TÜRKİYE CUMHURİYET
MERKEZ BANKASI

SECURITIES STATISTICS

SESRIC– Central Bank Of The Republic of Türkiye

Fatma Burcu ÇAKAL

Data Governance and Statistics Department
Monetary and Financial Data Division

07-08.11.2024

CONTENTS

- Methodology
- Overview of Securities Holding Statistics of CBRT
- Data Sources
- Dissemination & Reporting to International Organizations

METHODOLOGY

Handbooks

1

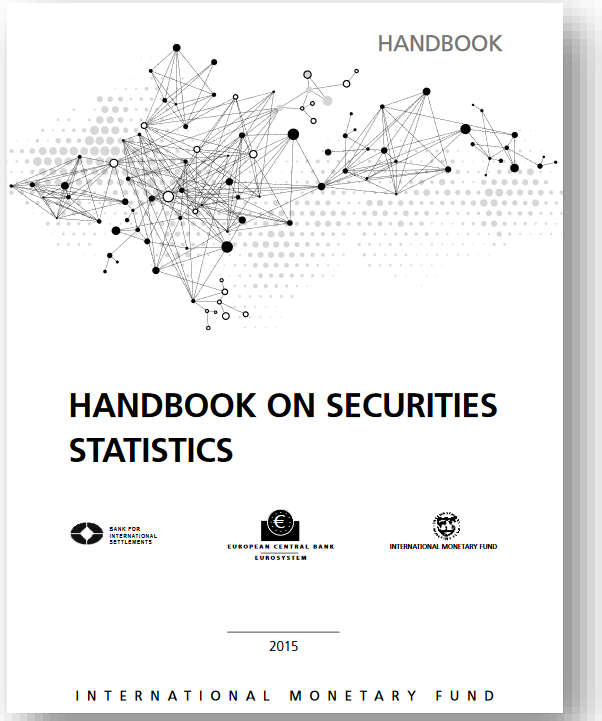
SNA 2008 & BPM 6& ESA 2010 & MFSM 2016

- ✓ definitions
- ✓ residency
- ✓ sectoral classification
- ✓ instruments
- ✓ calculations

Handbook on Securities Statistics

- ✓ ownership
- ✓ market value
- ✓ transaction

2



Main Features of Securities

Securities include:

- **debt securities**: *negotiable* financial instruments serving as evidence of a debt (2008 SNA, paragraph 11.64).

- **equity securities**: securities acknowledging claims on the residual value of a corporation after the claims of all creditors have been met (2008 SNA, paragraph 11.83).

- **investment fund shares or units** (to some extent): issued by investment funds (collective investment undertakings through which investors pool funds for investment in financial and nonfinancial assets) (2008 SNA, paragraph 11.94).

Residency

- Residency is based on the criteria of economic border and center of economic interest.
- Individuals and institutions that permanently reside in an economy for longer than one year and engage in economic activities in that economy are accepted as "residents".

  - foreign banks' branches in Türkiye are considered as residents
  - domestic banks' branches abroad are considered as nonresidents

Ownership

International standards recommend that securities statistics are compiled based on economic ownership

- HSS paragraph 3.40 *Economic ownership of the securities provided as collateral under such agreements is considered not to have been transferred because the cash recipient (the seller of the securities) remains subject to all market risks and continues to receive any benefits.* Therefore, transactions involving securities repurchase agreements and securities lending do not entail a new issuance of debt securities, but rather the incurrence of collateralized loans. These transactions are therefore excluded from debt securities statistics.

- BPM 6 paragraph 5.54 *The securities provided as collateral under securities lending, including a securities repurchase agreement, are treated as not having changed economic ownership, as discussed in paragraph 7.58. This treatment is adopted because the cash receiver is still subject to the risks or rewards of any change in the price of the security.*

1. Economic owner of a security is the party which is subject to the risks or rewards of any change in the price of the security.

2. The legal owner of a security can sell it or use it in repo/collateral/lending transactions.

3. These type of transactions in which economic ownership does not change should be excluded from securities statistics

Valuation of Debt Securities

Market prices are the basic reference for valuation

HSS recommends that

- Debt securities issues should be recorded **at both nominal and market value**,
- Debt securities holdings should be recorded **at market value**

Price

Price data need to be estimated when there is no market price for the reference date

Debt Securities

- **Domestic debt securities *issued by General Government:*** Markets Department calculates daily price data for each bond.

- **Domestic debt securities *issued by other sectors:*** Data sources are Central Registry Agency and Stock Exchange.

When there is no price available for reference date (t), price is defined as follows:

$$Price_t = \begin{cases} Price_{t-1} & if\ price\ is\ avaliable\ for\ t-1 \\ 100 & otherwise \end{cases}$$

- **Debt securities *issued in international markets:*** Primary data sources are commercial databases.

When there is no price available for reference date, price is defined as follows:

$$Price_t = \begin{cases} Price_{t-n}\ or\ Price_{t+n} & if\ price\ is\ avaliable\ for\ n \leq 5 \\ 100 & otherwise \end{cases}$$

Listed Shares

Data source: Stock Exchange

When there is no price available for reference date (t), last trading day's price is used.

$$Price_t = Price_n$$

$for\ n\ being\ the\ last\ trading\ day\ for\ that\ share$

Market Value

For the calculation of market value, we use end of period price

- The market value is calculated using the following formula:

$$Market\ Value_t = \sum_i \left(Face\ Value_t^i \times Price_t^i\right)$$

where:

$Market\ Value_t$ = total market value at period t

$Face\ Value_t^i$ = face value of security i at period t

$Price_t^i$ = market price of security i at period t,

Transactions

Transactions refers to net issuance (i.e., issuance minus redemptions) or net acquisitions (i.e., gross acquisitions minus disposals) of securities during accounting period t. (HSS paragraph 5.15)

Transactions are calculated by taking difference of stocks and using average prices and exchange rate

1. Debt Securities

$$Net\ transactions_t^{USD} = \sum_i \left\{ \left(Face\ Value_t^i - Face\ Value_{t-1}^i\right) \times Average\left(Price_t^i, Price_{t-1}^i\right) \div \left(\left(\sum_{p=0}^{n-1} Exchange\ Rate_{t-p} \right) x\ (1 \div n) \right) \right\}$$

where; $Face\ Value_t^i$ and $Price_t^i$ refer to the face value and market price of security i at time t, respectively.

2. Shares

$$Net\ transactions_t^{USD} = \sum_i \sum_{p=0}^{n-1} \left\{ \left(Face\ Value_{t-p}^i - Face\ Value_{t-p-1}^i\right) \times Price_{t-p-2}^i \div Exchange\ Rate_{t-p-2} \right\}$$

