



Ministry of Finance of Georgia State Treasury



CASH FORECASTING: **GEORGIA & BEYOND**

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November, 2024



STRUCTURE OF PRESENTATION





PFM

GEORGIAN CONTEXT



PFM

A chain of rules, systems, and processes—the strength of which is limited to that of its weakest link

Primary Ingredients:

- Comprehensive, Effective, and Transparent Tools and Processes
 - Ensures accountability and efficiency.
- Efficient and Safe Investment of Public Funds
 - Maximizes public value and minimizes risk.



PFM - TREASURY

KEY AREAS





CASH CONSOLIDATION

2000-2014



- Early 2000s - First attempts
- 2005 – 2015
 - ✓ E-Treasury
 - ✓ RTGS & SWIFT
 - ✓ TSA
 - ✓ New Modules...
- DeMPA 2013 – *...way far from advance country practice...*



CASH CONSOLIDATION

2015



- Until 2015:
 - ✓ Local Level - managing budgets using commercial bank account
 - ✓ Central Level – TSA integrated with PFMS
- Extending the TSA became relatively straightforward
- Reform Criticism & revision of the project design
- Reform Outcomes:
 - ✓ Budget execution reports available in real time
 - ✓ Economies in the use of resources
 - ✓ 700 new organizations and 2,000 new users to the system
 - ✓ Accumulation of Higher Cash Balances

TSA Expansion → Higher Treasury Balances → Cash Management Function Became Essential



STRUCTURE OF PRESENTATION





CASH MANAGEMENT EVOLUTION

PREPARATORY STAGE 1



GOAL: Increase the efficiency of the Treasury cash management system

- 2015 - Cash Forecasting and Management Department established (6 employees)
 - ✓ Cash Forecasting Division
 - ✓ Cash Management Division

- Adoption of Government decree regulating money auctions:
 - ✓ Type
 - ✓ Duration
 - ✓ Amount
 - ✓ Collateral



CASH MANAGEMENT EVOLUTION

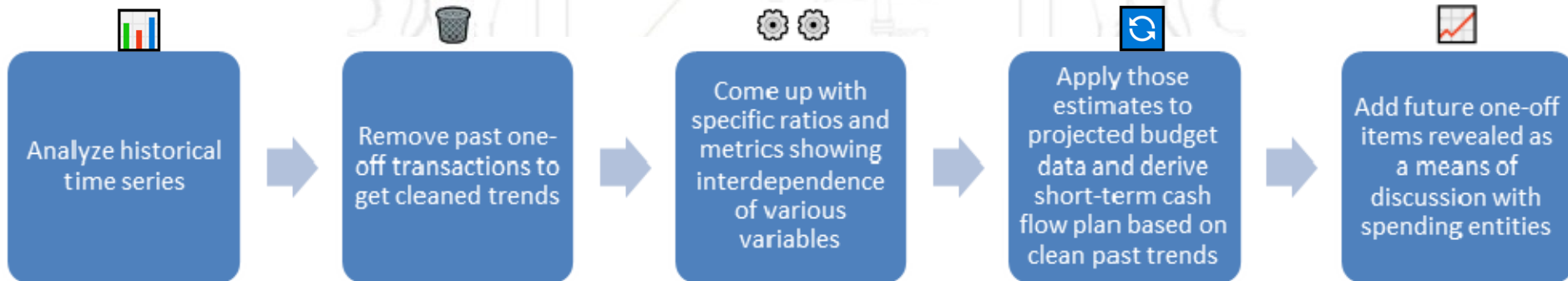
PREPARATORY STAGE 2



Cash forecasting models developed in two Sub-Stages:

- Sub-Stage 1:
 - ✓ Budget execution data
 - ✓ Annual budget Law
 - ✓ Close cooperation with: Budget, Debt & Fiscal Forecasting Departments

- Sub-Stage 2:
 - ✓ Building regular pattern:








CASH MANAGEMENT EVOLUTION

PREPARATORY STAGE 3



➤ **Technical tools adopted**

- ✓  Bloomberg Terminal
- ✓  Central Securities Depository (CSD)
- ✓  eTreasury System

➤ **July, 2017 - Treasury launched first deposit auction successfully**

- Improved liquidity management
- Enhanced investment strategies for surplus funds



