EUROPEAN CENTRAL BANK

EUROSYSTEM

ECB-PUBLIC

AGREEMENT ON NET FINANCIAL ASSETS

of 19 December 2022

BETWEEN

(1) Nationale Bank van België/Banque Nationale de Belgique

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1000 Brussels

Belgium

Deutsche Bundesbank

Wilhelm-Epstein-Strasse 14

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81325 Bratislava

Slovakia

Suomen Pankki – Finlands Bank

Snellmaninaukio

00101 Helsinki

Finland

(hereinafter together the ‘NCBs’ and individually an ‘NCB’),

and

(2) the European Central Bank (ECB)

The Parties to this Agreement are referred to collectively as the ‘Parties’ or individually as a ‘Party’.

Whereas:

(1) The euro area banking sector liquidity level should be set at an appropriate amount to ensure the efficient implementation of monetary policy. The Governing Council is competent to determine this level.

(2) All NCBs should be entitled to hold net financial assets up to their relative capital key share of projected Eurosystem maximum net financial assets, if no other restrictions apply. If some NCBs decide to hold less net financial assets than their entitlement, parts of their unused leeway may be temporarily and proportionally allocated to NCBs desiring to hold more net financial assets such that the interests of the leeway providing NCB and of the relevant leeway receiving NCB are taken into account.

(3) The aim of this Agreement is to ensure that the Parties' balance sheet management is consistent with a smooth and efficient implementation of Eurosystem monetary policy in general and with the restrictions derived from the preservation of the liquidity level determined by the Governing Council in particular. This Agreement does not aim to harmonise NCBs' balances sheets or limit NCBs in their operations or constrain NCBs' financial independence beyond what can be justified by monetary policy considerations.

(4) NCBs should be committed to reducing their net financial assets to the extent necessary to ensure the implementation of the single monetary policy and thereby protecting the objectives of the European System of Central Banks (ESCB). Unilateral termination by any of the Parties would be against the spirit of this Agreement.

(5) In achieving the aims envisaged by this Agreement, the Parties should be flexible, operate on the basis of mutual trust and observe the long-term goals that this Agreement seeks to capture.

(6) NCBs' foreign exchange and gold reserves are included when calculating their net financial assets under this Agreement and their status as official foreign reserves under Article 127(2) of the Treaty on the Functioning of the European Union remains unaffected. Furthermore, Article 30.4 and Article 31 of the Statute of the European System of Central Banks and of the European Central Bank (hereinafter the 'Statute of the ESCB') continue to apply.

(7) This Agreement is not a substitute for a monetary policy tool.

(8) The primacy of the single monetary policy, which is the exclusive competence of the Governing Council, remains unaffected by this Agreement.

(9) If this Agreement implies asset sales, the Governing Council may consider implementing monetary policy measures for a limited period of time, taking into account the prevailing market conditions, including the possible implications of large sales of assets in times of turbulence.

(10) The Eurosystem liquidity level set by the Governing Council may be taken as the basis for the calibration exercises. Alternatively, a potential conflict between a monetary policy objective and this Agreement could be addressed by the Governing Council in accordance with Article 14.4 of the Statute of the ESCB to the extent that it assesses that the Parties' compliance with the terms of this Agreement interferes with the objectives and tasks of the ESCB.

(11) This Agreement does not exempt the ECB or NCBs from the obligation to comply with Articles 123 and 124 of the Treaty or with other related provisions decided by the Governing Council,

THE PARTIES HAVE AGREED AS FOLLOWS:

Article 1

Definitions

1. For the purposes of this Agreement, the following definitions shall have the following meanings:

(a) 'adjusted expected net financial assets' are only applicable to unconstrained NCBs and means the minimum of expected net financial assets and the most recent calibration's ceilings adjusted for changes in net financial asset entitlements compared to the most recent calibration, as further defined in Part C, point (b), of Annex II;

(b) 'approximating proportionality as closely as possible' means that the distribution of projected Eurosystem maximum net financial assets among NCBs minimises the deviation from a distribution according to relative capital key shares given certain restrictions, as further defined in Annex II;

(c) 'calibration' means a calculation of NCBs' net financial asset entitlements and ceilings that is conducted periodically or on an ad hoc basis on the basis of the method defined in Article 2 of this Agreement, taking into account decisions of the Governing Council on changes to relevant monetary policy parameters as well as Eurosystem balance sheet data as specified in Article 4 of this Agreement;

(d) 'ELA Agreement' means the Agreement on emergency liquidity assistance, as approved by the Governing Council and published on the ECB's website at www.ecb.europa.eu;

(e) 'expected net financial assets' is a prudent, best-effort projection of the average level of net financial assets an NCB expects to hold in the subsequent year without taking into account any restrictions that may result from this Agreement;

(f) 'Eurosystem' means the ECB and the NCBs;

(g) 'Eurosystem minimum liquidity deficit' means the sum of the minimum level of Eurosystem main refinancing operations and the Eurosystem regular longer-term refinancing operations set by the Governing Council based on monetary policy considerations;

(h) 'liquidity deficit' means the part of the euro area banking sector's liquidity needs that is covered by *net* monetary policy lending, except Eurosystem liquidity-providing structural operations, as further defined in the context of the Eurosystem harmonised balance sheet in Annex I;