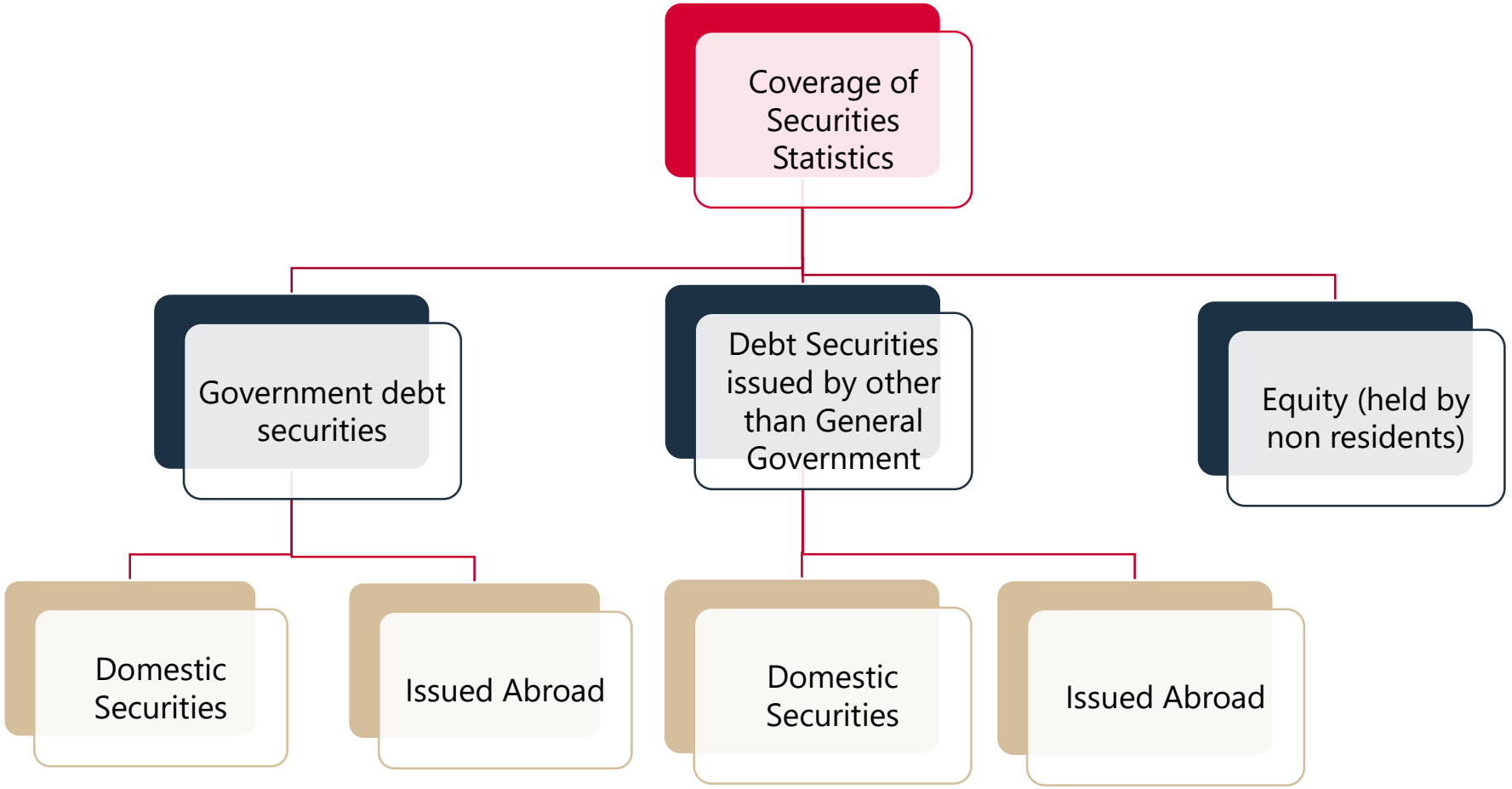
where; i refers to shares, n refers to the number of business days in the relevant week, t refers to the last business day of the week, $t-p$ refers to p day prior to the last business day, and $Exchange\ Rate_{t-p}$ refers to the indicative USD buying rate announced by the CBRT for p day prior to the last business day of the week.

OVERVIEW OF SECURITIES HOLDING STATISTICS OF CBRT

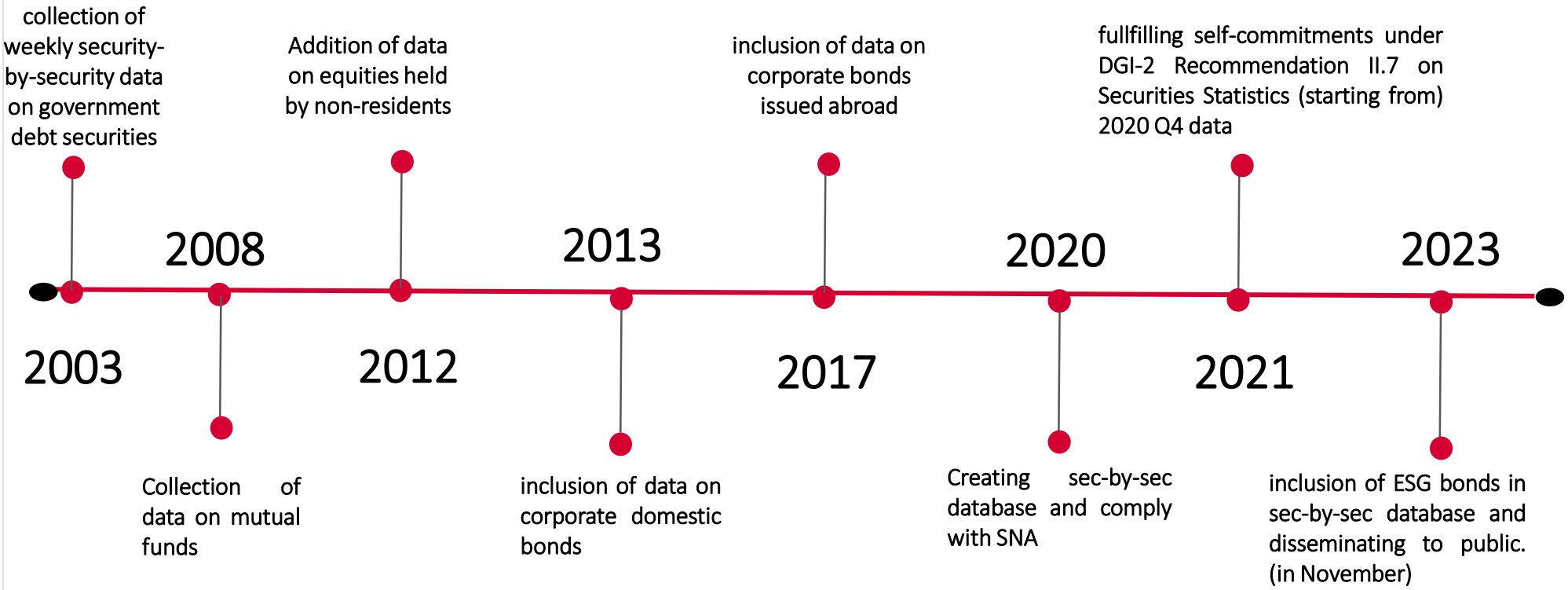
TÜRKİYE CUMHURİYET
MERKEZ BANKASI

Securities Statistics of Türkiye

Securities Statistics include…



Production History



DATA SOURCES

Data Sources

Data sources are specific to the instrument and market of issuance

Instrument Type	Issuer Sector	Market of Issuance	Data Sources		
			Issuance	Holder	Price
Debt Securities	General Government	Domestic	▸ CBRT – Payment System Department	▸ Resident Banks ▸ Brokage Houses ▸ Central Registry Agency ▸ Takasbank ▸ CBRT Branches	▸ CBRT – Markets Department
		Abroad	▸ Ministry of Treasury and Finance ▸ Commercial Data Provider	▸ Resident Banks ▸ Brokage Houses ▸ Takasbank (Istanbul Settlement and Custody Bank Inc)	▸ Commercial Data Provider
	Domestic Sectors Other Than General Government	Domestic	▸ Central Registry Agency ▸ Commercial Data Provider	▸ Central Registry Agency ▸ Resident Banks ▸ Brokage Houses	▸ Central Registry Agency ▸ Istanbul Stock Exchange
		Abroad	▸ Central Registry Agency ▸ Internal Database ▸ Commercial Data Provider	▸ Resident Banks ▸ Brokage Houses	▸ Commercial Data Provider
Shares	All domestic sectors	Domestic	▸ Istanbul Stock Exchange ▸ Central Registry Agency	▸ Central Registry Agency	▸ Istanbul Stock Exchange

