GOVERNMENT DEBT MANAGEMENT AGENCY PTE LTD.

ÁKK

# GOVERNMENT SECURITIES MARKET

QUARTERLY REPORT
Q1 2023

# Summary

The deficit of the central government amounted to HUF 2,089.7 billion (about EUR 5.5 billion) in Q1 2023. The net financing need was decreased by HUF 130.4 billion of the net balance of transfers from the European Union and other sources. Thus, the total net financing need amounted to HUF 1,959.3 billion. Net issuance was HUF 2,510.7 billion, out of which net HUF denominated issuance was HUF 1,103.1 billion and net foreign currency denominated issuance was HUF 1,407.6 billion. The total amount of other liabilities decreased by HUF 69.2 billion in 2023.

ÁKK had set up benchmarks to maintain the optimal cost-risk characteristics of public debt. The 90-day moving average values of those benchmarks at the end of Q1 2023 were as follows:

- The share of foreign currency denominated debt within the total debt was 26.2%.
- 100% of the foreign currency debt was denominated in euro.
- The fixed-floating mix of the total (foreign currency and HUF-denominated) debt portfolio was 71.3% and 28.7%.
- The average time to refixing (ATR) of the total debt portfolio was 5.2 years.
- The average term to maturity (ATM) of the total debt was 6.3 years.
- The share of retail government securities hold by the households within total debt was 19.0%.

All benchmark targets were met in Q1 2023, apart from the share of retail government securities hold by the households within total debt. From January 2023, a new benchmark is the share of retail government securities in total debt hold by households, with an acceptance range of 20-25%. The large foreign currency issuance in January significantly reduced that benchmark value, as the amount of total debt increased relative to the stock of retail government securities hold by retail investors, and the purchase of discount Treasury bills by retail investors also had a negative impact on the benchmark.

The short term secondary market yields increased, but the long term secondary market yields decreased in Q1. The 3-6 month yields increased by 216-132 basis points and the 12 month yields increased by 75 basis points compared to December. The 3-5 year yields decreased by 26-37 basis points, the 10 year yield decreased by 54 basis points and the 15-20 year yields decreased by 31-49 basis points. At the end of March the 1-year benchmark yield stood at 14.57%, the 5-year yield at 9.36% and the 10-year yield at 8.44% respectively. The yield of 20-year government bond was 7.92% at the last day of the first quarter.

In January 2023 5-year foreign currency bond in the amount of USD 1.5 billion (HUF 558.1 billion) and 10-year foreign currency bond in the amount of USD 1.5 billion (HUF 558.1 billion), and 30-year foreign currency bond in the amount of 1.25 billion USD (HUF 465.1 billion HUF) foreign currency bonds were issued. The foreign currency debt was further increased by the private placement in March. The 5- and 10-year foreign currency bonds issued in January were increased in the amounts of USD 150 million (HUF 54.3 billion) and USD 300 million (HUF 108.6 billion). A part of the January's issuance was used to repurchase two USD bonds maturing between 2023-24, together with the closing of the related swaps, at a face value of USD 1.0 billion (HUF 289.9 billion).

The liquidity in the secondary market was higher by 3% in Q1 compared to the previous quarter. OTC turnover of government securities amounted to HUF 27,082.7 billion. Primary dealers, who account for the decisive part of all secondary government securities trading, made 81% of their secondary government securities deals with non-resident investors.

The volume of non-resident holdings of Hungarian government securities increased by HUF 1,426.2 billion from end-December and amounted to HUF 6,578.3 billion at the end of March. This amount represented 19.4% of domestic government securities.

The EUR/HUF exchange rate according to the National Bank of Hungary was 380.99 on the last working day of March.

The credit rating of the long-term foreign currency denominated debt of Hungary was: BBB- (Standard & Poor's); BBB (Fitch); Baa2 (Moody's) as at 31 March 2023. In January, Standard & Poor's downgraded Hungary from BBB to BBB minus with a stable outlook and Fitch Ratings affirmed Hungary's BBB sovereign rating but changed the outlook to negative from stable.

## MACROECONOMIC INDICATORS

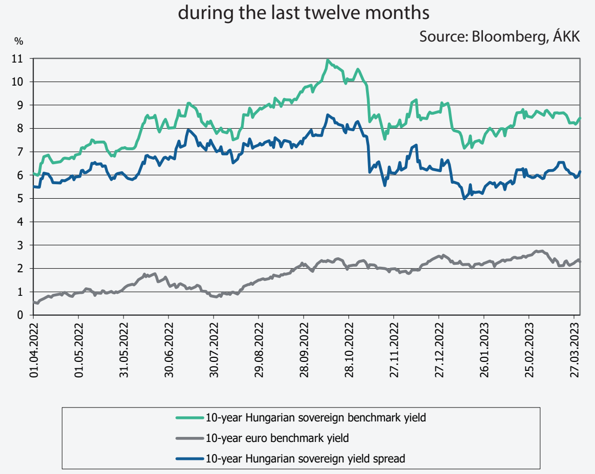
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Q1 2023 |
|---|---|---|---|---|---|---|---|
| GDP growth (yearly average) [1] | 4.3 | 5.4 | 4.6 | -4.5 | 7.1 | 4.6 | -1.1 |
| Industrial production [1] | 4.6 | 3.5 | 5.6 | -6.0 | 9.5 | 5.8 | -4.0 |
| Unemployment rate (%) (3-month average) | 4.0 | 3.6 | 3.3 | 4.1 | 4.1 | 3.7 | 4.1 |
| Consumer price index (yearly change) [2] | 2.1 | 2.7 | 4.0 | 2.7 | 7.4 | 24.5 | 25.4 |
| Consumer price index (yearly average) | 2.4 | 2.8 | 3.4 | 3.3 | 5.1 | 14.5 | |
| Producer price index (yearly change) [2] | 3.9 | 4.7 | 2.4 | 6.8 | 22.3 | 34.9 | 28.1 |
| Producer price index (yearly average) | 3.3 | 5.5 | 2.1 | 4.2 | 13.5 | 33.7 | |
| Net lending position of housholds (HUF Bn) [3] | 1,922.8 | 2,715.5 | 2,390.7 | 3,235.2 | 3,597.7 | 2,654.2 | 1,434.4 |
| Current account of balance of payments (EUR M) [4] | 2,535.9 | 215.9 | -1,148.0 | -1,569.9 | -6,252.2 | -13,724.3 | |
| Net direct investments (EUR M) [5] | -2,036.8 | -2,611.8 | -954.5 | -2,350.1 | -2,958.7 | -3,875.4 | |
| Balance of the central government budget (HUF Bn) | -1,763.0 | -1,375.5 | -1,023.8 | -4,953.5 | -4,662.3 | -4,611.5 | -2,019.0 |
| Balance of the central government budget (GFS, per cent of GDP)[6] | -3.3 | -2.8 | -2.5 | -11.2 | -8.5 | -7.2 | |
| Balance of the state budget (ESA, percent of GDP)[6] | -2.5 | -2.1 | -2.0 | -7.5 | -7.1 | -6.2 | |
| Central government gross debt (HUF Bn) | 26,746.2 | 28,688.2 | 29,682.0 | 36,684.3 | 40,697.0 | 45,562.4 | 47,375.9 |
| Central government gross debt (per cent of GDP) | 68.1 | 66.1 | 62.3 | 75.8 | 73.8 | 68.4 | |
| Net foreign debt (EUR M) [7] | 17,221.0 | 11,919.1 | 11,463.5 | 11,298.6 | 16,497.7 | 21,132.8 | |
| Net foreign debt (per cent of GDP) [8] | 13.6 | 8.8 | 7.8 | 8.3 | 10.7 | 12.4 | |
| HUF/USD mid exchange rate at the end of period | 258.82 | 280.94 | 294.74 | 297.36 | 325.71 | 375.68 | 349.85 |
| HUF/EUR mid exchange rate at the end of period | 310.14 | 321.51 | 330.52 | 365.13 | 369.00 | 400.25 | 380.99 |

