



**REPUBLIC OF TÜRKİYE**  
**MINISTRY OF TREASURY AND FINANCE**

# **Key Performance Indicators (KPIs) for Treasury Cash Management**

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# OUTLINE



- **Characteristics of KPIs**
- **KPIs for Cash Flow Forecasting**
- **KPIs for TSA**
- **KPIs for Cash Management**
- **Reporting**



# Characteristics of KPIs



- Key Performance Indicators (KPIs) play a crucial role in evaluating the **Treasury's performance** and tracking its progress in **achieving specific objectives**.
- KPIs can be measured using **both quantitative and qualitative** data.
- KPIs should;
  - clearly specify **what is being measured**, with a focus on a **specific area**.
  - **align with the Treasury's goals** and reflect its priorities.
  - **allow comparisons across various time periods** or **against benchmarks** to facilitate performance evaluation.
  - **be flexible and adaptable to changes**, allowing adjustments as required.
  - be linked to a **specific timeframe**, providing a clear deadline for achieving the targets.



# KPIs for Cash Flow Forecasting

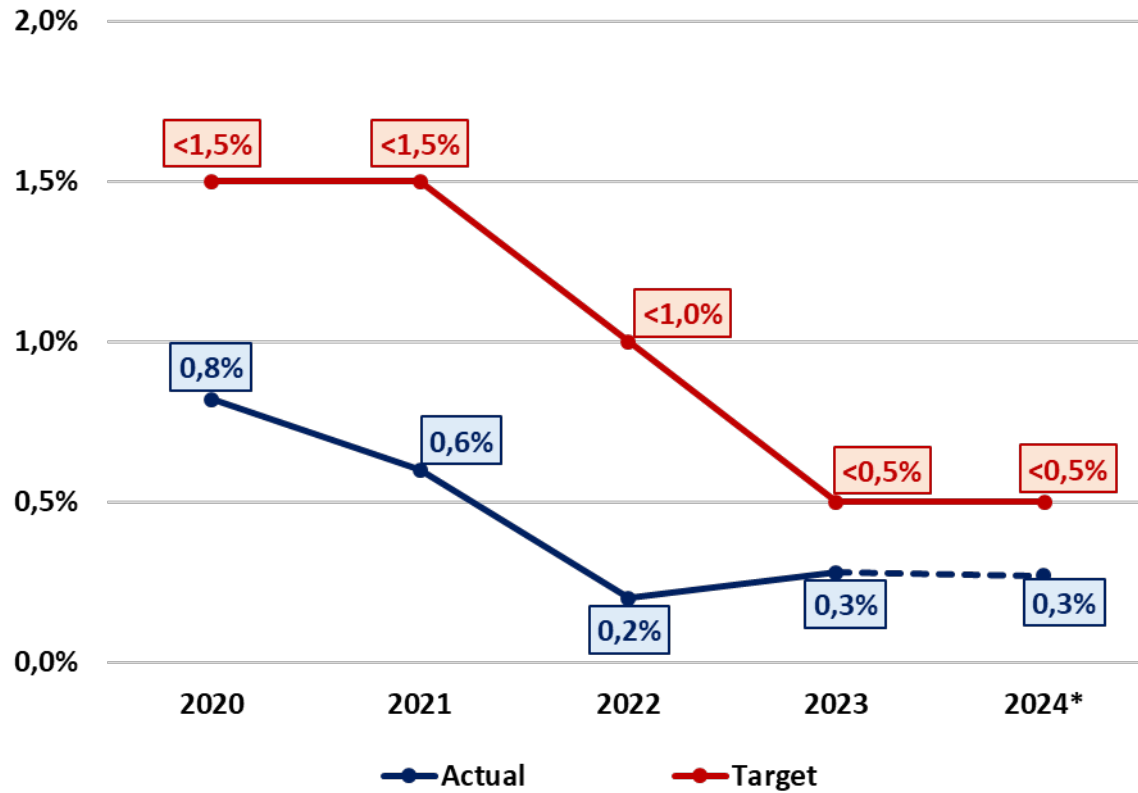


- KPIs on Cash Flow Forecasting are crucial for improving **cash flow forecasting** capacity and for maintaining **cash, debt and liquidity management** at a reasonable and predictable level.
- In this regard, we monitor 4 main KPIs for cash flow forecasting.

KPIs	TARGET	
1) Daily Cash Balance Forecast Deviation	<0.5%	It is important for CBRT's open market operations as it affects the level of liquidity in the market.
2) Monthly Revenue Forecast Deviation	<4%	It is important for debt management as it is taken into account when preparing the Financing Program.
3) Monthly Expenditure Forecast Deviation	<3%	
4) Monthly Cash Balance Deviation Does Not Exceed Threshold X (Nominal Terms)	X	Keeping cash flow deviations within the target level enables CBRT to focus on its own tools for managing liquidity in the market.



# 1. Daily Cash Balance Forecasting Deviation



\*Includes realization data for the January-June period.

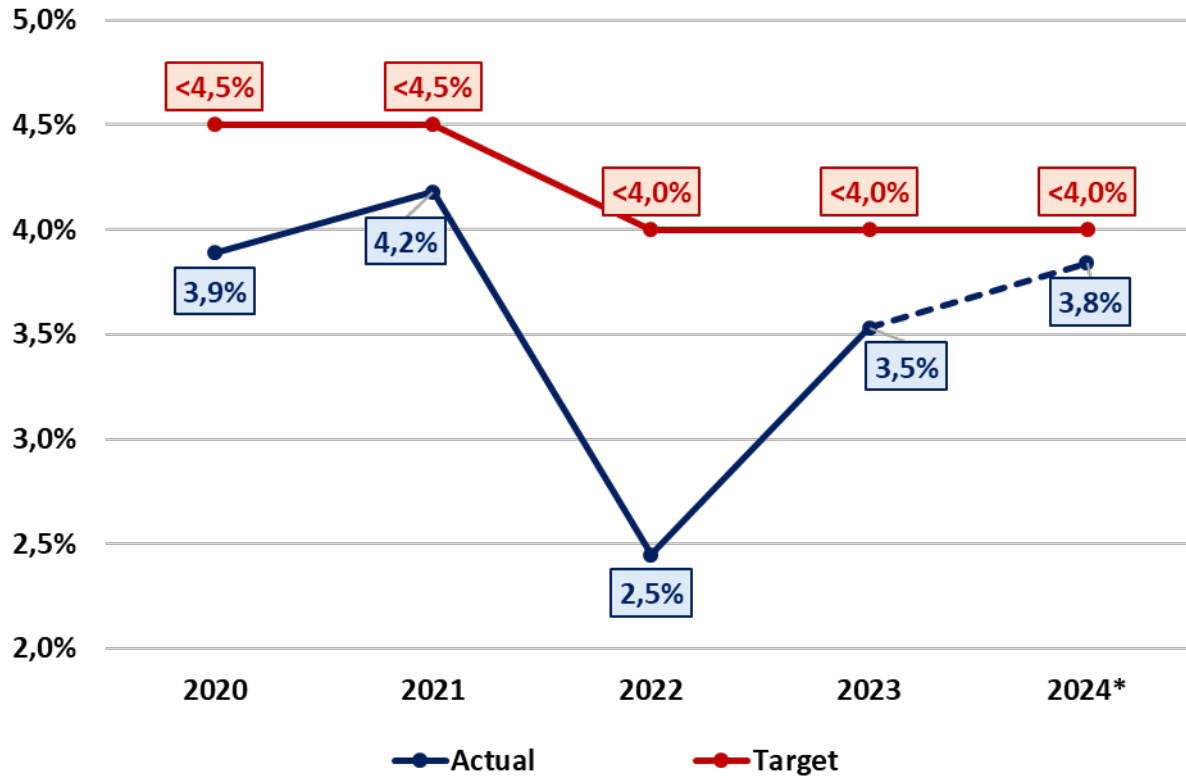
- ❖ Daily cash balance deviations have consistently realized below the target values each year.
- ❖ Trend performance was stable in 2020, declined between 2021 and 2022, and showed a notable improvement throughout 2023 and 2024.

Year	Actual	Upper Limit (Target)	Performance Rating	4-Year Trend (Average)	Trend Performance Rating
2020	0.8%	<1.5%	✓	0.5%	▶
2021	0.6%	<1.5%	✓	0.6%	▼
2022	0.2%	<1.0%	✓	0.7%	▼
2023	0.3%	<0.5%	✓	0.6%	▲
2024	0.3%	<0.5%	✓	0.5%	▲

Legend	Symbol
Favorable Trend	▲
Unfavorable Trend	▼
No change in trend, no effect	▶



## 2. Monthly Revenue Forecasting Deviation



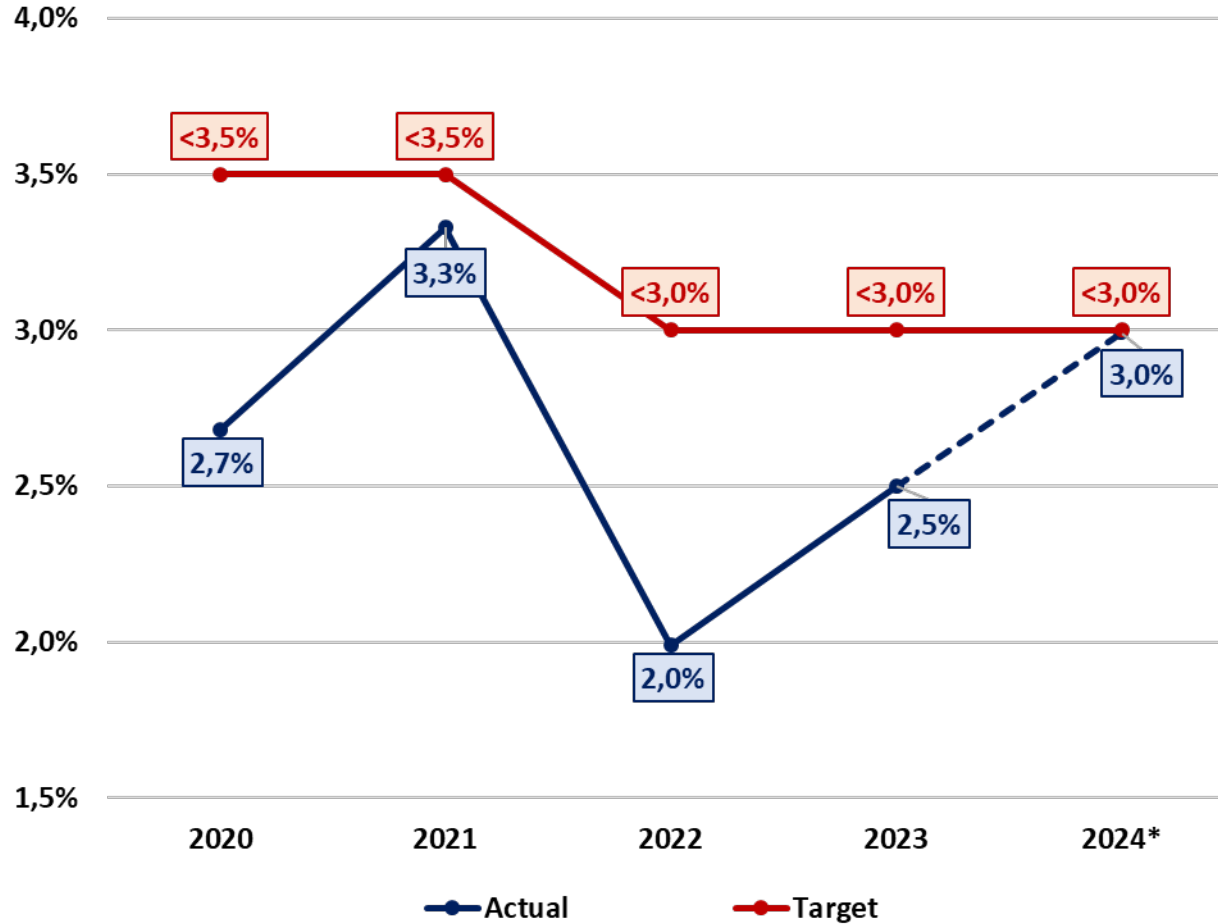
- ❖ The variance between estimated and actual receipts has been consistently realized below the target values each year.
- ❖ Trend performance has been stable in 2020, and experienced a notable improvement throughout 2021 and 2024.