(i) 'liquidity surplus' means a negative level of the liquidity deficit and is further defined in the context of the Eurosystem harmonised balance sheet in Annex I;

(j) ‘Eurosystem maximum liquidity surplus’ means a monetary policy parameter to be set by the Governing Council if monetary policy operations are conducted with the explicit intention to actively create a liquidity surplus;

(k) ‘minimum level of Eurosystem main refinancing operations’ means the minimum amount of main refinancing operations required to efficiently steer short-term interest rates to be set by the Governing Council;

(l) ‘net financial assets’ or ‘NFA’ means the net position of all balance sheet items that are not part of the liquidity deficit (surplus), liquidity-providing structural reverse operations, outright portfolios held for monetary policy purposes, euro banknotes, securities lending activities with cash collateral and reserve requirements, as further defined in Annex I;

(m) ‘net financial asset ceiling’ or ‘ceiling’ means the maximum net financial assets an NCB may hold on average in a given year as determined in the second step of the calibration described in Article 2(2), point (b), of this Agreement, and in Part C of Annex II;

(n) ‘net financial asset entitlement’ or ‘entitlement’ means the maximum net financial assets that NCBs are entitled to hold as derived in the first step of the calibration described in Article 2(2), point (a), of this Agreement, and in Part B of Annex II;

(o) ‘projected Eurosystem maximum net financial assets’ means the term as defined in Part B of Annex II;

(p) ‘unconstrained NCB’ means an NCB for which its respective entitlement exceeds its level of expected net financial assets;

(q) ‘unused leeway’ is defined as the positive difference between the entitlement and adjusted expected net financial assets plus the protection add-on;

(r) ‘proportionality’ means a situation in which the share of each NCB in projected Eurosystem maximum net financial assets corresponds to its relative capital key share;

(s) ‘protection add-on’ is only applicable to unconstrained NCBs and means a fixed nominal amount plus a fraction of the difference between the entitlement and the adjusted expected net financial assets;

(t) ‘Eurosystem regular longer-term refinancing operations’ means the total amount of Eurosystem refinancing operations with a maturity longer than one week and normally three months, which is predetermined by the Governing Council for a specified period of time based on monetary policy considerations;

(u) ‘relative capital key share’ means a percentage share of an NCB in the total amount of subscribed ECB capital held by the NCBs which are Parties to this Agreement, where the sum of relative capital key shares is 100 %;

(v) ‘securities lending activities’ means the lending of the securities purchased by the Eurosystem for the monetary policy portfolios;

(w) ‘waived assets’ means either specific types of assets or a level of net financial assets which are further defined in Article 3.

2. The Eurosystem total for a given quantity means the sum of the relevant quantity for all NCBs and the ECB.

3. The Annexes form an integral part of this Agreement and any Article that contains a reference to an Annex shall be read as if all or such part of the Annex which is referenced was set out in the body of the Article itself. Any reference to this Agreement shall include its Annexes.

Article 2

Ensuring consistency of net financial asset holdings with monetary policy implementation

1. NCBs undertake to act in accordance with the obligation that, during a given year, the average value of their net financial assets shall not exceed their net financial asset ceilings for that year.

2. In accordance with and as further described in parts B and C of Annex II, the calibration of individual net financial asset ceilings follows a two-step approach:

   (a) the first step determines the entitlements of NCBs by distributing the projected Eurosystem maximum net financial assets such as to approximate proportionality as closely as possible while each NCB's entitlement is at least as large as its waived assets (as further explained in Annex II);

   (b) the second step determines the ceilings of NCBs by redistributing unused leeway such that these ceilings approximate proportionality as closely as possible while satisfying the following restrictions: (i) the sum of all ceilings equals projected Eurosystem maximum net financial assets, (ii) the ceilings of unconstrained NCBs are equal to their adjusted expected net financial assets plus the protection add-on, but not larger than their entitlement (iii) the ceilings of all other NCBs are at least as large as their entitlements, but do not exceed their expected net financial assets (as further explained in Annex II).

3. For the below mentioned cases, the calibration mechanism is adjusted as follows:

   (a) If the sum of unused leeway exceeds the sum of net financial assets that NCBs desire to hold in excess of their entitlements, the part of unused leeway that is not allocated to such NCBs shall be allocated to unconstrained NCBs in the manner envisaged in Part C of Annex II.

   (b) If on the basis of prudent assumptions justified deviations according to Article 5(3) (including the specifications provided in Article 5(4) are expected to occur in the subsequent year, these deviations shall be taken into account in the manner envisaged in Part C of Annex II.

Article 3

Waivers

1. Asset-specific waiver

   As holdings of certain assets cannot fall below a certain minimum level, a waiver shall be applied protecting the value of each of these assets net of the corresponding liability positions. (For gold, the corresponding liability is the part of revaluation account in the third stage of EMU that relate to an

NCB's gold holdings.) These cases shall include if assets cannot be adjusted due to any of the following:

(a) external restrictions including, in the case of foreign reserves, the fact that a certain amount has to be maintained for institutional reasons;

(b) possible constraints meaning that an NCB may not freely dispose of its assets due to their nature, including, in the case of fixed assets, inventories; or

(c) limitations on the extent to which NCBs may sell claims on government.