Issuance Statistics

SbS Issuance stats database contains …

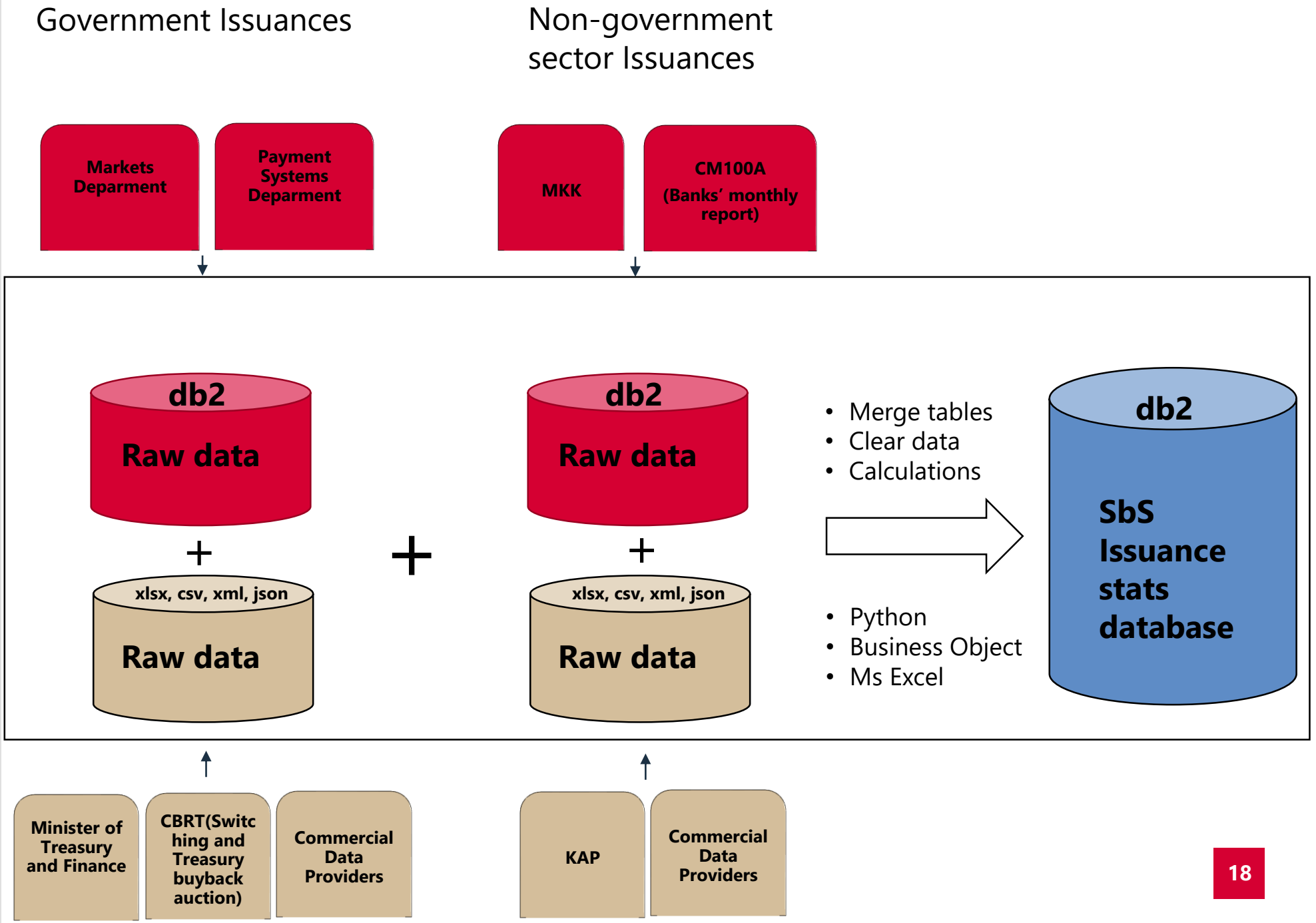
- The ISIN code is a unique identifier.
- Each is recorded in its original currency, while securities issued in domestic markets are also saved in Turkish Lira and securities issued abroad in US Dollars.

Some relevant features in the SbS database

Classification	Quantitive Information	Date	Other Features
Issuer Sector	Face Value	Issue Date	Original Maturity
Coupon Type	Market Value	Maturity Date	Remaining Maturity
Currency Code	Switching Amount	Switching Date	Coupon Rate
is_ESG	Buyback Amount	Buyback Date	Price
			Exchange Rate
			Issuer Name

Issuance Statistics

Data Sources and Collection



Holding Statistics

SbS holding stats database contains …

- The ISIN code is NOT a unique identifier. It is a foreign key to join with issue stats tables.
- Each is recorded in its original currency, while securities issued in domestic markets are also saved in Turkish Lira and securities issued abroad in US Dollars.

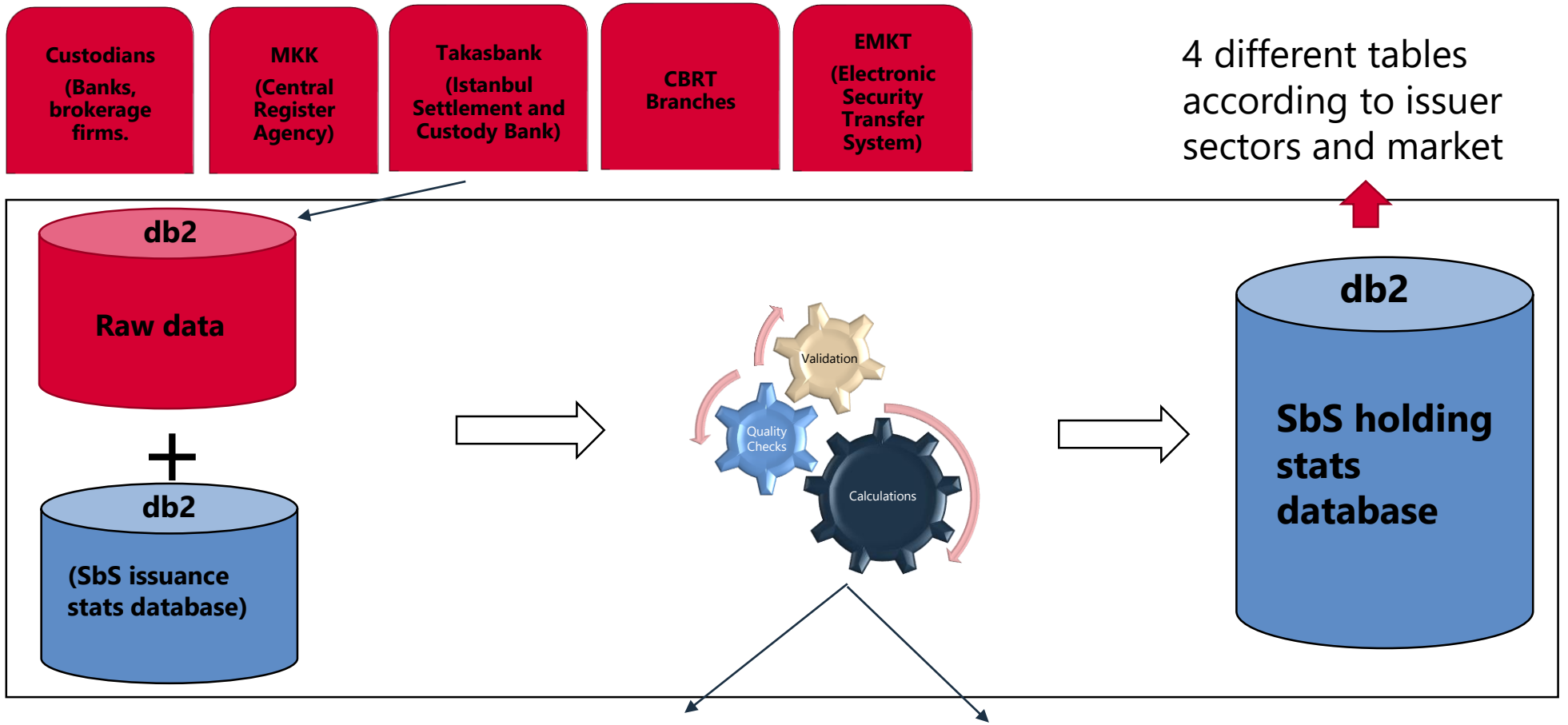
Some relevant features in the SbS database

Classification
Holder Sector
Reporting Agency Code
Currency Code
Transaction Code (outright purchase, repo etc…)

Quantitive Information
Face Value
Market Value

Other Features
Exchange Rate
Price

Holding Statistics



Objective 1.