CASH MANAGEMENT AUCTION

EVERY WEEK



Ministry of Finance		99) Workflow		Auctions System	
Ministry of Finance of Georgia (MFGE)					
10:31					
Auction	Type	Date	Time	Status	Amount
1. State Treasury Collateralized Deposit 343	Deposit	27-Dec-22	12:00 - 12:15	Allocated	200MM
2. State Treasury Collateralized Deposit 342	Deposit	13-Dec-22	12:00 - 12:15	Allocated	100MM
3. State Treasury Collateralized Deposit 341	Deposit	13-Dec-22	12:00 - 12:15	Allocated	100MM
4. State Treasury Collateralized Deposit 340	Deposit	06-Dec-22	12:00 - 12:15	Allocated	200MM
5. State Treasury Collateralized Deposit 339	Deposit	06-Dec-22	12:00 - 12:15	Allocated	100MM
6. State Treasury Collateralized Deposit 338	Deposit	29-Nov-22	12:00 - 12:15	Allocated	100MM
7. State Treasury Collateralized Deposit 337	Deposit	29-Nov-22	12:00 - 12:15	Allocated	100MM
8. State Treasury Collateralized Deposit 336	Deposit	22-Nov-22	12:00 - 12:15	Allocated	200MM
9. State Treasury Collateralized Deposit 335	Deposit	22-Nov-22	12:00 - 12:15	Allocated	200MM
10. State Treasury Collateralized Deposit 334	Deposit	15-Nov-22	12:00 - 12:15	Allocated	200MM
11. State Treasury Collateralized Deposit 333	Deposit	15-Nov-22	12:00 - 12:15	Allocated	200MM
12. State Treasury Collateralized Deposit 332	Deposit	08-Nov-22	12:00 - 12:15	Allocated	200MM
13. State Treasury Collateralized Deposit 331	Deposit	08-Nov-22	12:00 - 12:15	Allocated	200MM
14. State Treasury Collateralized Deposit 330	Deposit	01-Nov-22	12:00 - 12:15	Allocated	300MM
15. State Treasury Collateralized Deposit 329	Deposit	01-Nov-22	12:00 - 12:15	Allocated	200MM
16. State Treasury Collateralized Deposit 328	Deposit	01-Nov-22	12:00 - 12:15	Allocated	200MM
17. State Treasury Collateralized Deposit 327	Deposit	25-Oct-22	12:00 - 12:15	Allocated	200MM
18. State Treasury Collateralized Deposit 326	Deposit	18-Oct-22	12:00 - 12:15	Allocated	300MM
19. State Treasury Collateralized Deposit 325	Deposit	18-Oct-22	12:00 - 12:15	Allocated	100MM
20. State Treasury Collateralized Deposit 324	Deposit	11-Oct-22	12:00 - 12:15	Allocated	100MM
21. State Treasury Collateralized Deposit 323	Deposit	11-Oct-22	12:00 - 12:15	Allocated	400MM
22. State Treasury Collateralized Deposit 322	Deposit	04-Oct-22	12:00 - 12:15	Allocated	400MM
23. State Treasury Collateralized Deposit 321	Deposit	27-Sep-22	12:00 - 12:15	Allocated	400MM
24. State Treasury Collateralized Deposit 320	Deposit	20-Sep-22	12:00 - 12:15	Allocated	400MM
25. State Treasury Collateralized Deposit 319	Deposit	13-Sep-22	12:00 - 12:15	Allocated	400MM
26. State Treasury Collateralized Deposit 318	Deposit	06-Sep-22	12:00 - 12:15	Allocated	400MM
27. State Treasury Collateralized Deposit 317	Deposit	30-Aug-22	12:00 - 12:15	Allocated	400MM
28. STATE TREASURY DEPOSIT 316	Deposit	23-Aug-22	12:00 - 12:15	Allocated	50MM
29. State Treasury Collateralized Deposit 315	Deposit	23-Aug-22	12:00 - 12:15	Allocated	400MM
30. State Treasury Collateralized Deposit 314	Deposit	16-Aug-22	12:00 - 12:15	Allocated	400MM



CASH MANAGEMENT BENEFITS



Active Cash Management:

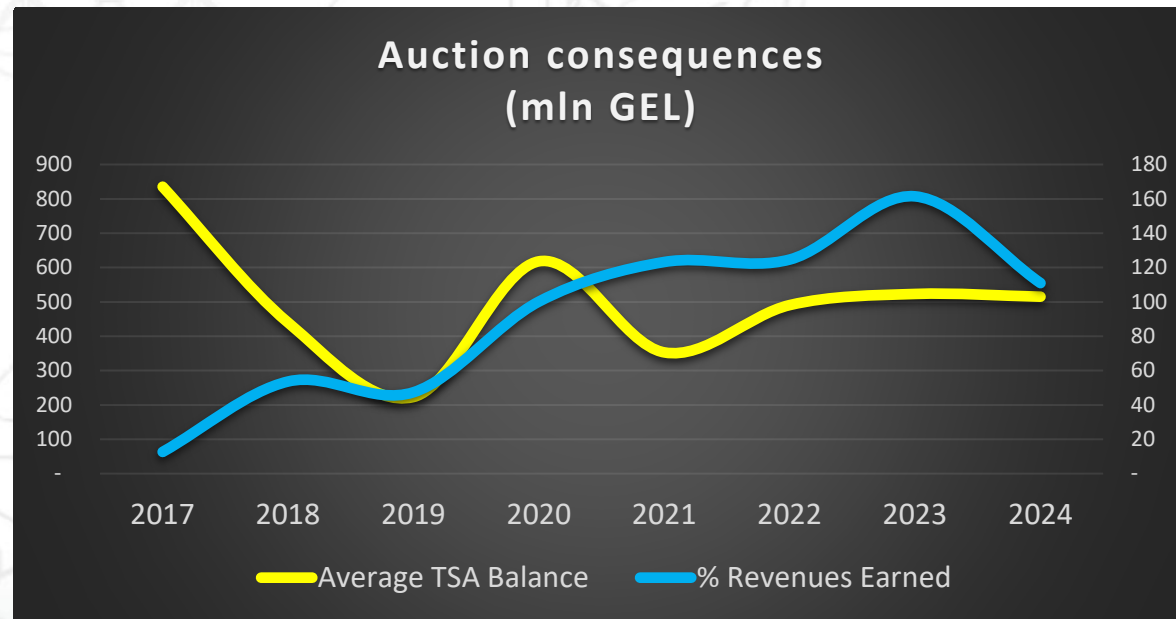
- ✓ Effective management of excess resources
- ✓ Additional revenue to Central budget
- ✓ Additional source of GEL liquidity with different terms
- ✓ Institutional development

Brief Summary:

