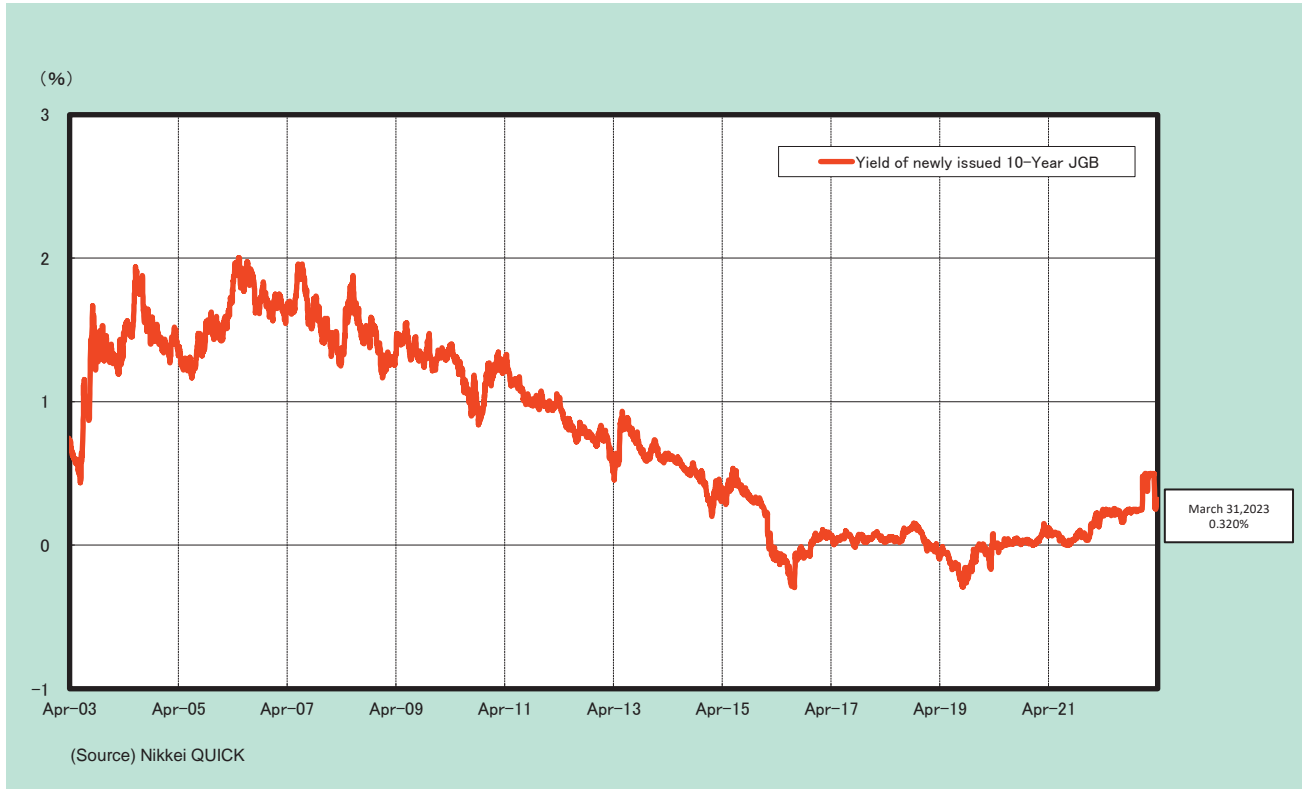
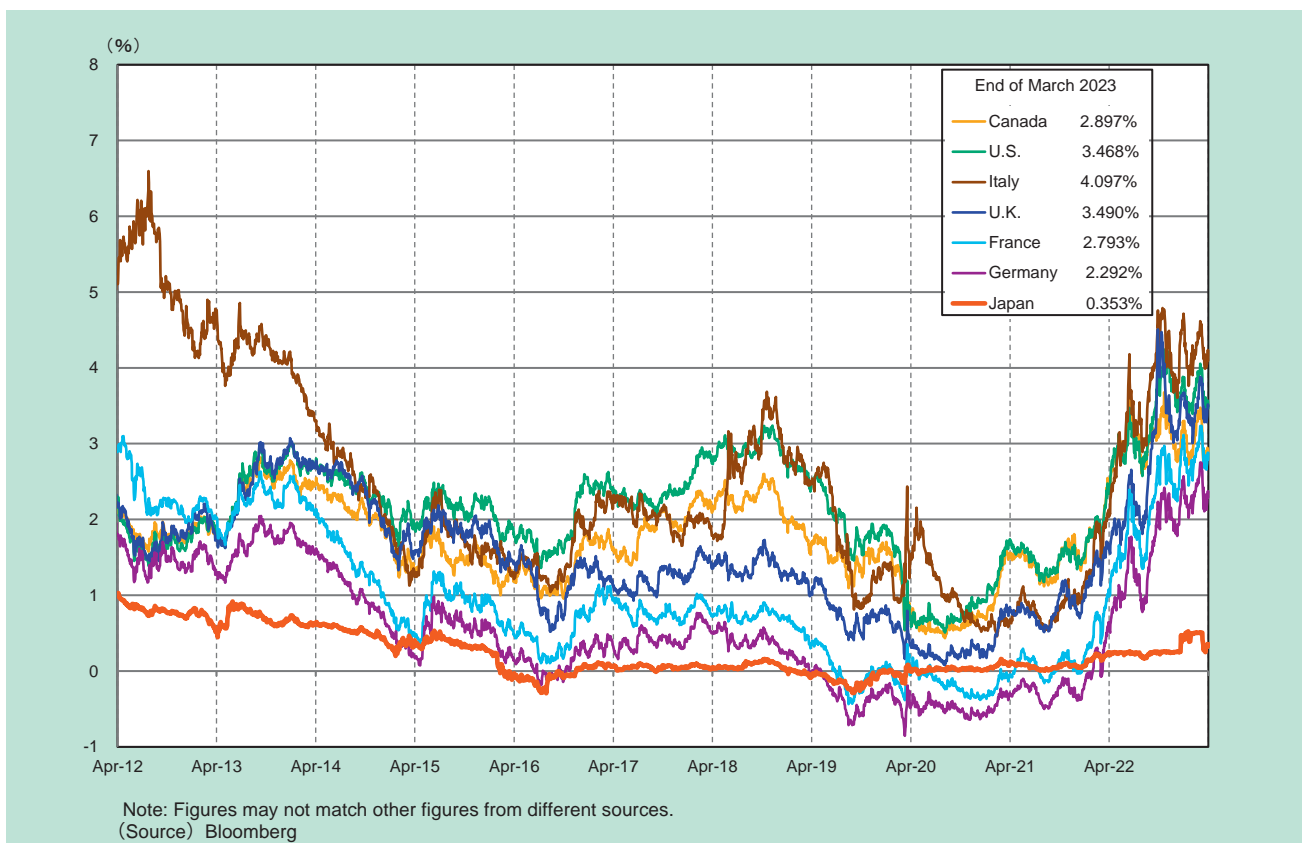