Year	Actual	Upper Limit (Target)	Performance Rating	4-Year Trend (Average)	Trend Performance Rating
2020	3.9%	<4.5%	✓	5.9%	▶
2021	4.2%	<4.5%	✓	5.5%	▲
2022	2.5%	<4.0%	✓	4.6%	▲
2023	3.9%	<4.0%	✓	3.7%	▲
2024	3.9%	<4.0%	✓	3.6%	▲

\*Includes realization data for the January-June period.



# 3. Monthly Expenditure Forecasting Deviation



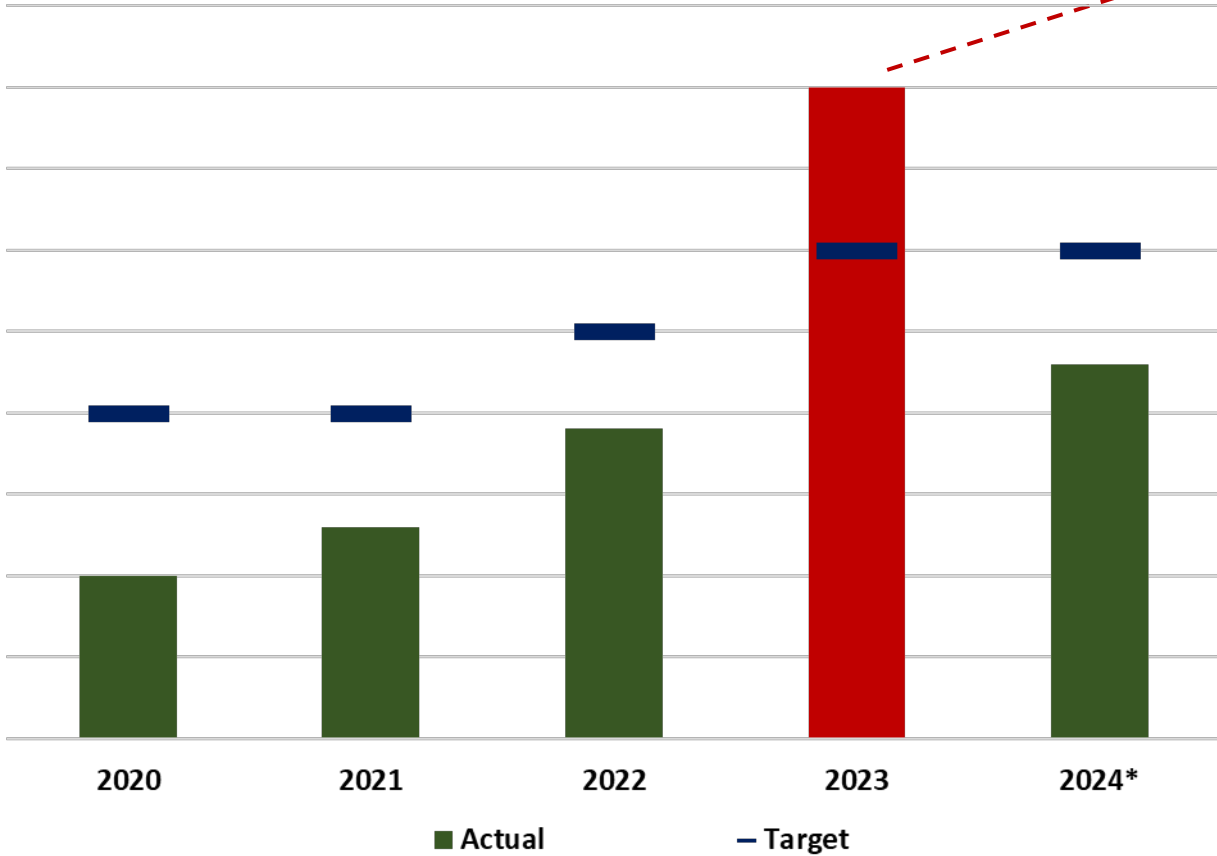
- ❖ The variance between estimated and actual expenditures has been realised below the target values each year.
- ❖ Trend performance was below the target 2020, and experienced a notable improvement in 2021, 2023 and 2024 where it was stable in 2022.

Year	Actual	Upper Limit (Target)	Performance Rating	4-Year Trend (Average)	Trend Performance Rating
2020	2.7%	<3.5%	✓	3.9%	▼
2021	3.3%	<3.5%	✓	3.5%	▲
2022	2.0%	<3.0%	✓	3.5%	▶
2023	3.0%	<3.0%	✓	3.0%	▲
2024		<3.0%	✓	2.8%	▲

\*Includes realization data for January-June period.



# 4. Monthly Cash Balance Deviation



The 2023 earthquake increased cash volatility and exacerbated cash balance deviations.

Year	Actual	Target	Performance Rating	4-Year Trend (Average)	Trend Performance Rating
2020	-	-	✓	-	▲
2021	-	-	✓	-	▲
2022	-	-	✓	-	▶
2023	-	-	✗	-	▼
2024	-	-	✓	-	▲

Legend	Symbol
Favorable Trend	▲
Unfavorable Trend	▼
No change in trend, no effect	▶





# KPIs for the TSA System



- The objective is to establish full-fledged TSA and manage it effectively. In this regard, we monitor 5 main KPIs for the TSA.

KPIs	TARGET
5) Coverage of the New TSA	Covering All Institutions Declared by the Law
6) Efficiency of the TSA Function	Establishing Full-fledge TSA
7) Expenditures in the TSA / Total Expenditures	>95% of Cent. Gov. >85% of Gen. Gov.
8) Revenues in TSA / Total Revenues	>99% of Cent. Gov. >85% of Gen. Gov.
9) The Percentage of Cash Balance in New TSA Used as Cash Buffer	%70

Preventing the idle retention of public funds in bank accounts, reducing borrowing costs.

Ensuring that all processes of collection of cash requests, revenues, and payments are carried out quickly and cost-effectively.

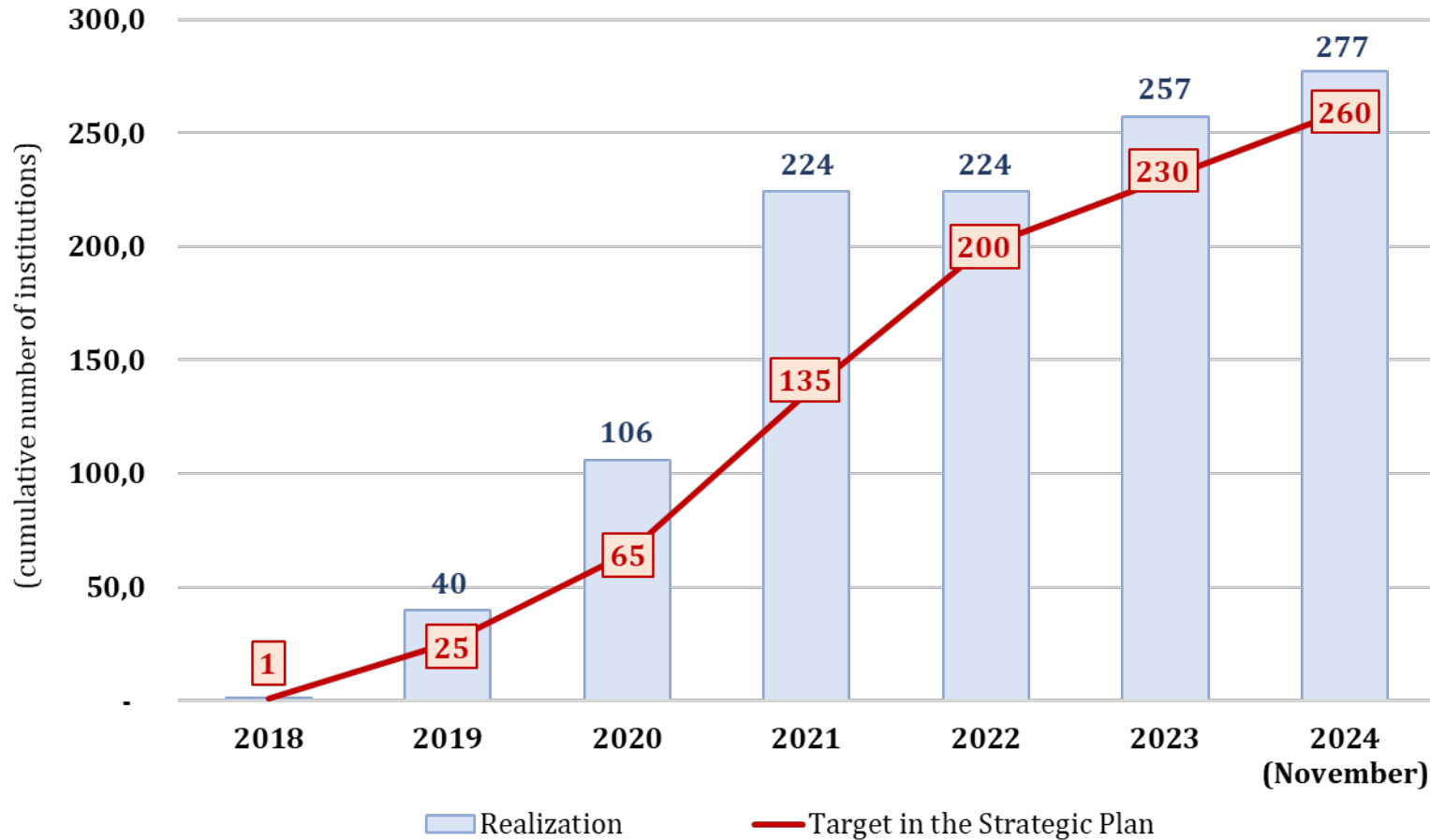
Ensuring that all public expenditures are executed quickly and efficiently through a single account.

Ensuring that government revenues are collected quickly and cost-effectively.

Minimizing the cost of the formal cash buffer by utilizing 70% of the excess reserves in the new TSA.

# 5. Coverage of the New TSA

- The number of public institutions included in the New TSA exceeded the annual targeted cumulative figure, and the target was successfully achieved.