Auctions Held: 500+

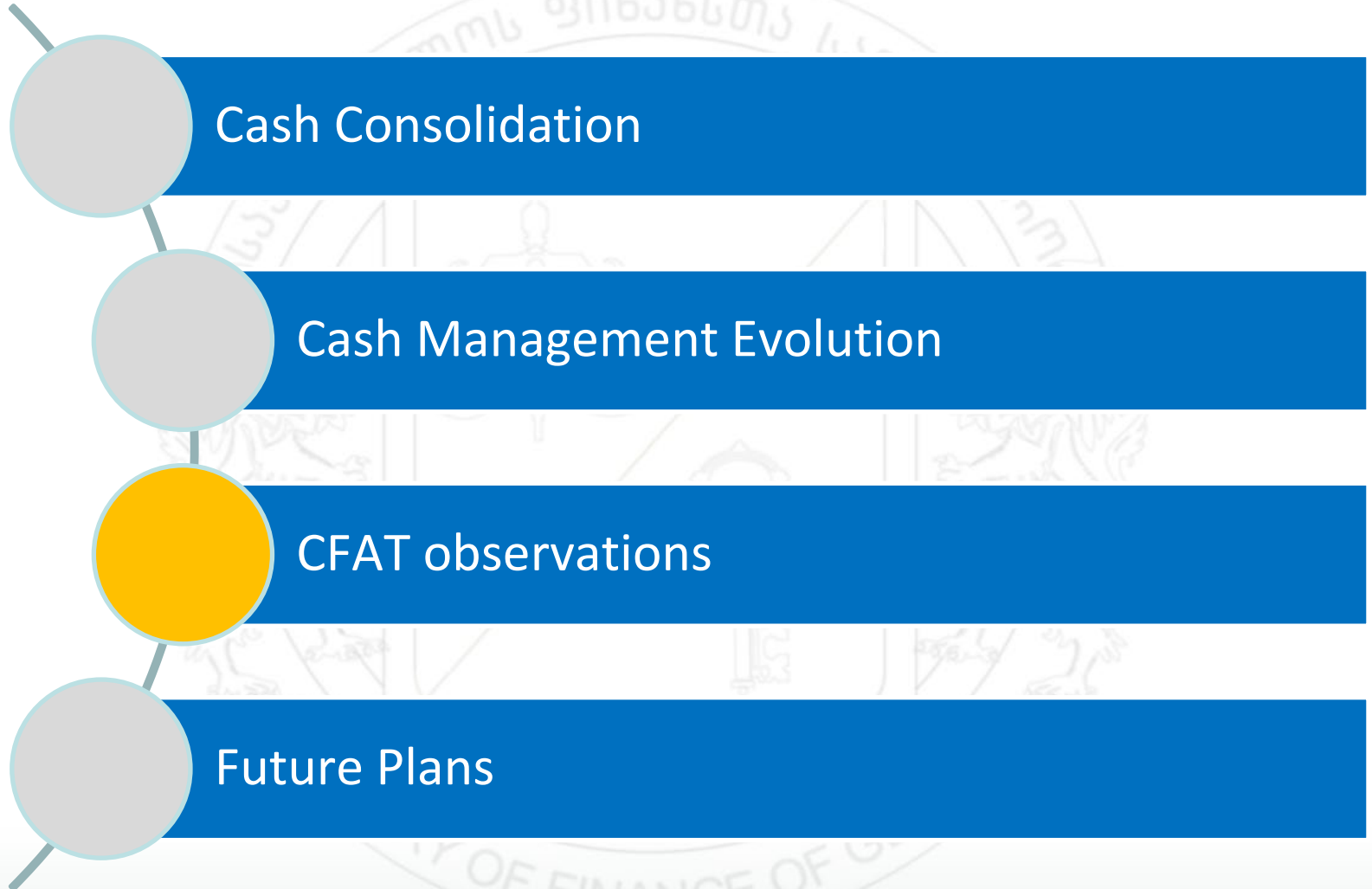
Total Income: 750+ mln GEL

Current Portfolio: 2 bln GEL





STRUCTURE OF PRESENTATION





CFAT

STRENGTHS



Key Strengths:

Technical:

- Easy-to-use Excel-based spreadsheet—all on one page
- User-friendly macros that simplify navigation
- Sophisticated formulas and data formats
- Information is easy to digest using charts and graphs
- Simple customization—add rows and columns effortlessly



CFAT

STRENGTHS (2)



Key Strengths:

Substantive:

- Uses current budget year data
- Incorporates up to five years of previous budget execution data
- Allows for assigning weights to different data points
- Provides multiple opportunities to adjust based on actual performance

By leveraging these technical and substantive strengths, CFAT compiles a comprehensive and easily understandable cash flow picture, making it an invaluable tool for engaging in discussions with counterparties during data compilation and for presenting to committees to support informed decision-making.

Ultimately, it enhances forecasting accuracy and provides valuable insights for effective cash management.







CFAT CHALLENGES

OBSERVATIONS WORLDWIDE



Key Challenges:

Technical:

-  **Limited Language Availability**
Tool is available in a limited number of languages.
-  **Bugs in Macros**
Issues present in earlier versions; recent updates have addressed many bugs.
-  **Sensitivity with Formulas**
Requires precise input; altering certain cells can cause errors.
-  **Difficulty in Customization**
Advanced Excel/VBA knowledge needed for significant customizations.









CFAT CHALLENGES (2)

