Citibank Europe plc, organizační složka
Bucharova 2641/14
158 02 Prague 5, Stodůlky, Czech Republic
acting on behalf of Citibank Europe plc
1 North Wall Quay, Dublin 1, Ireland

Name, Title & Date

Name, Title & Date

RYAN MARSH

AUTHORISED SIGNATORY

France

Citibank Europe Plc, London
Citigroup Centre
Canada Square, Canary Wharf
London E14 5LB

Name, Title & Date

Name, Title & Date

Germany

Citigroup Global Markets Deutschland AG (*)
Frankfurter Welle, Reuterweg 16
60323 Frankfurt, Germany

Name, Title & Date

Name, Title & Date

David Polak

Sven Huxhorn

Greece

Citibank Europe Plc, Greece Branch
Greece Branch
Othonos 8
Athens, 10557, Greece

Name, Title & Date

Name, Title & Date

RYAN MARSH

AUTHORISED SIGNATORY

Hong Kong

Citibank, N.A., Hong Kong Branch
Citibank Tower
Citibank Plaza
3 Garden Road, Central, Hong Kong

Name, Title & Date

Name, Title & Date

Hungary

Citibank Europe plc, Hungarian Branch Office
Bank Center, Citibank Tower,
Szabadság tér 7,
H-1052, Budapest, Hungary
on behalf of Citibank Europe plc
1 North Wall Quay, Dublin 1, Ireland

Name, Title & Date

Name, Title & Date

Ireland

Citibank, N.A., London Branch
Citigroup Centre, Canary Wharf,
London E14 5LB, United Kingdom

Name, Title & Date

Name, Title & Date

Alex Todd
Director

Each Custodian's signature is by Citibank, N.A., New York Offices, London Branch, Hong Kong Branch or Singapore Branch as authorized signer except for a Custodian identified by (*) on this Execution Addendum, whose signature is by an authorized signer of such Custodian



EXECUTION ADDENDUM TO EXCHANGE TRADED SERVICES SCHEDULE,
MASTER ANNEX AND EMEA ANNEX

Client: Goldman Sachs International

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Israel

Citibank, N.A., Israel Branch
Platinum Building, 12th Floor,
21 Ha'arbaa Street,
Tel-Aviv, 64739, Israel

Name, Title & Date

[Redacted Signature]

Name, Title & Date

[Redacted Signature]

Franco Carulli
Director
Citibank N.A.

Italy

Citibank, N.A., Milan Branch (*)
Via dei Mercanti, 12
20121 Milan
Italy

Name, Title & Date

Name, Title & Date

Japan

Citibank Japan Ltd. (*)
5-1, Marunouchi 1-chome,
Chiyoda-ku, Tokyo
Japan

Name, Title & Date

(*) Name, Title & Date

Mexico

Banco Nacional de México, S.A. (*)
Isabel La Católica No. 44, 1er Piso,
Col. Centro Histórico,
06000 México, D.F.

Name, Title & Date

[Redacted Signature]

Name, Title & Date

[Redacted Signature]

RYAN MARSH
AUTHORISED SIGNATOR

Netherlands

Citibank Europe Plc, London
Citigroup Centre, Canada Square
Canary Wharf, London E14 5LB

Name, Title & Date

Name, Title & Date

Nigeria

Citibank Nigeria Limited
27, Kofo Abayomi Street
Victoria Island,
Lagos, Nigeria

Name, Title & Date

[Redacted Signature]

Name, Title & Date

DYREKTOR
Biura Współpracy z Klientami
Departament Powiernictwa i Zarządów
Joanna Krzystanek

Poland

Bank Handlowy w Warszawie SA (*)
Ul. Senatorska 16
00-923 Warsaw, Poland

Name, Title & Date

[Redacted Signature]

Name, Title & Date

[Redacted Signature]

RYAN MARSH
AUTHORISED SIGNATOR

Portugal

Citibank Europe Plc, Sucursal em Portugal
Rua Barata Salgueiro 30 – 4th Floor
1269-056 Lisbon

Name, Title & Date

Name, Title & Date

Each Custodian's signature is by Citibank, N.A., New York Offices, London Branch, Hong Kong Branch or Singapore Branch as authorized signer except for a Custodian identified by (*) on this Execution Addendum, whose signature is by an authorized signer of such Custodian.