2 Secondary Market for Government Bonds

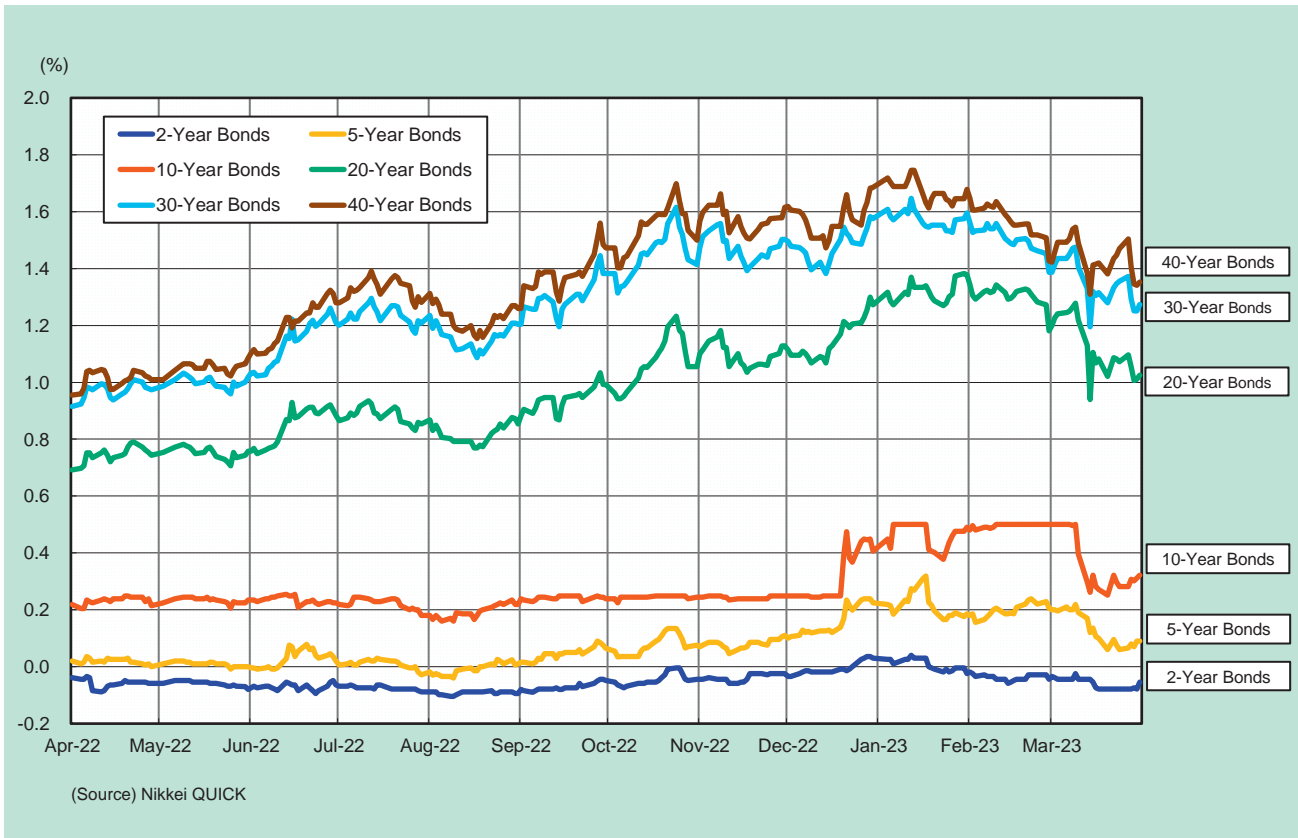
(1) 10-Year JGB Yield



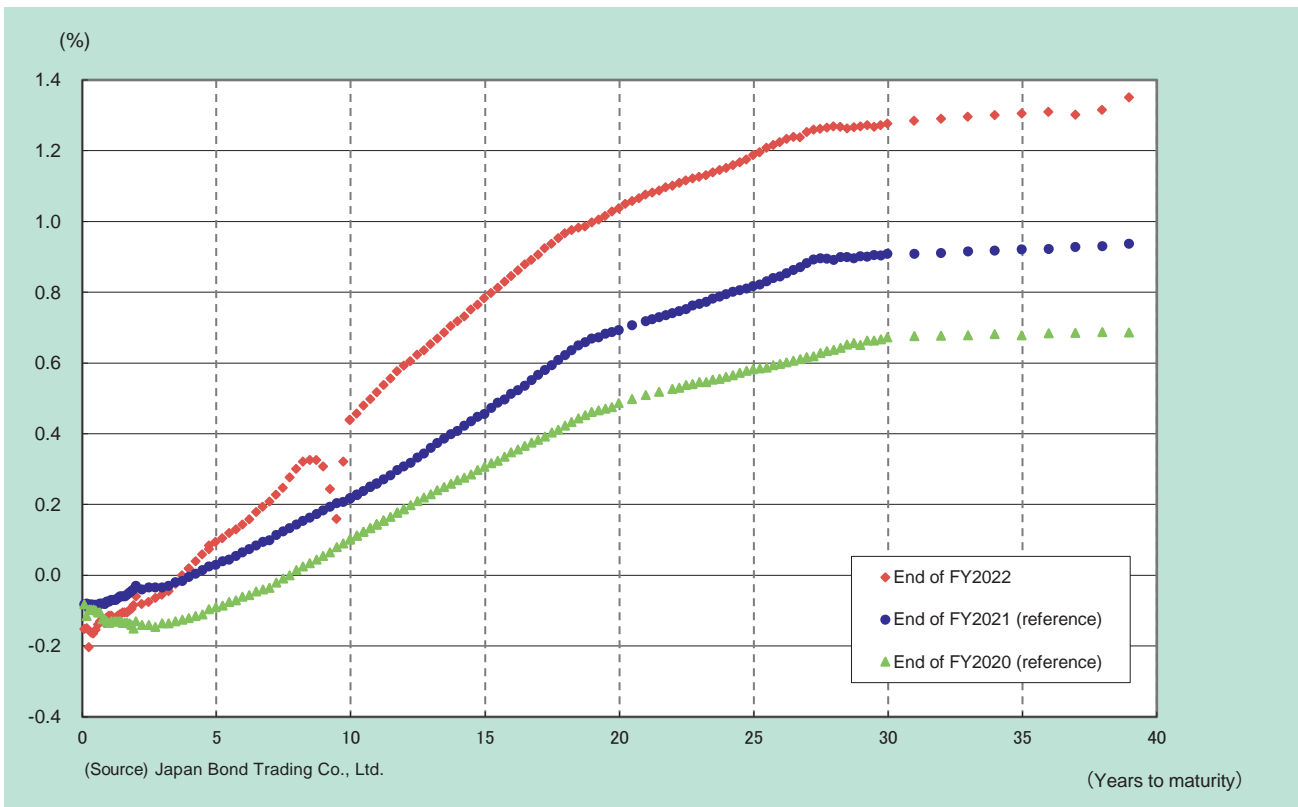