NCBs may, on a voluntary basis, submit input for the purpose of calculating an NCB's asset-specific waiver by using the template provided in Annex IV. In the event that no relevant request or data is submitted by an NCB, its asset-specific waiver for the respective calibration will be zero.

2. Historical waiver

Net financial assets shall not be adjusted below the historical level as specified for each NCB in Annex III. For NCBs of Member States that joined the euro area after this Agreement took effect, the corresponding figures are calculated in accordance with Article 6(3).

3. Dynamic waiver

NCBs that comply with the following two conditions may rely upon a dynamic waiver:

(i) the NCB has a relative capital key share below 1 % as of 1 January 2014; and

(ii) a comparison between the amount of maximum net financial assets that the NCB was permitted to hold in the year 2014 in accordance with the Agreement on net financial assets of 16 December 2009 and the amount of the NCB's net financial asset entitlement determined in accordance with this Agreement for the year 2015 results in a decrease of greater than 20 %.

For these NCBs, a dynamic waiver ensures that net financial assets shall not be adjusted below a fixed level calculated as follows: the NCB's historical waiver as specified in Annex III to this Agreement on net financial assets multiplied by the larger of either 1 (one) or the level of projected Eurosystem maximum net financial assets for the year of the calibration divided by EUR 960 billion.

4. Waived assets as described in paragraphs 1, 2, and 3 shall be excluded from any restriction that may result from this Agreement. For the purpose of Article 2(2), point (a), the entitlement of an NCB shall be at least as large as the highest of the amounts of waived assets that have been calculated in accordance with paragraphs 1, 2, and 3 above.

5. In addition, should NCBs be obliged to reduce net financial assets holdings because of restrictions derived from this Agreement, such reductions shall also not apply to assets that are held against their own funds or pension funds liabilities. For the purposes of this Agreement, own funds shall comprise all of the following: (a) paid-up capital; (b) legal or statutory reserves generated from retained profits and retained earnings carried forward; (c) other general reserves generated from retained profits; (d) general provisions made against non-specific risks; and (e) revaluation accounts.

Article 4

Calibration

1. In the fourth quarter of the year that marks three years after the most recent calibration, the Market Operations Committee (MOC) shall prepare a calibration as the basis for the implementation of this Agreement in the subsequent year. This periodic calibration shall take into account all of the following:

   (a) the prior decision of the Governing Council on the appropriate Eurosystem's liquidity level;

   (b) the current year's average third quarter level of Eurosystem euro banknotes, Eurosystem reserve requirements, Eurosystem liquidity-providing structural reverse operations, Eurosystem outright portfolios held for monetary policy purposes net of redemptions in held-to-maturity portfolios expected for the subsequent year and net financial asset holdings of the ECB adjusted for the effect of Eurosystem liquidity providing operations denominated in foreign currency;

   (c) any decision of the Governing Council on planned changes to the volume of Eurosystem liquidity-providing structural reverse operations and Eurosystem outright portfolios held for monetary policy purposes for the subsequent year;

   (d) any decision of the Governing Council to reduce the level of the reserve ratio to become effective before the end of the subsequent year;

   (e) liquidity surpluses of new euro area Member States expected for the following year, based on the information provided by the NCB concerned if the NCB's net financial entitlement and ceiling are set pursuant to Article 6(2), point (a);

   (f) the expected net financial assets of each NCB for the subsequent year;

   (g) the adjusted expected net financial assets of unconstrained NCBs;

   (h) the average figures for the third quarter of the current year for waived assets according to Article 3(1) as specified in Annex IV and relevant supplementary information as well as waived assets according to Article 3(2) and (3); and

   (i) the amount of expected justified deviations from Eurosystem maximum net financial assets as specified in Article 5(3), including justified deviations resulting from transactions covered by Article 5(4) as reported by the relevant NCBs.

2. The periodic calibration note shall be accompanied by a forecast of the actual liquidity level in the third quarter of the subsequent year as well as a series of tables containing all of the following:

   (a) each NCB's net financial asset entitlements and ceilings for the following year;

   (b) the average amount of net financial assets that each NCB expects to hold in the following year, the amount of waived net financial assets (using the template provided in Annex III) and expected justified deviations for each NCB, as reported by the relevant NCB;

   (c) the assumptions underlying the calibration concerning the parameters mentioned above in paragraph 1, subparagraphs (c), (d), (e) and (h).

3. In addition to the periodic calibrations to be conducted in accordance with paragraphs 1 and 2 above, ad hoc calibrations shall be conducted in the following cases:

   (a) under exceptional circumstances, and if requested by the Governing Council, MOC shall undertake an ad hoc calibration, taking into account any changes to the monetary policy parameters decided by the Governing Council prior to that ad hoc calibration. Changes to the monetary policy parameters may include the initiation of monetary policy operations with the explicit intention to actively create/eliminate a liquidity surplus;

   (b) upon demand of a Party, as follows: in the third quarter of a year that does not mark three years after the most recent calibration, the ECB shall submit a presentation to the MOC on whether a calibration should be prepared that year to reset NCBs' NFA ceilings and entitlements. This presentation shall take into account this Agreement's objective of ensuring that the Parties' balance sheet management is consistent with a smooth and efficient implementation of Eurosystem monetary policy in general and with the restrictions derived from the preservation of the liquidity level determined by the Governing Council in particular, and shall also avoid limiting NCBs in their operations or constraining NCBs' financial independence beyond what can be justified by monetary policy considerations. Following the presentation, any Party providing proper justification may demand that an ad hoc interim calibration be conducted in the subsequent fourth quarter, thereby taking effect in the subsequent year;

   (c) in the quarter before a new Party is anticipated to enter into this Agreement, in accordance with Article 6(1).