Minimizing reporting errors and preventing double counts

- Total amount reported by custodians and other sources
- Total amount in the Securities Depository

Objective 2.

Minimizing differences between total issuance and total amount of holders

- Total Amount of holders
- Outstanding Amount

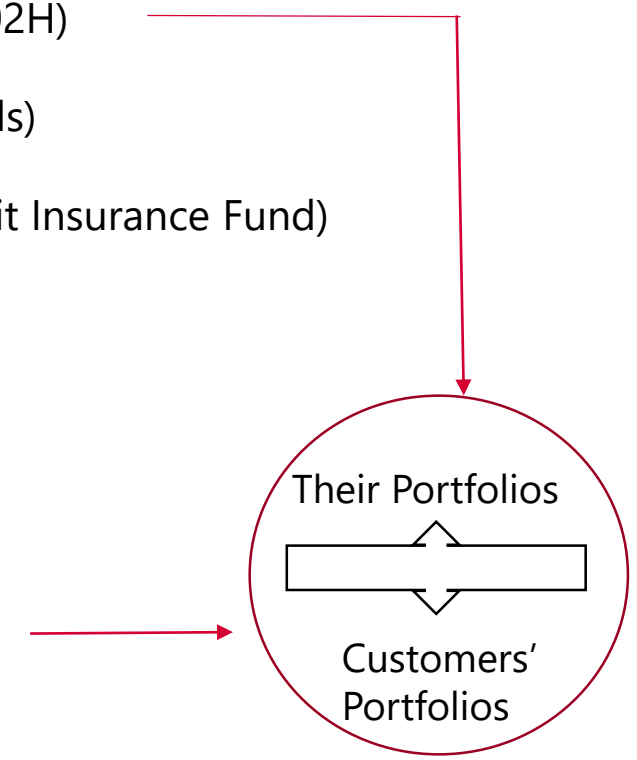
Holding Statistics

Data Sources

- **Government Domestic Debt Securities**
  - Resident Custodian Banks and Brokerage Houses (MD302H)
  - Istanbul Settlement and Custody Bank –Takasbank (Funds)
  - CBRT Branches (Foundation of CBRT Staff, Saving Deposit Insurance Fund)
  - MKK (Euroclear)
  - Unemployment Insurance Fund (UIF)

- **Debt Securities Issued Abroad**
  - Resident Custodian Banks and Brokerage Houses (MD302H)
  - Takasbank (Funds)
  - Central Registry Agency (MKK)

- **Domestic Debt Securities Issued by Other Than General Government**
  - Central Registry Agency (MKK)



Form of reporting Data from Banks & Dealer Companies

BANKS' WHATCHING SYTEM

BANK'S NAME: YYYY Bank

BANK'S EFT CODE: 999

FORM'S NAME: WEEKLY SECURIES DATA FORM

FORM'S CODE:MD302H

CURRENCY : THOUSAND TRY/ THOUSAND ORINAL CURRENCY / THOUSAND NUMBERS

LINE NUMBER	ISIN/CODE	TYPE OF SECURITY	TYPE OF TRANSACTIONS	SECTOR'S CODE	CURRENCY	FACE VALUE (Thousand Orijinal Currency / Thousand kg/gr (XAU))		RECORDED VALUE / MARKET VALUE (Thousand TRY)		Country of Counterpart
						Domestic Branchs	Branches Abroad	Domestic Branchs	Branches Abroad	
1	TRD120723T18	23	M11	S00014	TRY	100000	___,___,___,___	98995	___,___,___,___	TR
2	TRD140723F12	23	M12	S00011	USD	200000	___,___,___,___	205400	___,___,___,___	TR
3	TRD050724T16	28	M23	S00228	XAU	___,___,___,___	200	___,___,___,___	98080	GB
4	US90015WAL72	9	M61	S00014	USD	50000	___,___,___,___	400670	___,___,___,___	TR
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.	_ _ _ _ _ _ _ _ _ _ _ _ _	_ _	_ _ _	_ _ _ _ _ _	_ _ _	___,___,___,___	___,___,___,___	___,___,___,___	___,___,___,___	_ _
.			.	.	.	.	.	.	.	.

Reporting Schemes

Reporting forms are re-designed to fulfill international standards

- The reporting institutions report weekly stocks at face value in original underlying currency (debt securities) and daily stocks at number (shares)
- Sectoral classification in the reporting forms are adopted to SNA classification
- Banks and Brokage Houses use following codes when reporting their own holdings
  - M1: if held by bank and custodian institution
  - M2: if sold under a repo agreement
  - M3: if provided (given) as a collateral
  - M4: if given (lent) under a lending agreement
  - M6: customers' portfolio

Reporting agent loses legal ownership but still holds the economic ownership

Sectoral Classifications

Sectoral classification compiles with SNA

exception: money market funds & non-money market investment funds

Issuers

General Government **(S.13)**

Nonfinancial Corporations **(S.11)**

Banks **(S.122)**

Other Financial Intermediaries **(S.125)**

Financial Auxiliaries **(S.126)**

Holders

Total Economy **(S.1)**

Nonfinancial Corporations **(S.11)**

Financial Corporations **(S.12)**

- Central Bank **(S.121)**
- Banks **(S.122)**
- Investment Funds **(S.123, S.124)**
- Other financial intermediaries **(S.125)**
- Financial auxiliaries **(S.126)**
- Insurance corporations **(S.128)**
- Pension Funds **(S.129)**

General Government **(S.13)**

- Central Government **(S.1311)**
- Local Government **(S.1313)**
- Social Security Funds **(S.1314)**