(2) 10-Year Government Bonds Yields



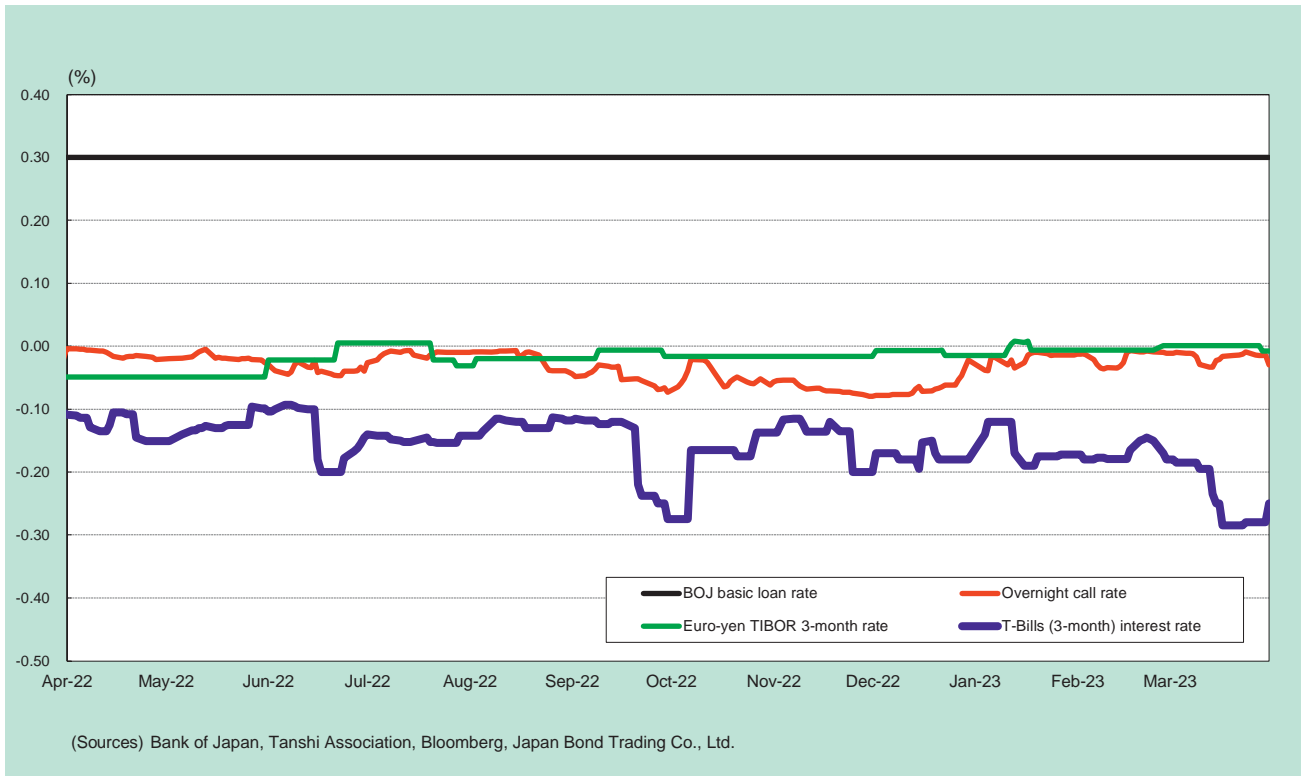
(3) Yields of JGBs in FY2022



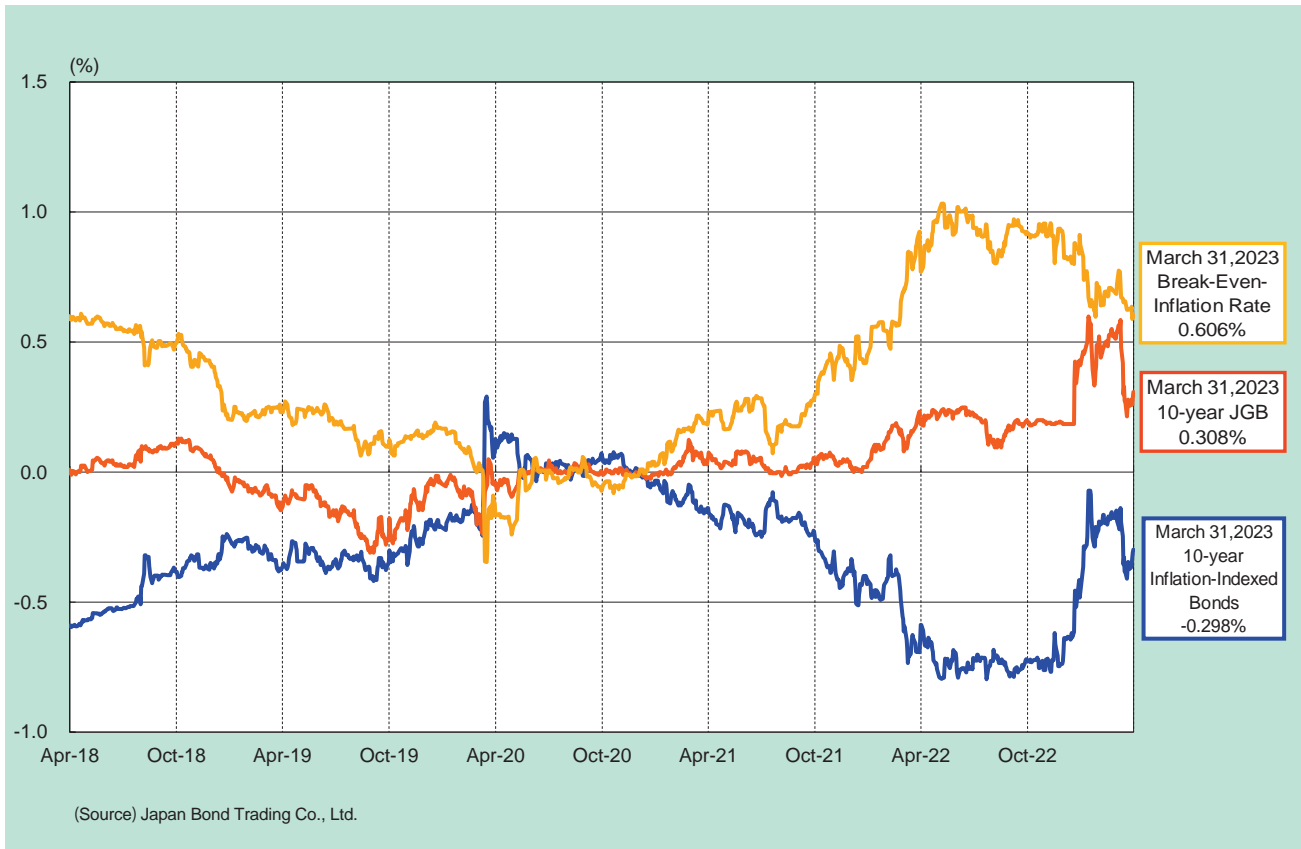