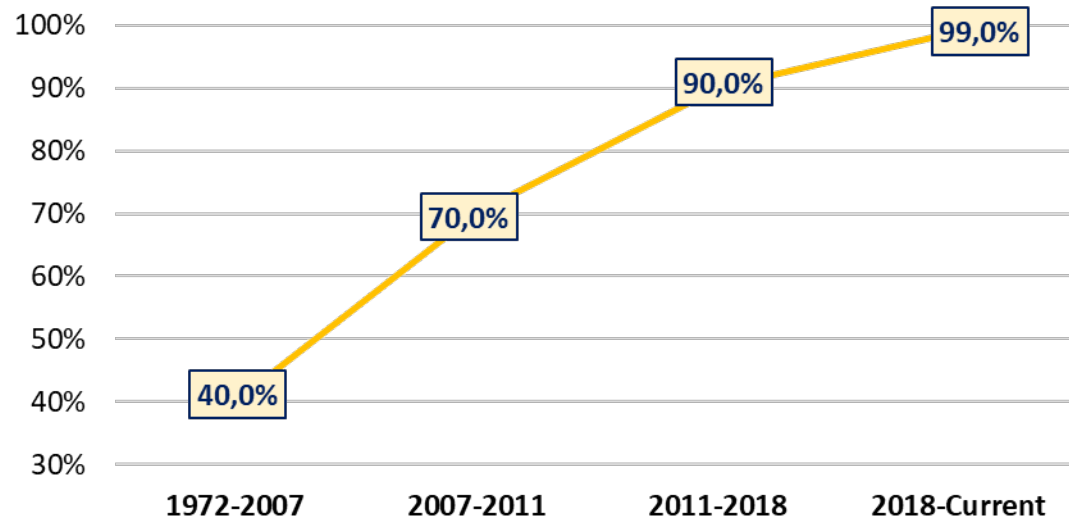


2018 - 2023 Strategic Program Targets			
Year	Targets (Cumulative)	Realizations (Cumulative)	Status
2018	1	1	✓
2019	25	40	✓
2020	65	106	✓
2021	135	224	✓
2022	200	224	✓
2023	230	257	✓
2024	-	277	-

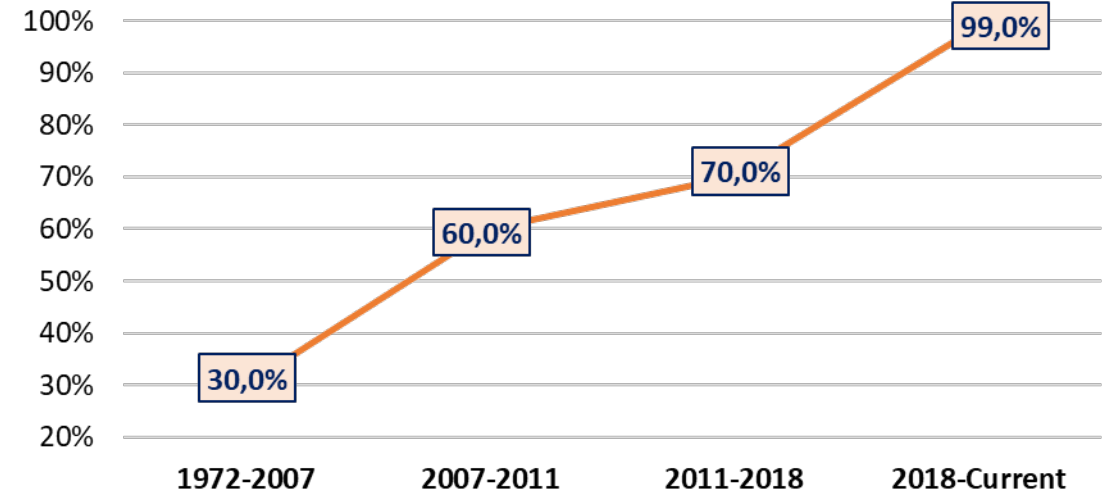


# 6. Efficiency of the TSA

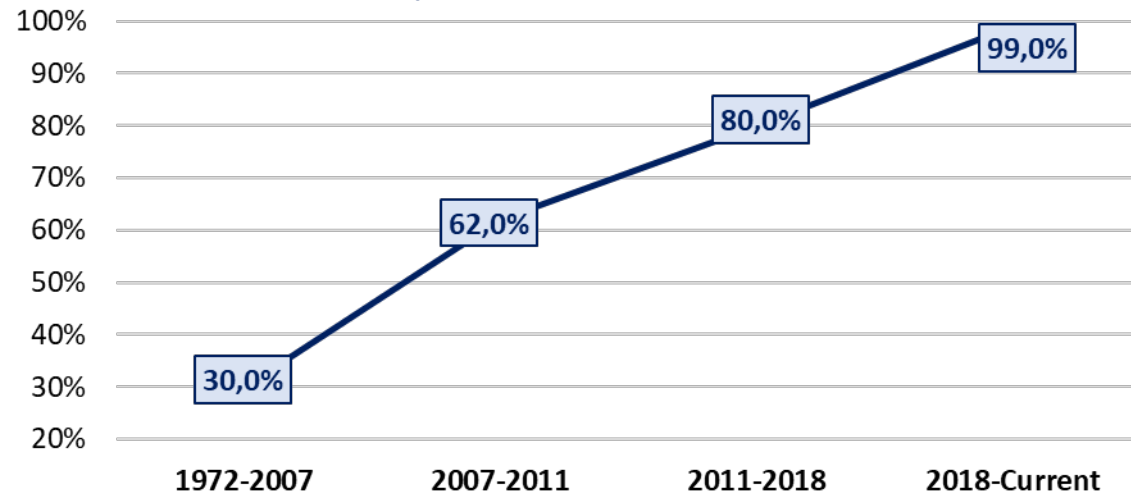
### Operational Development of TSA



### Structural Development of TSA



### Development of TSA (Total)



FEATURES OF TSA	1972-2007	2007-2011	2011-2018	2018-Current
Operational	40%	70%	90%	99%
Structural	30%	60%	70%	99%
Other	10%	50%	80%	99%
<b>TOTAL</b>	<b>30%</b>	<b>62%</b>	<b>80%</b>	<b>99%</b>

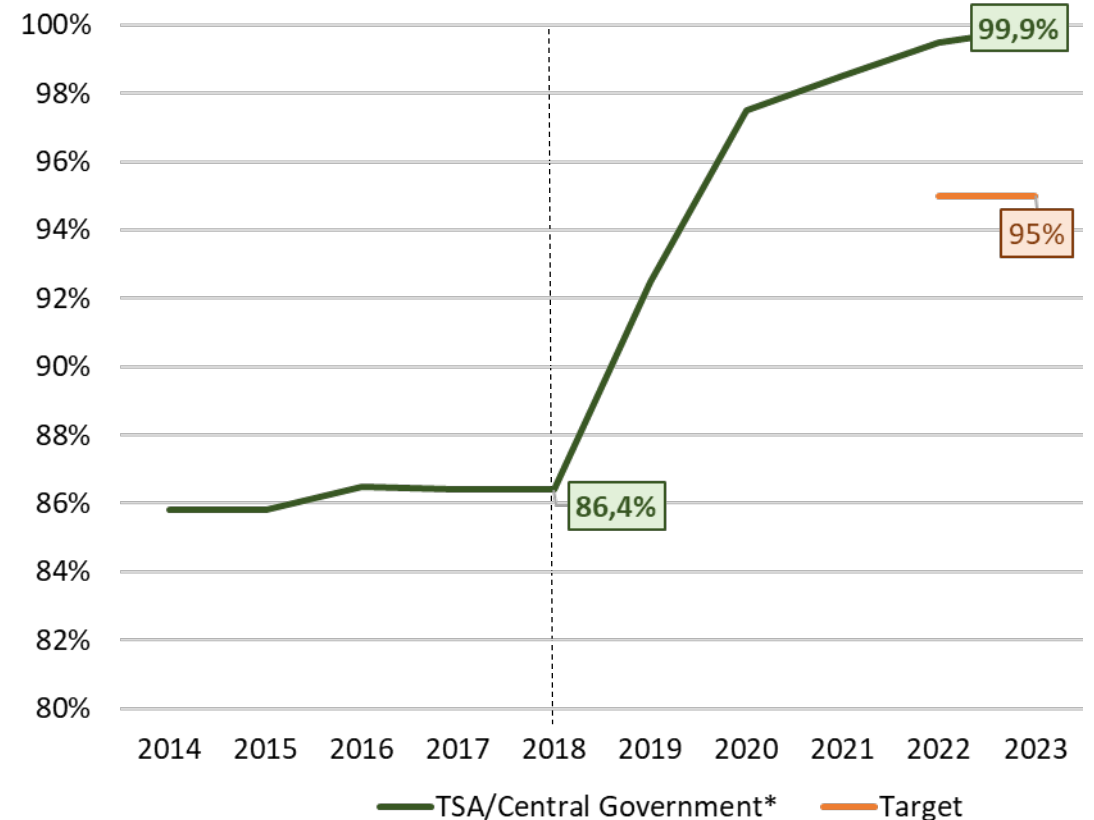
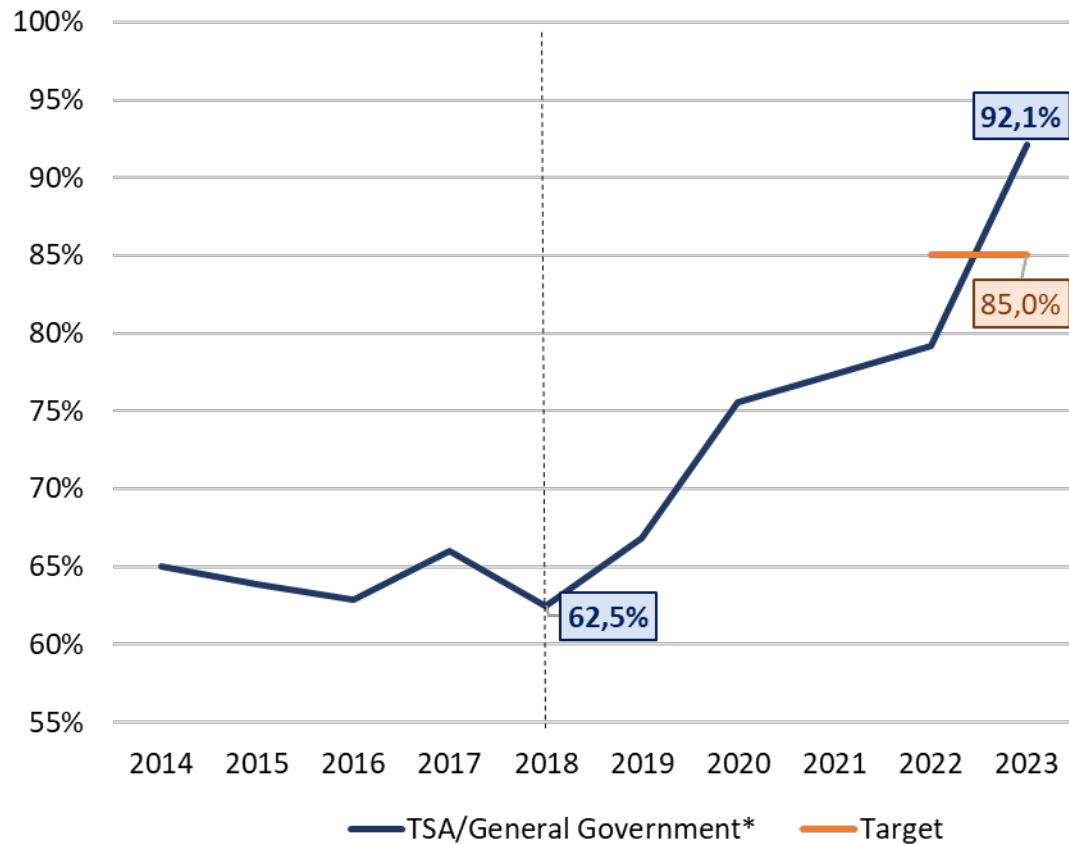
\*Based on Authors' Calculation



# 7. Expenditures in the TSA / Total Expenditures



- Executing budget expenditures through a single account improves cash management, reduces borrowing costs, enhances transparency, and minimizes idle balances for more efficient use of government funds.



