JSCC Quantitative Disclosures Summary

Q4 2023

March 11. 2024



Contents

| Disclaimer | 3 |
|---|----|
| Introduction | 4 |
| Highlights | 6 |
| Topic of this Quarter | 7 |
| Composition of Clearing Membership Categories | 9 |
| Contribution by JSCC(SIG) & Exchanges/PTSs | 10 |
| Mutualized Loss Compensation Resources | 12 |
| Ксср | 14 |
| Stress Testing | 15 |
| Initial Margin | 17 |
| Initial Margin Back Testing | 20 |
| Variation Margin & Initial Margin Calls | 22 |
| Collateral Composition of Initial Margin | 23 |
| Total Cash Received | 25 |
| Liquidity | 27 |
| Operational Availability | 29 |

Disclaimer

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This document is written in English, but some parts are written in both English and Japanese.

本文書は原則として英語表記ですが、一部日本語を併記しています。

Introduction

JSCC is a clearing organization licensed in Japan to conduct financial instrument obligation assumption (clearing) services under the Financial Instruments Exchange Law. JSCC is required to strictly comply with "Principles for Financial Market Infrastructures (hereinafter referred to as "PFMI")", as published by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) in April 2012.

To enhance overall transparency in financial market infrastructures, CPMI and IOSCO published "Principles for financial market infrastructures: disclosure framework and assessment methodology" in December 2012. In addition, as a supplement to the Principles, they released "Public quantitative disclosure standards for central counterparties" to encourage Clearing Organizations to disclose quantitative information.

License granted by Regulatory Authority in Japan

JSCC was licensed as the Financial Instruments Clearing Organization under the Financial Instruments and Exchange Act in January 2003, and as Commodity Clearing Organization under the Commodity Futures Act in July 2020 when JSCC integrated the commodity clearing services of Japan Commodity Clearing House Co., Ltd. As a result, JSCC is regulated and supervised directly by the Financial Services Agency, the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Economy, Trade and Industry of Japan.

License from Overseas Regulatory Authorities for Clearing Business

- U.S.: Exempt DCO (for Interest Rate Swap Clearing Business and Credit Default Swap Clearing Business)
- EU: Third-Country CCP (for all Clearing Businesses)
- Australia: Designation as Prescribed CCP (for Interest Rate Swap Clearing Business)
- Hong Kong: ATS-CCP and Designated CCP (for Interest Rate Swap Clearing Business)
- Switzerland: Foreign Central Counterparty (for Interest Rate Swap Clearing Business)
- Canada: Exempt Clearing Agency (for Interest Rate Swap Clearing Business)*
- * JSCC was granted interim exemption from Clearing Agency recognition under the Securities Act of Ontario, Canada.
- UK: Third-Country CCP (for all Clearing Businesses)*
- * JSCC has obtained temporary recognition for the provision of services in the U.K. as a Third Country CCP.

はじめに

JSCCは、金融商品取引法に基づき金融商品債務引受業の免許を取得している清算機関であり、決済・市場インフラ委員会(CPMI)と証券監督者国際機構(IOSCO)により2012年4月に公表された「金融市場インフラのための原則(以下「FMI原則」という。)」を遵守する必要があります。 CPMI及びIOSCOは、金融市場インフラの透明性を全般的に向上させるため、2012年12月に「FMI原則:情報開示の枠組みと評価方法」を公表しましたが、更にこれを補完するため、2015年2月に、清算機関が高い頻度で開示すべき定量的な情報の開示を促す、「清算機関のための定量的な情報開示基準」(原題:Public quantitative disclosure standards for central counterparties)を公表しています。

日本の規制当局からの免許取得状況

当社は、金融商品取引清算機関として2003年1月に金融商品債務引受業の免許を取得しており、また、2020年7月に株式会社日本商品清算機構の持つ清算機能を統合して商品市場に係る清算業務を承継するにあたり、商品取引清算機関として商品取引債務引受業の許可を取得しており、日本国の金融庁、農林水産省及び経済産業省による直接の規制と監督を受けています。

海外の規制当局からの認証等の取得状況

【米国】Exempt DCO(対象業務:金利スワップ清算業務、CDS清算業務)

【欧州連合】第三国CCP(対象業務:全清算業務)

【豪州】Prescribed CCPへの指定(対象業務:金利スワップ清算業務)

【香港】ATS-CCP及びdesignated CCP(対象業務:金利スワップ清算業務)

【スイス】外国CCP(対象業務:金利スワップ清算業務)

【カナダ】Exempt Clearing Agency(対象業務:金利スワップ清算業務)*

* JSCC はカナダ・オンタリオ州法上の清算機関としての認証免除に関して、暫定的な決定を受けています。

【英国】第三国CCP(対象業務:全清算業務)*

* JSCC は外国 CCP として英国でサービスを提供することについて、暫定的な認証を取得しています。

Highlights

- 71 bil. JPY of JSCC SIG and Compensation by Exchanges/PTS 79% of JSCC shareholder equity
- 3 breaches on stress testing for ETP Cash Securities, resolved on the following business days through the required additional collateral.
- Coverage of margin back testing (12-month period) above the JSCC risk appetite.
 - * JSCC risk appetite: IRS & CDS: 99.5% / Other Clearing Businesses: 99%
- O Liquidity Stress Testing breaches during the quarter
- 0 Defaults during the quarter
- 100% Operational Availability of the core system over the previous 12 months
- JSCC has changed its Margin calculation methodology from "SPAN method" to "VaR method" on November 6, 2023.

| Skin in the Game (SIG | <u>i)</u> | (PQD 4.1.1, 4.1.2, 4.1.6, 4.1.10) | Stress Testing | (PQD 4.4.4, 4.4.5, 4.4.8, 4.4.9) |
|------------------------------|--------------------|-----------------------------------|--|----------------------------------|
| | (in bil. JPY) (i | n mil. USD) | 3 Estimated Stress Losses Exceeda | |
| ETP Non-Commodity | 49.26 | 347 | ETP(Cash Securities): 3 days 27,165 mi | il. JPY at maximum. |
| ETP Commodity | 11.49 | 81 | | |
| CDS | 3.00 | 21 | | |
| IRS | 4.00 | 28 | | |
| OTC-JGB | 3.50 | 24 | | |
| Note: Compensation by Excha | nges & PTSs are in | ncluded for ETP. | | |
| USD/JPY: as of Dec. 31, 2023 | _ | | | |
| | | | | |

| Achieved Coverage Lo | <u>evel of Initia</u> | al Margins | (PQD 6.5.3) | Operational A | <u> Availability</u> | | (PQD 17.2.1) |
|----------------------|-----------------------|------------|-------------|---------------|----------------------|---------|--------------|
| ETP(Cash Securities) | 99.69% | (±0.00%) | | ETP | | 100.00% | |
| ETP(JGB F&O-OSE) | 99.80% | (+0.41%) | | CDS | | 100.00% | |
| ETP(INDEX F&O-OSE) | 99.89% | (-0.06%) | | IRS | | 100.00% | |
| ETP Commodity | 99.57% | (-0.27%) | | OTC-JGB | | 100.00% | |
| CDS | 100.00% | (±0.00%) | | | | | |
| IRS | 99.52% | (+0.02%) | | | | | |
| OTC-JGB | 99.67% | (+0.07%) | | | | | |

