

ECC CPMI-IOSCO Disclosure I/2017

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Contact

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| . | ı | I | Clearing |
|----------|--------|--|----------------------------|
| | Index | disclosure item | date, type, value |
| 4. | 4000 | | |
| | | Total value of default resources (excluding initial and retained variation | As at quarter end |
| | | margin), split by clearing service if default funds are segregated by clearing | Mn. EURO |
| 4.1 | | service | (collateral value) |
| | 4101 | a) pre-funded | 333,2 |
| | 1101 | own capital that forms part of the default waterfall (used before | 333,2 |
| | 4103 | | 10,0 |
| | 4102 | | 323,2 |
| | 1102 | iii. other | 0,0 |
| | 4104 | b) committed | n/a |
| | | own/parent funds that are committed to address a participant | .,, = |
| | 4105 | l | n/a |
| | 1200 | aggregate participant commitments to address an initial participant | .,, = |
| | 4106 | l | n/a |
| | 1200 | aggregate participant commitments to replenish the default fund to | .,, = |
| | 4107 | | 239,2 |
| | 1207 | iv. other | n/a |
| 4.2 | 4201 | KCCP | 0,0 |
| | | | -,- |
| | | Value of pre-funded default resources (excluding initial and retained | As at quarter end |
| 4.3 | | variation margin) | Mn. EURO |
| | 4301 | a) total Cash | 274,2 |
| | 4302 | i. deposited at a central bank of issue of the currency | [2] |
| | 4303 | ii. Cash deposited at other central banks | [2] |
| | 4304 | iii. Secured cash at commercial banks (including reverse repo) | [2] |
| | 4305 | iv. Unsecured cash deposited at commercial banks | [2] |
| | | b) Bonds at market value w/o haircut | |
| | 4306 | i. Agency | 4,1 |
| | 4307 | ii. Sovereign Government Bonds - domestic | 11,3 |
| | 4308 | _ ~ ~ | 12,4 |
| | 4309 | iv. State / Provincial / Municipal - domestic | 15,1 |
| | 4310 | v. State / Provincial / Municipal - foreign | 0,0 |
| | 4311 | vi. Supranational Agency | 9,0 |
| | 4312 | vii. other Bonds | 0,0 |
| | | c) Bonds at collateral value (post haircut) | |
| | 4313 | 1 9 , | 3,9 |
| | 4314 | l ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | 10,8 |
| | 4315 | | 11,4 |
| | 4316 | · ' ' | 14,6 |
| | 4317 | , , , , | 0,0 |
| | 4318 | l ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' | 8,2 |
| | 4319 | | 0,0 |
| | | d) other | [3] |
| 4.4 | | a) State whather the CCD is subject to a mainimum "Course A" - ""Co | As at guarter and |
| 4.4 | 4401 | a) State whether the CCP is subject to a minimum "Cover 1" or "Cover 2" | As at quarter end Cover 2 |
| | 4401 | l ' | |
| | 4402 | b) assumed close out period (days) C) the estimated largest aggregate stress loss (in excess of initial margin) | 2 |
| | | that would be caused by the default of any single participant and its | |
| | | affiliates (including transactions cleared for indirect participants) in | |
| | | extreme but plausible market conditions? | Mn. EURO |
| | 4402 | | 309,4 |
| | 4403 | l | 93,7 |
| | 4404 | ii. average over daily values previous 12 months | 93,7 |
| | 4405 | iii. number of days where stress loss exeeded IM, previous quarter | 0 |
| | 4406 | | n/a |
| | 4407 | l | n/a |
| | 1 .707 | 1 | 1/4 |