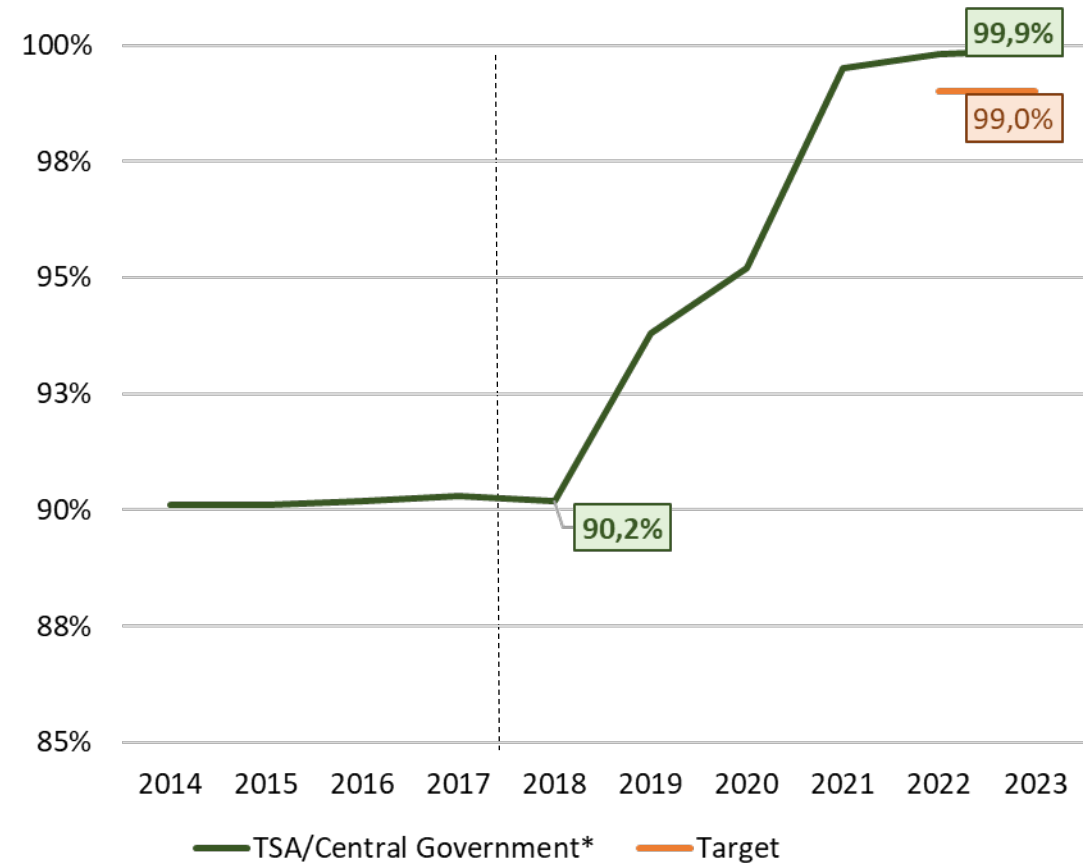
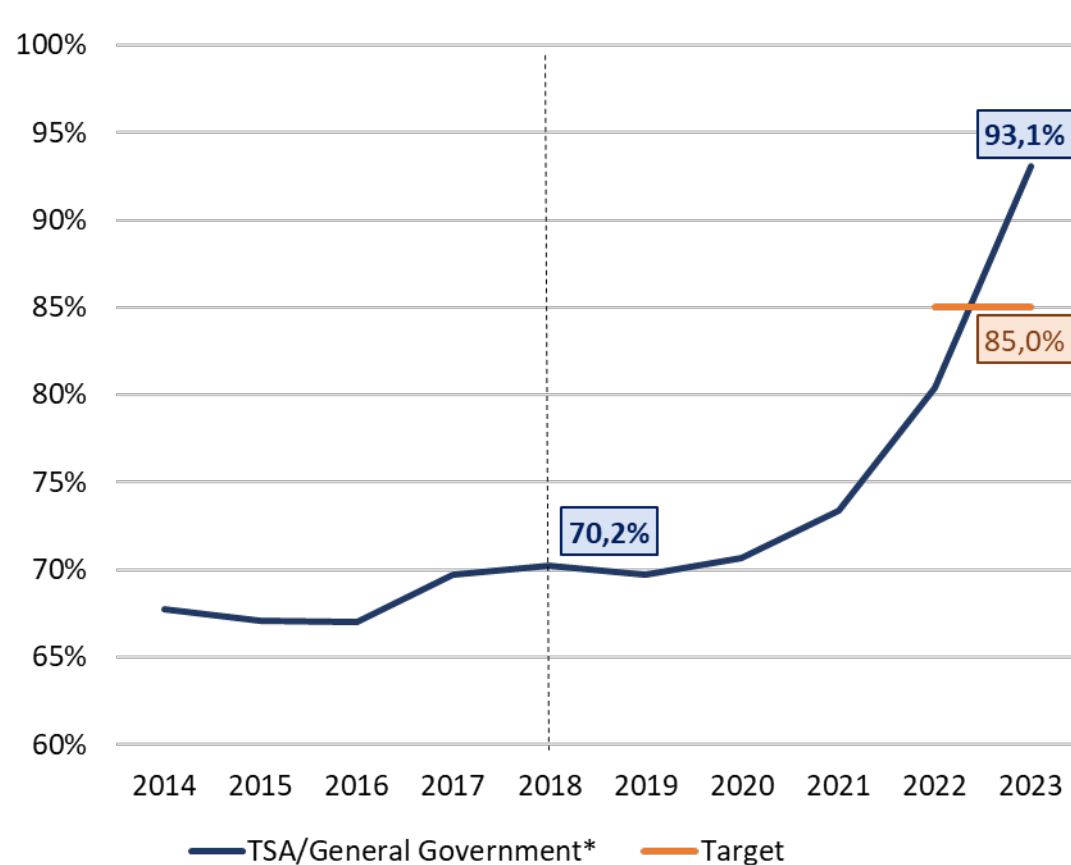
\*Based on Authors' Calculation



# 8. Revenues in TSA / Total Revenues



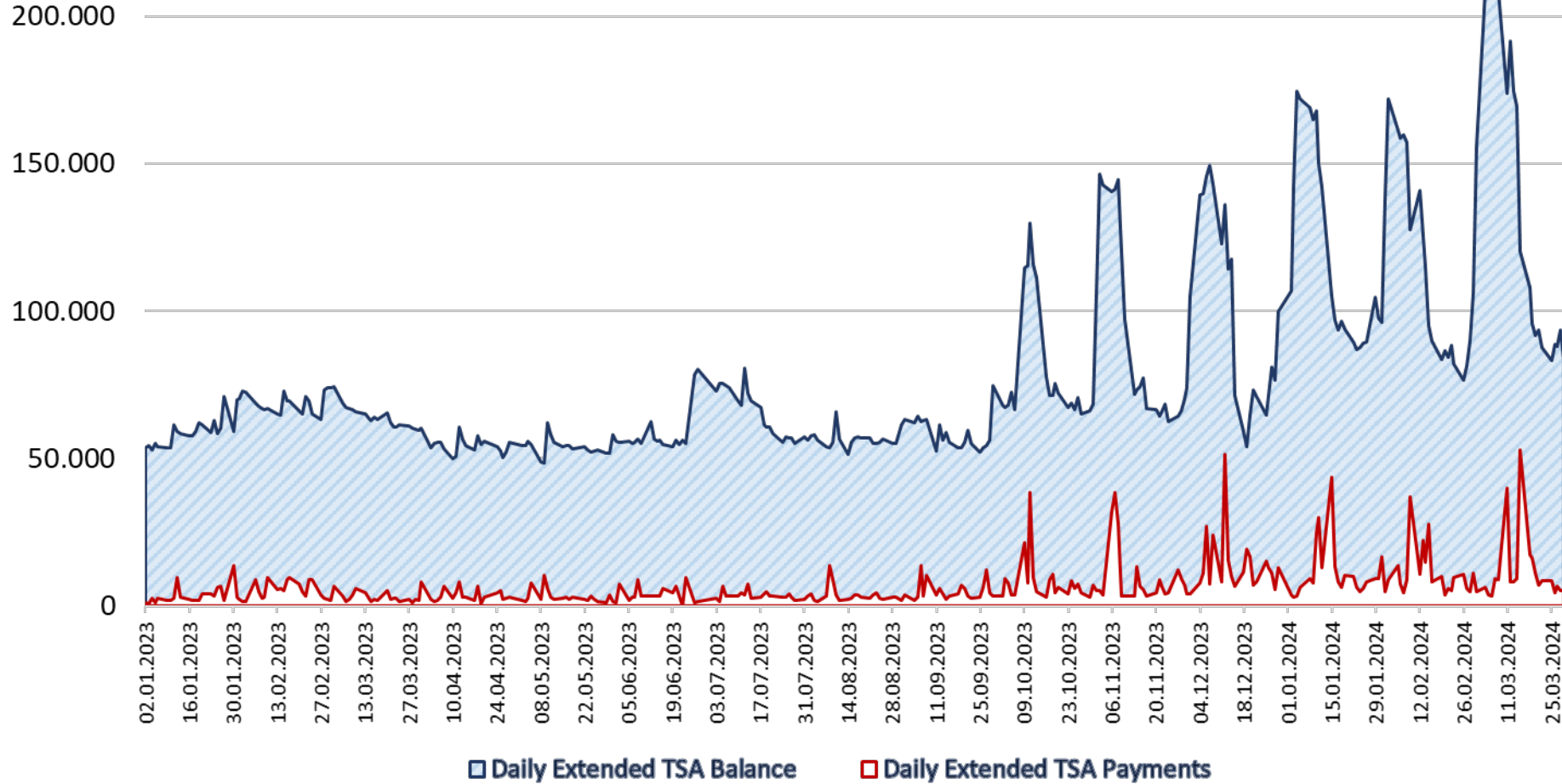
- Collecting public revenues in a single account optimizes cash management, enhances transparency, improves revenue forecasting, and ensures more efficient allocation and utilization of government funds.