Topic of this Quarter (1/2)

Listed Derivatives Margin Migrated to VaR Method

In November 2023, JSCC changed its Listed Derivatives Margin calculation method from SPAN to VaR

- > Use multiple historical data. Suppress sudden changes in Margin and enhance transparency
- More sophisticated risk management using a portfolio level risk calculation (including optimization of Margin)
- For smooth migration to VaR, certain transitional measures, such as adoption of AS method (exceptional), were taken for Commodity Derivatives, excluding Electricity and LNG

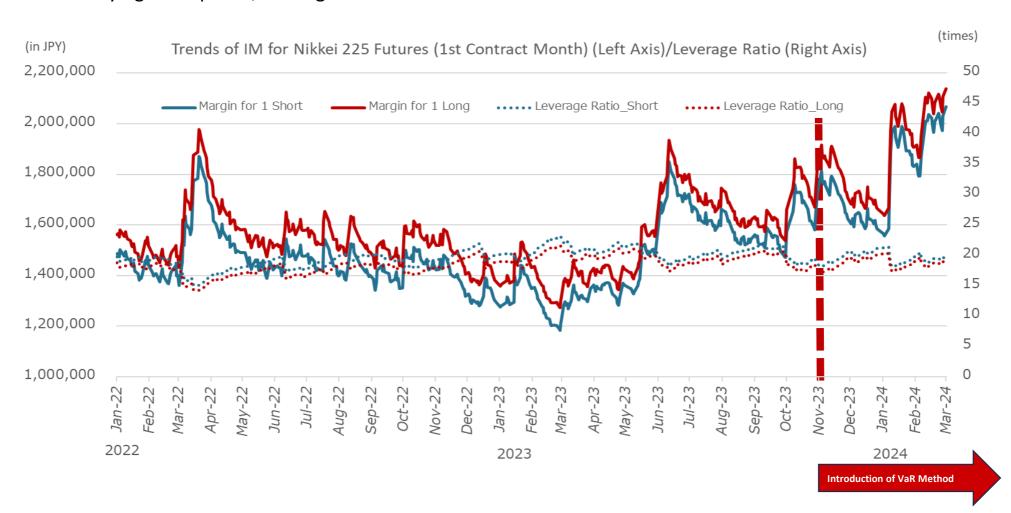
<HS : Historical simulation、 AS : Alternative simulation>

| | HS Method (Basic) | AS Method (Exceptional) | (Reference) SPAN |
|-----------|--|---|---|
| Outline | Use historical data directly to scenario | Pre-set scenario based on parameters | Pre -set scenario based on parameters |
| Scenario | 1,250 or more scenarios Fluctuation ratio obtained from historical data | 30 scenarios Ups and downs of prices, volatility, interest rates | 16 scenarios Ups and downs of prices, volatility |
| Handling | Different by contract month | Same for all contract months | Same for all contract months |
| of Margin | Unknown in advance (to be fixed after closing) | Known in advance | Known in advance |
| (per | Different depending on short or long | Same for short and long | Same for short and long |
| contract) | Updated daily | Updated weekly | Updated weekly |

Topic of this Quarter (2/2)

The chart below shows the VaR Margin and leverage ratio of Nikkei 225 Futures (Large Contracts) trading during the period from Jan. 2022 to March 2024.

➤ While Margin per contract is currently moving at a level of over JPY 2mil, mainly due to a rise in the underlying asset prices, leverage ratio has been stable at around x20.



Composition of Clearing Membership Categories

JSCC provides clearing services to clearing members of 14 different categories, each of which has a default fund to address any losses resulting from the default of a clearing participant in the relevant category. Some of the resources, such as liquidity resources, may be shared across the categories.

当社は、以下の14の清算資格に区分して清算業務を行っており、清算資格毎に清算参加者が破綻した場合を想定した損失をカバーするための清算基金制度を設けています。なお、 流動性供給枠等は複数の清算資格で共有しています。

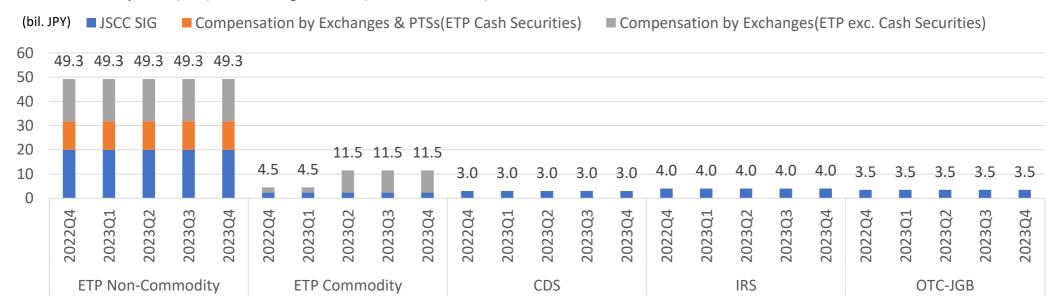
| Clearing Membership Category* 1. Cash Securities | | 2. JGB F&O 3. INDEX F&O | 4. Precious Metals 5. Rubber 6. Agricultural 7. Petroleum | 8. Energy | 9. Agricultural (ODEX) 10. Sugar 11. Precious Metals(ODEX) | 12. CDS 13. IRS 14. OTC-JGB | |
|---|--------------------|--|---|------------------------------|--|--|------|
| | | | | ETP | | | |
| | | Cash Saguritias | | Deriv | vatives | | |
| | | "ETP(Cash Securities)" | "ETP Non- commodity derivatives" | | | | |
| Market | | | mmodity Commodity" | | " <u>ETP Commodity</u> " | | ОТС |
| | Exchanges/ PTSs | Japanese Securities Exchanges, PTSs | (Osaka E | SE Exchange) sted ETP" | TOCOM (Tokyo Commodity Exchange) | ODEX (Osaka Dojima Exchange) " <u>ODEX-listed</u> <u>ETP</u> " | |
| Regulato | ory Law | , | al Instruments and FIEA-regulated ETF | • | • | lity Futures Act) ulated ETP" | FIEA |

^{*}Underlined abbreviations in each segment are those used in the quantitative disclosure of JSCC.