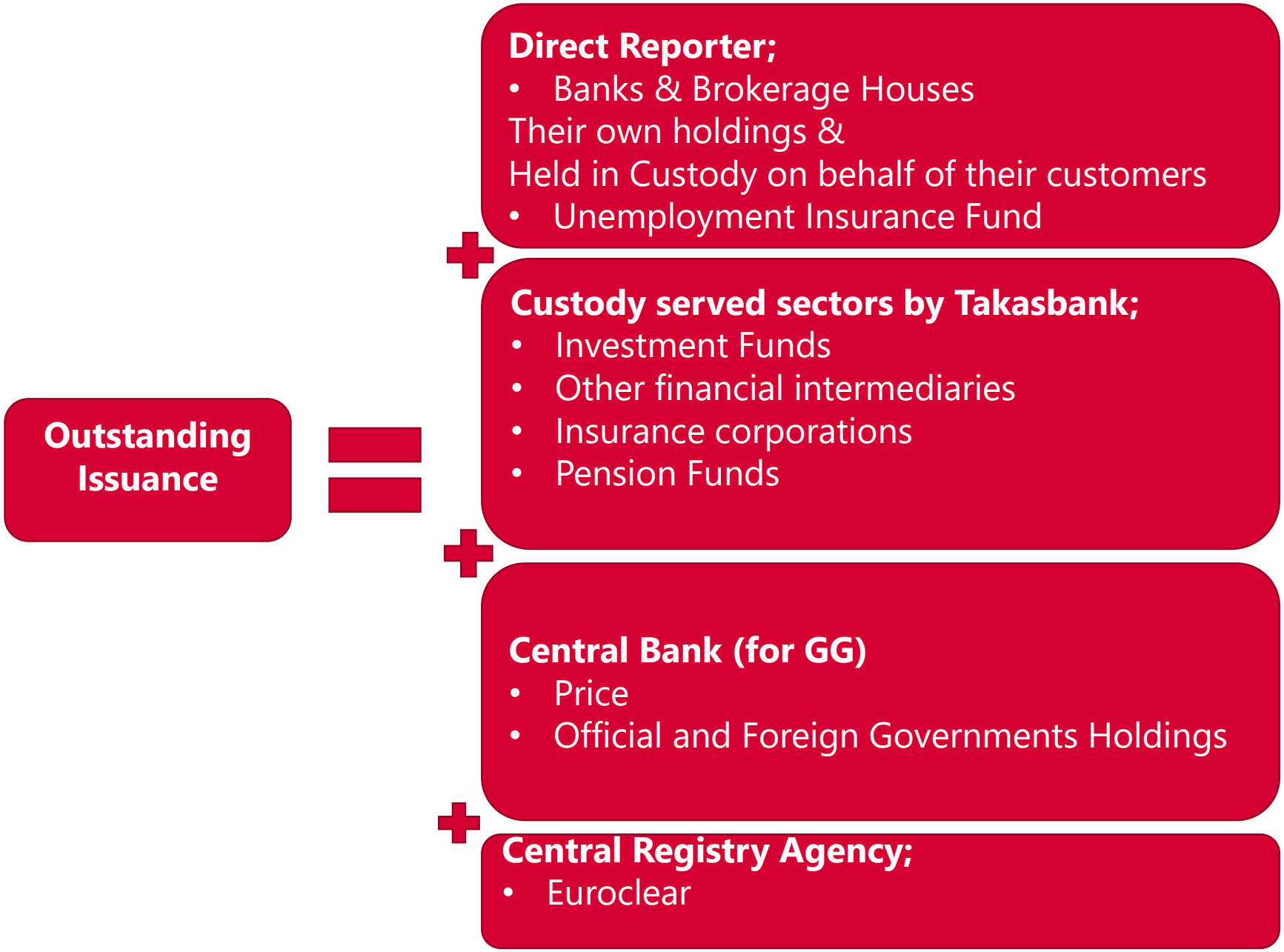
Households **(S.14)**

Nonprofit Institutions Serving Households **(S.15)**

Rest of The World **(S.2)**

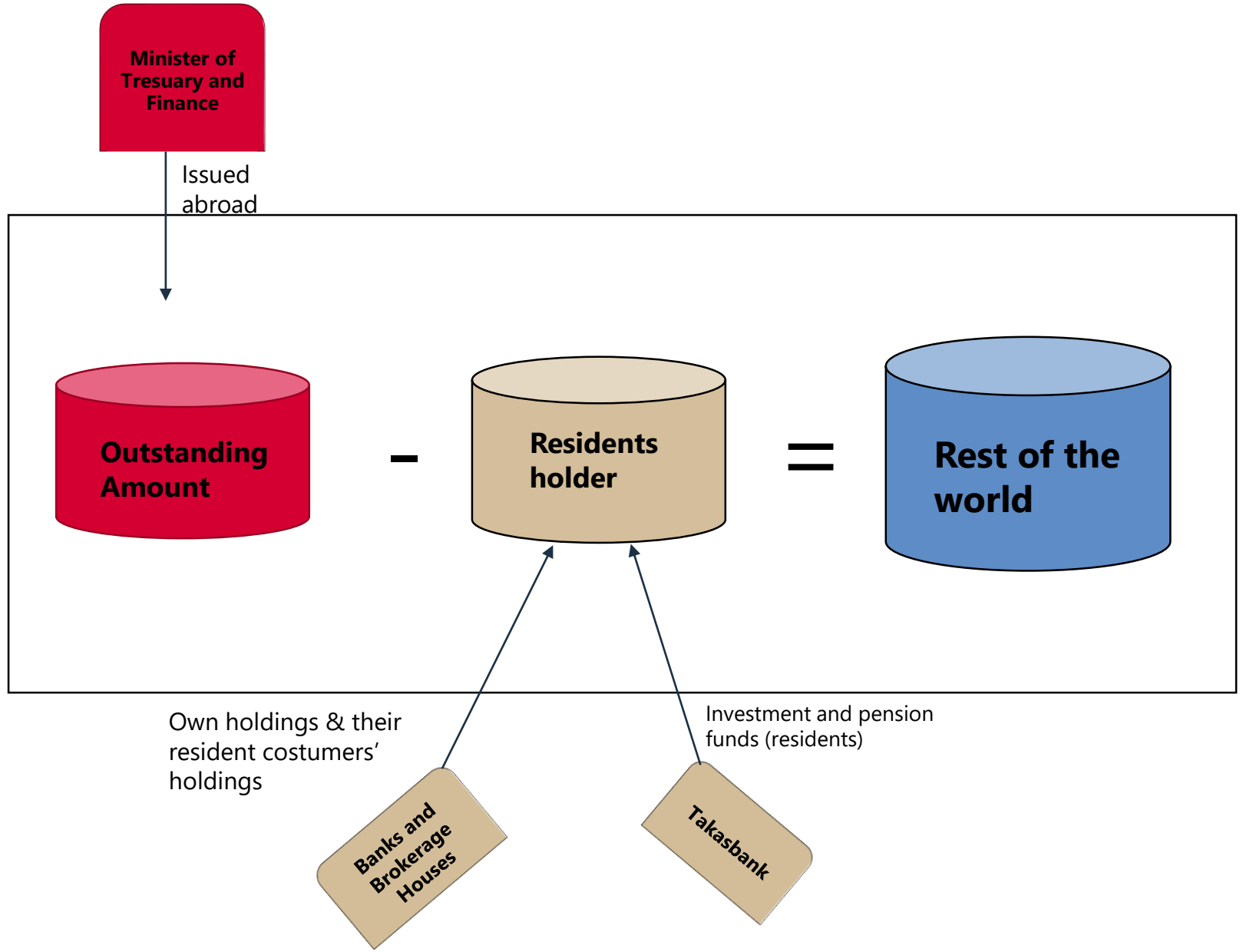
- Domestic Banks' Branches Abroad
- Other

The outstanding Issuance and the collected holdings of securities from all sources expected to be nearly equal.