   (d) in the event that a review of this Agreement in accordance with Article 7(2) leads to this Agreement being amended so that calibrations conducted under this Agreement would result in materially different NCB ceilings and entitlements.

4. Where an ad hoc calibration is conducted in accordance with any of the cases set out in paragraph 3, points (a) to (d), this shall constitute the most recent calibration for the purposes of paragraph 1 and the next periodic calibration shall take place in the fourth quarter of the year that marks three years after that ad hoc calibration.

Article 5

Yearly assessment

1. In the first quarter of each year, the ECB shall prepare an assessment of the implementation of this Agreement in the previous year and submit it after discussion in the MOC to the ECB's decision-making bodies, together with the MOC's observations.

2. Compliance with this Agreement shall be assessed by comparing the value of NCBs' average net financial asset holdings over a given year with NCBs' ceilings for that year. The effect of Eurosystem liquidity providing operations denominated in foreign currency in respect of an NCB's average net financial asset holdings shall be taken into account and adjusted accordingly.

3. Developments in relation to net financial assets which are not directly under the control of an NCB may justify a temporary deviation from its net financial asset ceiling. With the exception of those cases mentioned in Article 5(4), the decision as to whether a temporary deviation is covered by the exemption laid down in this paragraph 3 requires the consent of all Parties to this Agreement.

4. The following situations shall qualify as a justified temporary deviation from an NCB's net financial asset ceiling, according to Article 5(3):

   (a) If an NCB exceeds its ceiling due to additional IMF claims in the year in which such additional IMF claims arose, a deviation is justified subject to the obligation to bring its net financial assets back in line with its ceiling in the following year or, in exceptional cases, following a clearly specified time schedule agreed upon by all Parties;

   (b) If an NCB exceeds its ceiling due to the provision of emergency liquidity assistance (ELA) as defined in the ELA Agreement, a deviation is justified up to the amount of ELA provided. The ELA providing NCB shall act to limit the deviation to the extent possible;

   (c) If an NCB exceeds its ceiling due to non-redeemed Eurosystem loans, a deviation is justified up to the outstanding amount of these loans and does not affect an NCB's ability to expand net financial assets; and

   (d) If an NCB exceeds its ceiling due to unforeseen balance sheet developments following the temporary provision of unused leeway to other NCBs, a deviation is justified provided that its NFA holdings do not exceed its entitlement.

Article 6

New euro area Member States

1. NCBs of Member States whose currency becomes the euro shall be invited to enter into this Agreement.

2. An NCB which joins the Eurosystem may choose whether its inaugural net financial asset entitlement and ceiling shall be:

   (a) equal to its net financial assets, excluding banknotes denominated in national currencies, any outstanding monetary policy operations initiated by the NCB before joining the Eurosystem and any temporary effects resulting from frontloading of euro banknotes, recorded on the first calendar day of the year in which it joins the Eurosystem; or

   (b) determined in the ad hoc calibration pursuant to Article 4(3), point (c).

   The NFA entitlement and ceiling determined under point (a) above shall remain in place until the next calibration is conducted in accordance with Article 4.

   For the purpose of the determination under point (b), no historical waiver shall be applicable for that NCB.

3. For an NCB which joins the euro area, the waiver according to Article 3(2), where applicable, is determined as a certain percentage of its net financial assets, excluding banknotes denominated in national currencies, any outstanding monetary policy operations initiated by the NCB before joining the Eurosystem and any temporary effects resulting from frontloading of euro banknotes, recorded on the first calendar day of the year in which it joins the Eurosystem. This percentage is: 100 % if the NCB's relative capital key share is 6 % or less; or, if the NCB's relative capital key share is larger than 6 %, it is calculated by the rule (6 % × 100 % +(c-6 %) × 60 %)/c in which c denotes the NCB's relative capital key share. The relative capital key shares are those effective at the time the NCB becomes a Party to this Agreement.
4. Subject to a new NCB entering into an adherence letter according to which the new NCB accepts the rights and obligations pursuant to this Agreement or any revisions hereto, the Parties shall accept the entry into this Agreement of new NCBs and agree to review it if necessary to take account of the situation of any such new parties.

Article 7

Effective date, review, amendments and disclosure

1. This Agreement shall take effect on 19 December 2022 and shall replace the Agreement on net financial assets of 6 November 2019.
2. This Agreement shall be reviewed from time to time, but in any case, no later than five years from the effective date referred to in Article 7(1) or the date of the last review, whichever is later.
3. This Agreement may only be amended in writing by consent of all Parties.
4. At least once a year, the ECB publishes the 'Annual average Net Financial Assets of the NCBs and the ECB' on its website.