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|-----------|--------------|--|-----------------------------------|
| | 4408 | amount of exess of stress loss over IM, day 3 | n/a |
| | 4408 | , , | n/a |
| | 4409 | , · · | n/a |
| | 4410 | , · · | n/a |
| | 4411 | · · · | n/a |
| | 4412 | , , | n/a |
| | 4413 | l | n/a n/a |
| | 4414 4415 | | n/a |
| | 4413 | d) what was the actual largest aggregate credit exposure (in excess of initial | • |
| | | margin) to any single participants and their affiliates | [4] |
| | 4416 | | n/a |
| | 4417 | l | n/a |
| | 4417 | e) the estimated largest aggregate stress loss (in excess of initial margin) | 11/4 |
| | | that would be caused by the default of any two participant and its | |
| | | affiliates (including transactions cleared for indirect participants) in | |
| | | extreme but plausible market conditions? | Mn. EURO |
| | 4418 | | 370,6 |
| | 4419 | l | 141,8 |
| | | | |
| | 4420 | , | 1 |
| | 4421 | , · · | -19,4 |
| | 4422 | 1 | n/a |
| | 4423 | l | n/a n/a |
| | 4424 4425 | l | n/a |
| | 4426 | l | n/a |
| | 4427 | 1 | n/a |
| | 4428 | l | n/a |
| | 4429 | 1 | n/a |
| | 4430 | l | n/a |
| | | f) what was the actual largest aggregate credit exposure (in excess of initial | |
| | | margin) to any two participants and their affiliates | [4] |
| | 4431 | i. maximum of daily values | n/a |
| | 4432 | | n/a |
| 5. | | Collateral (Principle 5) | |
| 5.1 | 5101 | Assets eligible as initial margin, and the respective haircuts applied | l, |
| | | http://www.ecc.de/ecc-en/risk-management/collateral-management | /overview I |
| 5.2 | 5201 | Assets eligible for pre-funded participant contributions to the default | |
| | | resources, and the respective haircuts applied | |
| 5.3 | | http://www.ecc.de/ecc-en/risk-management/collateral-management Collateral Backtesting | previous 12 months |
| 5.5 | 5301 | | previous 12 months |
| | 5301 | I | 3 days |
| | 5302 | l | 255 days |
| | 5304 | | 0 |
| | | haircuts | |
| 6. | 6000 | Margin (Principle 6) | |
| Initial N | 1argin | T | <u> </u> |
| 6.1 | | Unitial Margin Populiroment by type of cogregation | As at quarter end Mn. EURO |
| 0.1 | 6101 | Initial Margin Requirement by type of segregation a) House | IMIN. EURO 0 |
| | 6101 | 1 .: | 1.896,8 |
| | 6102 | l , | < 2% overall |
| | | Initial Margin Requirement for indirect participants: gross or net? | net |
| | 0104 | | liet |
| | | | As at quarter end |
| 6.2 | | Initial margin received by type of segregation | Mn. EURO |
| | | a) House | [6] |
| | | | |

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| 10300 01 | sciosare for central counterparties 1/2017 | Clearing |
|----------------------|---|-------------------|
| | Cash | 20/ |
| 6201 | total Cash | < 2% overall |
| 6202 | deposited at a central bank of issue of the currency | [2] |
| 6203 | Cash deposited at other central banks | [2] |
| 6204 | Secured cash at commercial banks (including reverse repo) | [2] |
| 6205 | Unsecured cash deposited at commercial banks | [2] |
| 5205 | Bonds (market value - w/o haircuts) | 0.0 |
| 6206 | Sovereign Government Bonds - domestic | 0,0 |
| 6207 | Sovereign Government Bonds - foreign | 0,0 |
| 6208 | Agency | 0,0 |
| 6209 | Supranational Agency | 0,0 |
| 6210 | State / Provincial / Municipal - domestic | 0,0 |
| 6211 | State / Provincial / Municipal - foreign | 0,0 |
| 6212 | other Bonds | 0,0 |
| | Bonds (collateral value - post haircuts) | |
| 6213 | Sovereign Government Bonds - domestic | 0,0 |
| 6214 | Sovereign Government Bonds - foreign | 0,0 |
| 6215 | Agency | 0,0 |
| 6216 | Supranational Agency | 0,0 |
| 6217 | State / Provincial / Municipal - domestic | 0,0 |
| 6218 | State / Provincial / Municipal - foreign | 0,0 |
| 6219 | other Bonds | 0,0 |
| | o) non-segregated | |
| | Cash | |
| 6220 | total Cash | 1.845,5 |
| 6221 | deposited at a central bank of issue of the currency | [2] |
| 6222 | Cash deposited at other central banks | [2] |
| 6223 | Secured cash at commercial banks (including reverse repo) | [2] |
| 6224 | Unsecured cash deposited at commercial banks | [2] |
| | Bonds (market value - w/o haircuts) | |
| 6225 | Sovereign Government Bonds - domestic | 56,8 |
| 6226 | Sovereign Government Bonds - foreign | 0,0 |
| 6227 | Agency | 53,2 |
| 6228 | Supranational Agency | 0,0 |
| 6229 | State / Provincial / Municipal - domestic | 22,3 |
| 6230 | State / Provincial / Municipal -foreign | 0,0 |
| 6231 | other Bonds | 1,0 |
| | Bonds (collateral value - post haircuts) | 0,0 |
| 6232 | Sovereign Government Bonds - domestic | 55,0 |
| 6233 | Sovereign Government Bonds - foreign | 0,0 |
| 6234 | Agency | 50,2 |
| 6235 | Supranational Agency | 0,0 |
| 6236 | State / Provincial / Municipal - domestic | 21,0 |
| 6237 | State / Provincial / Municipal - domestic | 0,0 |
| 6238 | other Bonds | 0,8 |
| | c) segregated clients [5] | 0,8 |
| | Cash | [6] |
| 6239 | total Cash | < 2% overall |
| 6240 | deposited at a central bank of issue of the currency | [2] |
| | Cash deposited at other central banks | |
| 6241 | Secured cash at commercial banks (including reverse repo) | [2] |
| 6242 | Unsecured cash deposited at commercial banks | [2] |
| 6243 | Bonds (market value - w/o haircuts) | [2] |
| 6244 | Sovereign Government Bonds - domestic | 0.0 |
| 6244 | Sovereign Government Bonds - domestic Sovereign Government Bonds - foreign | 0,0 0,0 |
| 6245 | Agency | 0,0 |
| 6246 | = - | |
| 6247 | Sunranational Agency | 1111 |
| 6247 6248 | Supranational Agency State / Provincial / Municipal - domestic | 0,0 |
| 6247 6248 6249 | Supranational Agency State / Provincial / Municipal - domestic State / Provincial / Municipal - foreign | 0,0 0,0 0,0 |