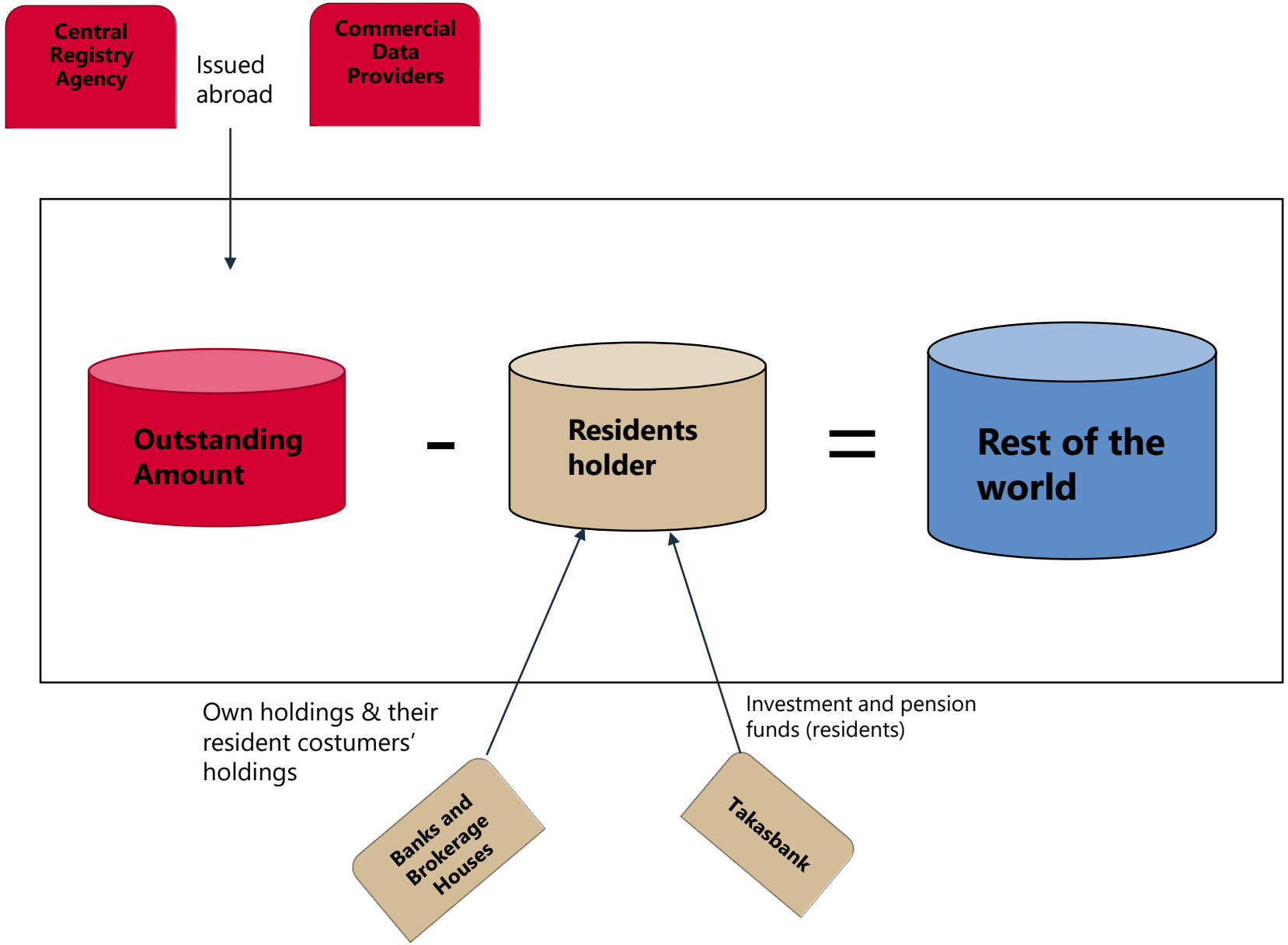
Debt Securities Issued Abroad by General Government

The sources of residents portfolio are reporting agents and Takasbank which give custody service to residents.



Debt Securities Issued Abroad by Other Than General Government

The sources of residents portfolio are reporting agents and Takasbank which give custody service to residents.



Dissemination &
Reporting to International Organizations

TÜRKİYE CUMHURİYET
MERKEZ BANKASI

Publication

We disseminate our SS on a weekly basis…

t time

t is the reference time of the reports

01

t +1 time

Until 5:30 p.m.

02

t + 2

- Check the sources if they send their reports
- Compare data with previous week
- Work on issuance statistics

03

t + 3

- Prepare holding statistics
- Check the aggregate data, publication template and database

04

t + 4

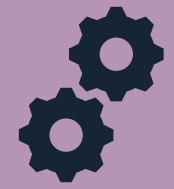
Disseminate SS at 2:30 p.m.