Contribution by JSCC(SIG) & Exchanges/PTSs (1/2)

PQD References: 4.1.1, 4.1.2, 4.1.6, 4.1.10

Contribution by JSCC(SIG) & Exchanges/PTSs (end of Quarter)



JSCC SIG (end of Quarter)

Compensation by Exchanges & PTSs (end of Quarter)

| • | | | | | (bil. JPY) | · | _ | | | | (bil. JPY) |
|-------------------|--------|--------|--------|--------|------------|----------------------------------|--------|--------|--------|--------|------------|
| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| ETP Non-Commodity | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | ETP(Cash Securities) | 11.81 | 11.81 | 11.81 | 11.81 | 11.81 |
| ETP Commodity | 2.37 | 2.37 | 2.37 | 2.37 | 2.37 | ETP Non-Commodity Derivatives | 17.45 | 17.45 | 17.45 | 17.45 | 17.45 |
| CDS | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | ETP Commodity | 2.12 | 2.12 | 9.12 | 9.12 | 9.12 |
| IRS | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | CDS | - | - | - | - | - |
| OTC-JGB | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | IRS | - | - | - | - | - |
| | | | | | | OTC-JGB | - | - | - | - | - |

Note: About 90% of the Compensation by Exchanges & PTSs are arranged to be contributed by exchanges affiliated with JSCC.

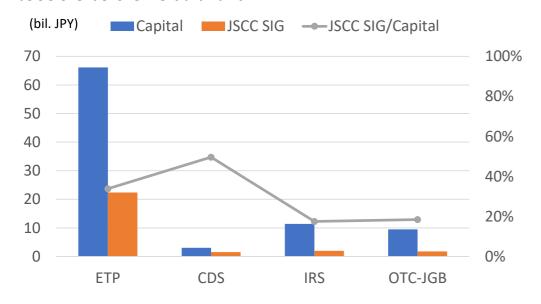
注:取引所及びPTSによる損失補償の約90%は、日本取引所グループ内の取引所により拠出されています。

Contribution by JSCC(SIG) & Exchanges/PTSs (2/2)

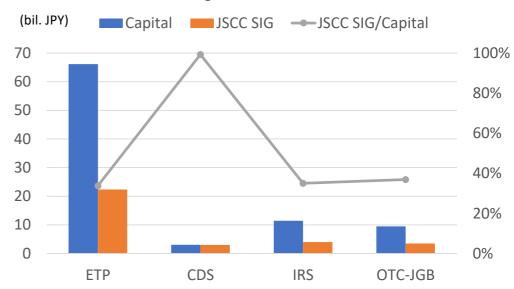
PQD References: 4.1.1, 4.1.2

JSCC Capital, JSCC SIG (left axis) and Ratio of JSCC SIG to Capital (JSCC SIG/Capital, right axis) (end of Quarter)

JSCC SIG before Default Fund



JSCC SIG before and alongside Default Fund



Note: JSCC has adopted class share structure to maintain its own funds for each of clearing businesses - Class A shares for Exchange Traded Products(Cash and Derivatives(Commodity and Non-Commodity), Class B shares for CDS, Class C shares for IRS, and Class D shares for OTC JGB.

Capital amounts per share by class shares as of Mar. 31, 2023 and number of shares are found at the following links:

注: JSCCは4つの種類株式(A種類株式:現物取引及び上場デリバティブ取引(商品と商品以外)の清算業務、B種類株式:CDS清算業務、C種類株式:金利スワップ取引清算業務、D種類株式:国債店頭取引清算業務)を発行しています。各種類株式の1株当たり純資産額(Mar. 31, 2023)及び発行済み株式の総数は以下をご覧ください。

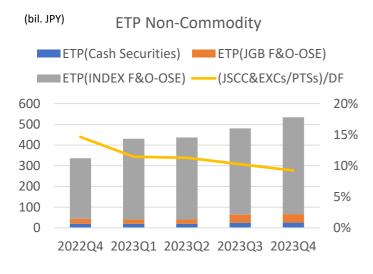
https://www.jpx.co.jp/jscc/kaisya/koukoku.html

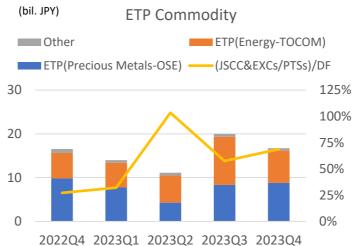
https://www.jpx.co.jp/jscc/en/company/profile.html

Mutualized Loss Compensation Resources (1/2)

PQD References: 4.1.4

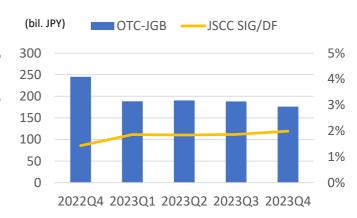
Default Fund (end of Quarter)











Mutualized Loss Compensation Resources (2/2)

PQD References: 4.1.4, 4.1.8

Default Fund (end of Quarter)

Assessment (end of Quarter)

| | | | | | (bil. JPY) | | | | | | (bil. JPY) |
|------------------------------|--------|--------|--------|--------|------------|------------------------------|--------|--------|--------|--------|------------|
| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| ETP(Cash Securities) | 19 | 19 | 19 | 24 | 25 | ETP(Cash Securities) | n/a | n/a | n/a | n/a | n/a |
| ETP(JGB F&O-OSE) | 23 | 20 | 20 | 39 | 41 | ETP(JGB F&O-OSE) | 70 | 60 | 62 | 118 | 124 |
| ETP(INDEX F&O- OSE) | 293 | 390 | 396 | 416 | 467 | ETP(INDEX F&O- OSE) | 879 | 1,171 | 1,188 | 1,250 | 1,402 |
| ETP(Precious Metals-OSE) | 9 | 7 | 4 | 8 | 8 | ETP(Precious Metals-OSE) | 29 | 23 | 12 | 24 | 26 |
| ETP(Rubber-OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Rubber-OSE) | 2 | 1 | 1 | 1 | 1 |
| ETP(Agricultural- OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Agricultural- OSE) | 0 | 0 | 0 | 0 | 0 |
| ETP(Petroleum-OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Petroleum-OSE) | 0 | 0 | 0 | 0 | 0 |
| ETP(Energy-TOCOM) | 5 | 5 | 6 | 11 | 7 | ETP(Energy-TOCOM) | 17 | 17 | 18 | 33 | 22 |
| ETP(Agricultural- ODEX) | 0 | 0 | 0 | 0 | 0 | ETP(Agricultural- ODEX) | 0 | 0 | 0 | 0 | 0 |
| ETP(Sugar-ODEX) | 0 | 0 | 0 | 0 | 0 | ETP(Sugar-ODEX) | 0 | 0 | 0 | 0 | 0 |
| ETP(Precious Metals-ODEX) | - | 0 | 0 | 0 | 0 | ETP(Precious Metals-ODEX) | - | 0 | 0 | 0 | 0 |
| CDS | 44 | 39 | 29 | 30 | 26 | CDS | 44 | 39 | 29 | 30 | 26 |
| IRS | 58 | 30 | 61 | 48 | 46 | IRS | 58 | 30 | 61 | 48 | 46 |
| OTC-JGB | 245 | 188 | 190 | 188 | 176 | OTC-JGB | 245 | 188 | 190 | 188 | 176 |

Note: For ETP derivatives, the required amount of the assessment is capped at 3 times the Clearing Fund Requirement of each non-defaulting Clearing Participant. For OTC products, the required amount of the assessment is capped at the Clearing Fund Requirement of each non-defaulting Clearing Participant.