\*Based on Authors' Calculation



# 9. The Percentage of Cash Balance in the New TSA Used as Cash Buffer



On average, **approximately 10% of the daily balance is used for payments to institutions** in the new TSA system, while the **remaining balance (90%) is utilized as a cash buffer.**

The increase in excess cash reserves in the New TSA system **reduces the cost of the formal cash buffer.**



# KPIs for Cash Management



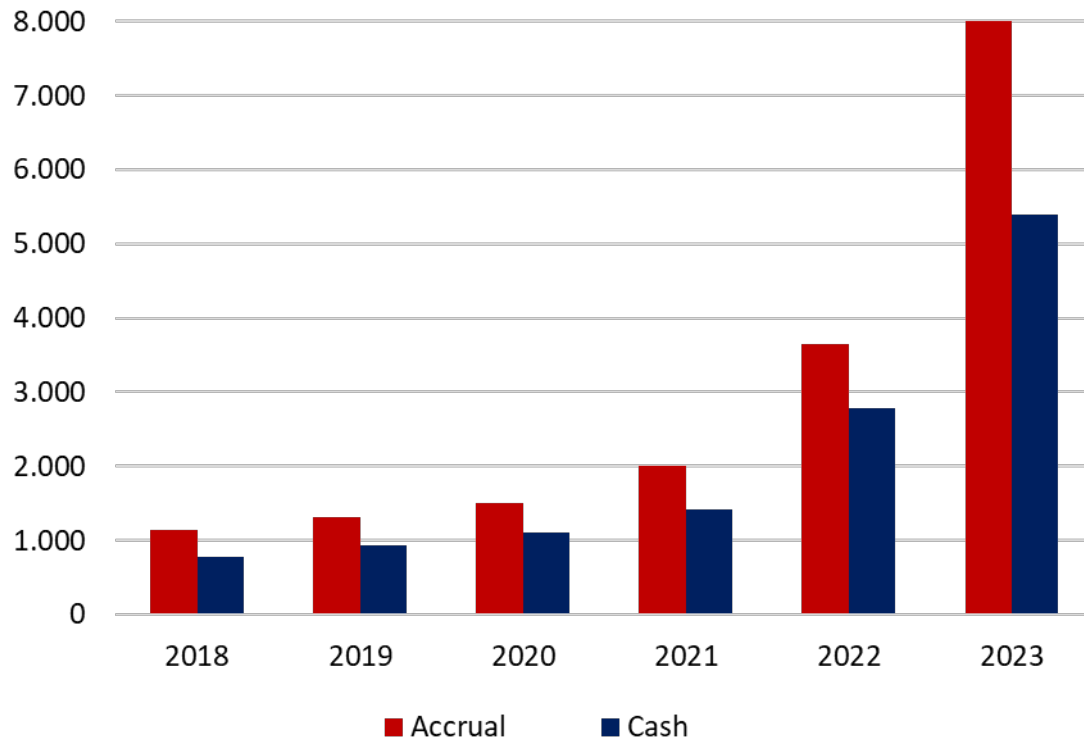
- Cash management is conducted with an approach that aligns the cash program with the budget, aims to maximize returns from financial resources while reducing costs, and strengthens demand and program capacity. In this regard, we monitor 5 main KPIs for cash management.

KPIs	TARGET
10) Discrepancy Between Accrual And Cash-based Non-interest Expenditures (%GDP)	<0.5% Preventing the arrears exceeding a certain percentage of GDP, thus avoiding a surge in the following year's expenditures and consequently mitigating liquidity risk.
11) Percentage of Expenditure Arrears	<3.5% Minimizing the share of arrears, thereby preventing the weakening of the link between the budget and cash flow.
12) Transaction Costs / Expenditures	<0.025% Ensuring that all expenditure is covered at the lowest possible cost.
13) Rate of Return on Cash Holdings	Return gain close to the rate of market return Achieving returns exceeding the maximum rate for institutions.
14) Efficiency in Cash Requests System	100% Improving the effectiveness of cash planning and forecasting.

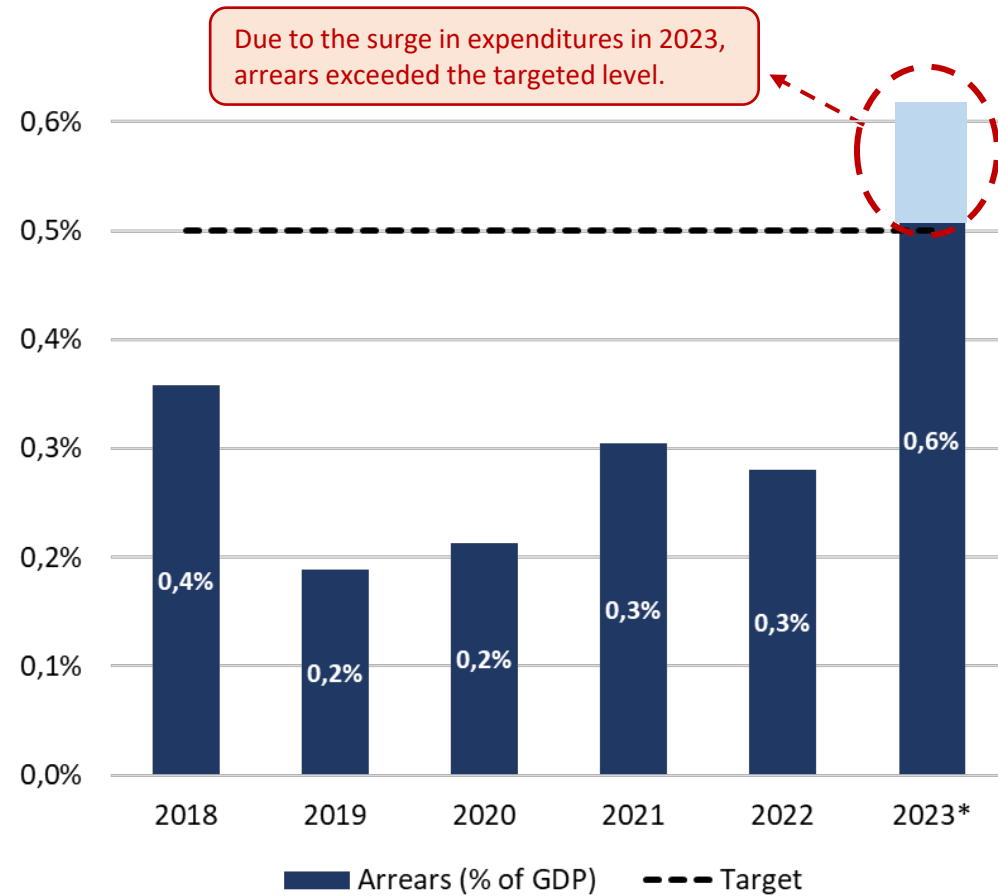
# 10. Accrual and Cash Based Non-Interest Expenditures



Accrual and Cash Based Non-Interest Expenditures Over Years (billion TL)



- The aim is to keep arrears below **0.5%** of GDP.



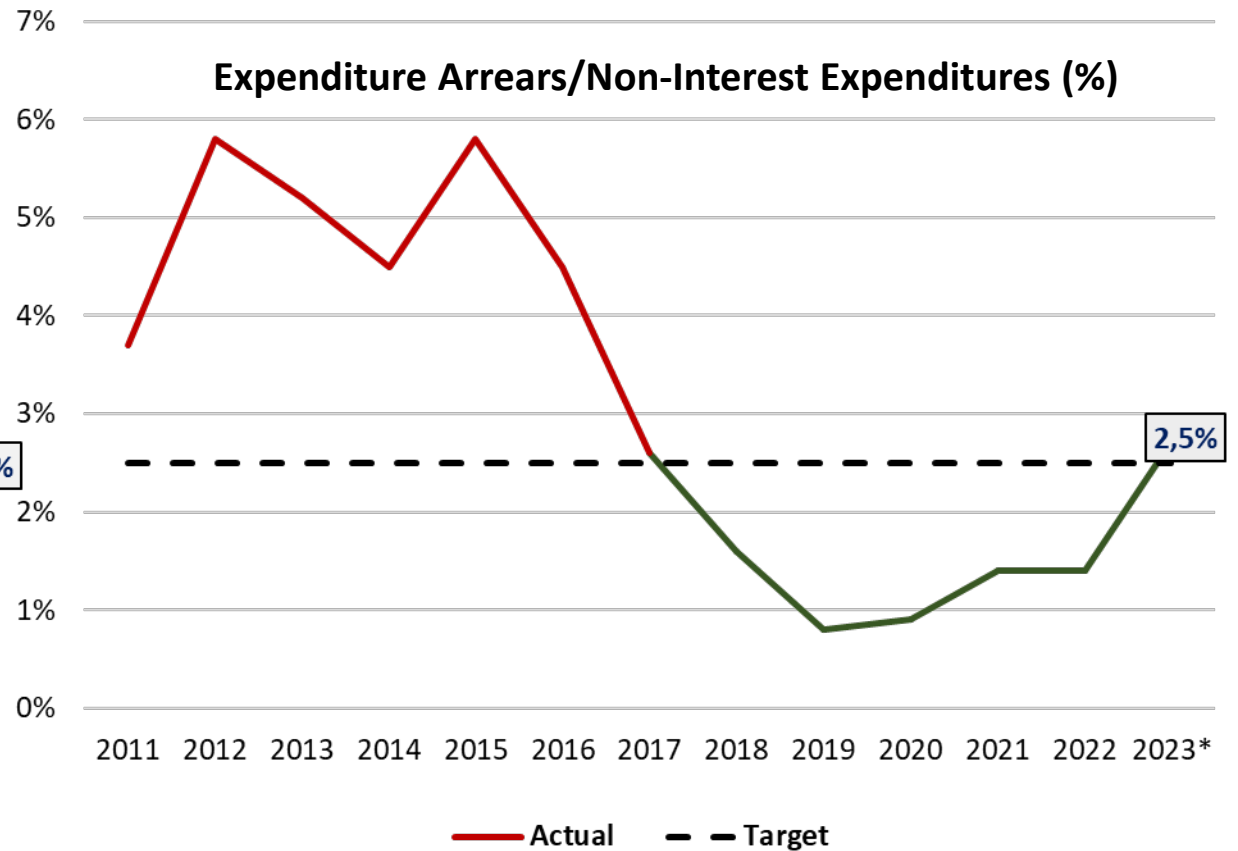
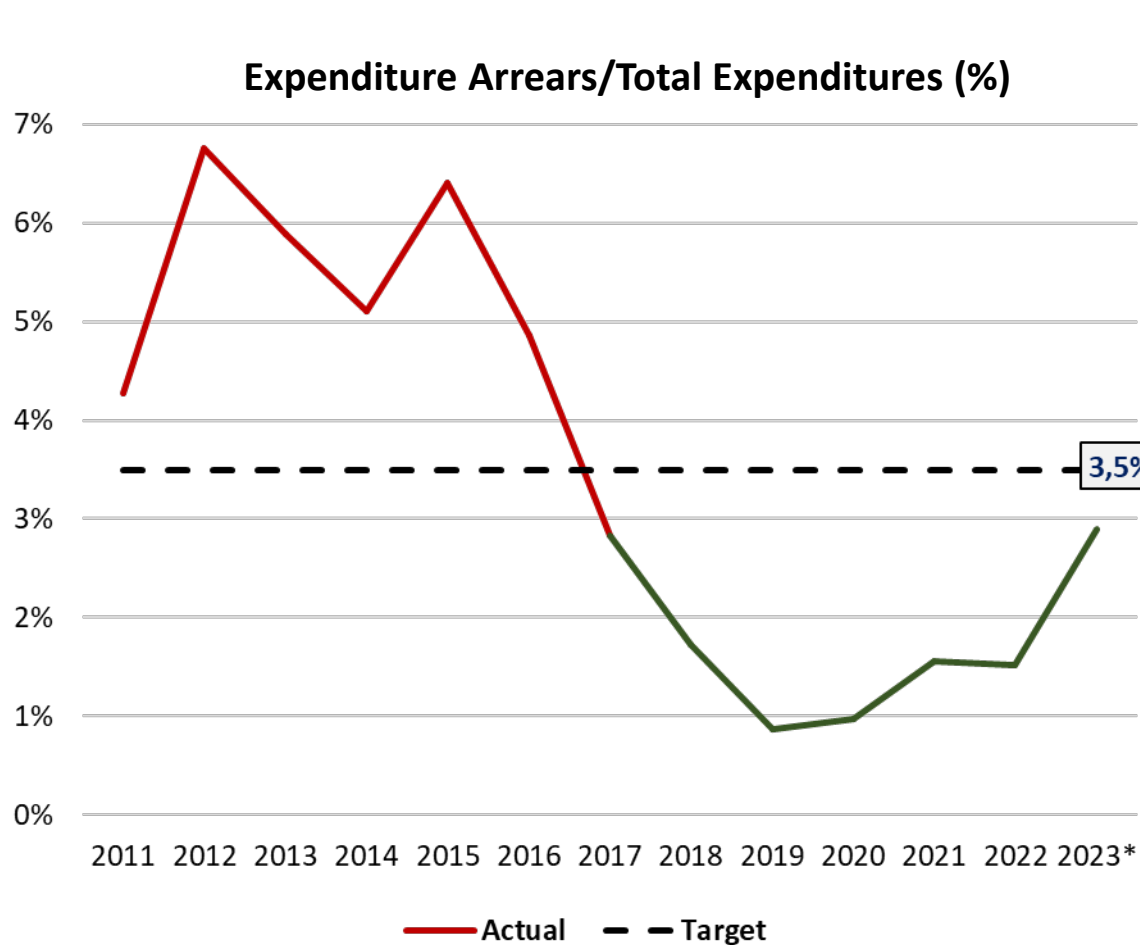




# 11. Percentage of Expenditure Arrears



- Since high expenditure arrears impose an additional burden on cash management for the following year, it is important to set and monitor them as a KPI.