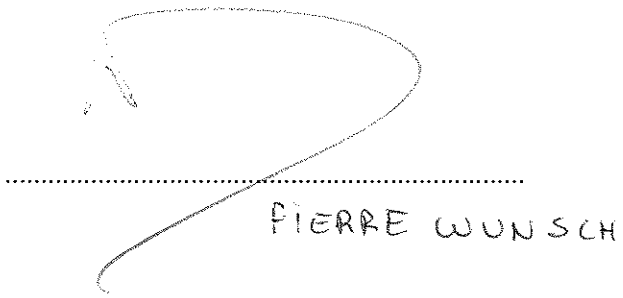
Article 8

Dispute resolution

1. This Agreement shall be governed by and construed in accordance with the laws of the Federal Republic of Germany.
2. In the event of legal disputes between the Parties, the Parties shall consider all necessary action to settle these disputes pursuant to the terms and conditions set forth in the Memorandum of Understanding on an Intra-ESCB Dispute Settlement Procedure. If legal action is unavoidable, the Court of Justice of the European Union shall have exclusive jurisdiction for all claims and legal actions arising from or in connection with this Agreement and its implementation.

Done in the English language and signed by the Parties' duly authorised representatives. The original copy of this agreement shall be deposited with the ECB and each Party shall receive a copy.

For the Nationale Bank van België/Banque Nationale de Belgique



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PIERRE WUNSCH

For the Deutsche Bundesbank

Dr Joachim Nagel

Dr Sabine Mauderer

For the Central Bank of Ireland



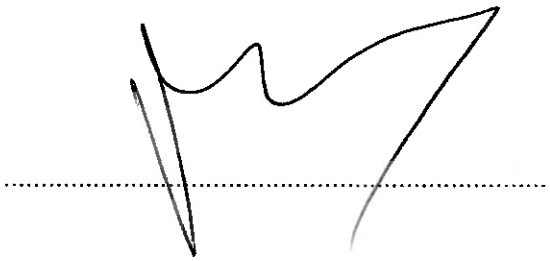
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Gabriel Makhlouf

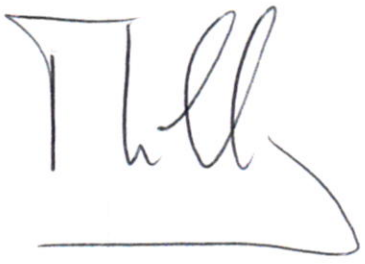
For the Bank of Greece

YANNIS STOURNARAS

For the Banco de España

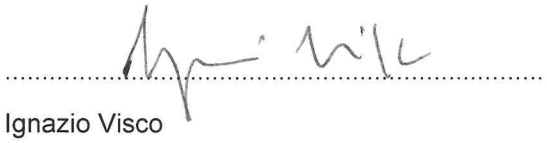


For the Banque de France



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For the Banca d'Italia



Ignazio Visco

For the Central Bank of Cyprus



For Hrvatska Narodna Banka

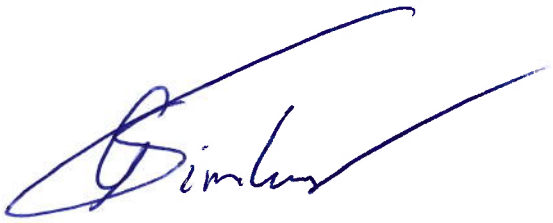
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Boris Vujčić, governor

For Latvijas Banka

M. KAZAKS
GOVERNOR

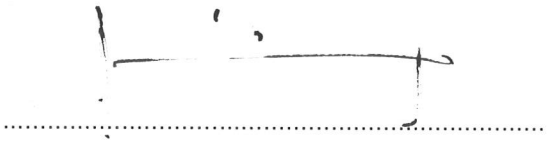
For Lietuvos bankas



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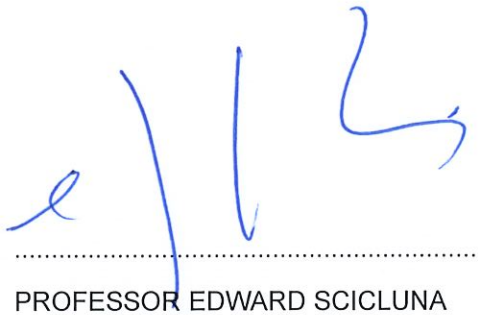
Gediminas Šimkus

For the Banque centrale du Luxembourg



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For the Central Bank of Malta



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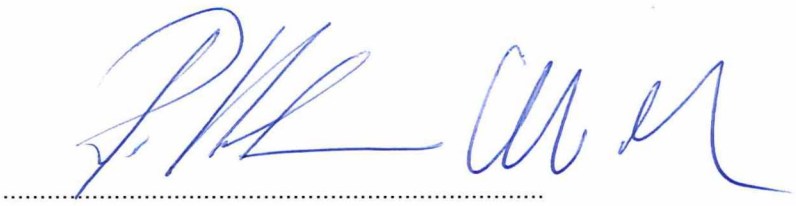
PROFESSOR EDWARD SCICLUNA

For De Nederlandsche Bank



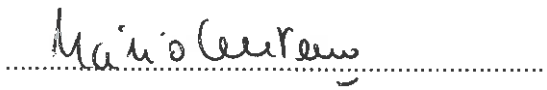
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For the Oesterreichische Nationalbank



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For the Banco de Portugal



For Banka Slovenije

Boštjan Vasle

Governor



For Národná banka Slovenska



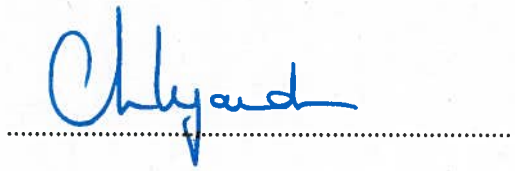
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For Suomen Pankki – Finlands Bank

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Olli Rehn

For the European Central Bank



SIMPLIFIED BALANCE SHEET FORMAT USED IN THIS AGREEMENT

This Agreement distinguishes between six items in a simplified balance sheet at time t, as illustrated below.