注:上場デリバティブに係る特別清算料(VMへアカットを除く)は、生存参加者の清算基金所要額の3倍の額を上限としています。

OTC取引に係る特別清算料(VMへアカットを除く)は、生存参加者の清算基金所要額を上限としています。

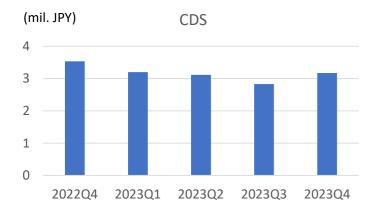
Ксср

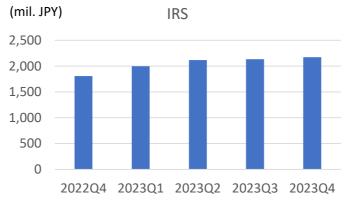
PQD References: 4.2.1

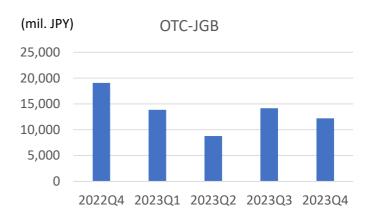
Kccp (end of Quarter)







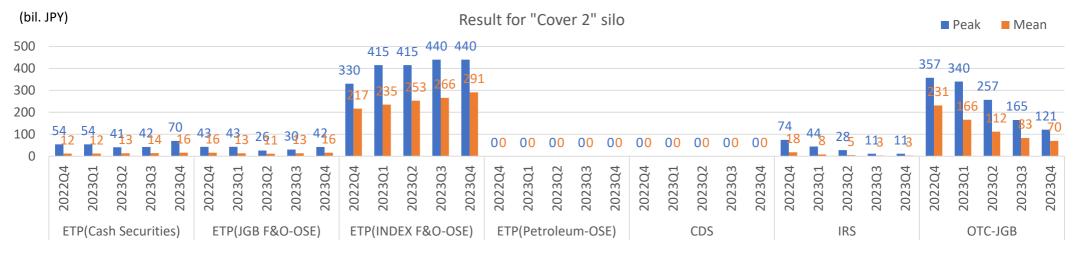


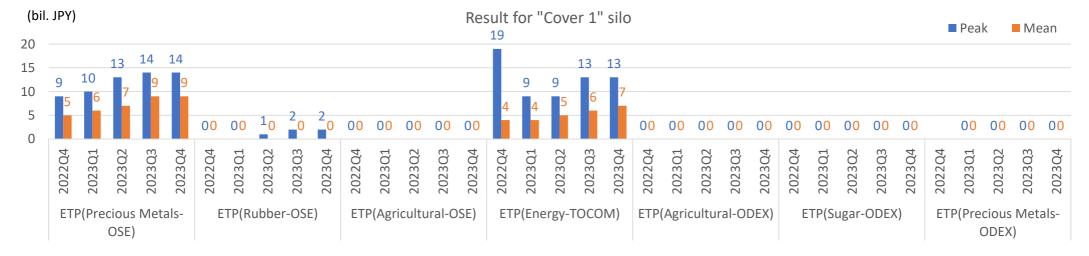


Stress Testing (1/2)

PQD References: 4.4.3, 4.4.7

Estimated Largest Aggregate Stress Loss in Excess of Initial Margin (previous 12 months)





Note: The default assumptions for prefunded financial resources are Cover 2(two Clearing Participants including affiliates with the largest expected loss) for ETP(Cash Securities, Derivatives for Non-Commodity and Petroleum), CDS, IRS, & OTC JGB, and Cover 1 + 5 financially weakest Clearing Participants for Commodity ex. Petroleum.

注:現物株式、上場金融デリバティブ及び原油については上位2先、原油を除く上場商品デリバティブについては上位1先及び純財産額が下位の5先の破綻を想定しています。

Stress Testing (2/2)

PQD References: 4.4.4, 4.4.5, 4.4.8, 4.4.9

Number of Days exceeded Actual pre-funded Default Resources (during Quarter)

| - Result for "Cover 2" : | silo | | | | Result for "Cover 1" s | silo | | | | | |
|--------------------------|--------|--------|--------|--------|--|------------------------------|--------|--------|--------|--------|--------|
| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| ETP(Cash Securities) | 0 | 3 | 2 | 2 | 3 | ETP(Precious Metals-OSE) | 5 | 2 | 5 | 1 | 0 |
| ETP(JGB F&O-OSE) | 0 | 0 | 0 | 2 | 0 | ETP(Rubber-OSE) | 0 | 0 | 0 | 1 | 0 |
| ETP(INDEX F&O- OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Agricultural- OSE) | 0 | 0 | 0 | 0 | 0 |
| ETP(Petroleum-OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Energy-TOCOM) | 9 | 4 | 1 | 8 | 0 |
| CDS | 0 | 0 | 0 | 0 | 0 | ETP(Agricultural- ODEX) | 0 | 0 | 0 | 0 | 0 |
| IRS | 0 | 0 | 0 | 0 | 0 | ETP(Sugar-ODEX) | 0 | 0 | 0 | 0 | 0 |
| OTC-JGB | 0 | 0 | 0 | 0 | 0 | ETP(Precious Metals-ODEX) | - | 0 | 0 | 0 | 0 |

Maximum Amount exceeding Actual pre-funded Default Resources (during Quarter)