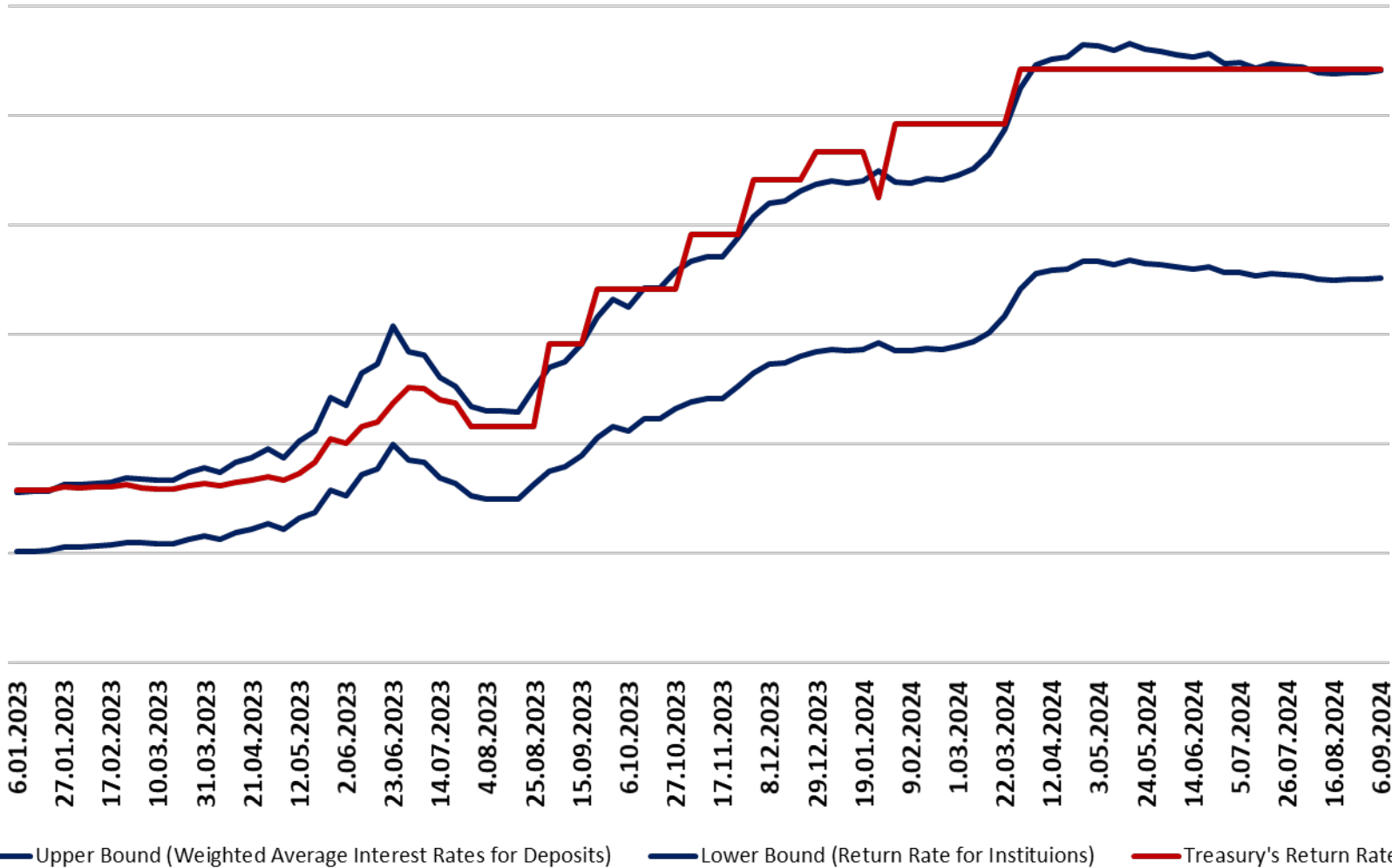


\*Excluding the earthquake-related spending

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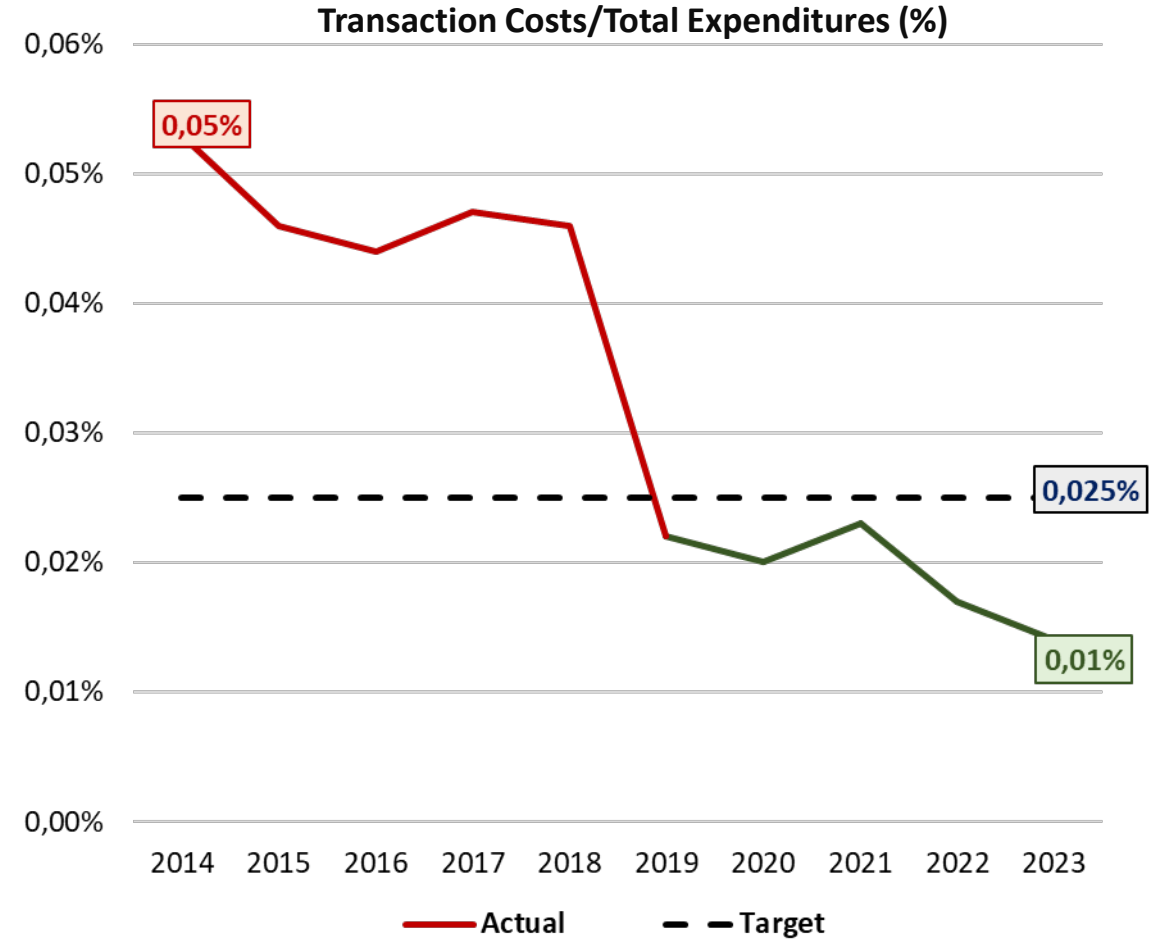
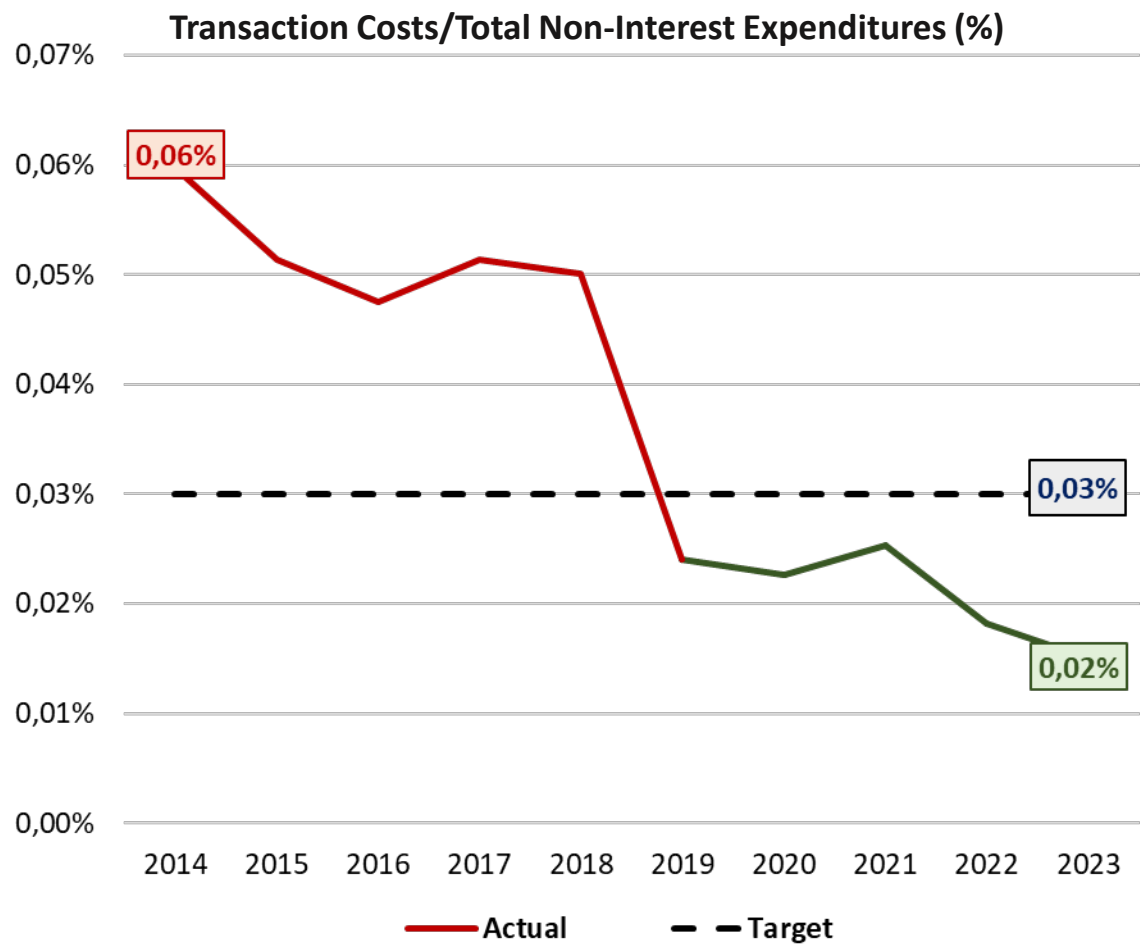
# 12. Return on Cash Surplus in the TSA



Objective is to generate returns on its resources at rates of return that are closer to the market rate than those achieved by public institutions.