(4) JGB Yield Curves



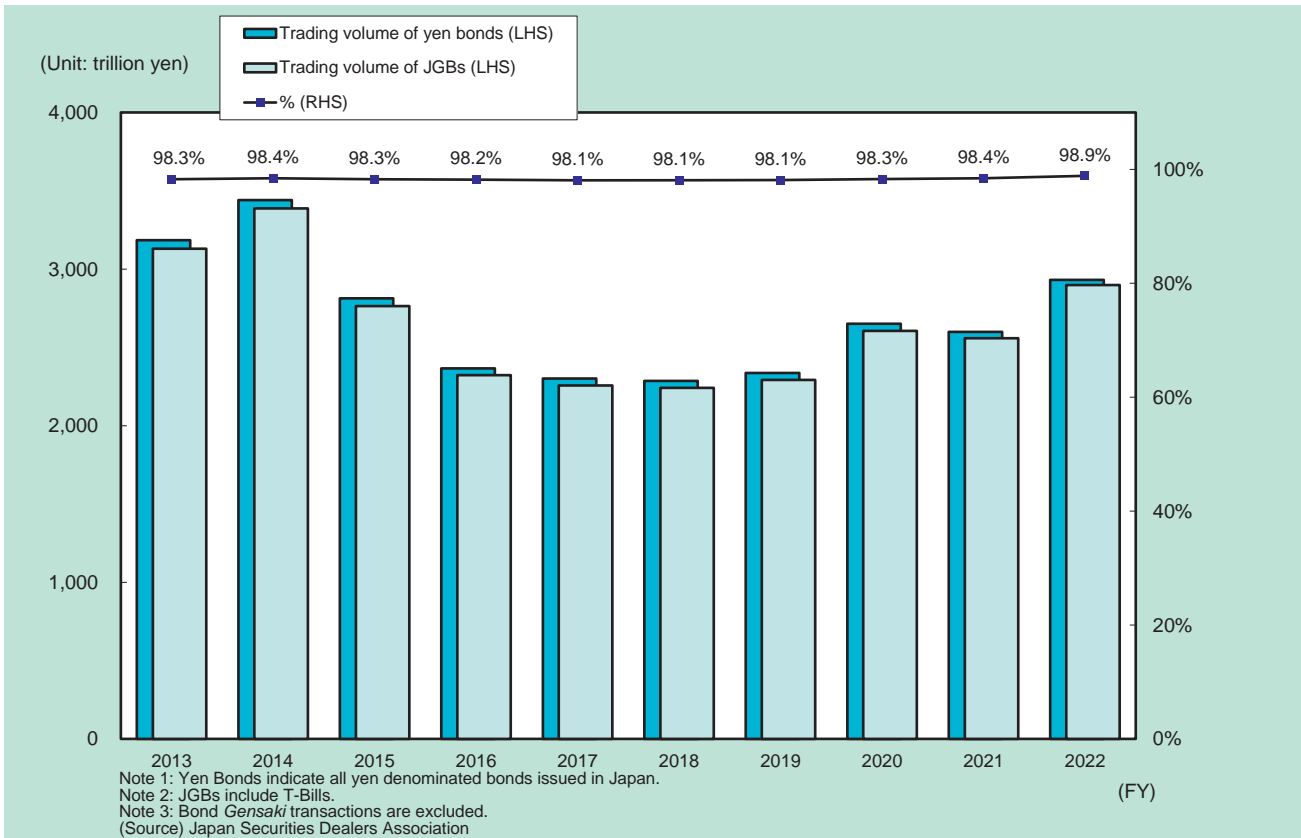
(5) Various Rates in the Short-term Financial Market in FY2022