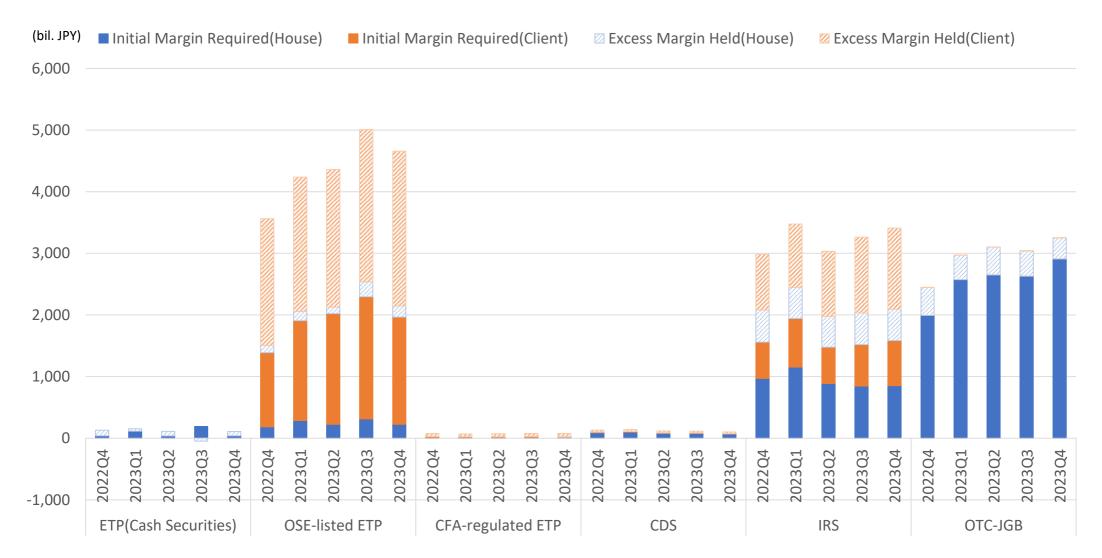
| - Result for "Cover 2" | silo | | • | | (mil. JPY) | - Result for "Cover 1": | silo | | | | (mil. JPY) |
|------------------------|--------|--------|--------|--------|------------|------------------------------|--------|--------|--------|--------|------------|
| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| ETP(Cash Securities) | 0 | 8,629 | 9,212 | 5,882 | 27,165 | ETP(Precious Metals-OSE) | 205 | 149 | 1,271 | 98 | 0 |
| ETP(JGB F&O-OSE) | 0 | 0 | 0 | 4,439 | 0 | ETP(Rubber-OSE) | 0 | 0 | 0 | 34 | 0 |
| ETP(INDEX F&O- OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Agricultural- OSE) | 0 | 0 | 0 | 0 | 0 |
| ETP(Petroleum-OSE) | 0 | 0 | 0 | 0 | 0 | ETP(Energy-TOCOM) | 835 | 712 | 1,399 | 469 | 0 |
| CDS | 0 | 0 | 0 | 0 | 0 | ETP(Agricultural- ODEX) | 0 | 0 | 0 | 0 | 0 |
| IRS | 0 | 0 | 0 | 0 | 0 | ETP(Sugar-ODEX) | 0 | 0 | 0 | 0 | 0 |
| OTC-JGB | 0 | 0 | 0 | 0 | 0 | ETP(Precious Metals-ODEX) | - | 0 | 0 | 0 | 0 |

Note: Possibility of breaches continuing for consecutive days is minimized by applying additional initial margin in ETP(Cash Securities) and the daily revision of default fund in other clearing services.

注:現物清算資格は当初証拠金追加所要額の適用、その他の清算資格は清算基金の日次更新により、当日発生したブリーチは翌営業日には解消することを想定しています。

Initial Margin (1/3)

PQD References: 6.1.1, 6.2.15



Note: Excess margin held is calculated by subtracting initial margin required from initial margin held (post haircut).

注:証拠金余剰額は、ヘアカット後の証拠金預託額から証拠金所要額を減じて計算しています。

Initial Margin (2/3)

PQD References: 6.1.1, 6.2.15

Initial Margin Held (Post Haircut) (end of Quarter)

| J | | | , | | (bil. JPY) | G | • | , , | | , | (bil. JPY) |
|---|--|--|--|--|---|---|---|---|---|---|---|
| ETP(Cash Securities) | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | ETP(Cash Securities) | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| Total | 39 | 114 | 36 | 190 | 38 | House(Total) | 129 | 152 | 110 | 142 | 109 |
| | | | | | | | | | | | |
| OSE-listed ETP | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | OSE-listed ETP | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 184 | 287 | 226 | 311 | 225 | House | 301 | 436 | 332 | 554 | 406 |
| Client | 1,202 | 1,618 | 1,795 | 1,982 | 1,738 | Client | 3,259 | 3,801 | 4,029 | 4,454 | 4,252 |
| Total | 1,387 | 1,906 | 2,021 | 2,294 | 1,964 | Total | 3,561 | 4,238 | 4,361 | 5,008 | 4,658 |
| CFA-regulated ETP | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | CFA-regulated ETP | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 10 | 10 | 8 | 10 | 10 | House | 12 | 11 | 10 | 13 | 13 |
| Client | 16 | 13 | 15 | 15 | 10 | Client | 66 | 57 | 62 | 66 | 64 |
| Total | 26 | 23 | 24 | 26 | 21 | Total | 79 | 68 | 73 | 79 | 78 |
| | | | | | | | | | | | |
| CDS | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | CDS | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| | 89 | 97 | 77 | 76 | 66 | House | 91 | 99 | 80 | 79 | 69 |
| House | 0,5 | 37 | , , | . • | | | | | | | |
| House Client | 9 | 9 | 7 | 7 | 6 | Client | 40 | 40 | 38 | 34 | 32 |
| | | | | 7 83 | 6 72 | | 40 132 | 40 140 | 38 118 | 34 114 | 32 101 |
| Client | 9 | 9 | 7 | 7 | | Client | | | | | |
| Client Total | 9 98 | 9 106 | 7 85 | 7 83 | 72 | Client Total | 132 | 140 | 118 | 114 | 101 |
| Client Total IRS | 9 98 2022Q4 | 9 106 2023Q1 | 7 85 2023Q2 | 7 83 2023Q3 | 72 2023Q4 | Client Total IRS | 132 2022Q4 | 140 2023Q1 | 118 2023Q2 | 114 2023Q3 | 101 2023Q4 |
| Client Total IRS House | 9 98 2022Q4 969 | 9 106 2023Q1 1,153 | 7 85 2023Q2 886 | 7 83 2023Q3 846 | 72 2023Q4 852 | Client Total IRS House | 2022Q4 1,493 | 140 2023Q1 1,657 | 118 2023Q2 1,383 | 2023Q3 1,359 | 2023Q4 1,362 |
| Client Total IRS House Client Total | 9 98 2022Q4 969 589 1,558 | 9 106 2023Q1 1,153 786 1,940 | 7 85 2023Q2 886 589 1,476 | 7 83 2023Q3 846 671 1,517 | 72 2023Q4 852 732 1,585 | Client Total IRS House Client Total | 2022Q4 1,493 1,488 2,981 | 2023Q1 1,657 1,818 3,476 | 2023Q2 1,383 1,649 3,033 | 2023Q3 1,359 1,903 3,262 | 101 2023Q4 1,362 2,048 3,410 |
| Client Total IRS House Client Total OTC-JGB | 9 98 2022Q4 969 589 1,558 2022Q4 | 9 106 2023Q1 1,153 786 1,940 2023Q1 | 7 85 2023Q2 886 589 1,476 2023Q2 | 7 83 2023Q3 846 671 1,517 2023Q3 | 72 2023Q4 852 732 1,585 2023Q4 | Client Total IRS House Client Total OTC-JGB | 2022Q4 1,493 1,488 2,981 2022Q4 | 2023Q1 1,657 1,818 3,476 2023Q1 | 2023Q2 1,383 1,649 3,033 2023Q2 | 2023Q3 1,359 1,903 3,262 2023Q3 | 2023Q4 1,362 2,048 3,410 2023Q4 |
| Client Total IRS House Client Total OTC-JGB House | 9 98 2022Q4 969 589 1,558 2022Q4 1,992 | 9 106 2023Q1 1,153 786 1,940 2023Q1 2,573 | 7 85 2023Q2 886 589 1,476 2023Q2 2,651 | 7 83 2023Q3 846 671 1,517 2023Q3 2,629 | 72 2023Q4 852 732 1,585 2023Q4 2,908 | Client Total IRS House Client Total OTC-JGB House | 2022Q4 1,493 1,488 2,981 2022Q4 2,447 | 2023Q1 1,657 1,818 3,476 2023Q1 2,970 | 2023Q2 1,383 1,649 3,033 2023Q2 3,101 | 2023Q3 1,359 1,903 3,262 2023Q3 3,041 | 2023Q4 1,362 2,048 3,410 2023Q4 3,250 |
| Client Total IRS House Client Total OTC-JGB | 9 98 2022Q4 969 589 1,558 2022Q4 | 9 106 2023Q1 1,153 786 1,940 2023Q1 | 7 85 2023Q2 886 589 1,476 2023Q2 | 7 83 2023Q3 846 671 1,517 2023Q3 | 72 2023Q4 852 732 1,585 2023Q4 | Client Total IRS House Client Total OTC-JGB | 2022Q4 1,493 1,488 2,981 2022Q4 | 2023Q1 1,657 1,818 3,476 2023Q1 | 2023Q2 1,383 1,649 3,033 2023Q2 | 2023Q3 1,359 1,903 3,262 2023Q3 | 2023Q4 1,362 2,048 3,410 2023Q4 |