# 13. Transaction Costs / Expenditures





# 14. Improving the Efficiency of Cash Request System



- Increasing the efficiency of institutions' cash requests improves cash programming and forecasting, enables more accurate liquidity management, and reduces operational costs

	<i>Previous</i>	<i>Current</i>	<i>Performance Rating</i>	<i>Target</i>
<b>Frequency of Cash Request Submission by Institutions</b>	Weekly	Daily	▲	<b>Establishing Effective Cash Request System</b>
<b>Cash Request Submission Horizon</b>	Next Three Months	Next Three Months	▶	
<b>Cash Request Granularity</b>	3 Breakdowns	7 Breakdowns	▲	
<b>Electronic Submission of Cash Requests</b>	IT System, Excel, Email	IT System	▲	



# KPIs for Reporting



- We adopt a reporting method that includes extensive data, is produced frequently, and ensures transparency toward senior management.
- In this regard, we monitor 3 main KPIs for reporting frequency.

KPIs	FREQUENCY
15) Reporting of Treasury Cash Statement	Twice a Day
16) Reporting of Annual Cash Flow Forecasting and Cash Balance Estimation	Daily
17) Reporting of Distribution of Financial Resources of Institutions	Weekly

Frequent cash reporting provides management with timely visibility of the Treasury's liquidity, enabling better cash flow forecasting and quicker responses to potential shortfalls or surpluses. It also helps manage financial risks and improve the operational efficiency of cash utilization.



# 15. Daily Reporting to Management



- The Accounting Unit reports Treasury cash flows and portfolio allocation to management twice a day.

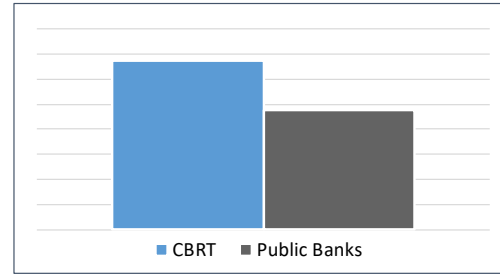
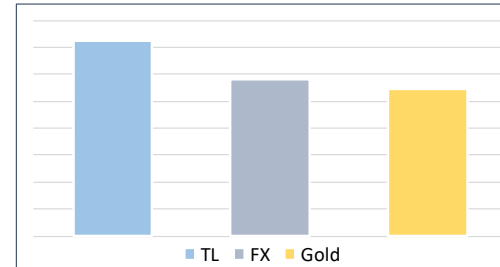
SUMMARY OF THE TREASURY CASH FLOW		
<b>The Balance of Day Before</b>	X	
<b>Cash Inflows (1+2+3)</b>	X	
<b>1. Tax</b>	X	
Value Added Tax	X	
Corporate Tax	X	
Income Tax	X	
Other	X	
<b>2. Non-tax</b>	X	
Interest Income	X	
Dividend income	X	
Other	X	
<b>3. Financing</b>	X	
- Borrowing	X	
- Internal Borrowing	X	
- External Borrowing	X	
<b>Cash Outflows (4+5)</b>	X	
<b>Expenditures</b>	X	
Personnel Expenditures	X	
Other Expenditures (Provincial Expenditures, Transfers to Local Administrations and SOE's, Social Security Institutions, Ministries etc.)	X	
<b>5. Debt Service</b>	X	
Domestic	X	
- Principal	X	
- Interest	X	
Foreign	X	
- Principal	X	
- Interest	X	
<b>Total Balance</b>	X	

CASH HOLDINGS		
	<b>Total (TL)</b>	<b>Total (Dolar)</b>
<b>TL</b>	X	X
<b>FX</b>	X	X
Dolar	X	X
Euro	X	X
Other	X	X
<b>Gold</b>	X	X
<b>Total</b>	X	X

	<b>Total (TL)</b>	<b>Total (Dolar)</b>
<b>CBRT</b>	X	X
TL	X	X
FX	X	X
Gold	X	X
<b>Public Banks</b>	X	X
TL	X	X
FX	X	X
Gold	X	X
<b>Total Balance</b>	X	X





# 16. Daily Reporting to Management



## Annual Cash Program

CASH PROGRAM 2024													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TOTAL
<b>REVENUES</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Tax</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
Income Tax Revenues	x	x	x	x	x	x	x	x	x	x	x	x	x
Corporate Tax Revenues	x	x	x	x	x	x	x	x	x	x	x	x	x
Value Added Tax Revenues	x	x	x	x	x	x	x	x	x	x	x	x	x
Other Tax Revenues	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Non-tax</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
Interest Income	x	x	x	x	x	x	x	x	x	x	x	x	x
Dividend Income	x	x	x	x	x	x	x	x	x	x	x	x	x
Other Non-tax Revenues	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>EXPENDITURES</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Non-Interest Expenditures</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
Personnel Expenditures	x	x	x	x	x	x	x	x	x	x	x	x	x
Transfers to Local Administrations	x	x	x	x	x	x	x	x	x	x	x	x	x
Provincial Expenditures	x	x	x	x	x	x	x	x	x	x	x	x	x
Social Security Institutions	x	x	x	x	x	x	x	x	x	x	x	x	x
Ministries	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>PRIMARY BALANCE</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>INTEREST PAYMENTS</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>CASH BALANCE</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>FINANCING</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>BORROWING (NET)</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>FOREIGN BORROWING (NET)</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
Borrowing	x	x	x	x	x	x	x	x	x	x	x	x	x
Payment	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>DOMESTIC BORROWING (NET)</b>	x	x	x	x	x	x	x	x	x	x	x	x	x
Borrowing	x	x	x	x	x	x	x	x	x	x	x	x	x
Payment	x	x	x	x	x	x	x	x	x	x	x	x	x

## Daily Cash Program

	02.09.2024	...	...	...	30.09.2024	TOTAL
<b>REVENUES</b>	x	x	x	x	x	x
<b>Tax</b>	x	x	x	x	x	x
<b>Non-tax</b>	x	x	x	x	x	x
<b>EXPENDITURES</b>	x	x	x	x	x	x
<b>Non-Interest Expenditures</b>	x	x	x	x	x	x
Personnel Expenditures	x	x	x	x	x	x
Transfers to Local Administrations	x	x	x	x	x	x
Provincial Expenditures	x	x	x	x	x	x
<b>PRIMARY BALANCE</b>	x	x	x	x	x	x
<b>INTEREST PAYMENTS</b>	x	x	x	x	x	x
<b>CASH BALANCE</b>	x	x	x	x	x	x
<b>FINANCING</b>	x	x	x	x	x	x
<b>BORROWING (NET)</b>	x	x	x	x	x	x
<b>FOREIGN BORROWING (NET)</b>	x	x	x	x	x	x
<b>DOMESTIC BORROWING (NET)</b>	x	x	x	x	x	x

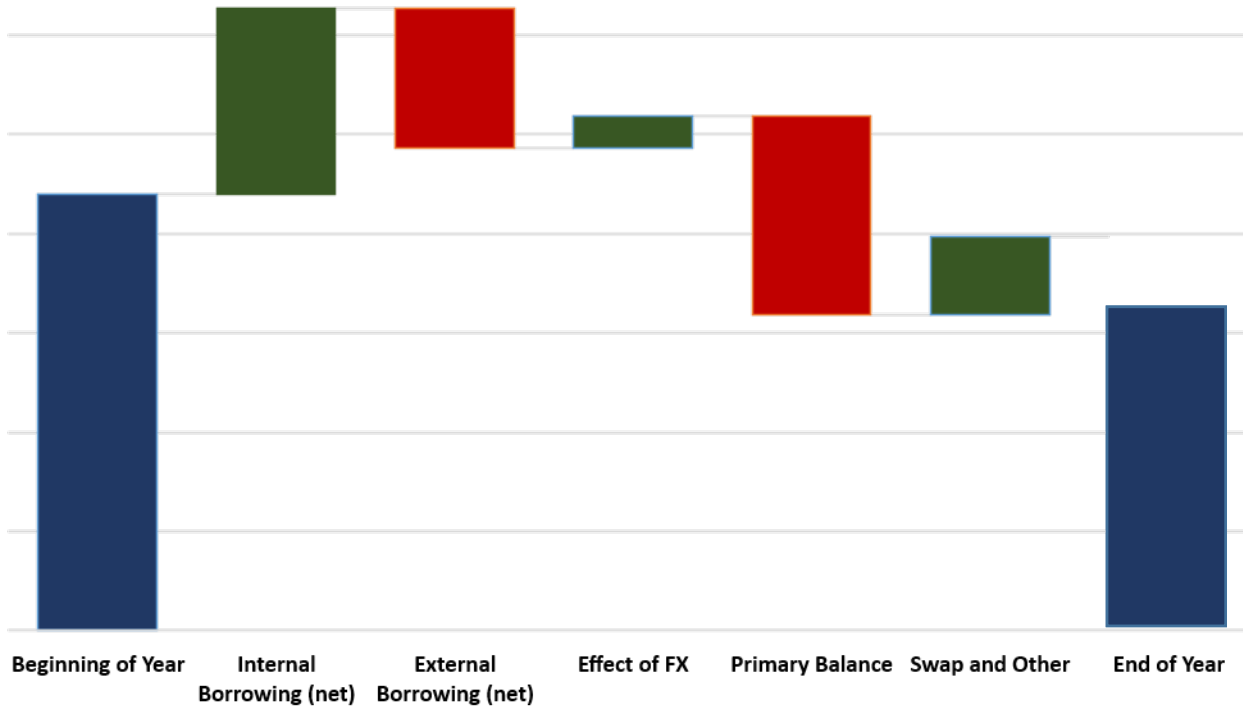


# 16. Daily Reporting to Management

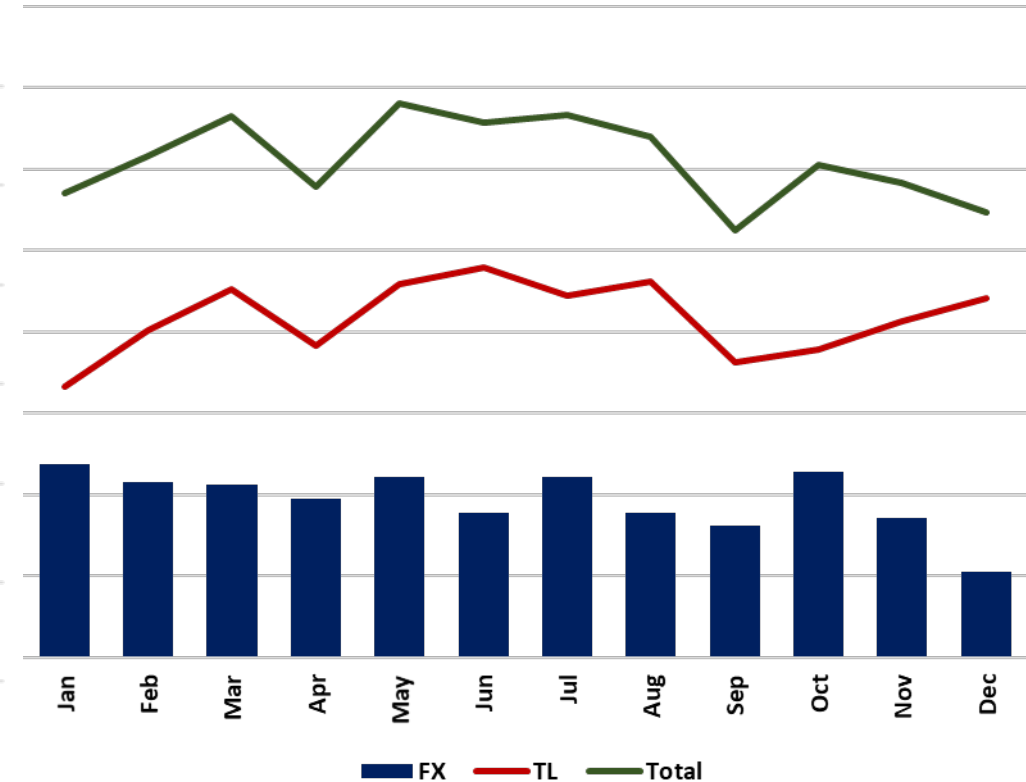


- The Cash Management Unit reports the **components of the change in cash balance** and the **monthly cash balance** to management on a daily basis.