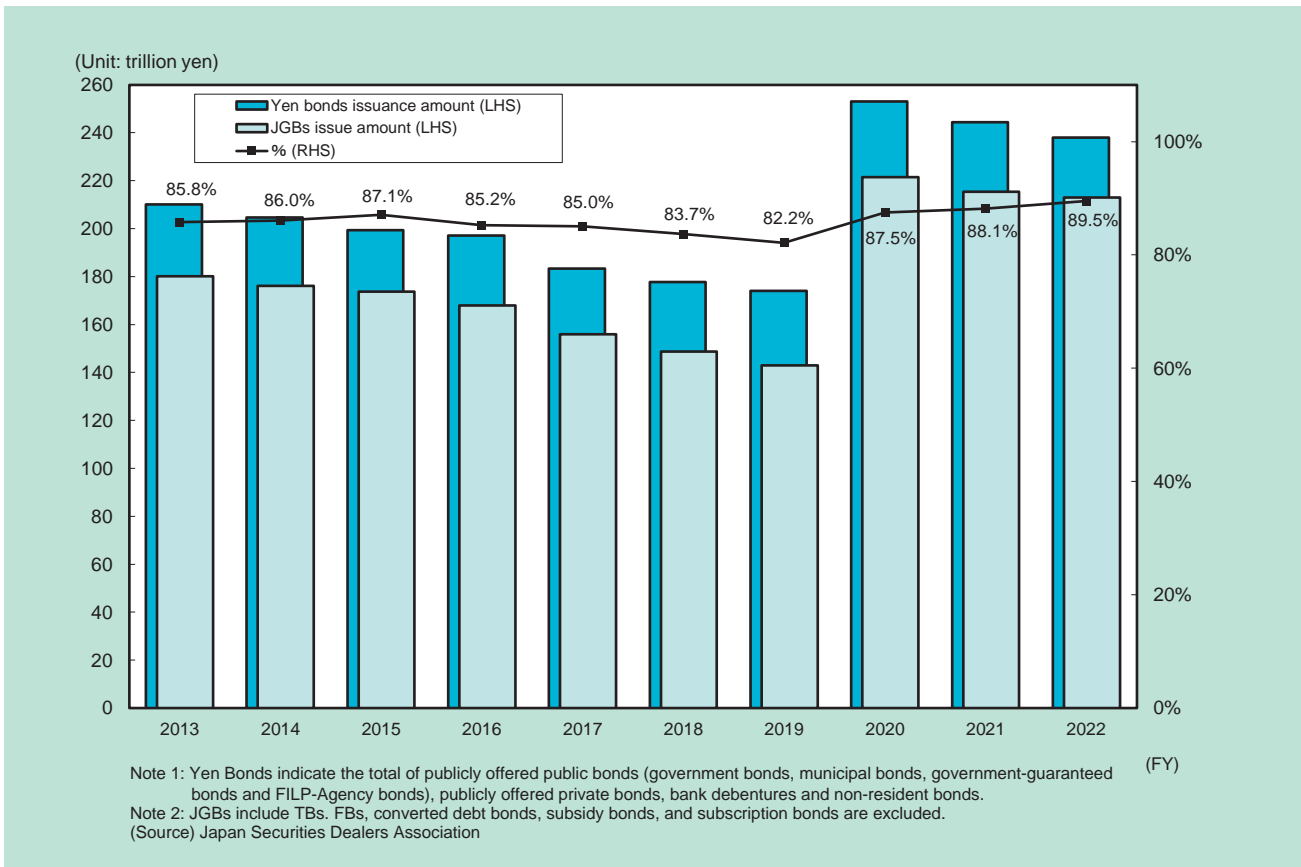
(6) Break-Even-Inflation (BEI) Rate



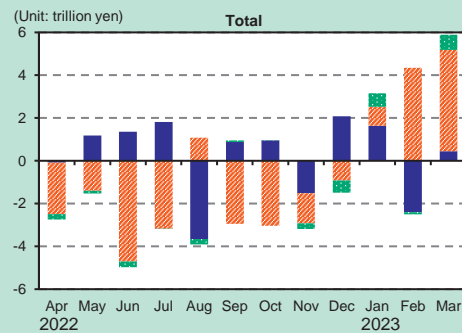
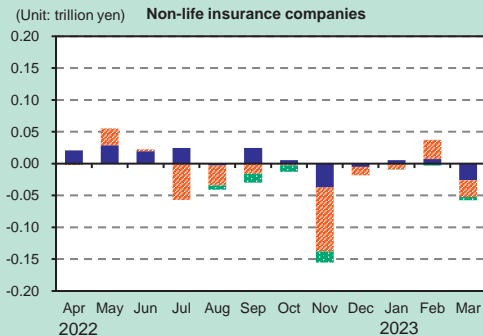
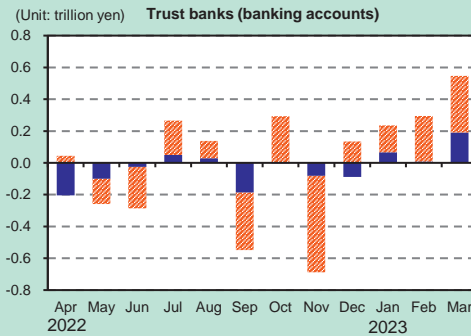
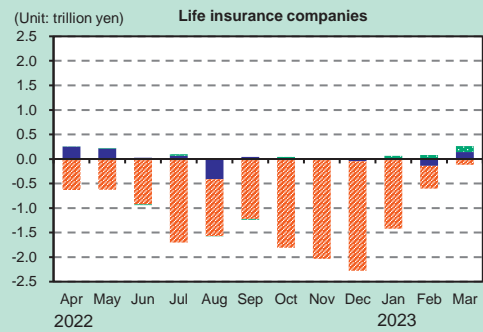
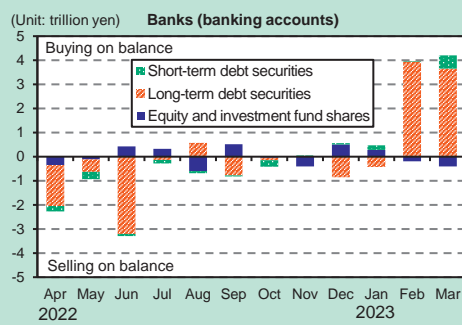
(7) JGB Share in Total Trading Volume of Yen Bonds



(8) JGB Share in Total Issuance Amount of Yen Bonds

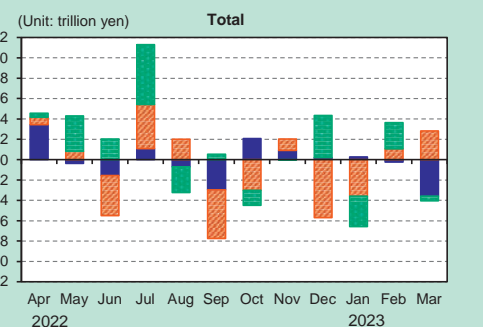
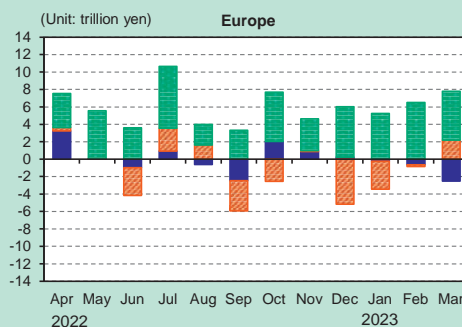
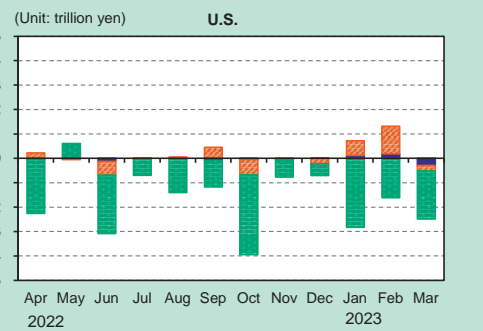
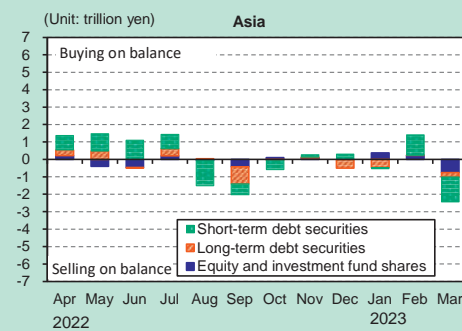