Source: ÁKK, KSH, MNB, PM

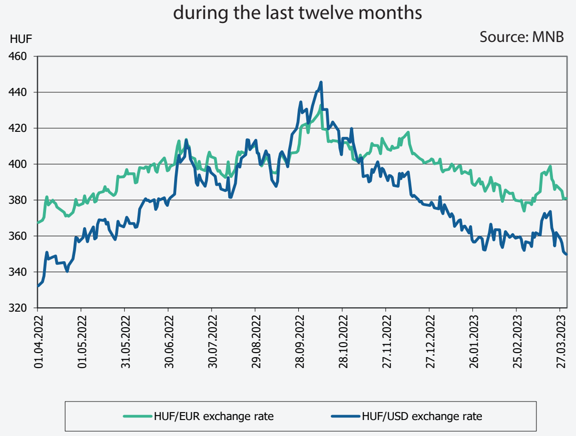
[1] Same period of previous year = 100%, working day adjusted
[2] In case of yearly data: December/previous December, otherwise month/same month of the previous year
[3] Non-consolidated data
[4] Data compiled in accordance with the methodology used by the NBH from 2004
[5] Including intercompany loans
[6] Proportion of seasonally adjusted GDP
[7] Excluding intercompany loans
[8] 2021 value based on HUF data

ÁKK - Government Debt Management Agency
KSH - Hungarian Central Statictical Office
MNB - National Bank of Hungary
PM - Finance Ministry

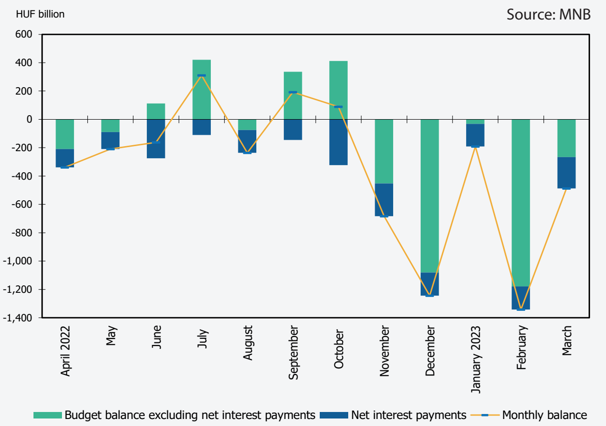
10-year Hungarian and eurozone benchmark yields during the last twelve months



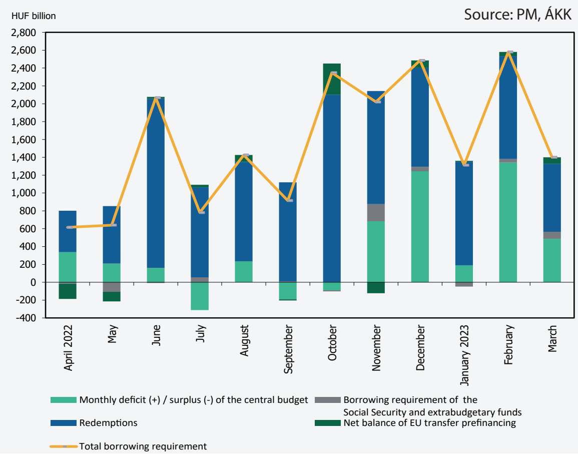

The exchange rate of the Hungarian Forint during the last twelve months




Monthly balance of the central government budget




Gross borrowing requirement



## CENTRAL GOVERNMENT GROSS DEBT

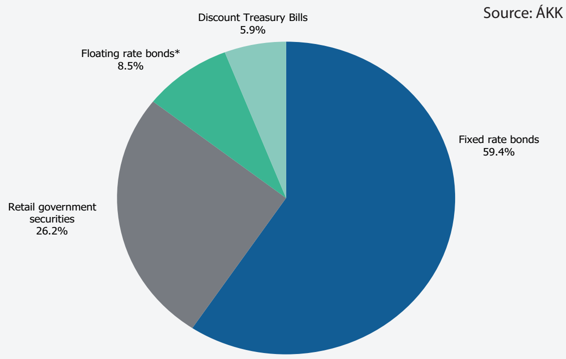
HUF BILLION

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Q1 2023 |
|---|---|---|---|---|---|---|---|
| 1. Forint denominated debt | 20,689.4 | 22,796.0 | 24,357.1 | 29,237.3 | 32,121.2 | 33,775.6 | 34,878.7 |
| 1.1. Loans | 1,041.1 | 1,167.7 | 1,208.1 | 1,161.6 | 1,307.7 | 1,024.2 | 964.7 |
| 1.2. Government securities | 19,648.3 | 21,628.3 | 23,149.0 | 28,075.7 | 30,813.5 | 32,751.4 | 33,914.0 |
| 1.2.1. Public issues | 19,609.2 | 21,589.1 | 23,109.8 | 28,036.5 | 30,813.5 | 32,751.4 | 33,914.0 |
| 1.2.1.1. Bonds | 11,767.1 | 12,836.1 | 13,378.5 | 18,206.6 | 20,220.0 | 22,346.3 | 23,012.5 |
| 1.2.1.2. Discount T-bills | 1,039.2 | 1,237.3 | 657.3 | 658.2 | 583.2 | 1,785.8 | 2,016.4 |
| 1.2.1.3. Retail securities | 6,802.9 | 7,515.7 | 9,074.0 | 9,171.7 | 10,010.2 | 8,619.4 | 8,885.1 |
| 1.2.2. Private placements | 39.2 | 39.2 | 39.2 | 39.2 | 0.0 | 0.0 | 0.0 |
| 2. Foreign currency denominated debt* | 5,782.5 | 5,724.8 | 5,121.2 | 7,318.2 | 8,395.2 | 11,397.3 | 12,177.0 |
| 2.1. Loans | 929.1 | 795.0 | 825.4 | 1,291.1 | 1,345.2 | 1,959.1 | 1,960.7 |
| 2.1.1. Foreign loans | 929.1 | 795.0 | 825.4 | 1,291.1 | 1,345.2 | 1,959.1 | 1,960.7 |
| 2.1.2. Domestic loans | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.2. Government securities | 4,853.5 | 4,929.8 | 4,295.8 | 6,027.1 | 7,049.9 | 9,438.2 | 10,216.3 |
| 2.2.1. Issued abroad | 4,145.9 | 4,246.2 | 3,713.5 | 5,481.3 | 6,594.9 | 9,085.5 | 9,795.3 |
| 2.2.2. Issued domestically | 707.6 | 683.6 | 582.3 | 545.9 | 455.0 | 352.8 | 420.9 |
| Total | 26,472.0 | 28,520.7 | 29,478.3 | 36,555.5 | 40,516.4 | 45,173.0 | 47,055.7 |
| Other liabilities | 274.2 | 167.4 | 203.7 | 128.8 | 180.6 | 389.4 | 320.2 |
| Total central government debt | 26,746.2 | 28,688.2 | 29,682.0 | 36,684.3 | 40,697.0 | 45,562.4 | 47,375.9 |
| Marketable HUF debt (1.2.1.1+1.2.1.2+1.2.2) | 12,845.5 | 14,112.6 | 14,075.0 | 18,904.0 | 20,803.2 | 24,132.1 | 25,028.9 |
| Gross debt/GDP | 68.1% | 66.1% | 62.3% | 75.8% | 73.8% | 68.1% | |

* Foreign exchange debt is recorded at the mid exchange rate of the NBH at the end of the year/month.

### Composition of HUF government securities as at 31.03.2023

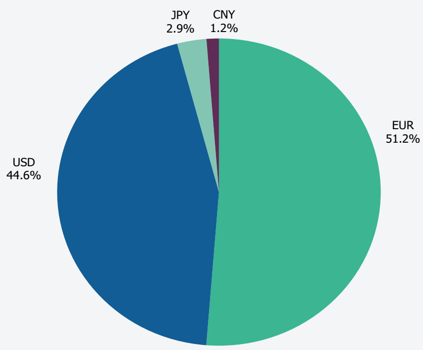
Source: ÁKK




* Without retail government securities.