Initial Margin (3/3)

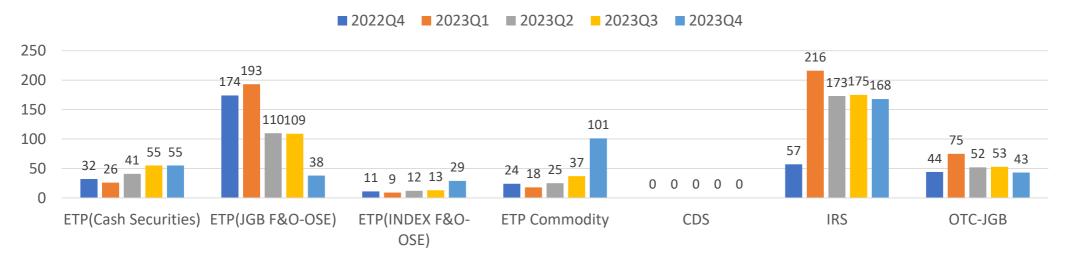
Excess Margin Held (end of Quarter)

| | • | , | | | (bil. JPY) |
|----------------------|--------|--------|-----------|--------|------------|
| ETP(Cash Securities) | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| Total | 90 | 38 | 74 | -47 | 71 |
| | | | | | |
| OSE-listed ETP | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 116 | 149 | 105 | 242 | 180 |
| Client | 2,057 | 2,182 | 2,234 | 2,471 | 2,513 |
| Total | 2,174 | 2,331 | 2,340 | 2,714 | 2,694 |
| CFA-regulated ETP | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 1 | 1 | 1 | 2 | 3 |
| Client | 50 | 43 | 47 | 50 | 54 |
| Total | 52 | 44 | 49 | 53 | 57 |
| CDS | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 2 | 2023Q1 | 2023Q2 | 3 | 2023Q+ |
| Client | 31 | 31 | 30 | 27 | 25 |
| Total | 34 | 33 | 33 | 30 | 28 |
| Total | 34 | 33 | 33 | 30 | 20 |
| IRS | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 523 | 503 | 497 | 513 | 509 |
| Client | 898 | 1,031 | 1,059 | 1,231 | 1,315 |
| Total | 1,422 | 1,535 | 1,556 | 1,745 | 1,825 |
| OTC-JGB | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
| House | 454 | 397 | 450 | 411 | 341 |
| Client | 0 | 0 | 0 | 0 | 0 |
| Total | 455 | 398 | 451 | 412 | 342 |

Initial Margin Back Testing (1/2)

PQD References: 6.5.1.1, 6.5.3

Number of Margin Breaches (previous 12 months)



Achieved Coverage Level (previous 12 months)

| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
|------------------------|---------|---------|---------|---------|----------|
| ETP(Cash Securities) | 99.82% | 99.86% | 99.77% | 99.69% | 99.69% |
| ETP(JGB F&O-OSE) | 98.64% | 98.70% | 99.36% | 99.39% | 99.80% 🧥 |
| ETP(INDEX F&O- OSE) | 99.93% | 99.96% | 99.95% | 99.95% | 99.89% |
| ETP Commodity | 99.76% | 99.88% | 99.87% | 99.84% | 99.57% |
| CDS | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| IRS | 99.83% | 99.35% | 99.49% | 99.50% | 99.52% 🧥 |
| OTC-JGB | 99.66% | 99.42% | 99.60% | 99.60% | 99.67% 🧥 |

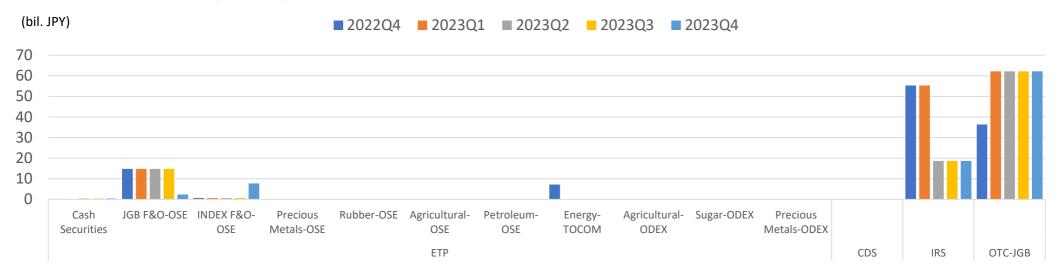
Number of Margin Breaches

- ➤ The decrease in the number of margin breaches in ETP(JGB F&O-OSE) was due to the December 2022 breach (due to the Bank of Japan's monetary policy meeting) no longer being in the period covered.
- ➤ The increase in ETP(INDEX F&O-OSE) was due to the market decline at the beginning of October, while the increase in the number of breaches in ETP Commodity futures was due to market fluctuations.