Simplified balance sheet of NCB i in year t

Assets$_{i,t}$	**Liabilities$_{i,t}$**
$M_{i,t}$ = liquidity deficit (+) / surplus (-), defined as net monetary policy lending (except Eurosystem liquidity-providing structural reverse operations and Eurosystem outright portfolios held for monetary policy purposes) – excess reserves + TARGET-related intra-Eurosystem balances + balances related to other operational requirements within the Eurosystem	$B_{i,t}$ = euro banknotes $L_{i,t}$ = securities lending activities with cash collateral
$S_{i,t}$ = liquidity-providing structural reverse operations	
$P_{i,t}$ = outright portfolios held for monetary policy purposes	
$F_{i,t}$ = net financial assets (includes all autonomous factors except euro banknotes)	$R_{i,t}$ = required reserves

The Eurosystem balance sheet format is mapped into these six items as follows:

$M_{i,t}$= A5.1+A5.2+A5.3+A5.5+A9.4+A9.5-L2.2-L2.3-L2.4-L4-L10.3-L10.4-(L2.1-$R_{i,t}$)

$S_{i,t}$ = A5.4

$P_{i,t}$ = A7.1

$F_{i,t}$ = A1+A2+A3+A4+A5.6+A6+A7.2 +A8+A9.1+A9.2+A9.3+A10+A11-L1.2-L2.5-L3-L5 -L6-L7-L8-L9-L10.1-L10.2-L11-L12-L13-L14-L15+$L_{i,t}$

$B_{i,t}$ = L1.1

$R_{i,t}$ = required reserves

$L_{i,t}$= amount of cash received as collateral in securities lending activities involving securities from outright portfolios held for monetary policy purposes

Excess reserves= L2.1 - $R_{i,t}$

The simplified Eurosystem balance sheet is the consolidated balance sheet of all Eurosystem NCBs and the ECB.

Annex II

DESCRIPTION OF THE CALIBRATION MECHANISM

A. The calibration mechanism

For the formal description of the calibration mechanism, the following notation is introduced. A calibration exercise in Q3 of year t determines for each NCB $i = 1, \dots, N$ for the subsequent year $t+1$ the entitlement $(F^1_{i,t+1})$ and ceiling $(F^2_{i,t+1})$. For NCB i the relative capital key share is denoted by c_i, its waived net financial assets by $W_{i,t+1}$, its expected net financial assets by $F^*_{i,t+1}$ and its adjusted expected NFA by $\overline{F}^*_{i,t+1}$. Finally, $\overline{F}_{t+1}$ denotes projected maximum net financial assets.

The calibration proceeds in two steps:

B. First step: Determination of net financial asset entitlements

The entitlements $F^1_{i,t+1}$, for $i = 1, \dots, N$ minimise the distance to the proportional distribution of projected Eurosystem maximum net financial assets, as defined below, while each NCB's entitlement is at least as large as its waived assets. For each NCB the distance to proportionality is weighted by its relative capital key share so as to take into account the different size of NCBs. Formally, the entitlements solve the following optimisation problem:

$$\min_{(F_i)} \sum_{i=1}^{N} \frac{1}{c_i} \left(F_i - c_i \overline{F}_{t+1}\right)^2$$

$$F_i \geq W_{i,t+1}, \qquad i = 1, \dots, N$$

$$\sum_{i=1}^{N} F_i = \overline{F}_{t+1}$$

Projected Eurosystem maximum net financial assets means, for the subsequent year, the Q3 average outstanding Eurosystem euro banknotes plus Q3 average Eurosystem reserve requirements plus Q3 average securities lending activities with cash collateral minus the sum of all of the following: (i) the Eurosystem minimum liquidity deficit or if applicable Eurosystem maximum surplus; (ii) the Q3 average volume of Eurosystem liquidity-providing structural reverse operations; (iii) Eurosystem outright portfolios held for monetary policy purposes net of all redemptions in held-to-maturity Eurosystem outright portfolios expected for the subsequent year ; (iv) planned changes to the volume of Eurosystem liquidity-providing structural reverse operations for the subsequent year; (v) planned changes to the volume of Eurosystem outright portfolios held for monetary policy purposes for the subsequent year (excluding redemptions) (vi) lower required reserves resulting from planned reductions of the reserve ratio to become effective before the end of the subsequent year; (vii) the sum of the expected liquidity surpluses of Member States joining the euro area before the end of the subsequent year ; and (viii) the Q3 average net financial asset holdings of the ECB adjusted for the effect of Eurosystem liquidity providing operations denominated in foreign currency. The respective Q3 average values refer to the year in which the calibration is conducted.