### Currency composition of the foreign exchange debt portfolio before swaps as at 31.03.2023*

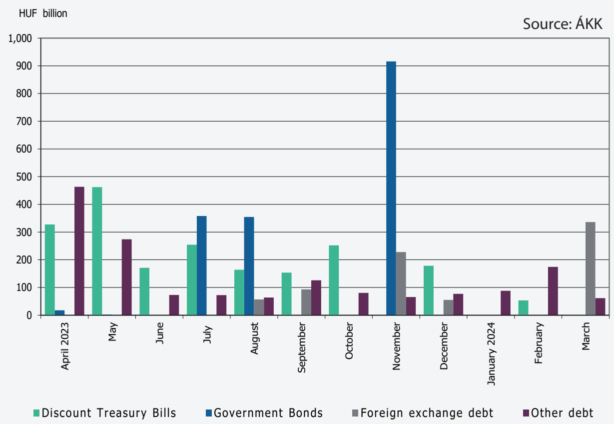
Source: ÁKK




* Composition before swaps. By using cross-currency swaps, 100% of the actual foreign exchange debt of the central government was due in euros.

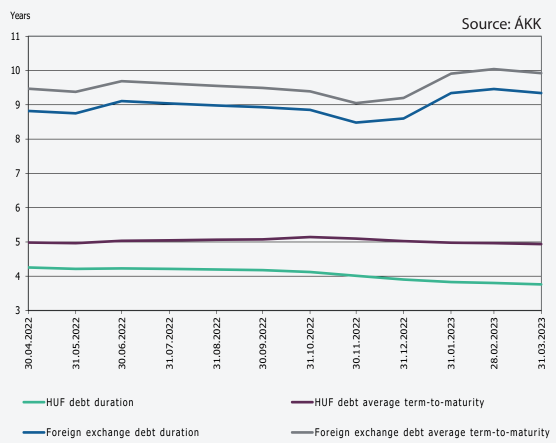
### Maturity profile of the central government gross debt over the next 12 months, as at 31.03.2023

Source: ÁKK




### Average term-to-maturity of the HUF and foreign currency debt portfolios

Source: ÁKK



# GOVERNMENT BOND AUCTION RESULTS

| Government Bond | 2032/B | 2026/H | 2028/A | 2032/A | 2041/A | 2026/H | 2028/A | 2032/A | 2032/B |
|---|---|---|---|---|---|---|---|---|---|
| ISIN code | HU0000406087 | HU0000406160 | HU0000402532 | HU0000405550 | HU0000404165 | HU0000406160 | HU0000402532 | HU0000405550 | HU0000406087 |
| Maturity (in years) | 10 | 3 | 5 | 10 | 20 | 3 | 5 | 10 | 10 |
| Coupon | 13.78% | 9.50% | 6.75% | 4.75% | 3.00% | 9.50% | 6.75% | 4.75% | 13.78% |
| Auction | 7th auction | 1st auction | 48th auction | 26th auction | 42nd auction | 2nd auction | 49th auction | 27th auction | 8th auction |
| Date of auction | 05.01.2023 | 12.01.2023 | 12.01.2023 | 12.01.2023 | 19.01.2023 | 26.01.2023 | 26.01.2023 | 26.01.2023 | 02.02.2023 |
| Date of financial settlement | 11.01.2023 | 18.01.2023 | 18.01.2023 | 18.01.2023 | 25.01.2023 | 01.02.2023 | 01.02.2023 | 01.02.2023 | 08.02.2023 |
| Redemption date | 25.08.2032 | 21.10.2026 | 22.10.2028 | 24.11.2032 | 25.04.2041 | 21.10.2026 | 22.10.2028 | 24.11.2032 | 25.08.2032 |
| Maximum annual yield (%) - ISMA | - | 9.25 | 8.14 | 7.37 | 7.18 | 9.49 | 8.20 | 7.46 | - |
| Minimum annual yield (%) - ISMA | - | 9.15 | 8.06 | 7.27 | 7.15 | 9.40 | 8.14 | 7.41 | - |
| Average annual yield (%) - ISMA | - | 9.20 | 8.10 | 7.34 | 7.15 | 9.45 | 8.17 | 7.43 | - |
| Maximum annual yield (%) - EHM | - | 9.24 | 8.13 | 7.36 | 7.17 | 9.48 | 8.19 | 7.45 | - |
| Minimum annual yield (%) - EHM | - | 9.14 | 8.05 | 7.26 | 7.14 | 9.39 | 8.13 | 7.40 | - |
| Average annual yield (%) - EHM | - | 9.20 | 8.10 | 7.34 | 7.14 | 9.44 | 8.16 | 7.43 | - |
| Maximum price (%) | 95.9000 | 101.1500 | 94.1001 | 82.6815 | 58.4120 | 100.3620 | 93.7846 | 81.8794 | 96.4600 |
| Minimum price (%) | 95.7800 | 100.8350 | 93.7568 | 82.0755 | 58.1911 | 100.0861 | 93.5295 | 81.5750 | 95.9000 |
| Average price (%) | 95.8200 | 100.9745 | 93.9075 | 82.2271 | 58.4105 | 100.2008 | 93.6489 | 81.7311 | 96.0700 |
| Amount offered for sale (HUF million) | 15,000.00 | 30,000.00 | 25,000.00 | 20,000.00 | 15,000.00 | 25,000.00 | 20,000.00 | 15,000.00 | 15,000.00 |
| Amount of bids submitted (HUF million) | 54,550.00 | 34,700.00 | 109,984.19 | 51,550.00 | 42,400.00 | 40,990.00 | 37,500.00 | 17,400.00 | 29,900.00 |
| Amount of bids accepted (HUF million) | 15,000.00 | 28,500.00 | 54,499.99 | 26,499.99 | 15,000.00 | 24,999.99 | 19,999.99 | 10,000.00 | 20,000.00 |
| Bid-to-cover ratio | 3.64 | 1.22 | 2.02 | 1.95 | 2.83 | 1.64 | 1.88 | 1.74 | 1.50 |
| Bids submitted (pcs) | 54 | 33 | 68 | 41 | 45 | 37 | 46 | 34 | 27 |
| Bids accepted (pcs) | 12 | 19 | 34 | 23 | 5 | 25 | 30 | 21 | 16 |
| Tail (average price - minimum price) | 0.04 | 0.14 | 0.15 | 0.15 | 0.22 | 0.11 | 0.12 | 0.16 | 0.17 |
| Market sales (HUF million) | 15,000.00 | 28,500.00 | 54,499.99 | 26,499.99 | 15,000.00 | 24,999.99 | 19,999.99 | 10,000.00 | 20,000.00 |
| Non-competitive offer (HUF million) | 4,120.00 | 0.00 | 18,971.66 | 9,039.99 | 5,840.00 | 0.00 | 0.00 | 0.00 | 4,560.00 |
| Total amount sales (HUF million) | 19,120.00 | 28,500.00 | 73,471.65 | 35,539.98 | 20,840.00 | 24,999.99 | 19,999.99 | 10,000.00 | 24,560.00 |