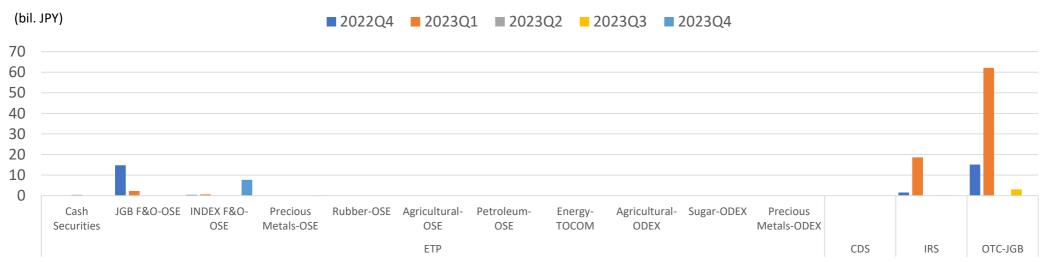
Initial Margin Back Testing (2/2)

PQD References: 6.5.4

Peak Size of Uncovered Exposure (previous 12 months)



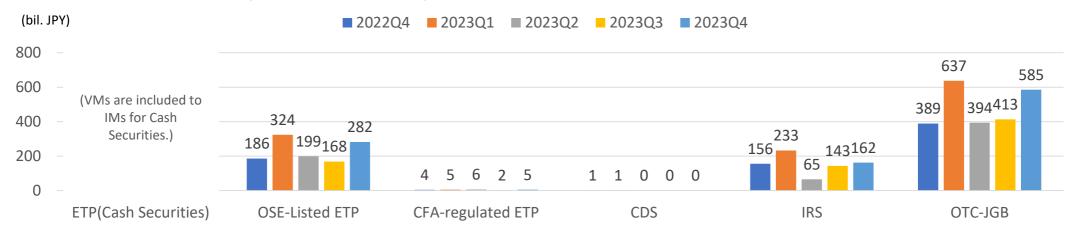
Peak Size of Uncovered Exposure (previous 3 months)



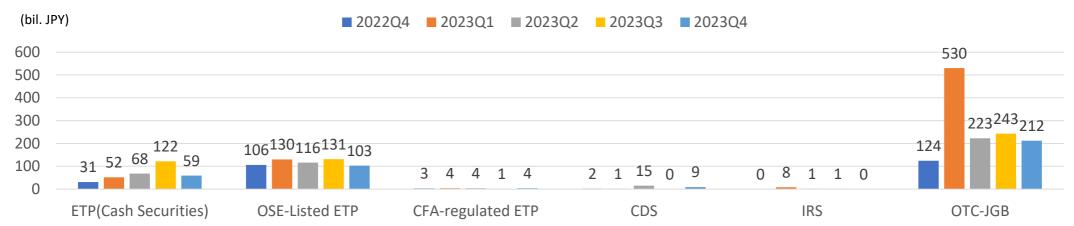
Variation Margin & Initial Margin Calls

PQD References: 6.7.1, 6.8.1

Maximum Total Variation Margin Paid to JSCC (during Quarter)



Maximum Aggregate Initial Margin Call (during Quarter)



Collateral Composition of Initial Margin (1/2)

PQD References: 6.2.1-6.2.14

Collateral Composition of Initial Margin-ETP (end of Quarter)



Note: "Secured cash deposited at commercial banks (including reverse repo)" is held in settlement accounts of commercial banks, which are entirely protected by the Japanese Deposit Insurance Corporation.

"Non-Cash Sovereign Government Bonds – Domestic" is JGBs.

"Non-Cash Equities" means domestic listed securities (including convertible bonds for ETP Derivatives). Details of the eligible collateral can be found at the following link: 注:「商業銀行における保全された現金預金」は全額が預金保険制度の対象となる決済性預金です。

「現金以外のソブリン債(自国債)」は日本国債です。

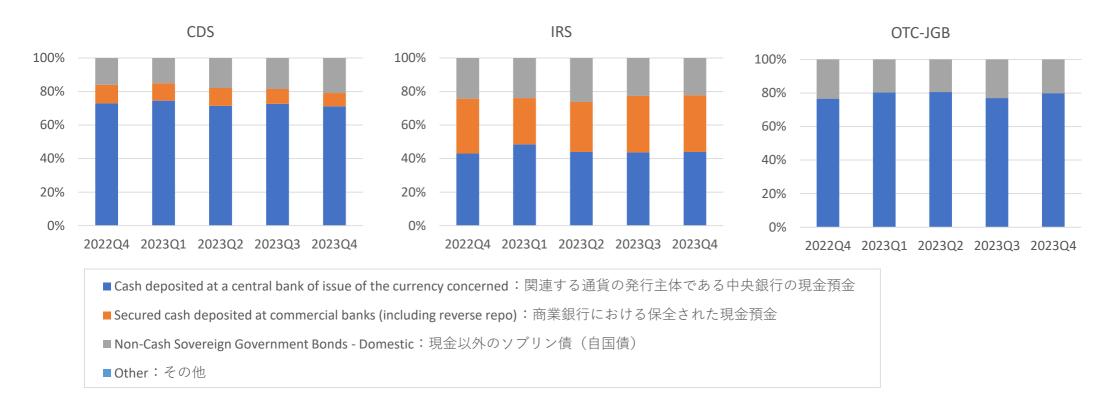
「現金以外の株式」は内国上場株式です(上場デリバティブはCBも含む)。適格担保については以下をご覧ください。

https://www.jpx.co.jp/jscc/en/risk/collateral/collateral.html

Collateral Composition of Initial Margin (2/2)

PQD References: 6.2.1-6.2.14

Collateral Composition of Initial Margin-OTC (end of Quarter)



Note: "Secured cash deposited at commercial banks (including reverse repo)" is held in a trust account, which is bankruptcy remote from JSCC and clearing participants. For OTC derivatives, clearing participants and clients may choose between custodying their collateral in a trust or in the central bank.

"Non-Cash Sovereign Government Bonds – Domestic" is JGBs.

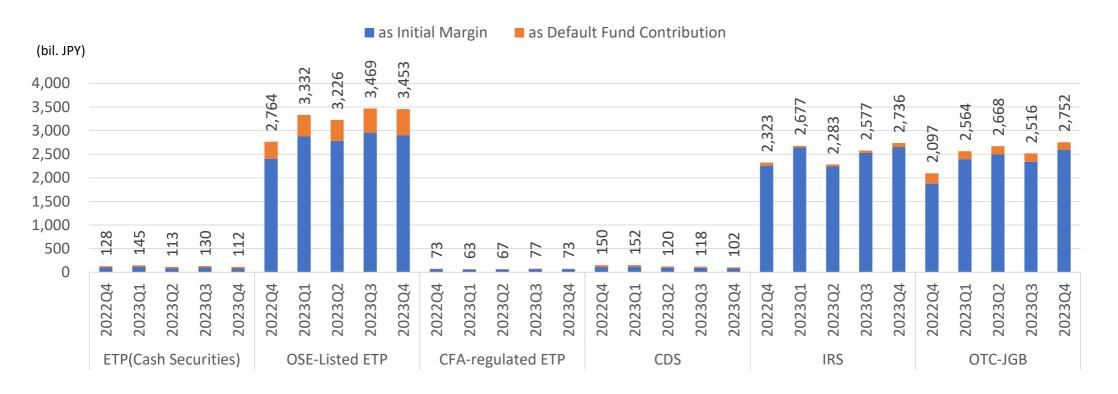
注:「商業銀行における保全された現金預金」は信託銀行に信託されており、JSCC及び清算参加者の破綻リスクから保護されています。OTCデリバティブの担保の預託先は、清算参加者・清算委託者の選択に従います。