(9) Portfolio Investment Assets in FY2022



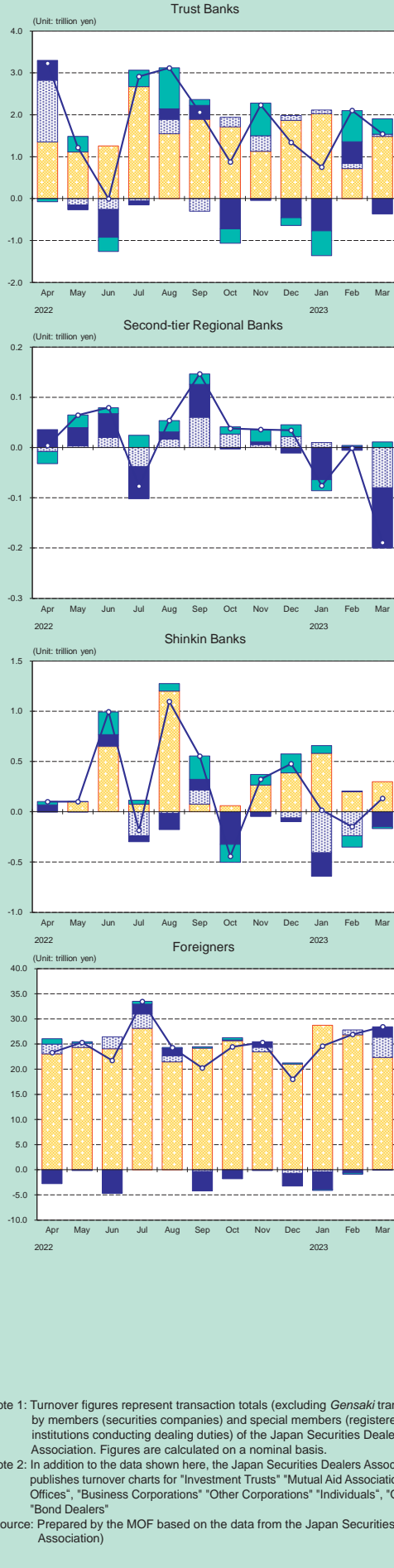
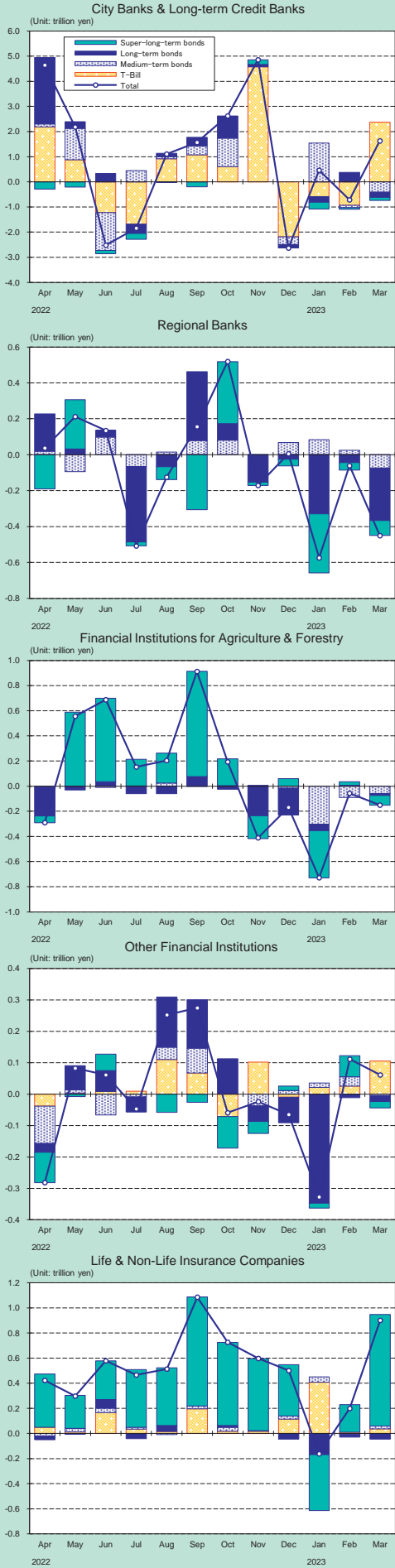
Note 1: Figures indicate the situation of investment by residents in securities issued by non-residents.
 Note 2: "Long-term debt securities" are securities with an original maturity of more than one year and include central government bonds, government agency securities, supranational bonds, local government bonds, bank bonds, corporate bonds, Samurai bonds, etc.
 Note 3: "Short-term debt securities" are securities with an original maturity of no more than one year and include T-Bills, commercial papers, etc.
 Note 4: "Total" includes "General government", "Banks (trust accounts)" and "Trust banks (trust accounts)", etc. in addition to the data shown above.
 (Source) Ministry of Finance

(10) Portfolio Investment Liabilities in FY2022



Note 1: Figures indicate the situation of investment by non-residents in securities issued by residents.
 Note 2: "Long-term debt securities" are securities with an original maturity of more than one year and include central government bonds, government agency securities, supranational bonds, local government bonds, bank bonds, corporate bonds, and Samurai bonds, etc.
 Note 3: "Short-term debt securities" are securities with an original maturity of no more than one year and include T-Bills, commercial papers, etc.
 Note 4: "Total" includes "Central and South America", "Oceania" and "Middle East", etc. in addition to the data shown above.
 (Sources) Ministry of Finance, Bank of Japan

(11) Trends in JGB Transactions (by investor type) in FY2022



Note 1: Turnover figures represent transaction totals (excluding *Gensaki* transactions) by members (securities companies) and special members (registered financial institutions conducting dealing duties) of the Japan Securities Dealers Association. Figures are calculated on a nominal basis.
 Note 2: In addition to the data shown here, the Japan Securities Dealers Association also publishes turnover charts for "Investment Trusts" "Mutual Aid Association of Govt. Offices", "Business Corporations" "Other Corporations" "Individuals", "Others" and "Bond Dealers"
 (Source: Prepared by the MOF based on the data from the Japan Securities Dealers Association)

(12) Trading Volume of Yen Bonds

(Unit: trillion yen)

| | Yen Bonds | JGBs | | | | |
|--------|-----------|-----------------------|-----------------|-------------------|------------------|---------|
| | | Super long-term Bonds | Long-term Bonds | Medium-term Bonds | Short-term Bonds | |
| FY2013 | 3,184.7 | 3,129.5 | 342.0 | 690.9 | 767.9 | 1,328.6 |
| FY2014 | 3,440.1 | 3,386.7 | 413.5 | 698.4 | 999.9 | 1,274.9 |
| FY2015 | 2,812.6 | 2,764.0 | 372.9 | 641.5 | 723.9 | 1,025.7 |
| FY2016 | 2,365.5 | 2,322.8 | 389.1 | 471.5 | 696.2 | 766.0 |
| FY2017 | 2,301.2 | 2,257.1 | 435.3 | 498.1 | 567.1 | 756.6 |
| FY2018 | 2,285.4 | 2,242.0 | 459.3 | 525.1 | 495.9 | 761.7 |
| FY2019 | 2,335.9 | 2,292.6 | 439.8 | 499.4 | 560.6 | 792.9 |
| FY2020 | 2,650.4 | 2,605.6 | 429.1 | 441.7 | 454.9 | 1,279.9 |
| FY2021 | 2,599.4 | 2,559.0 | 469.7 | 517.9 | 461.3 | 1,110.0 |
| FY2022 | 2,931.3 | 2,898.1 | 504.1 | 689.3 | 527.3 | 1,177.5 |

Note: Bond *Gensaki* transactions are excluded.
 (Source) Japan Securities Dealers Association