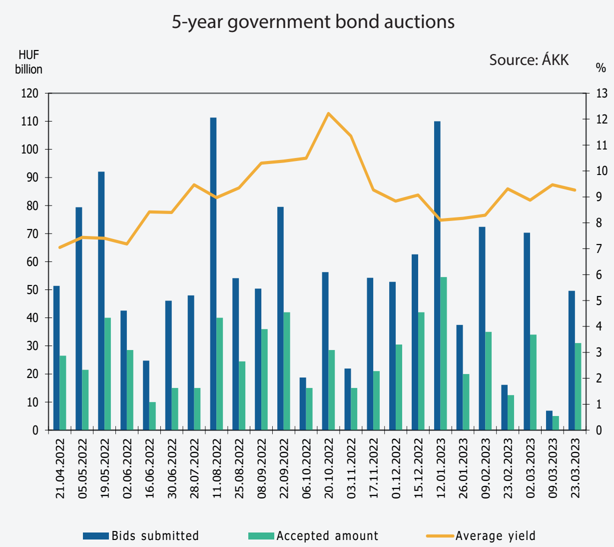
| Government Bond | 2026/H | 2028/A | 2032/A | 2025/C | 2038/A | 2026/H | 2028/A | 2032/A | 2029/A |
|---|---|---|---|---|---|---|---|---|---|
| ISIN code | HU0000406160 | HU0000402532 | HU0000405550 | HU0000404058 | HU0000403555 | HU0000406160 | HU0000402532 | HU0000405550 | HU0000404603 |
| Maturity (in years) | 3 | 5 | 10 | 3 | 15 | 3 | 5 | 10 | 6 |
| Coupon | 9.50% | 6.75% | 4.75% | 1.00% | 3.00% | 9.50% | 6.75% | 4.75% | 2.00% |
| Auction | 3rd auction | 50th auction | 28th auction | 34th auction | 60th auction | 4th auction | 51st auction | 29th auction | 69th auction |
| Date of auction | 09.02.2023 | 09.02.2023 | 09.02.2023 | 16.02.2023 | 16.02.2023 | 23.02.2023 | 23.02.2023 | 23.02.2023 | 02.03.2023 |
| Date of financial settlement | 15.02.2023 | 15.02.2023 | 15.02.2023 | 22.02.2023 | 22.02.2023 | 01.03.2023 | 01.03.2023 | 01.03.2023 | 08.03.2023 |
| Redemption date | 21.10.2026 | 22.10.2028 | 24.11.2032 | 26.11.2025 | 27.10.2038 | 21.10.2026 | 22.10.2028 | 24.11.2032 | 23.05.2029 |
| Maximum annual yield (%) - ISMA | 9.39 | 8.30 | 7.68 | 10.73 | 7.92 | 10.60 | 9.35 | 8.55 | 8.89 |
| Minimum annual yield (%) - ISMA | 9.35 | 8.28 | 7.66 | 10.65 | 7.81 | 10.50 | 9.25 | 8.43 | 8.84 |
| Average annual yield (%) - ISMA | 9.37 | 8.29 | 7.67 | 10.69 | 7.86 | 10.55 | 9.31 | 8.50 | 8.87 |
| Maximum annual yield (%) - EHM | 9.38 | 8.29 | 7.67 | 10.72 | 7.91 | 10.59 | 9.34 | 8.54 | 8.88 |
| Minimum annual yield (%) - EHM | 9.34 | 8.27 | 7.65 | 10.64 | 7.80 | 10.49 | 9.24 | 8.42 | 8.83 |
| Average annual yield (%) - EHM | 9.36 | 8.28 | 7.66 | 10.68 | 7.85 | 10.54 | 9.30 | 8.49 | 8.86 |
| Maximum price (%) | 100.5000 | 93.2320 | 80.4520 | 77.9167 | 57.3403 | 97.1289 | 89.3090 | 76.1720 | 68.3427 |
| Minimum price (%) | 100.3708 | 93.1383 | 80.3308 | 77.7629 | 56.6605 | 96.8453 | 88.9146 | 75.5159 | 68.1590 |
| Average price (%) | 100.4371 | 93.1980 | 80.4025 | 77.8336 | 57.0316 | 96.9929 | 89.0724 | 75.7750 | 68.2218 |
| Amount offered for sale (HUF million) | 25,000.00 | 20,000.00 | 15,000.00 | 25,000.00 | 10,000.00 | 25,000.00 | 20,000.00 | 15,000.00 | 15,000.00 |
| Amount of bids submitted (HUF million) | 55,130.00 | 72,400.00 | 58,137.00 | 23,800.50 | 11,800.00 | 15,900.00 | 16,100.00 | 17,895.46 | 70,329.30 |
| Amount of bids accepted (HUF million) | 33,999.99 | 34,999.99 | 26,500.00 | 14,000.00 | 5,499.99 | 11,500.00 | 12,499.99 | 12,999.99 | 34,000.00 |
| Bid-to-cover ratio | 1.62 | 2.07 | 2.19 | 1.70 | 2.15 | 1.38 | 1.29 | 1.38 | 2.07 |
| Bids submitted (pcs) | 38 | 54 | 53 | 39 | 39 | 30 | 23 | 35 | 42 |
| Bids accepted (pcs) | 19 | 19 | 23 | 22 | 26 | 24 | 19 | 28 | 13 |
| Tail (average price - minimum price) | 0.07 | 0.06 | 0.07 | 0.07 | 0.37 | 0.15 | 0.16 | 0.26 | 0.06 |
| Market sales (HUF million) | 33,999.99 | 34,999.99 | 26,500.00 | 14,000.00 | 5,499.99 | 11,500.00 | 12,499.99 | 12,999.99 | 34,000.00 |
| Non-competitive offer (HUF million) | 10,852.56 | 13,359.99 | 9,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12,186.24 |
| Total amount sales (HUF million) | 44,852.55 | 48,359.98 | 36,300.00 | 14,000.00 | 5,499.99 | 11,500.00 | 12,499.99 | 12,999.99 | 46,186.24 |