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|--------|--|--|--|
| | 6250 6251 6252 6253 6254 6255 6256 6257 | Bonds (collateral value - post haircuts) Sovereign Government Bonds - domestic Sovereign Government Bonds - foreign Agency Supranational Agency State / Provincial / Municipal - domestic State / Provincial / Municipal - foreign | 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 |
| 6.3 | 6301 | Initial margin rates on individual contracts, where the CCP sets such rates | [7] |
| 6.4 | 6401 6402 6403 6404 6405 | Look Back Period Weighting on historical data Close Out Periods Rates and Credits http://www.ecc.de/ecc-en/risk-mai | 99% 1 Year (250 Trading Days) Exponential Weighting with Lambda = 0.99 2 days nagement/reports_and_files Daily |
| 6.5 | 6501 6502 6503 | b) Number of observations where IM fell below mark-to-market | prev. 12 months, daily basis 20 40 99,9% |
| Margin | 6504 6505 6506 6507 | e) If once a day, specify at what time of day. f) i. breaches of initial margin: peak uncovered exposure | continuously n/a Mn. EURO 14,8 0,9 |
| 6.6 | | Average total variation margin paid to the CCP by participants each business day. | Average over quarter Mn. EURO 41,1 |
| 6.7 | | Maximum total variation margin paid to the CCP on any given business day over the period. | Maximum over quarter Mn. EURO 127,9 |
| 6.8 | 6801 | Maximum aggregate initial margin call on any given business day over the period. | Maximum over quarter Mn. EURO 196,8 |
| 7. | | Liquidity Risk (Principle 7) | 6 |
| 7.1 | 7101 7102 7109 | | Mn. EURO As at quarter end 2.205,4 0,0 |
| | 7116 7103 7110 | iii. USD b) Cash deposited at other central banks i. EUR | 0,0 As at quarter end 0,0 0,0 |
| | 7117 7104 | c) Secured cash deposited at commercial banks (including reverse repo) | 0,0 As at quarter end 0,0 |