(13) Trading Volume of JGB Futures

(Unit: trillion yen)

| | Trading Volume | | | Open Interest (End of FY) | | |
|--------|---------------------|---------------------|-----|---------------------------|---------------------|-----|
| | 10-Year JGB Futures | 20-Year JGB Futures | | 10-Year JGB Futures | 20-Year JGB Futures | |
| FY2013 | 857.0 | 856.9 | – | 10.3 | 10.3 | – |
| FY2014 | 904.9 | 903.9 | 0.6 | 8.7 | 8.7 | 0.0 |
| FY2015 | 849.7 | 849.1 | 0.3 | 7.2 | 7.2 | 0.0 |
| FY2016 | 700.0 | 699.9 | 0.0 | 8.0 | 8.0 | 0.0 |
| FY2017 | 880.7 | 880.7 | 0.0 | 11.7 | 11.7 | 0.0 |
| FY2018 | 1,023.5 | 1,023.4 | 0.0 | 11.1 | 11.1 | 0.0 |
| FY2019 | 955.3 | 955.3 | 0.0 | 6.9 | 6.9 | – |
| FY2020 | 712.7 | 712.7 | – | 7.7 | 7.7 | – |
| FY2021 | 813.2 | 813.2 | – | 8.9 | 8.9 | – |
| FY2022 | 788.7 | 788.7 | 0.0 | 15.7 | 15.7 | – |

Note: Trading in 20-year JGB Futures had been suspended due to little demand but was re-launched based on JGB market conditions and discussions with investors in April 2014.
 (Source) Japan Securities Clearing Corporation

(14) Trading Volume of Bond *Gensaki*

(Unit: trillion yen)

| | Trading Volume | | | Outstanding (End of FY) | |
|--------|-----------------------------------|----------|-------------|---|--|
| | Yen Bonds (excluding JGB baskets) | JGBs | JGB Baskets | Transactions other than Subsequent Collateral Allocation Repos (Standard Repos, etc.) | Subsequent Collateral Allocation Repos |
| FY2013 | 6,275.4 | 6,238.0 | – | 26.4 | – |
| FY2014 | 7,064.3 | 7,004.9 | – | 30.8 | – |
| FY2015 | 7,582.8 | 7,486.9 | – | 30.5 | – |
| FY2016 | 6,918.4 | 6,887.5 | – | 33.4 | – |
| FY2017 | 7,622.2 | 7,579.0 | – | 40.2 | – |
| FY2018 | 13,575.8 | 13,537.7 | 3,112.7 | 101.6 | 14.8 |
| FY2019 | 17,259.1 | 17,222.5 | 6,450.2 | 133.6 | 22.7 |
| FY2020 | 18,843.3 | 18,837.1 | 9,085.0 | 120.6 | 27.8 |
| FY2021 | 22,791.3 | 22,777.5 | 10,326.1 | 155.9 | 22.6 |
| FY2022 | 34,591.9 | 34,579.9 | 10,929.3 | 192.6 | 22.0 |

Note 1: The Outstanding at the end of fiscal year is the total outstanding of securities companies and financial institutions for dealing.

Note 2: JGB Baskets and Subsequent Collateral Allocation Repos are traded price base (otherwise nominal).
 (Source) Japan Securities Dealers Association

(15) Trading Volume of Bond-Lending

(Unit: trillion yen)

| | Lending | | | Borrowings | | |
|--------|---------|-----------------|--------------------|------------|-----------------|--------------------|
| | | With Collateral | Without Collateral | | With Collateral | Without Collateral |
| FY2013 | 6,965.7 | 6,946.1 | 19.5 | 5,271.8 | 5,186.7 | 85.1 |
| FY2014 | 8,347.4 | 8,328.5 | 18.8 | 6,616.5 | 6,547.9 | 68.5 |
| FY2015 | 8,228.7 | 8,213.1 | 15.6 | 5,809.2 | 5,736.5 | 72.7 |
| FY2016 | 8,547.9 | 8,535.8 | 12.1 | 5,966.5 | 5,893.2 | 73.3 |
| FY2017 | 8,548.4 | 8,442.5 | 105.9 | 5,627.7 | 5,557.3 | 70.5 |
| FY2018 | 5,622.5 | 5,291.4 | 331.1 | 3,601.8 | 3,518.8 | 83.0 |
| FY2019 | 3,090.5 | 2,781.8 | 308.7 | 2,003.5 | 1,921.6 | 81.9 |
| FY2020 | 2,782.6 | 2,371.9 | 410.7 | 1,476.7 | 1,403.0 | 73.7 |
| FY2021 | 2,107.1 | 1,749.3 | 357.7 | 1,305.4 | 1,233.6 | 71.8 |
| FY2022 | 3,011.7 | 2,587.9 | 423.8 | 1,928.9 | 1,849.7 | 79.2 |

Note: Trading volume is the total of contracts by all members of Japan Securities Dealers Association.
(Source) Japan Securities Dealers Association

(16) Trading Volume of JGBs Option by OTC

(Unit: trillion yen)

| | Total | Call Options | | Put Options | |
|--------|-------|--------------|-------|-------------|-------|
| | | Bid | Offer | Bid | Offer |
| | | | | | |
| FY2013 | 114.3 | 39.9 | 22.3 | 24.6 | 27.5 |
| FY2014 | 102.3 | 41.5 | 18.2 | 19.9 | 22.6 |
| FY2015 | 65.8 | 32.8 | 9.1 | 11.3 | 12.6 |
| FY2016 | 68.9 | 26.8 | 11.8 | 15.0 | 15.3 |
| FY2017 | 97.9 | 31.2 | 20.6 | 22.6 | 23.6 |
| FY2018 | 119.6 | 35.3 | 28.9 | 29.9 | 25.5 |
| FY2019 | 131.8 | 36.1 | 31.7 | 33.2 | 30.8 |
| FY2020 | 81.0 | 25.1 | 18.2 | 18.8 | 18.8 |
| FY2021 | 81.4 | 25.4 | 18.0 | 18.4 | 19.5 |
| FY2022 | 142.4 | 39.2 | 33.1 | 33.5 | 36.7 |

Note 1: Trading volume is the total of transactions by securities companies and dealings by financial institutions.
Note 2: Trading volume is on a nominal basis
(Source) Japan Securities Dealers Association

(17) Trading Volume of JGB Futures Options

(Unit: trillion yen)

| | Trading Volume | | Open Interest (End of FY) | | |
|--------|----------------|------|---------------------------|-----|-------|
| | Call | Put | Call | Put | Total |
| FY2013 | 145.0 | 49.7 | 95.3 | 2.2 | 1.8 |
| FY2014 | 118.7 | 33.1 | 85.5 | 1.4 | 1.2 |
| FY2015 | 102.5 | 31.3 | 71.2 | 0.9 | 0.7 |
| FY2016 | 92.5 | 28.0 | 64.5 | 1.4 | 1.2 |
| FY2017 | 86.2 | 30.2 | 56.1 | 1.6 | 1.1 |
| FY2018 | 70.9 | 25.7 | 45.2 | 0.9 | 0.6 |
| FY2019 | 64.4 | 31.1 | 33.4 | 0.0 | 0.0 |
| FY2020 | 24.6 | 11.7 | 12.9 | 0.1 | 0.1 |
| FY2021 | 16.0 | 7.5 | 8.5 | 0.1 | 0.0 |
| FY2022 | 7.6 | 3.1 | 4.4 | 0.1 | 0.1 |

(Source) Japan Exchange Group, Inc.