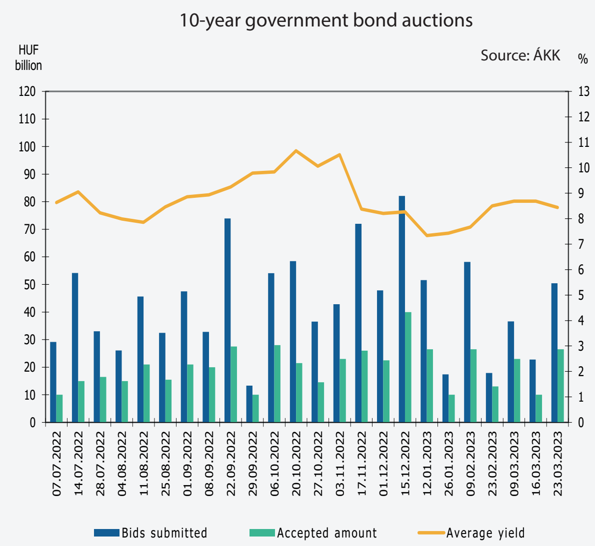
Source: ÁKK

## GOVERNMENT BOND AUCTION RESULTS

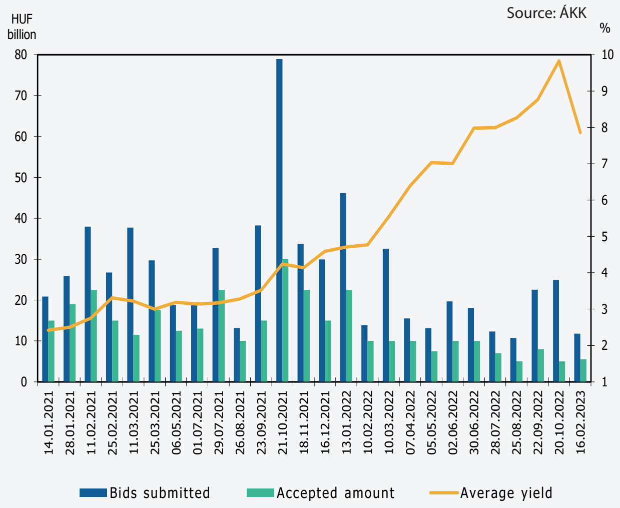
| Government Bond | 2032/B | 2026/H | 2028/A | 2032/A | 2032/G | 2026/H | 2028/A | 2032/A | 2032/B |
|---|---|---|---|---|---|---|---|---|---|
| ISIN code | HU0000406087 | HU0000406160 | HU0000402532 | HU0000405550 | HU0000405535 | HU0000406160 | HU0000402532 | HU0000405550 | HU0000406087 |
| Maturity (in years) | 10 | 3 | 5 | 10 | 10 | 3 | 5 | 10 | 10 |
| Coupon | 16.29% | 9.50% | 6.75% | 4.75% | 4.50% | 9.50% | 6.75% | 4.75% | 16.29% |
| Auction | 9th auction | 5th auction | 52nd auction | 30th auction | 12th auction | 6th auction | 53rd auction | 31st auction | 10th auction |
| Date of auction | 02.03.2023 | 09.03.2023 | 09.03.2023 | 09.03.2023 | 16.03.2023 | 23.03.2023 | 23.03.2023 | 23.03.2023 | 30.03.2023 |
| Date of financial settlement | 08.03.2023 | 16.03.2023 | 16.03.2023 | 16.03.2023 | 22.03.2023 | 29.03.2023 | 29.03.2023 | 29.03.2023 | 05.04.2023 |
| Redemption date | 25.08.2032 | 21.10.2026 | 22.10.2028 | 24.11.2032 | 27.05.2032 | 21.10.2026 | 22.10.2028 | 24.11.2032 | 25.08.2032 |
| Maximum annual yield (%) - ISMA | - | 10.55 | 9.50 | 8.71 | 8.72 | 10.32 | 9.28 | 8.46 | - |
| Minimum annual yield (%) - ISMA | - | 10.49 | 9.44 | 8.67 | 8.66 | 10.28 | 9.24 | 8.41 | - |
| Average annual yield (%) - ISMA | - | 10.52 | 9.47 | 8.69 | 8.69 | 10.29 | 9.26 | 8.44 | - |
| Maximum annual yield (%) - EHM | - | 10.54 | 9.49 | 8.70 | 8.71 | 10.31 | 9.27 | 8.45 | - |
| Minimum annual yield (%) - EHM | - | 10.48 | 9.43 | 8.66 | 8.65 | 10.27 | 9.23 | 8.40 | - |
| Average annual yield (%) - EHM | - | 10.52 | 9.46 | 8.68 | 8.69 | 10.28 | 9.25 | 8.43 | - |
| Maximum price (%) | 96.0100 | 97.1800 | 88.6100 | 74.9508 | 74.3451 | 97.7810 | 89.4610 | 76.3902 | 95.6500 |
| Minimum price (%) | 95.7000 | 97.0016 | 88.3900 | 74.7285 | 74.0392 | 97.6702 | 89.3000 | 76.1198 | 95.4100 |
| Average price (%) | 95.8400 | 97.0738 | 88.5126 | 74.8462 | 74.1676 | 97.7436 | 89.3724 | 76.2200 | 95.5200 |
| Amount offered for sale (HUF million) | 15,000.00 | 20,000.00 | 15,000.00 | 10,000.00 | 10,000.00 | 10,000.00 | 10,000.00 | 10,000.00 | 10,000.00 |
| Amount of bids submitted (HUF million) | 33,950.00 | 6,400.00 | 6,950.00 | 36,631.00 | 22,752.00 | 46,750.00 | 49,650.00 | 50,460.43 | 12,500.00 |
| Amount of bids accepted (HUF million) | 15,000.00 | 4,499.98 | 5,000.00 | 22,999.98 | 10,000.00 | 19,000.00 | 31,000.00 | 26,499.96 | 7,999.99 |
| Bid-to-cover ratio | 2.26 | 1.42 | 1.39 | 1.59 | 2.28 | 2.46 | 1.60 | 1.90 | 1.56 |
| Bids submitted (pcs) | 37 | 14 | 13 | 45 | 39 | 30 | 35 | 68 | 22 |
| Bids accepted (pcs) | 20 | 9 | 7 | 27 | 26 | 9 | 13 | 32 | 14 |
| Tail (average price - minimum price) | 0.14 | 0.07 | 0.12 | 0.12 | 0.13 | 0.07 | 0.07 | 0.10 | 0.11 |
| Market sales (HUF million) | 15,000.00 | 4,499.98 | 5,000.00 | 22,999.98 | 10,000.00 | 19,000.00 | 31,000.00 | 26,499.96 | 7,999.99 |
| Non-competitive offer (HUF million) | 4,750.00 | 0.00 | 0.00 | 0.00 | 1,191.36 | 5,280.00 | 7,920.00 | 9,327.78 | 0.00 |
| Total amount sales (HUF million) | 19,750.00 | 4,499.98 | 5,000.00 | 22,999.98 | 11,191.36 | 24,280.00 | 38,920.00 | 35,827.74 | 7,999.99 |

Source: ÁKK

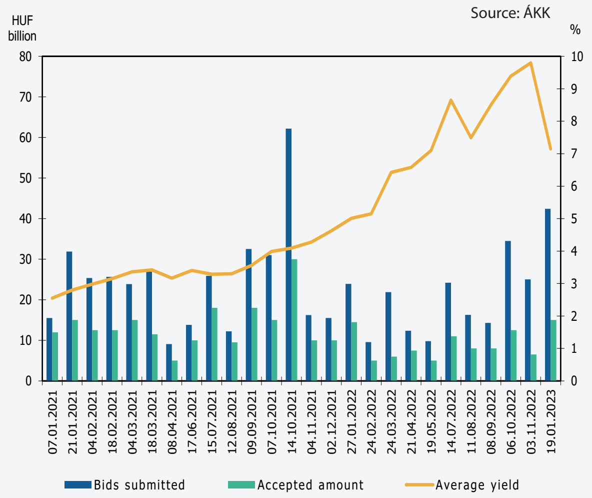


15-year government bond auctions




20-year government bond auctions




## INTEREST RATE RESETS OF FLOATING RATE GOVERNMENT BONDS IN Q1 2023

| Government bond | Date of interest rate reset | Interest period | | Date of interest payment | Reset interest rate | Interest payable |
|---|---|---|---|---|---|---|
| 2023/B | 23.01.2023 | 26.01.2023 | 26.04.2023 | 26.04.2023 | 16.00% | 4.00% |
| 2027/J | 23.01.2023 | 27.01.2023 | 27.01.2024 | 29.01.2024 | 15.25% | 15.25% |
| 2027/K | 13.01.2023 | 20.01.2023 | 24.02.2024 | 26.02.2024 | 15.25% | 16.71% |
| 2027/B | 18.01.2023 | 22.01.2023 | 22.04.2023 | 24.04.2023 | 16.03% | 4.01% |
| 2030/I | 13.01.2023 | 20.01.2023 | 20.02.2024 | 20.02.2024 | 16.00% | 17.36% |
| 2033/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2034/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2035/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2036/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2037/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2038/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2039/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2040/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2041/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2042/S | 26.01.2023 | 01.02.2023 | 01.02.2024 | 01.02.2024 | 17.50% | 17.50% |
| 2024/I | 15.02.2023 | 21.02.2023 | 21.02.2024 | 21.02.2024 | 16.20% | 16.20% |
| 2025/I | 14.02.2023 | 20.02.2023 | 20.02.2024 | 20.02.2024 | 15.90% | 15.90% |
| 2026/J | 14.02.2023 | 20.02.2023 | 20.02.2024 | 20.02.2024 | 15.25% | 15.25% |
| 2026/O | 15.02.2023 | 22.02.2023 | 21.04.2023 | 21.04.2023 | 15.17% | 2.44% |
| 2028/I | 17.02.2023 | 23.02.2023 | 23.02.2024 | 23.02.2024 | 16.00% | 16.00% |
| 2029/I | 15.02.2023 | 21.02.2023 | 21.02.2024 | 21.02.2024 | 16.00% | 16.00% |
| 2029/B | 17.02.2023 | 22.02.2023 | 22.05.2023 | 22.05.2023 | 16.18% | 4.00% |
| 2032/B | 22.02.2023 | 25.02.2023 | 25.05.2023 | 25.05.2023 | 16.29% | 4.03% |
| 2025/K | 21.03.2023 | 27.03.2023 | 27.03.2024 | 27.03.2024 | 15.25% | 15.25% |
| 2025/N | 24.03.2023 | 30.03.2023 | 30.06.2023 | 30.06.2023 | 15.81% | 4.04% |
| 2027/I | 20.03.2023 | 24.03.2023 | 24.03.2024 | 25.03.2024 | 16.00% | 16.00% |
| 2028/N | 16.03.2023 | 22.03.2023 | 22.03.2024 | 22.03.2024 | 17.25% | 17.54% |
| 2028/O | 16.03.2023 | 22.03.2023 | 22.03.2024 | 22.03.2024 | 17.25% | 17.54% |
| 2029/J | 14.03.2023 | 21.03.2023 | 21.03.2024 | 21.03.2024 | 16.00% | 16.00% |
| 2030/J | 21.03.2023 | 28.03.2023 | 20.03.2024 | 20.03.2024 | 16.00% | 15.65% |