European Commodity Clearing AG CPMI-IOSCO Disclosure for Central Counterparties I/2017 ii. GBP 7111 0,0 iii. USD 0,0 7118 d) Unsecured cash deposited at commercial banks 10,5 7105 FUR ii. GBP 0,6 7112 iii. USD 0,2 7119 e) secured committed lines of credit including committed foreign exchange As at quarter end swaps and committed repos i. EUR 0,0 7106 ii. GBP 0,0 7113 7120 iii. USD 0.0 f) unsecured committed lines of credit which the CCP may draw without As at quarter end providing collateral/security EUR 0.0 7107 ii. GBP 0,0 7114 7121 iii. USD 0,0 $\left(\mathbf{g} \right)$ highly marketable collateral held in custody and investments that are As at quarter end readily available and convertible into cash with prearranged and highly reliable funding arrangements even in extreme but plausible market conditions [9] EUR 51,9 7108 ii. GBP 7115 0,0 iii. USD 0,0 7122 h) other EUR 0,0 i. ii. GBP 0,0 iii. USD 0,0 State whether the CCP has routine access to central bank liquidity or As at quarter end facilities. EUR yes - intraday facility 7123 ii. GBP 7124 no iii. USD no 7125 7.2 7201 Supplementary Liquidity over those from 7.1 n/a 7.3 Largest same-day payment obligation in total that would be caused by the default of any single participant and its affiliates in extreme but plausible previous quarter market conditions? Mn. EURO 549,3 7301 i. maximum estimated amount ii. number of days where estimated payment exceeded liquidity 7302 0 iii. amount of excess on each day: amount of exess of payment over liq., day 1 7303 n/a 7304 amount of exess of payment over lig., day 2 n/a amount of exess of payment over liq., day 3 n/a 730 7306 amount of exess of payment over liq., day 4 n/a 7307 amount of exess of payment over lig., day 5 n/a amount of exess of payment over liq., day 6 n/a 7308 amount of exess of payment over liq., day 7 n/a 7309 amount of exess of payment over liq., day 8 n/a 7310 7311 amount of exess of payment over liq., day 9 n/a amount of exess of payment over liq., day 10 7312 n/a actual largest payment obligation to a single participant over the past 12 months n/a 12. Exchange of Value Settlement Systems (Principle 12) 12.1 Percentage of settlements by value effected using a DvP, DvD or PvP n/a Percentage of settlements by volume effected using a DvP, DvD or PvP 12.2 12201 settlement mechanism n/a

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| | | • |
|-------------|---|-----------------------------|
| 13 | Default Rules and Procedures (Principle 13) | |
| 13.1 | Quantitative information related to past defaults | |
| | a) amount of loss vs. amount of margin | n/a |
| | b) amount of other financial resources used to cover losses | n/a |
| | c) proportion of client positions closed-out/ported | n/a |
| | | |
| 14. 14.1 | Segregation and Portability (Principle 14) Total client positions (Open Interest) as a share of notional values, by type | T |
| 14.1 | of segregation | [6] |
| | a) basis: OI short side | [6] |
| | 14101 i. HOUSE | 0% |
| | 14101 I. HOOSE 14102 ii. ISA | < 5% |
| | 14102 II. ISA 14103 iii. LSOC/GOS | > 95% |
| | 14104 iv. SOS | < 5% |
| | b) basis: OI long side | \ 3% |
| | 14105 i. HOUSE | 0% |
| | 14105 ii. ISA | < 5% |
| | 14100 iii. ISOC/GOS | > 95% |
| | 14108 iv. SOS | < 5% |
| 15. | General Business Risk (Prinicple 15) | 1370 |
| | Constant Statement (i. timepre 20) | Mn. EURO |
| 15.1 | 15101 a) value of liquid net assets funded by equity (EMIR capital) | 74,7 |
| | 15102 b) six months of current operating expenses | 18,2 |
| 15.2 | Financial disclosures from Financial Statement as of 31st of December 2016 | [10] |
| | 15201 a) total revenue | 84,6 |
| | 15202 b) total expenditure | 36,3 |
| | 15203 c) profits | 48,2 |
| | 15204 d) total assets | 3.079,2 |
| | 15205 e) total liabilities | 3.079,2 |
| | 15206 f) | All Cash pledged by |
| | Explain if collateral posted by clearing participants is held on or off the | participants is held on the |
| | CCP's balance sheet | balance sheet |
| 15.3 | Income breakdowns | |
| | a) percentage of income from clearing fees | 100% |
| | ₁₅₃₀₂ b) percentage of income from reinvestment of assests provided by clearing | 0% |
| 1 | participants | |
| 16. | Custody and Investment Risks (Principle 16) | |
| | | As at quarter end |
| | | Mn. EURO |
| 16.1 | 16101 Total Cash received by the CCP from participants | 2.138,2 |
| | Total Cash received by the CCP from participants: Default Fund contribution | |
| 46.2 | Total Cash received by the CCP from participants: Initial Margins | 1.864,0 |
| 16.2 | Investment of Cash: Deposits | 1000/ |
| | a) deposits at central banks of issue of the currency | 100% |
| | 16202 b) deposits at other central banks | 0% |
| | 16203 c) secured deposits at commercial banks | 0% 0% |
| | 16204 d) unsecured deposits at commercial banks 16205 e) money market funds | 0% |
| | | 0% |
| | , - , | 100% |
| | 16207 g) Cash - EUR 16208 h) Cash - GBP | 0% |
| | 16209 i) Cash - USD | 0% |
| | 16210 j) weighted average maturity of deposits and funds (days) | <1 |
| | Investment of Cash: Securities | |
| | 16211 a) domestic sovereign government bonds | 0% |
| | 16212 b) foreign sovereign government bonds | 0% |
| | 16213 c) agency bonds | 0% |
| | 16214 d) state/ provincial / municipal bonds | 0% |
| | | I 3/0 |