C. Second step: Redistribution unused leeway

Explanation of the redistribution mechanism

The second step of the calibration mechanism redistributes unused leeway to those NCBs desiring to hold net financial assets exceeding their entitlement. However, when redistributing leeway from unconstrained NCBs to other NCBs, the calibration mechanism balances two particular interests. By providing unused leeway unconstrained NCBs will obtain a lower ceiling, running an increased risk of not complying with their NFA ceilings if their average net financial assets exceed their expected net financial assets due to unforeseen developments on their balance sheets beyond their control. To mitigate this risk, unconstrained NCBs retain a certain share of their unused leeway in the form of a protection add-on. At the same time NCBs desiring to hold NFA exceeding their entitlements run the risk that unconstrained NCBs may claim back unused leeway from one calibration to another. To address this issue, restrictions on unconstrained NCBs are introduced which cap an increase of their expected net financial assets resulting in adjusted expected net financial assets.

(a) Protection add-on

In order to mitigate the risk of non-compliance, the ceiling applicable to unconstrained NCBs equals their adjusted expected NFA *plus* a protection add-on (or the NCB's entitlement if the latter is lower). The protection add-on is composed of a fraction $s = 25$ % of the difference between the entitlement and the adjusted expected NFA plus a fixed nominal amount $z =$ EUR 2 billion. Hence, for unconstrained NCBs the NFA ceilings are determined as:

$$F^2_{i,t+1} = \sum^{*} \frac{a}{b} \min\left\{ \bar{F}^{*}_{i,t+1} + \overbrace{z + s\left(F^1_{i,t+1} - \bar{F}^{*}_{i,t+1}\right)}^{\text{Protection add-on}}, F^1_{i,t+1} \right\} \quad \text{for} \quad \bar{F}^{*}_{i,t+1} \leq F^1_{i,t+1}$$

Both parameter values referred to herein are understood to remain stable until the next review of the Agreement.

(b) Adjusted expected net financial assets

Adjusted expected NFA for NCB i are defined as follows. Initially, an upper limit on expected net financial assets is calculated as

$$\tilde{F}^{*}_{i,t+1} = F^2_{i,t} + \max\left(0, F^1_{i,t+1} - F^1_{i,t}\right), \quad \text{if } F^1_{i,t} > F^2_{i,t}$$

Thus, NCBs which provide unused leeway in the current calibration ('unconstrained NCBs' in t), will only be allowed to increase their expected net financial assets relevant for the period $t+1$ up to their current NFA ceiling $F^2_{i,t}$. However, if the NCB received additional entitlements in the first step of the calibration, expected NFA can be increased by this additional amount $\left(F^1_{i,t+1} - F^1_{i,t}\right)$.

If this upper limit plus the protection add-on exceeds the NCB's entitlement, in other words, when the NCB is no longer providing unused leeway, then the upper limit does not apply. Adjusted expected NFA for NCB i is therefore defined as

Thus, for NCBs that do not provide unused leeway in the current year t, i.e. for which $F_{i,t}^1 \leq F_{i,t}^2$, expected NFA are not adjusted.

Determination of the net financial asset ceilings

The second step determines the ceilings of NCBs by redistributing unused leeway to those NCBs that desire to hold net financial assets exceeding their entitlements such that these ceilings approximate proportionality as closely as possible while satisfying the following restrictions: (i) the sum of all NCBs' ceilings equals projected maximum net financial assets, (ii) the ceiling of each unconstrained NCB is the smaller of its entitlement and its adjusted expected net financial assets plus the protection add-on, (iii) the ceiling of all other NCBs is at least as large as their entitlements and does not exceed their expected net financial assets.

Formally, the ceilings $F_{i,t+1}^2$, for $i = 1, \dots, N$ solve the following optimisation problem:

$$\min_{(F_i)} \sum_{i=1}^{N} \frac{1}{c_i} \left(F_i - c_i \overline{F}_{t+1}\right)^2$$

$$F_i = \min\left\{\bar{F}_{i,t+1}^* + z + \mathrm{s}\left(F_{i,t+1}^1 - \bar{F}_{i,t+1}^*\right), F_{i,t+1}^1,\right\} \quad \text{for} \quad \bar{F}_{i,t+1}^* \leq F_{i,t+1}^1$$

$$F_i \leq F_{i,t+1}^*, \text{ for } \bar{F}_{i,t+1}^* > F_{i,t+1}^1$$

$$F_i \geq F_{i,t+1}^1, \text{ for } \bar{F}_{i,t+1}^* > F_{i,t+1}^1$$

$$\sum_{i=1}^{N} F_i = \bar{F}_{t+1}$$

Modifications to the second step of the calibration exercise

In case **justified deviations** according to Article 5(3) (including the specifications provided in Article 5(4)) are expected to occur during the next year, these deviations will be adjusted for as follows: if the total amount of expected justified deviations for the next year is not larger than total unused leeway, then the latter is reduced by the amount of the deviation before the remainder is distributed in the second step of the calibration. If the total amount of expected justified deviations for the next year is larger than total unused leeway, the first step of the calibration will be repeated, with the amount of maximum projected NFA being reduced by the *total* amount of the expected deviation.