Example for Components of the Change in Cash Balance



Example for Monthly Cash Balance



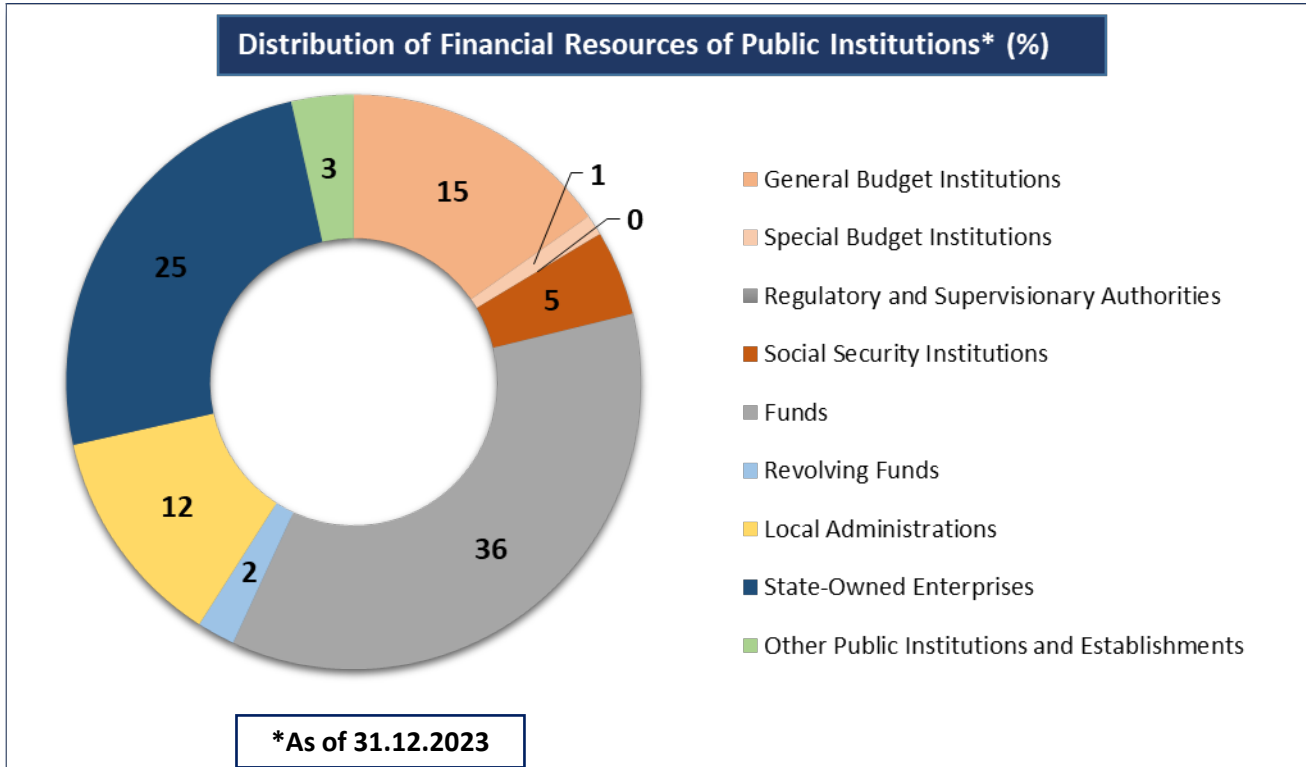




# 17. Reporting to Management



- The Cash Management Unit reports the distribution of **public funds categorized by institution and bank** to management on a daily basis.



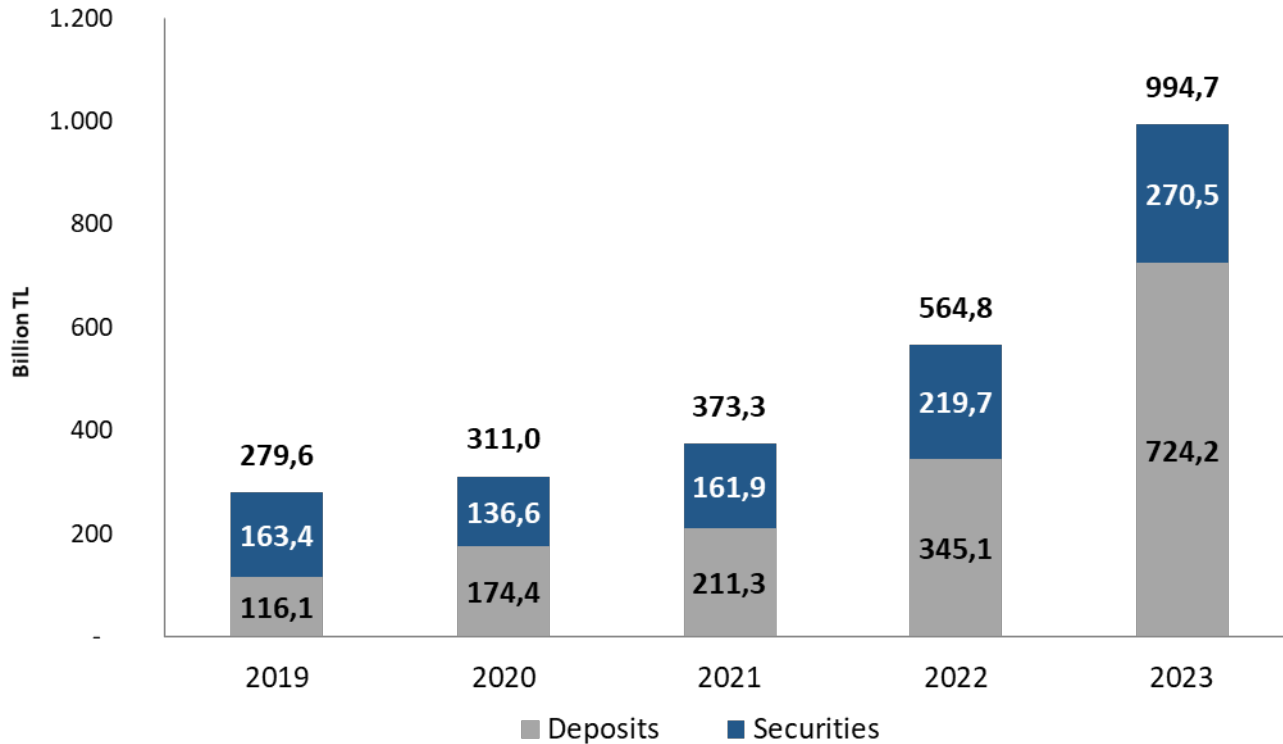
BANKS	Distribution of Funds by Banks (%)	09.09.2024 (Billion TL)	16.09.2024 (Billion TL)	Weekly Change (%)
Bank A	x	x	x	x
Bank B	x	x	x	x
Bank C	x	x	x	x
CBRT	x	x	x	x
Total	x	x	x	x

# 17. Reporting to Management

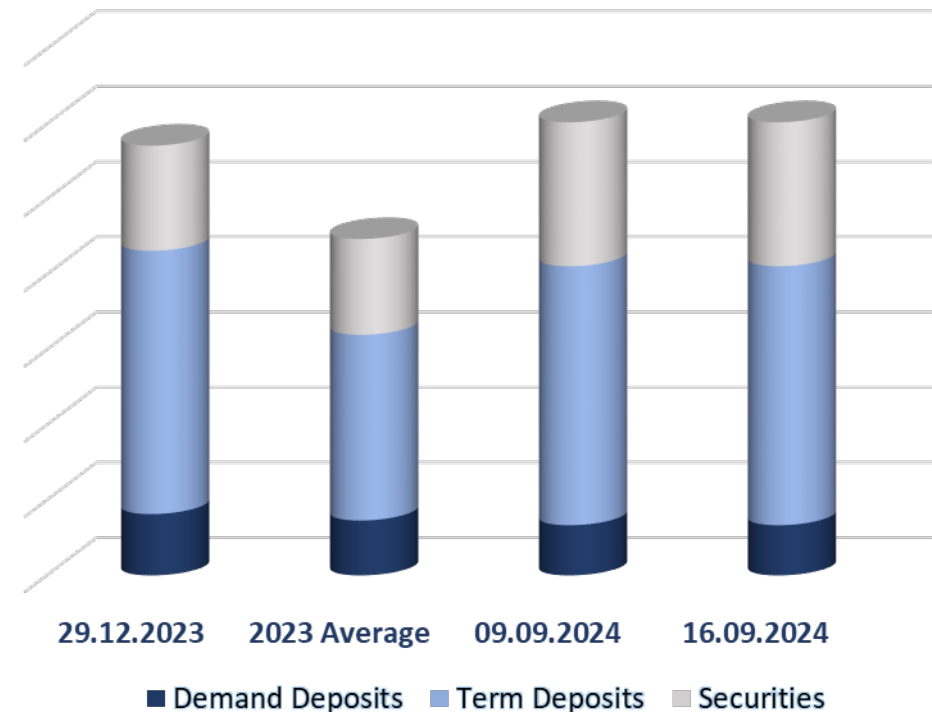


- The **distribution of public funds categorized by type of instrument** is reported weekly to management by the Cash Management Department. It is also published annually in the Public Debt Management Report

Financial Resources of Public Institutions



Financial Resources of Public Institutions





# Conclusion

- Key Performance Indicators (KPIs) play a crucial role in evaluating the Treasury's performance and tracking its progress in **achieving specific objectives**.
- KPIs are essential to promote both **predictability and efficiency** in cash management.
- KPIs should be **regularly adjusted as necessary** to improve effectiveness.
- In this regard, **17 KPIs** have been defined and are regularly monitored, with adjustments made as necessary.

By tracking these metrics;

- We gain valuable insights into the Treasury's performance,
- We identify areas for improvement,
- We make informed decisions that optimize cash flow, effectively manage risks, and ultimately improve to the overall performance of the Treasury.



**REPUBLIC OF TÜRKİYE**  
**MINISTRY OF TREASURY AND FINANCE**

**Thank You For Your Attention**

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