European Commodity Clearing AG CPMI-IOSCO Disclosure for Central Counterparties I/2017 e) other instruments 16215 0% 16216 percentage split by currency 0% g) percentage split by currency 0% 16217 0% 16218 h) percentage split by currency weighted average maturity of these securities 0 16219 Investment of Cash: Investment Risk 16220 VaR(99%) of total investment portfolio n/a 16221 **Limit for Investment Counterparty** individual limits, see [11] Number of limit breaches 16222 16.3 16301 Investment of Cash: Rehypothetication of Cash none ECC does not use the instrument of rehypothetication of cash for investment 17. **Operational Risk (Principle 17)** 17.1 17101 Operational availability targets for the core systems involved in clearing n/a 17201 Achieved availability of the core systems, previous twelve months 17.2 n/a 17.3 17301 Total number of failures affecting the core systems, previous twelve months n/a 17302 Total duration of failures affecting the core systems, previous twelve months n/a 17.4 17401 Recovery time objectives (in hours) 2 18. Access and Participation Requirements (Principle 18) 18.1 Number of clearing members by type and origin as at quarter end n a) DCM domestic 18101 18102 b) DCM foreign 3 c) GCM domestic 2 18103 18104 d) GCM foreign 18 e) DCP domestic 0 18105 5 f) DCP foreign 18106 18.2 Percentage of OI held by Top5 CM: daily average over quarter 18201 a) basis: long side 79% b) basis: short side 77% 18202 Percentage of OI held by Top5 CM: peak EoD over quarter 18203 c) basis: long side 81% d) basis: short side 78% 18204 18.3 Percentage of IM posted by Top5 CMs 18301 a) peak EoD over quarter 79% 77% 18302 b) daily average over quarter 18.4 18401 Percentage of Top5 CM contributions to CF 66% 19. **Tiered Participation Arrangements (Principle 19)** 19.1 Measures of concentraion of client clearing 19101 a) Number of known clients 508 b) Number of CM clearing for clients 20 19102 19103 c) Client OI attributale to Top5 CM 78% 19104 d) Client OI attributale to Top5 CM 78%

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Comments and Explanations

- [1] According to the Clearing Conditions, ECC may request the non-defaulting Clearing Members to replenish their default fund contributions within 10 days after a Clearing Member has been set into default and the default fund has been fully or partially utilized. The amount reported here as replenishment assumes the default of the largest Clearing Member. It is calculated as the total Default Fund Contributions of all Clearing Members less the conribution of the largest Clearingmember.
- [2] ECC maintains cash collateral provided in EURO for initial margin requirements and the default fund contributions at first at its TARGET2 account. ECC does not separate its holdings of cash and cash investments between default fund contributions and margin contributions.
- [3] According to ECC's collateral policy, ECC does not accept "other types" of collteral for the default fund. See also https://www.ecc.de/ecc-en/risk-management/collateral-management
- [4] ECC does not invest funds with the top five Clearingmembers (according to initial margin requirement) or its affiliates. Therefore, the credit exposures with clients and participants are determined by the clearing service, but not influenced by other creditor relationsships to the Clearing Members.
- [5] Under the term "Segreated Clients", ISA, OSA and SOS segregated accounts are comprised.
- [6] Values are provided in ranges for data protection reasons.
- [7] All margin calculations are based on a general modelling approach either for derivatives or for spot products. The statistical models and all relevant changes to them are part of a regulatory oversight process. They are based on conservative assumptions which are validated once a year by external parties. Information concerning the margining approach can be found under: https://www.ecc.de/ecc-en/risk-management/margining
- [8] Days without uncovered exposure are not included in the calculation of the average value.
- [9] Based on ECCs obligation to maintain liquidity for the default of the largest two Clearing Members, reported here are highly secure and liquid securities provided by all Clearing Members as contribution to the Clearing Funds as well as securities provided by the top two Clearing Members as collateral for their initial margin requirement.
- [10] Values taken from the latest audited annual financial statement for the calendar year ending at 31st of December 2016. See also https://www.ecc.de/ecc-en/about-ecc/company/reports
- [11] ECC sets individual limits for every single investment counterparty with regard to types of investment as well as overall limits for the individual counterparty and the counterparties company group. These limits are based on an internal risk assessment using different external data sources including external rating agencies.

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