OBSERVATIONS WORLDWIDE



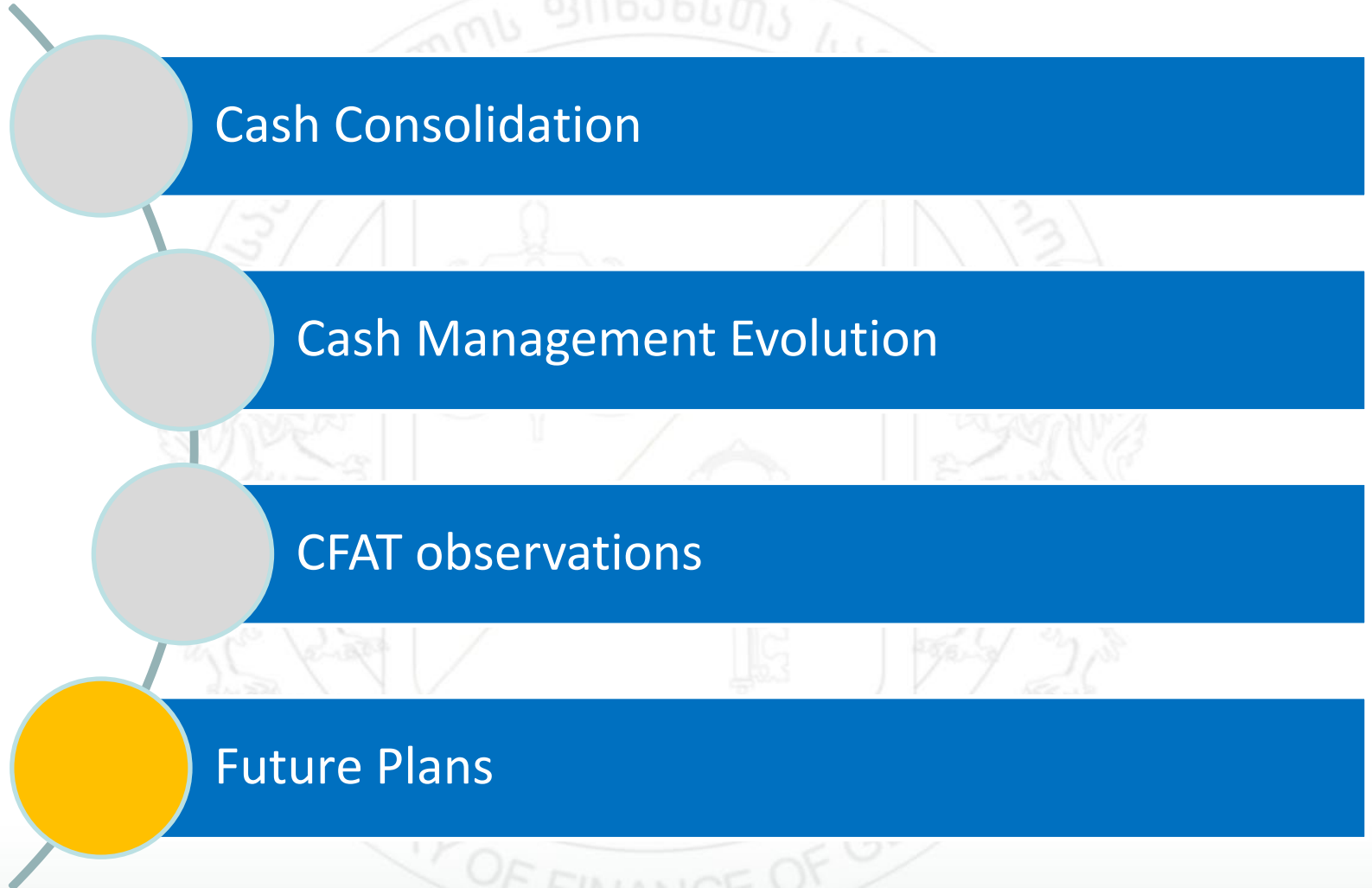
Key Challenges:

Substantive:

-  Lack of Credibility in Budget Data
-  Absence of Historical Data
-  Timing Issues with Data Compilation
-  No Institutional Arrangements for Adjustments
-  No Dedicated Cash Forecasting Team
-  Lack of Committees to Discuss Results



STRUCTURE OF PRESENTATION





GEORGIAN TREASURY

ONGOING ACTIVITIES AND FUTURE PLANS



Ongoing Projects:

- Finalize Enhancement of TSA (Treasury Single Account)
 - Continuing improvements and optimizations of the TSA system.
- Implement Machine Learning in Transaction Processing
 - Utilizing ML algorithms to improve efficiency and accuracy.

Planned Initiatives:

- Apply Machine Learning in Cash Forecasting
 - Leveraging ML techniques to enhance forecasting accuracy.
- Use Natural Language Processing (NLP) in Accounting Data Processing
 - Automating and improving data processing with NLP.
- Enhance Customer Service Quality through Large Language Models (LLMs)
 - Implementing AI-driven models to improve customer interactions.



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Thank you for your attention!

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