Source: ÁKK

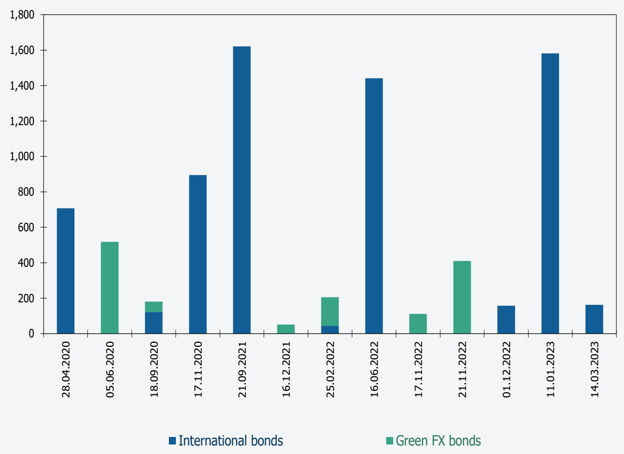
## GREEN BOND ISSUANCE

In line with international efforts, Hungary, through ÁKK Zrt., intends to actively contribute to sustainable financing internationally as well as on the Hungarian domestic capital market by issuing green bonds. Within the ESG (Environmental, Social, and Governance) system, a green bond is an innovative financial product that specifically targets resources to support green investment. Green bond is issued to finance and refinance environmentally friendly projects that also take sustainability into account.

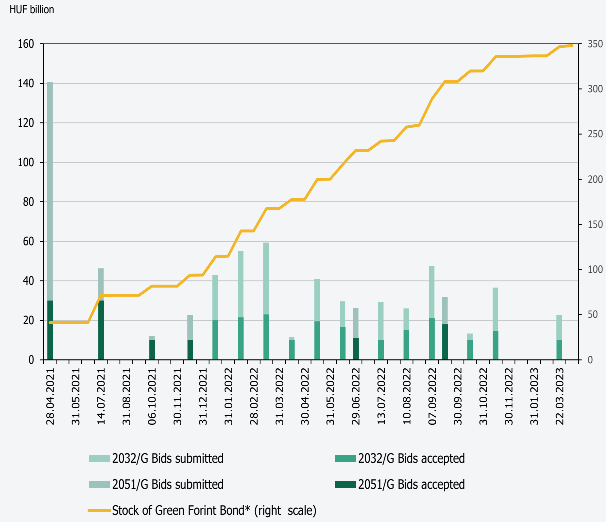
Hungary's first international euro Green Bond was issued on 2 June 2020 in the amount of EUR 1.5 billion (HUF 518.4 billion). The next green bond issue was in September 2020 denominated in Japanese yen. It was a Samurai bond in the amount of JPY 20.0 billion (HUF 57.5 billion), making Hungary the first foreign state to issue green bond in Japan. In December 2021, the first green Panda bond was also issued in the amount of CNY 1.0 billion (HUF 50 billion). The investors' interest was strong in the Chinese yuan-denominated green bond. The interest rate on the euro was below 0% (-0.013%) through the conversion to the euro in a fixed rate foreign exchange swap, making it the cheapest foreign currency bond issuance ever. In February 2022, Samurai bonds denominated in Japanese yen were issued again in the total amount of JPY 59.3 billion (HUF 161.8 billion). In November 2022, EUR 1 billion (HUF 410.5 billion) of Green Bonds and CNY 2 billion (HUF 110.9 billion) of Green Panda Bonds were issued.

The Green Bond Framework Program was expanded to the HUF government bond market too. In April 2021 a 30-year green bond was issued, followed by the sale of a 10-year green forint bond in January 2022. By the end of March 2023, via the auctions, the green HUF bond portfolio reached HUF 348.0 billion (EUR 0.9 billion).

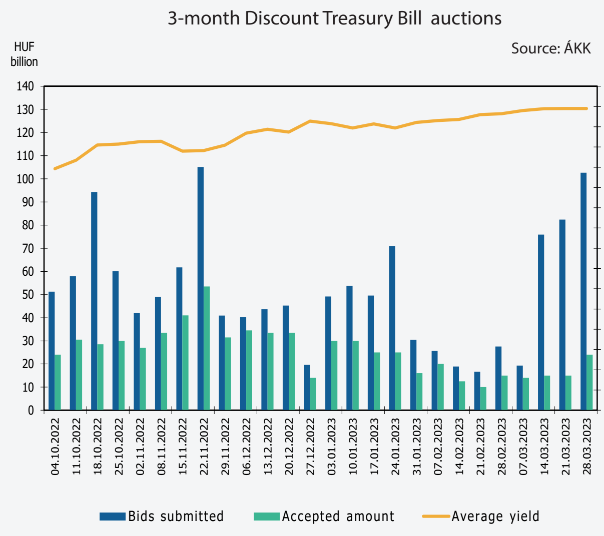
Foreign currency bond issuance
2020-Q12023
(HUF billion)

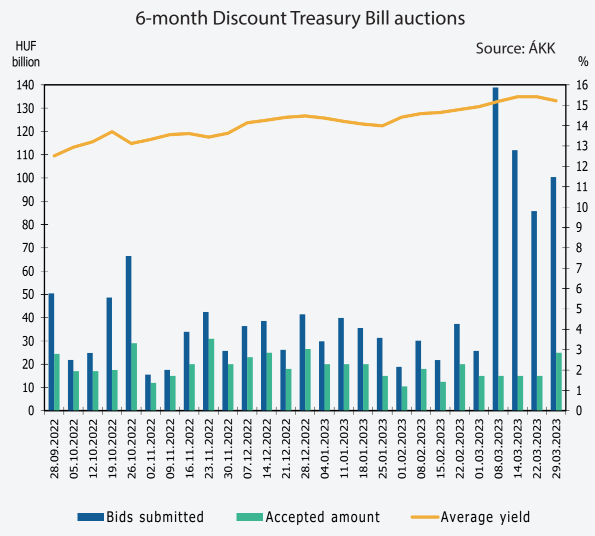


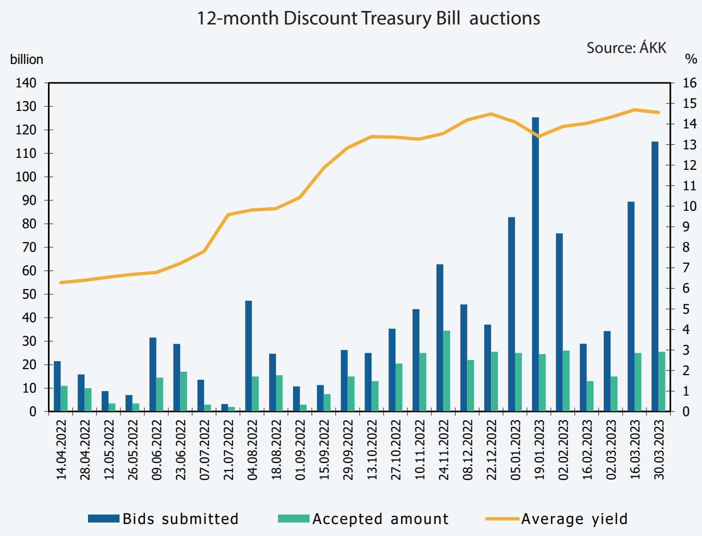

Green forint bond auctions
2021-Q12023
(HUF billion)