**EXECUTION ADDENDUM TO EXCHANGE TRADED SERVICES SCHEDULE,
MASTER ANNEX AND EMEA ANNEX**

Client: Goldman Sachs International

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Singapore

Citibank, N.A., Singapore Branch
8 Marina View
#21-00 Asia Square Tower 1
Singapore 018960

Name, Title & Date

Name, Title & Date

South Africa

Citibank, N.A. South Africa
145 West Street
Sandown, Sandton
2196, South Africa

Name, Title & Date

Name, Title & Date

Spain

Citibank Europe Plc, Sucursal en España
José Ortega Y Gasset, 29
28006 Madrid, Spain

Name, Title & Date

Name, Title & Date

Sweden

Citibank Europe Plc (England), Sweden Branch
Box 1422,
SE 111 84 Stockholm, Sweden

Name, Title & Date

Name, Title & Date

Switzerland

Citibank, N.A., London Branch
Citigroup Centre, Canary Wharf,
London E14 5LB, United Kingdom

Name, Title & Date

Name, Title & Date

Turkey

Citibank A.Ş.
Buyukdere Caddesi 100
80280 Esentepe, Istanbul, Turkey

Name, Title & Date

Name, Title & Date

**Alex Todd
Director**

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EXECUTION ADDENDUM TO EXCHANGE TRADED SERVICES SCHEDULE,
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PART II - CLEARING MEMBER SELECTION

In relation to the provision of services under the ETSS the following entities will be acting as Clearing Member to the Client¹.

	Client Signature	Clearing Member Signature
ASX Clear Citigroup Securities Clearing Australia LtdGPO Box 764, Melbourne, Vic., 3001	_____ Name, Title & Date	_____ Name, Title & Date
AthexClear Citibank Europe Plc., Greece Branch Othonos 8 Athens, 10557, Greece	_____ Name, Title & Date	_____ Name, Title & Date
BME Clearing Citibank Europe Plc 1 North Wall Quay Dublin 1, Ireland	_____ Name, Title & Date	_____ Name, Title & Date
Canadian Depository for Securities Citibank CanadaCitibank Place 123 Front Street West Toronto, Ontario M5J 2M3	_____ Name, Title & Date	_____ Name, Title & Date
CC&G Citibank Europe Plc 1 North Wall Quay Dublin 1, Ireland	_____ Name, Title & Date	_____ Name, Title & Date
CCP.A Citibank Europe Plc 1 North Wall Quay Dublin 1, Ireland	_____ Name, Title & Date	_____ Name, Title & Date]

Alex Todd
Director

¹ Each Custodian's signature is by Citibank, N.A., New York Offices, London Branch, Hong Kong Branch or Singapore Branch as authorized signer, except for a Custodian identified by (*) on this Execution Addendum, whose signature is by an authorized signer of such Custodian.



EXECUTION ADDENDUM TO EXCHANGE TRADED SERVICES SCHEDULE,
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CDP

Citibank, N.A., Singapore Branch
8 Marina View
#21-00 Asia Square Tower 1
Singapore 018960

Name, Title & Date

Name, Title & Date]

Eurex Clearing

Citibank Europe Plc
1 North Wall Quay
Dublin 1, Ireland

Name, Title & Date

Name, Title & Date]

EuroCCP NV

Citibank Europe Plc
1 North Wall Quay
Dublin 1, Ireland

Name, Title & Date

Name, Title & Date]

Hong Kong Securities Clearing Company Limited

Citibank, N.A., Hong Kong Branch
50th Floor Citibank Tower, Citibank Plaza, 3
Garden Road, Central, Hong Kong

Name, Title & Date

Name, Title & Date]

Japan Commodity Clearing House (JCCH)

Citibank Japan Ltd.
5-1, Marunouchi 1-chome,
Chiyoda-ku, Tokyo
Japan

Name, Title & Date

Name, Title & Date]

Japan Securities Clearing Corp (JSCC)

Citibank Japan Ltd.
5-1, Marunouchi 1-chome,
Chiyoda-ku, Tokyo
Japan

Name, Title & Date

Name, Title & Date]

JASDEC DVP Clearing Co. – JDCC

Citibank Japan Ltd.
5-1, Marunouchi 1-chome,
Chiyoda-ku, Tokyo
Japan

Name, Title & Date

Name, Title & Date]

KDPW CCP

Bank Handlowy w Warszawie S.A.
Ul. Senatorska 16
00-923 Warsaw, Poland

Name, Title & Date

Name, Title & Date]

Alex Todd
Director

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Keler CCP

Citibank Europe plc Hungarian Branch Office
Bank Center, Citibank Tower,
Szabadság tér 7,
H-1052, Budapest, Hungary

Name, Title & Date

Name, Title & Date]

LCH Clearnet Limited

Citibank Europe Plc
1 North Wall Quay
Dublin 1, Ireland

Name, Title & Date

Name, Title & Date]

LCH Clearnet SA

Citibank Europe Plc
1 North Wall Quay
Dublin 1, Ireland

Name, Title & Date

Name, Title & Date]

TASECH

Citibank, N.A., Israel Branch
Platinum Building, 12th Floor,
21 Ha'arboa Street,
Tel-Aviv, 64739, Israel

Name, Title & Date

Name, Title & Date]

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