05

t + 5

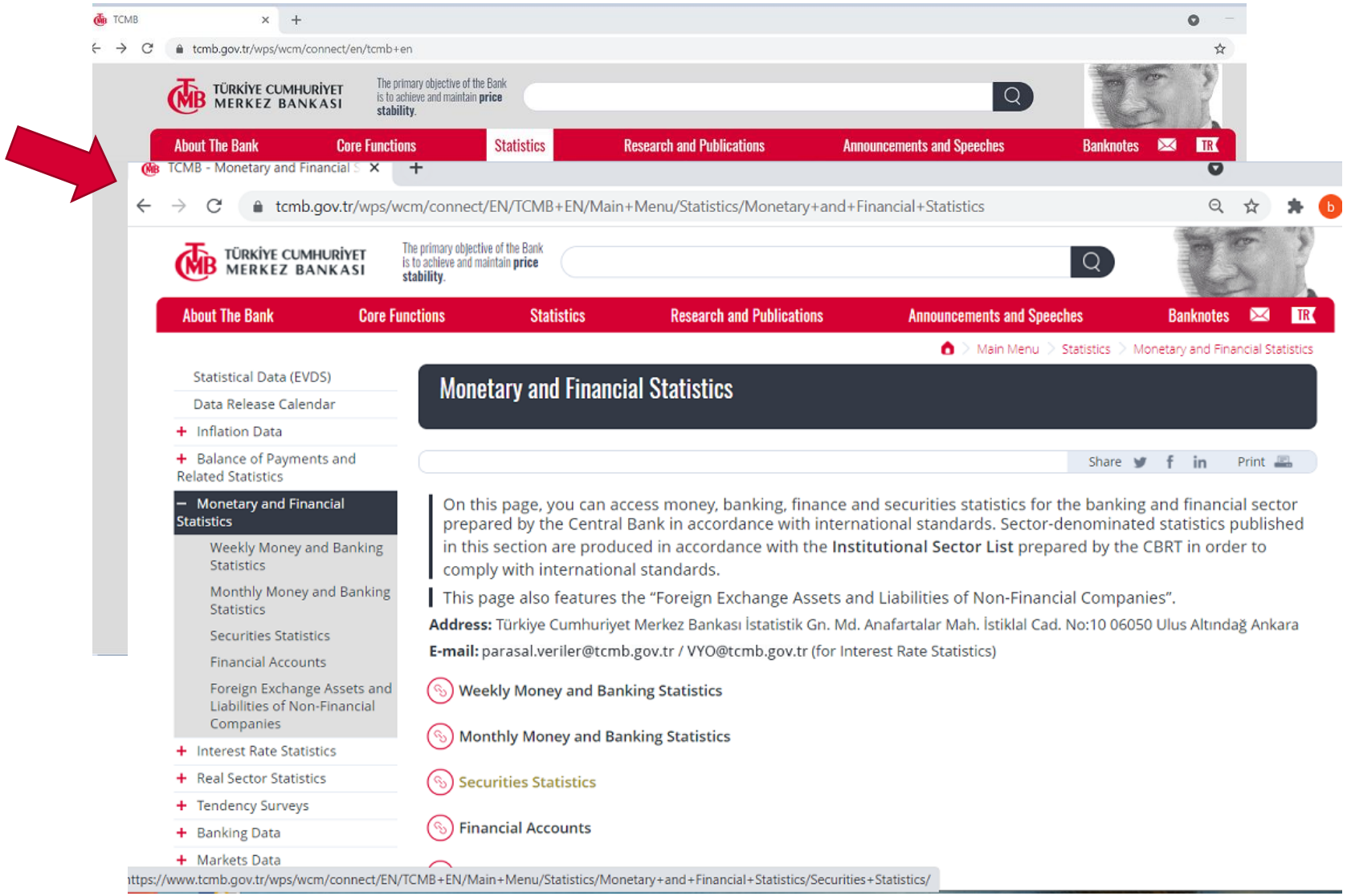
Prepare other internal reports

06

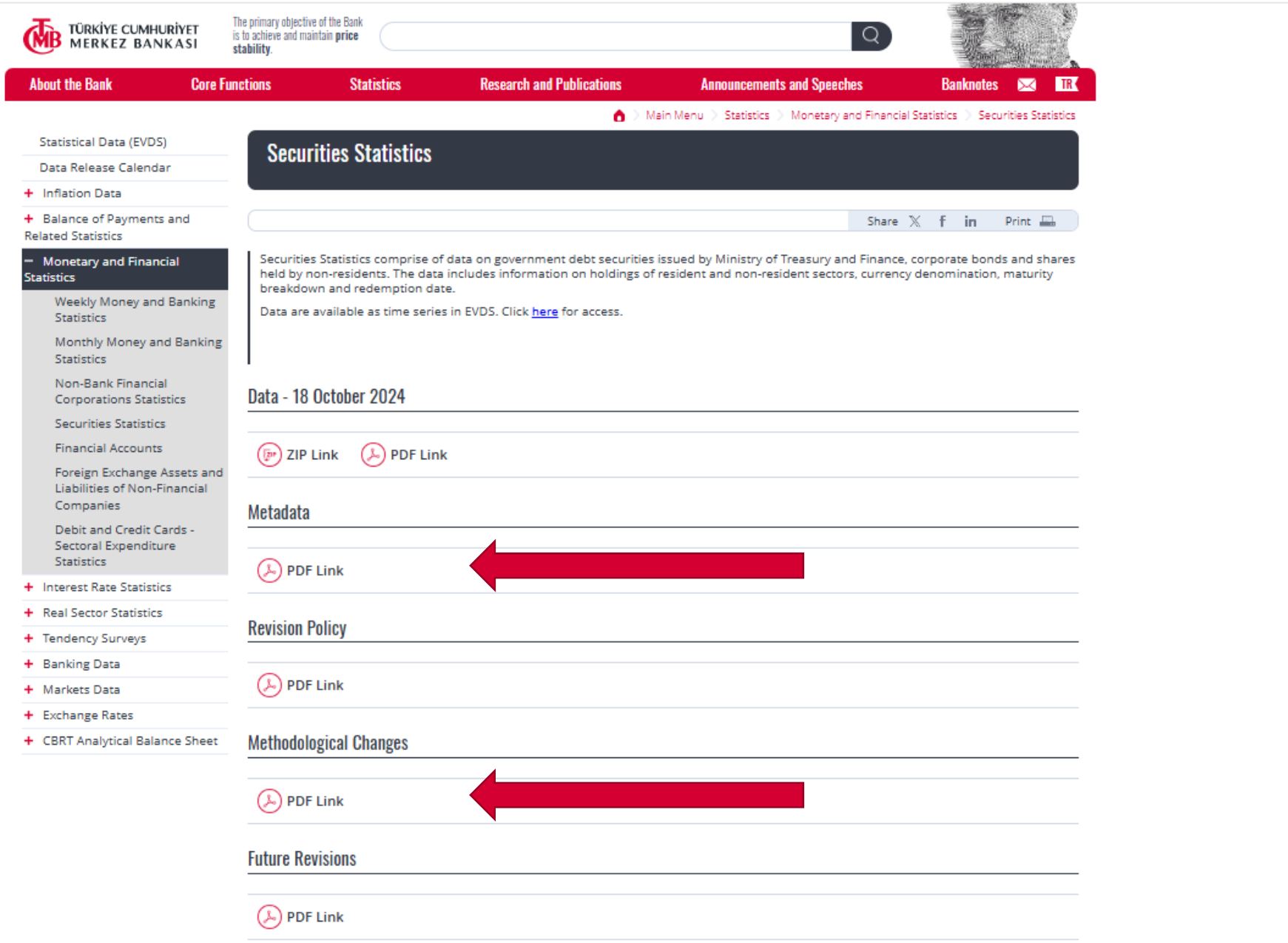


TÜRKİYE CUMHURİYET MERKEZ BANKASI

Publication On the Web



Publication Metadata Methodological Changes



Securities Statistics Table of Contents

- Publication on a weekly basis
- Non-residents' holdings (Table 1)
- Holding statistics (Table 2- Table 13)

TÜRKİYE CUMHURİYET MERKEZ BANKASI

SECURITIES STATISTICS

October 18, 2024

Data Governance and Statistics Department
Monetary and Financial Data Division

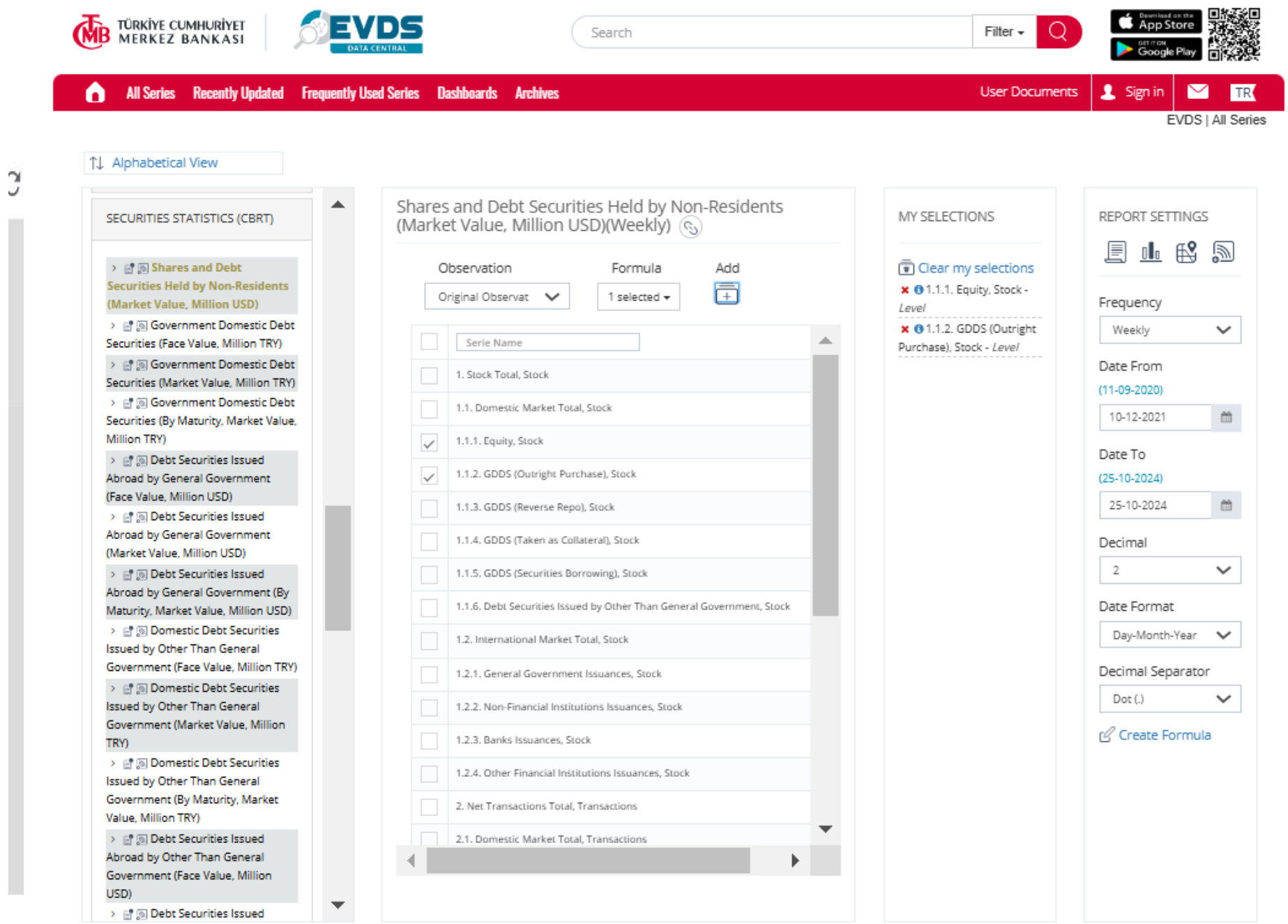
CONTENTS

1 Shares and Debt Securities Held by Non-Residents (Stock and Net Transaction, Million USD)
2 Government Domestic Debt Securities (Million TRY)
3 Government Domestic Debt Securities (By Maturity, Million TRY)
4 Debt Securities Issued Abroad by General Government (Million USD)
5 Debt Securities Issued Abroad by General Government (By Maturity and Currency, Million USD)
6 Domestic Debt Securities Issued by Other Than General Government (Face Value, Million TRY)
7 Domestic Debt Securities Issued by Other Than General Government (Market Value, Million TRY)
8 Domestic Debt Securities Issued by Other Than General Government (By Maturity, Million TRY)
9 Debt Securities Issued Abroad by Other Than General Government (Face Value, Million USD)
10 Debt Securities Issued Abroad by Other Than General Government (Market Value, Million USD)
11 Debt Securities Issued Abroad by Other Than General Government (By Maturity and Currency, Million USD)
12 For Information: Environmental, Social and Governance Domestic Debt Securities (Face Value, Million TRY)
13 For Information: Environmental Social and Governance Debt Securities Issued Abroad (Face Value, Million USD)

www.tcmb.gov.tr

Electronic Data Delivery System (EVDS)