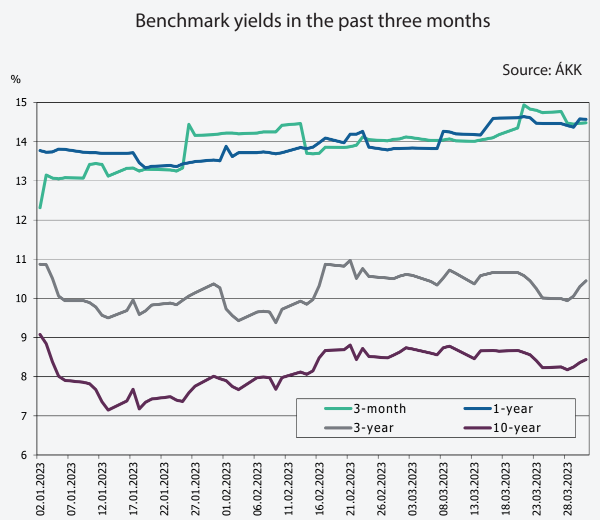


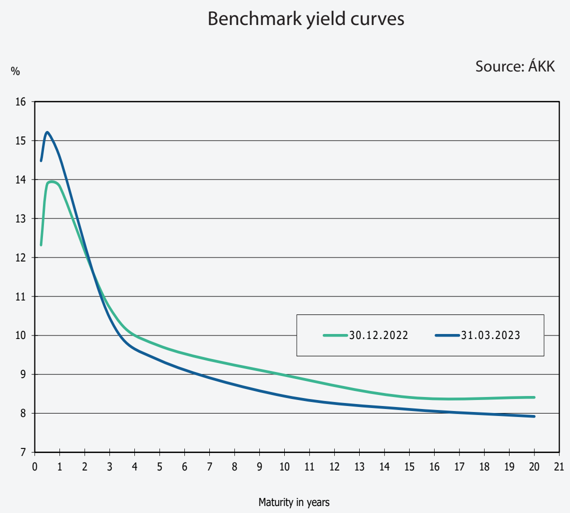

* Includes the stock of non-competitive tenders.


3-month Discount Treasury Bill auctions
Source: ÁKK
HUF billion
%
Bids submitted
Accepted amount
Average yield


6-month Discount Treasury Bill auctions
Source: ÁKK
HUF billion
%
Bids submitted
Accepted amount
Average yield

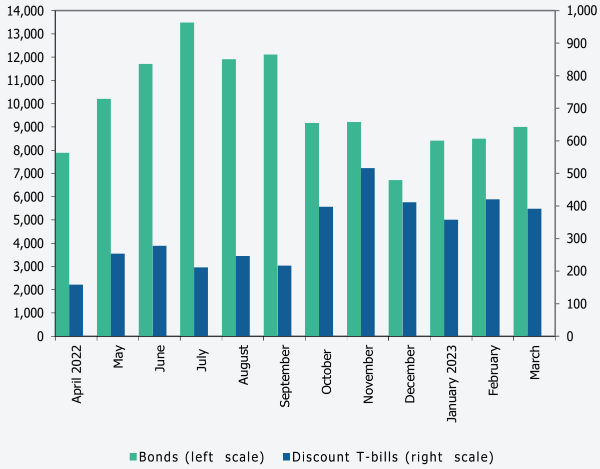

12-month Discount Treasury Bill auctions
Source: ÁKK
billion
%
Bids submitted
Accepted amount
Average yield


Benchmark yields in the past three months
Source: ÁKK
%
3-month
1-year
3-year
10-year


Benchmark yield curves
Source: ÁKK
%
30.12.2022
31.03.2023
Maturity in years

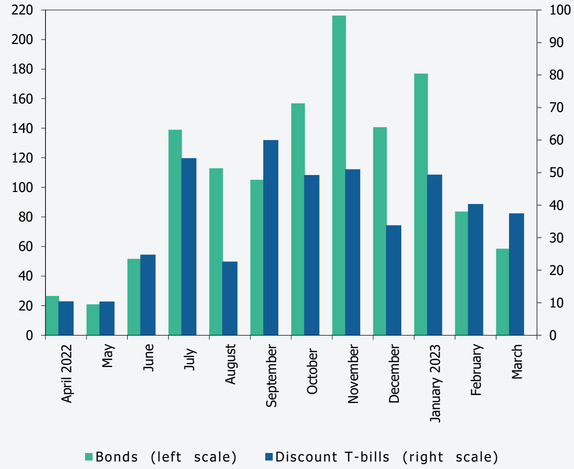
OTC
Secondary market trading of Hungarian government securities
(HUF billion)

Source: KELER, ÁKK



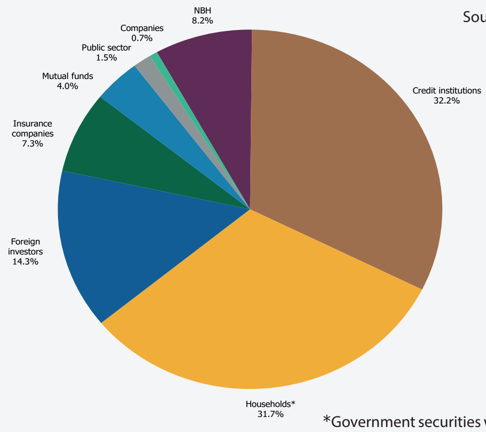

MTS Hungary trading
Secondary market trading of Hungarian government securities
(HUF billion)

Source: ÁKK, MTS Hungary



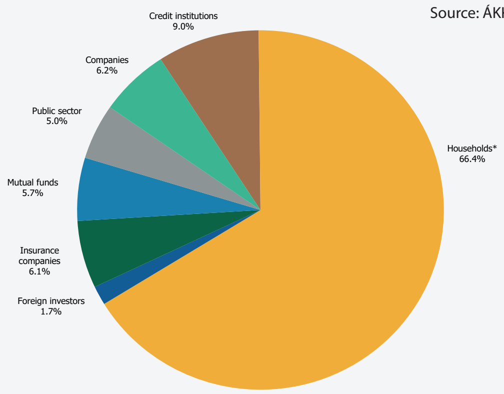

Breakdown of government securities with a maturity of over one year by investor sector in Q1 2023

Source: ÁKK




Breakdown of government securities with maturity up to one year by investor sector in Q1 2023

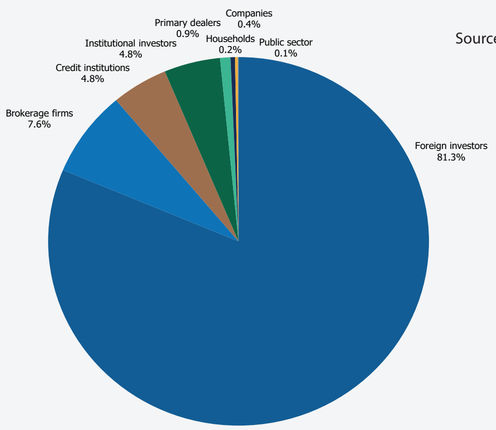
Source: ÁKK




*Government securities with a maturity of up to one year and with a maturity of over one year, the stock of Households also includes the stock of non-profit institutions serving households.

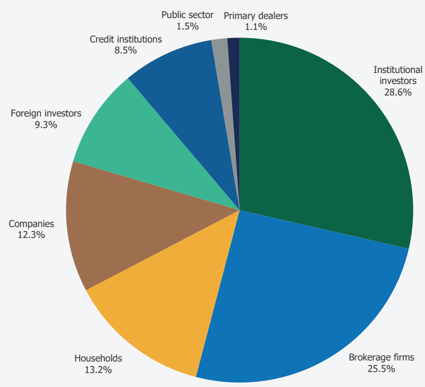
Breakdown of primary dealers' secondary market turnover in government bonds by investor groups in Q1 2023

Source: ÁKK



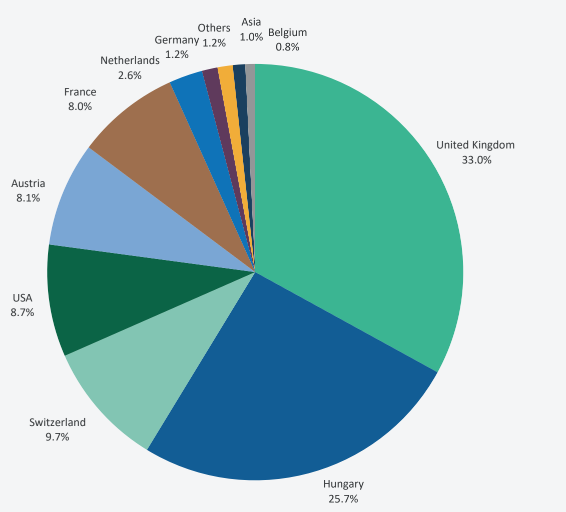

Breakdown of primary dealers' secondary market turnover in Discount Treasury Bills by investor groups in Q1 2023