(18) Outstanding Amount of STRIPS-Principal-Only Book-entry Transfer JGBs

(Unit: billion yen)

| | 40-Year Bonds | | 30-Year Bonds | | 20-Year Bonds | | 10-Year Bonds | | 5-Year Bonds | | 2-Year Bonds | | Total | |
|--------|---------------|------------|---------------|-------------|---------------|-------------|---------------|-------------|--------------|-------------|--------------|------------|-------|---------------|
| | Call | Put | Call | Put | Call | Put | Call | Put | Call | Put | Call | Put | Call | Put |
| FY2013 | 39.3 | (8,493.4) | 143.1 | (53,274.0) | 23.8 | (139,142.0) | 152.5 | (299,174.5) | 24.6 | (153,383.2) | — | (70,172.0) | 383.3 | (723,639.1) |
| FY2014 | 39.6 | (10,445.5) | 143.3 | (64,211.4) | 24.5 | (157,000.2) | 138.5 | (298,055.7) | 16.6 | (158,260.0) | — | (69,152.9) | 362.6 | (757,125.7) |
| FY2015 | 49.6 | (13,133.4) | 146.4 | (76,987.9) | 23.9 | (174,841.3) | 119.3 | (301,008.5) | 12.1 | (160,806.5) | — | (63,932.8) | 351.3 | (790,710.4) |
| FY2016 | 49.6 | (16,597.6) | 146.4 | (88,628.2) | 20.7 | (192,056.6) | 94.4 | (302,813.6) | 6.5 | (160,409.4) | — | (60,419.9) | 317.5 | (820,925.1) |
| FY2017 | 49.6 | (20,283.7) | 146.4 | (100,696.1) | 20.6 | (208,335.0) | 66.4 | (308,203.8) | 3.6 | (156,681.3) | — | (57,975.4) | 286.7 | (852,175.2) |
| FY2018 | 49.6 | (23,191.4) | 146.4 | (111,350.1) | 20.6 | (226,008.7) | 46.1 | (314,323.3) | 1.2 | (147,403.4) | — | (55,436.4) | 263.9 | (877,713.3) |
| FY2019 | 49.7 | (26,504.6) | 146.4 | (121,641.1) | 20.6 | (243,077.3) | 23.0 | (313,956.3) | 0.4 | (138,030.0) | — | (52,360.6) | 240.0 | (895,569.8) |
| FY2020 | 49.7 | (30,453.0) | 146.4 | (133,637.9) | 20.6 | (261,715.0) | 13.9 | (316,538.4) | — | (135,198.7) | — | (60,130.9) | 230.6 | (937,673.9) |
| FY2021 | 49.9 | (35,098.5) | 146.4 | (146,955.0) | 20.6 | (281,354.0) | 6.0 | (320,319.2) | — | (136,099.3) | — | (71,542.0) | 222.8 | (991,368.0) |
| FY2022 | 50.2 | (40,240.8) | 146.4 | (160,036.2) | 20.4 | (296,896.8) | 3.5 | (323,874.0) | — | (138,002.0) | — | (73,629.5) | 220.4 | (1,032,679.4) |

<Key> Outstanding Amount of Principal-Only Book-entry Transfer JGBs at the end of each period (Outstanding amount of JGBs qualified for STRIPS)
 Note: Figures may not sum up to the total because of rounding.

(19) Japan's Sovereign Rating by Major Credit Rating Agencies

(Long-term debt denominated in home currency on May. 15, 2023)

| Moody's | S&P | Fitch | R&I | JCR |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| Nov. 17, 98 Aaa | Feb. 22, 01 AAA | Jun. 29, 00 AAA | Dec. 21, 11 AAA | Oct. 31, 00 AAA |
| Sep. 8, 00 Aa1 | Nov. 27, 01 AA+ | Nov. 26, 01 AA+ | Dec. 21, 11 AA+ | AA+ |
| Dec. 4, 01 Aa2 | Apr. 15, 02 AA | Nov. 21, 02 AA | Dec. 21, 11 AA | AA |
| May 18, 09 Aa3 | Apr. 22, 07 AA- | May 22, 12 AA- | Dec. 21, 11 AA- | AA- |
| Jun. 30, 08 A1 | Jan. 27, 11 A+ | Sep. 16, 15 A+ | Dec. 21, 11 A+ | A+ |
| May 31, 02 A2 | Oct. 11, 07 A | Apr. 27, 15 A | Dec. 21, 11 A | A |
| A3 | A- | A- | A- | A- |
| Baa1 | BBB+ | BBB+ | BBB+ | BBB+ |
| Baa2 | BBB | BBB | BBB | BBB |
| Baa3 | BBB- | BBB- | BBB- | BBB- |

[Outlook]

| | | | | |
|-----------------------|-----------------------|------------------------|------------------------|-----------------------|
| Stable (Dec. 1, 2014) | Stable (Jun. 9, 2020) | Stable (Mar. 25, 2022) | Stable (Aug. 30, 2018) | Stable (Aug. 9, 2018) |
|-----------------------|-----------------------|------------------------|------------------------|-----------------------|

(20) List of Sovereign Ratings by Major Credit Rating Agencies

(Long-term debt denominated in home currency on May. 15, 2023)

| | Moody's | S&P | Fitch | R&I | JCR |
|-----------|---------------------------|-----------------------------|--|-----------------------------------|--|
| Aaa/AAA | U.S. Germany Canada | Germany Canada | U.S. Germany | U.S. U.K. Germany France | Japan U.S. U.K. Germany France Canada |
| Aa1/AA+ | | U.S. | Canada | Japan | Korea |
| Aa2/AA | France Korea | U.K. France (↓) Korea | | | Spain China |
| Aa3/AA- | U.K. (↓) Ireland | Ireland (↑) | Korea Ireland U.K. (↓) France | China Korea Ireland | |
| A1/A+ | Japan China | Japan China | China | | |
| A2/A | | Spain | Japan | Spain | Italy Portugal |
| A3/A- | | | Spain | | |
| Baa1/BBB+ | Spain | Portugal | Portugal | Italy | |
| Baa2/BBB | Portugal | Italy | Italy | Portugal | |
| Baa3/BBB- | Italy (↓) | | | | |
| Ba1/BB+ | | Greece (↑) | Greece | Greece | |
| Ba2/BB | | | | | |
| Ba3/BB- | Greece (↑) | | | | |
| B1/B+ | | | | | |
| B2/B | | | | | |
| B3/B- | | | | | |
| Caa1/CCC+ | | | | | |
| Caa2/CCC | | | | | |
| Caa3/CCC- | | | | | |
| Ca/CC | | | | | |
| C | | | | | |
| SD/RD | | | | | |

" (↑) "shows that the outlook is positive.
" (↓) "shows that the outlook is negative.