A special provision is necessary in an **excess situation** in which maximum Eurosystem leeway exceeds the total amount of NCBs' expected net financial assets as referred to in Article 2(3), point (a). Hence, in this case, the NFA ceilings of *unconstrained* NCBs are defined as follows:

$$F_{i,t+1}^2 = \min\{\bar{F}_{i,t+1}^* + z + s\left(F_{i,t+1}^1 - \bar{F}_{i,t+1}^*\right), F_{i,t+1}^1\} + k_{i,t+1} UL_{t+1}^*, \text{ for } \bar{F}_{i,t+1}^* \leq F_{i,t+1}^1,$$

with $UL_{t+1}^* = UL_{t+1} - \sum_{j:\bar{F}_{j,t+1}^* > F_{j,t+1}^1} \bar{F}_{j,t+1}^*$ denoting *excess* leeway, total unused leeway, $k_{i,t+1} = \frac{F_{i,t+1}^1 - \min\{F_{i,t+1}^1, \bar{F}_{i,t+1}^* + z + s\left(F_{i,t+1}^1 - \bar{F}_{i,t+1}^*\right)\}}{UL_{t+1}}$ the share of NCB i in total unused leeway and $UL_{t+1} = \sum_{j:\bar{F}_{j,t+1}^* \leq F_{j,t+1}^1} F_{i,t+1}^1 - \min\left\{F_{i,t+1}^1, \bar{F}_{i,t+1}^* + z + s\left(F_{i,t+1}^1 - \bar{F}_{i,t+1}^*\right)\right\}$ total unused leeway.

Annex III

HISTORICAL WAIVERS ACCORDING TO ART. 3.2

(all figures in million EUR)

NCB	Historical waiver according to Art. 3.2
Nationale Bank van België/Banque Nationale de Belgique	15,416
Deutsche Bundesbank	71,792
Eesti Pank	1,311
Central Bank of Ireland	4,625
Bank of Greece	21,822
Banco de España	50,231
Banque de France	62,989
Banca d'Italia	69,926
Central Bank of Cyprus	4,142
Latvijas Banka	3,687
Lietuvos bankas	5,856
Banque centrale du Luxembourg	4,610
Central Bank of Malta	2,530
De Nederlandsche Bank	18,411
Oesterreichische Nationalbank	15,329
Banco de Portugal	14,069
Banka Slovenije	4,860
Národná banka Slovenska	16,954
Suomen Pankki	8,900

Annex IV

REPORTING TEMPLATE ON WAIVED ASSETS ACCORDING TO ARTICLE 3(1)

	Waived assets	Description of the item *	Specification of data	Amount
1	**Minimum level of foreign assets**	Defined as the amount of foreign reserves needed to satisfy two further calls of ECB foreign reserves	Two times balance sheet item A.9.2	Available at ECB
	Gold and gold receivables	NCBs' gold holdings that are subject to the restrictions of the Central Bank Gold Agreement of 27 September 2014	Balance sheet item A.1	Available at ECB
	Gold - Stage Three revaluation accounts	Unrealised profits accumulated since the start of the EMU in 1999 reflecting changes in the market price for gold	Data comparable to NCBs' input to the annual RCM/AMICO Report on Eurosystem financial risks and buffers	Reported by NCBs
2	**Net Gold**	Stock of NCBs' gold holdings net of revaluation effects	Difference between A.1 and revaluation accounts	
3	**Government claims**	Stock of claims towards the government stemming from prior to the start of the EMU	Balance sheet item A.8	Available at ECB
	Receivables from the IMF	Claims towards/ assets related to the IMF that are derived from NCBs' international commitments	Balance sheet item A.2.1	Available at ECB
	Counterpart of SDR allocated by the IMF	Liabilities vis-à-vis the IMF that are derived from NCBs' international commitments	Balance sheet item L.9	Available at ECB
4	**Net SDR**	Net claims towards the IMF	A.2.1 minus L.9	
5	**Participating interest in ECB**	NCBs' share in the ECB's capital	Balance sheet item A.9.1	Available at ECB
6	**Subitems of balance sheet item A.11.4**	Various items either reflecting national specifics or accounting-related positions that due to their nature cannot be freely disposed	6.1+6.2+6.3+6.4+6.5+6.6	
6.1	**Fixed assets and inventories**	Land and buildings, furniture and equipment	Same methodology that is used for the preparation of the ECB's annual report	Reported by NCBs
	Accruals and deferred expenditures	Income not due in but assignable to the reported period	Same methodology that is used for the preparation of the ECB's annual report	Reported by NCBs
	Accruals and income collected in advance	Expenditure falling due in a future period but relating to reporting period; income received in reported period but relating to a future period	Same methodology that is used for the preparation of the ECB's annual report	Reported by NCBs
6.2	**Net accruals**		Accruals and deferred expenditures minus accruals and income collected in advance	
6.3	**Prepayment to government**			Reported by NCBs
6.4	**Special advance to the IEDOM**	Reflecting specific institutional circumstances relating to French oversea territories		Reported by NCBs
6.5	**ERP loans Portfolio**			Reported by NCBs
	Receivables and sundry asset side		Same methodology that is used for the preparation of the ECB's annual report	Reported by NCBs
	Sundry liability side		Same methodology that is used for the preparation of the ECB's annual report	Reported by NCBs
6.6	**Net sundry**		The higher value of zero or receivables and sundry asset side minus sundry liability side	
	Total waiver		Position 1+2+3+4+5+6	

* As far as balance sheet positions of the Eurosystem's harmonsided balance sheet are concemed see Annex IV of ECB/2010/20 as amended for further details