Source: ÁKK



Geographical breakdown of gross turnover*
of primary dealers in Q1 2023

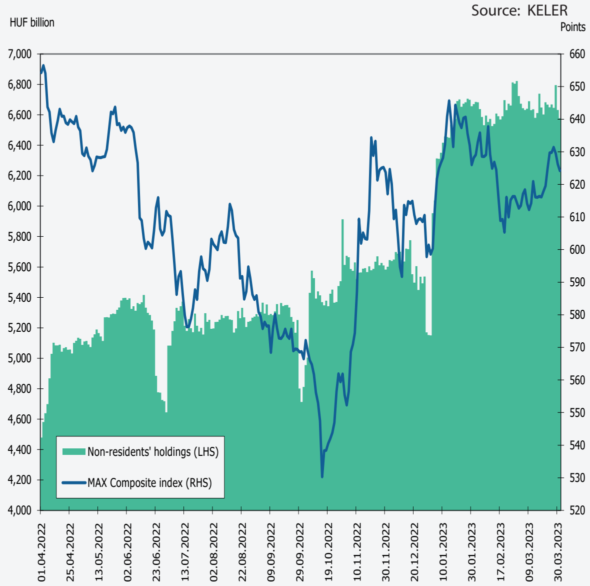
Source: Primary Dealers




*Government bonds, Discount T-bills, OTC markets, MTS

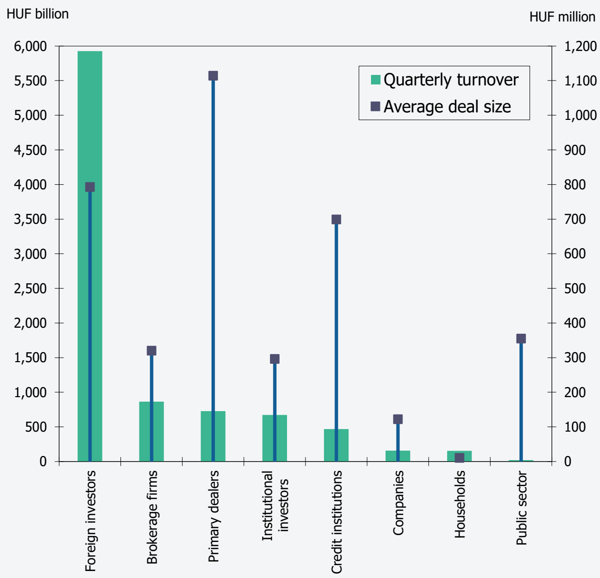
Non-residents' holdings of Hungarian government securities
and the MAX Composite index during the last year

Source: KELER




Primary dealers' trading with different investor groups
in Q1 2023

Source: ÁKK




Government securities with the highest
secondary market turnover in Q1 2023

| Government security | Date of redemption | Turnover (HUF billion) |
|---|---|---|
| 2032/A | 24.11.2032 | 1,116.9 |
| 2028/A | 22.10.2028 | 625.4 |
| 2033/A | 20.04.2033 | 586.1 |
| 2028/B | 23.03.2028 | 566.2 |
| 2024/C | 24.10.2024 | 435.2 |
| 2024/B | 26.06.2024 | 386.4 |
| 2030/A | 21.08.2030 | 347.8 |
| 2031/A | 22.10.2031 | 343.2 |
| 2025/C | 26.11.2025 | 300.9 |
| 2041/A | 25.04.2041 | 290.2 |

Source: ÁKK

## HUNGARIAN GOVERNMENT SECURITIES INDICES

| | Value of the index | | | | | Annual yield earned on the index portfolio (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MAX index | HMAX index | MAX Composite index | RMAX index | ZMAX index | MAX index | HMAX index | MAX Composite index | RMAX index | ZMAX index |
| 30.12.2022 | 623.0255 | 71.2383 | 601.3941 | 570.3822 | 572.4011 | -16.05 | -19.16 | -14.67 | 3.01 | 5.90 |
| 31.01.2023 | 653.4691 | 75.9018 | 628.2105 | 575.4131 | 577.8596 | -10.73 | -12.22 | -9.70 | 4.25 | 7.04 |
| 28.02.2023 | 639.3667 | 73.7755 | 616.3168 | 578.2946 | 582.8239 | -10.85 | -12.82 | -9.70 | 5.00 | 7.96 |
| 31.03.2023 | 647.4880 | 74.5776 | 624.1902 | 586.1561 | 590.1889 | -5.95 | -7.54 | -5.13 | 6.23 | 8.98 |

Source: ÁKK

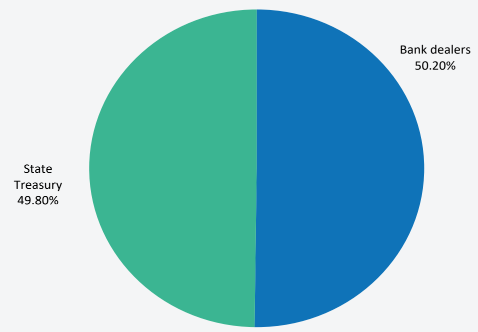
### Outstanding amount of benchmark government bond series in Q1 2023

Source: ÁKK

| Government bond | HUF billion | | |
|---|---|---|---|
| | 31.01.2023 | 28.02.2023 | 31.03.2023 |
| 2025/C-2026/H | 1,466.39 | 98.67 | 139.40 |
| 2028/B | 793.14 | 861.49 | 917.90 |
| 2032/A | 744.65 | 790.99 | 862.90 |
| 2038/A | 901.67 | 907.17 | 907.18 |
| 2041/A | 540.15 | 540.31 | 540.33 |

### Breakdown of retail securities stock by distributors in Q1 2023

Source: ÁKK




| PRIMARY DEALERS - AS AT 31 MARCH 2023 | |
|---|---|
| BNP Paribas | J.P. Morgan Securities SE |
| CIB Bank Zrt. | K&H Bank Zrt. |
| Citibank Europe plc Hungarian Branch | MKB Bank Nyrt. |
| Deutsche Bank AG | OTP Bank Nyrt. |
| Erste Befektetési Zrt. | Raiffeisen Bank Zrt. |
| Goldman Sachs Bank Europe SE | UniCredit Bank AG |
| ING Bank N.V. Hungarian Branch | |

## REUTERS PAGES (CODES)

main page: HUTREASURY

| Auction results are available from 11.30 (CET) | |
|---|---|
| HUISSUE | Publication of the following issues and 1-year Hungarian Government Security underwriting and results |
| HUAUCTION01 | Discount T-bill auction result |
| HUAUCTION02 | Government Bond auction results |
| HUAUCTION03 | Non-competitive fixed rate benchmark bonds offer |
| HUAUCTION04 | Non-competitive floating rate bonds offer's result |
| HUAUCTION05 | Non-competitive fixed rate non-benchmark bonds offer |
| HUBUYBACK | Government Bond buyback auction results |
| HUEXCHANGE | Government Bond exchange auction results |
| **Secondary market data** | |
| HUBONDFIX | Benchmark yield fixing |
| HUBONDAKK, HUBONDAKK4 | Best morning secondary market quotations |
| HUBONDAKK2, HUBONDAKK3 | Best afternoon secondary market quotations |
| HUBONDINDEX1 | Hungarian Government Total Return Index (MAX) |
| HUMAXCOMP, HUMAXCOMP2 | MAX Composite Index |
| HUAKK01,HUAKK02,HUAKK03, HUAKK04, HUAKK05 | Hungarian Government Total Return Index (MAX) statistics |
| **Other** | |
| HUFLOATER | Interest rate reset of floating rate bonds |

## FURTHER INFORMATION PAGES:

Bloomberg pages (code): GDMA
Homepage: www.akk.hu
www.allampapir.hu