「現金以外のソブリン債(自国債) | は日本国債です。

Total Cash Received (breakdown by IM/DF)

PQD References: 16.1.1, 16.1.2

Total Cash Received from Participants (end of Quarter)



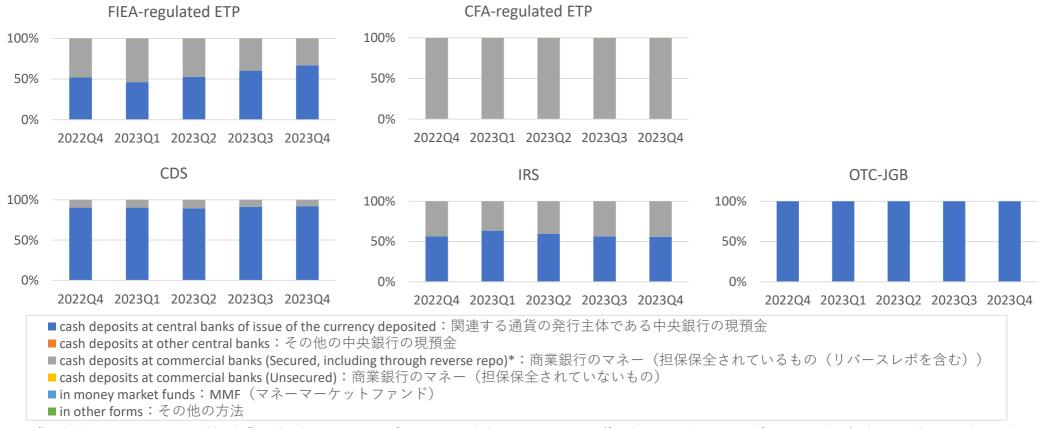
Note: For ETP, each Clearing Participant must deposit yen cash with a value that is at least 50% of their default fund requirement, minus JPY1 billion.

注:JSCCは上場商品において、清算基金所要額から10億円を控除した額の半額以上について円貨での預託を求める清算基金の現金預託制度を設けています。

Total Cash Received (breakdown by the custody)

PQD References: 16.2.2-16.2.7

Percentage of Total Participant Cash Held as Cash Deposits (end of Quarter)



Note: "Cash deposits at commercial banks" are bankruptcy remote from JSCC and clearing participants (for the trust scheme used for CDS and IRS). They are deposited in settlement accounts for other clearing membership categories.

Deposits for CFA-related ETP are not deposited at the central bank.

Only non-JPY currencies are deposited at unsecured commercial banks.

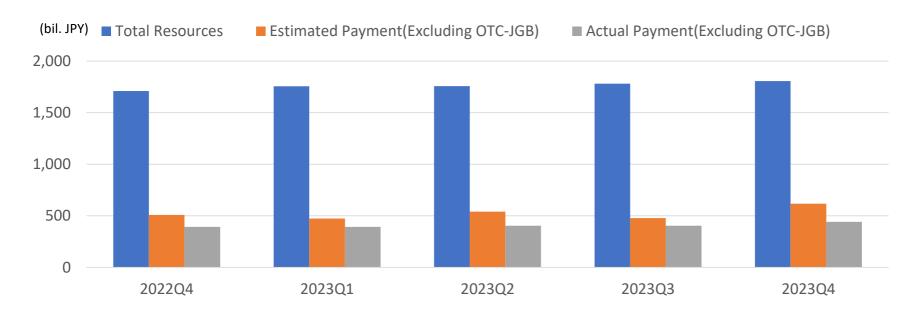
注:「商業銀行の現預金」は、CDS及びIRSにおいてはJSCC及び清算参加者から倒産隔離された信託口座に保管されており、その他においては預金保険によって保護された決済性預金です。 商先法に基づく商品の担保は中央銀行口座を利用していません。

外貨のみを未保全の商業銀行口座に預託しています。

Liquidity (1/2)

PQD References: 7.1.2-7.1.8, 7.3.1, 7.3.2, 7.3.4

Qualifying Liquid Resources (end of Quarter) and Cover 1 Result of Estimated(during Quarter)/Actual(previous 12 months) Largest Payment Obligations



Number of Liquidity Stress Test Breaches (during Quarter)

| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
|-------------------|--------|--------|--------|--------|--------|
| Excluding OTC-JGB | 0 | 0 | 0 | 0 | 0 |

Note: For OTC- JGB, JSCC has established a liquidity framework via JGB repo transactions with Clearing Participants and other financial institutions.

注:国債店頭取引においては、清算参加者又はそれ以外の金融機関との国債証券のレポ取引により、資金流動性を調達する制度を設けています。

Liquidity (2/2)

PQD References: 7.1.2-7.1.8

Size and Composition of Qualifying Liquid Resources (end of Quarter)

(bil. JPY)

| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 |
|--|---------|---------|---------|---------|---------|
| Cash deposited at a central bank of issue of the currency concerned* | 142.3 | 188.5 | 190.4 | 212.1 | 220.0 |
| Cash deposited at other central banks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Secured cash deposited at commercial banks (including reverse repo)* | 0.6 | 0.6 | 0.7 | 2.9 | 19.9 |
| Unsecured cash deposited at commercial banks | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 |
| Secured committed lines of credit including committed foreign exchange swaps and committed repos | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unsecured committed lines of credit | 1,525.2 | 1,525.2 | 1,525.2 | 1,525.2 | 1,525.2 |
| Highly marketable collateral and convertible into cash with prearranged and highly reliable funding arrangements | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 1,709 | 1,756 | 1,758 | 1,782 | 1,806 |

Note: Cash is deposited at a central bank and secured cash deposited at commercial banks, depending on JSCC's rules. For ETP, each Clearing Participant must deposit yen cash with a value that is at least 50% of their default fund requirement, minus JPY1 billion. Therefore, the level of cash varies depending on the default fund requirement.

"Unsecured committed lines of credit" mean secured yen-denominated and foreign currency denominated liquidity supplies from its parent company and multiple commercial banks that have been designated as Fund Settlement Banks (Liquidity Supply Facilities).

注:中央銀行及び商業銀行の現金預金は、清算基金所要額から10億円を控除した額の半額以上について円貨での預託を求める上場商品に係る清算基金の現金預託制度によるものであり、その額は清 算基金所要額に連動します。

「コミットされた無担保信用供与枠:Unsecured committed lines of credit」とは、親会社及び資金決済銀行として指定された複数の商業銀行から確保している流動性供給枠(資金流動性供給ファシリティ)を指します。

Operational Availability

PQD References: 17.1.1, 17.2.1

Actual/Target Availability of the Core Systems (previous 12 months)

| | | Actual | | | | Target |
|---------|---------|---------|---------|---------|---------|--------|
| | 2022Q4 | 2023Q1 | 2023Q2 | 2023Q3 | 2023Q4 | |
| ETP | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 99.99% |
| CDS | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 99.90% |
| IRS | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 99.90% |
| OTC-JGB | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 99.99% |