- Publication on a weekly basis



TÜRKİYE CUMHURİYET MERKEZ BANKASI

Internal Reports

- Daily Report on Non-residents' Holdings of GDDS and Shares
- Weekly Reports
  - Non-residents Holding reports
    - GDDS, Shares, Gov. Bonds issued abroad, corporate bonds, loans provided by banks from abroad, TRY deposits of non-residents and swaps data exchange for TRY.
  - GDDS held by the Banking Sector and Non-Bank Sector
  - Gov. Bonds issued abroad ownership on security by security basis
  - GDDS stock belonging to all sectors on security by security basis

Consistency with other macroeconomic statistics

- Link to Financial Accounts

Security by Security Database is serving as an input for Financial Accounts on

- GDDS holdings of non-financial sector
- GDDS holdings of households
- domestic issuance of non-financial sector
- maturity breakdown for issuance of all sectors (being used as a proxy)

Security by Security Database serve as the «primary source» for Financial Accounts on

- issuance statistics of all sectors
- holding statistics for all sectors

⇒ compilation of debt securities in a whom-to-whom format

Consistency with other macroeconomic statistics

- Link to Balance of Payment, International Investment Position

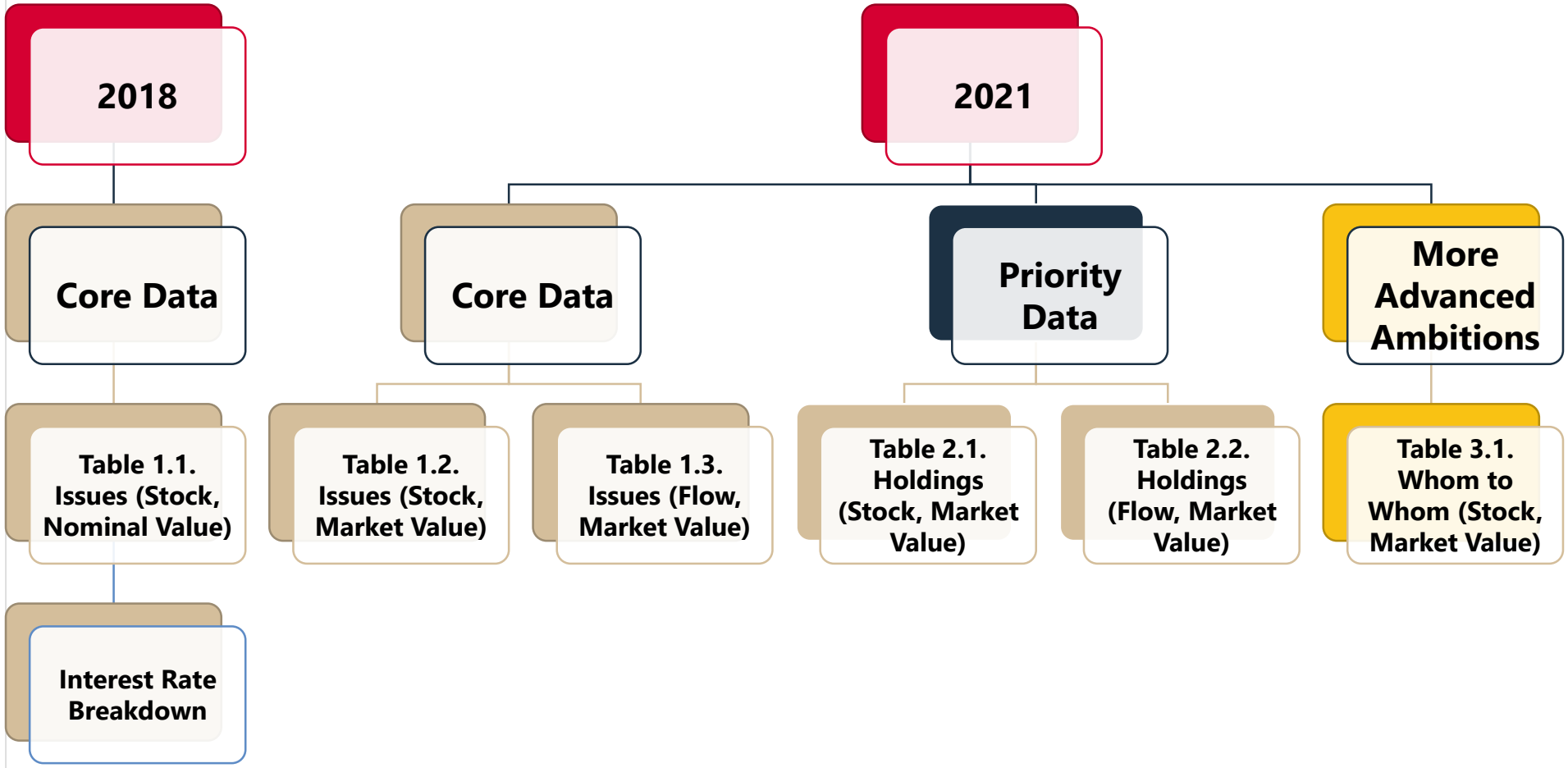
BOP	CURRENT ACCOUNT		
	CAPITAL ACCOUNT		
	FINANCIAL ACCOUNT	Portfolio Investment	Net incurrence of liabilities •Equity securities •Debt securities
IIP	LIABILITIES	Portfolio Investment	Equity securities •Banks •Other Sectors
			Debt securities •Banks •General Government •Other Sectors

Information about the Reporting

Reporting Template 1 - Table 1.1: Debt Securities Issues by Sector, Currency, Maturity, Interest Rate and Market of Issuance. Stocks at Nominal Value

Issuer / Currency, Maturity, Interest rate, Market of issuance	Residents (S1)												All resident issuers (S1)
	Non-financial corporations (S11)	Financial corporations (S12)							General government (S13)		*Memo item: public sector*	Households and NPISH (S14+ S15)	
			Central bank (S121)	Other deposit-taking corporations (S122)	Money market funds (S123)	Other financial corporations (S124 to S127)	*Of which:* Securitisation corporations	Insurance corporations and pension funds (S128,S129)		*Of which:* Central government (S1311)			
Column number	1	2	3	4	5	6	7	8	9	10	11	12	13
Total													
By domestic currency													
By foreign currency													
Total													
Short term at original maturity													
Long term at original maturity													
More than 1 year and up to and including 2 years													
More than 2 years and up to and including 5 years													
More than 5 years and up to and including 10 years													
More than ten years													
Long term at original maturity, with a remaining maturity up to and including 1 year													
Total													
Fixed interest rate													
Variable interest rate													
Inflation-linked													
Interest rate-linked													
Asset price-linked													
Total													
Domestic market													
International market													

G20 Data Gaps Commitments of Türkiye



www.tcmb.gov.tr