

# FISIM

Data sources are Banking Regulation and Supervision Agency (BRSA) and Central Bank Republic of Turkey (CBRT)

- ❑ Double reference rate (TRY -national currency- and FX -Foreign currency-)
- ❑ Allocation of FISIM by institutional sector (calculated by separately for loans and deposits)
- ❑ Calculation of constant price; chain-linked method
- ❑ FISIM allocated by activities

# FISIM

Data sources are Banking Regulation and Supervision Agency (BRSA) and CBRT

- ✓ Deposit banks
- ✓ Development and investment banks
- ✓ Participation bank



Loans (TL and foreign currency)  
Deposits (TL and foreign currency)  
Interest rec./pay. (TL and foreign currency)

Sources used to estimate FISIM can be listed as follows;

- Profit and loss account for interest flows
- Balance sheet data for loan and deposit stocks

Reference interest rates are calculated based on the profit and loss account and balance sheet calculations. The variables used for estimation of reference interest rates are:

Sector\_Total Loan (TRY) (FX)

Sector\_Total Deposit (TRY) (FX)

Sector\_Total\_Interest\_Revenue (TRY)(FX)

Sector\_Total\_Interest\_Expense (TRY)(FX)

# FISIM

## □ Double reference rate

$$\text{Ref. rate (TL)} = \frac{\frac{\text{interest rec. (TL)}}{\text{stock of loans (TL)}} + \frac{\text{interest pay. (TL)}}{\text{stock of deposits (TL)}}}{2}$$

$$\text{Ref. rate (FC)} = \frac{\frac{\text{interest rec. (FC)}}{\text{stock of loans (FC)}} + \frac{\text{interest pay. (FC)}}{\text{stock of deposits (FC)}}}{2}$$

FISIM on deposits:  $(\text{deposits} * \text{interest reference rate}) - \text{paid interest on deposits}$

FISIM on loans:  $(\text{interest receivable on loans}) - (\text{loans} * \text{interest reference rate})$

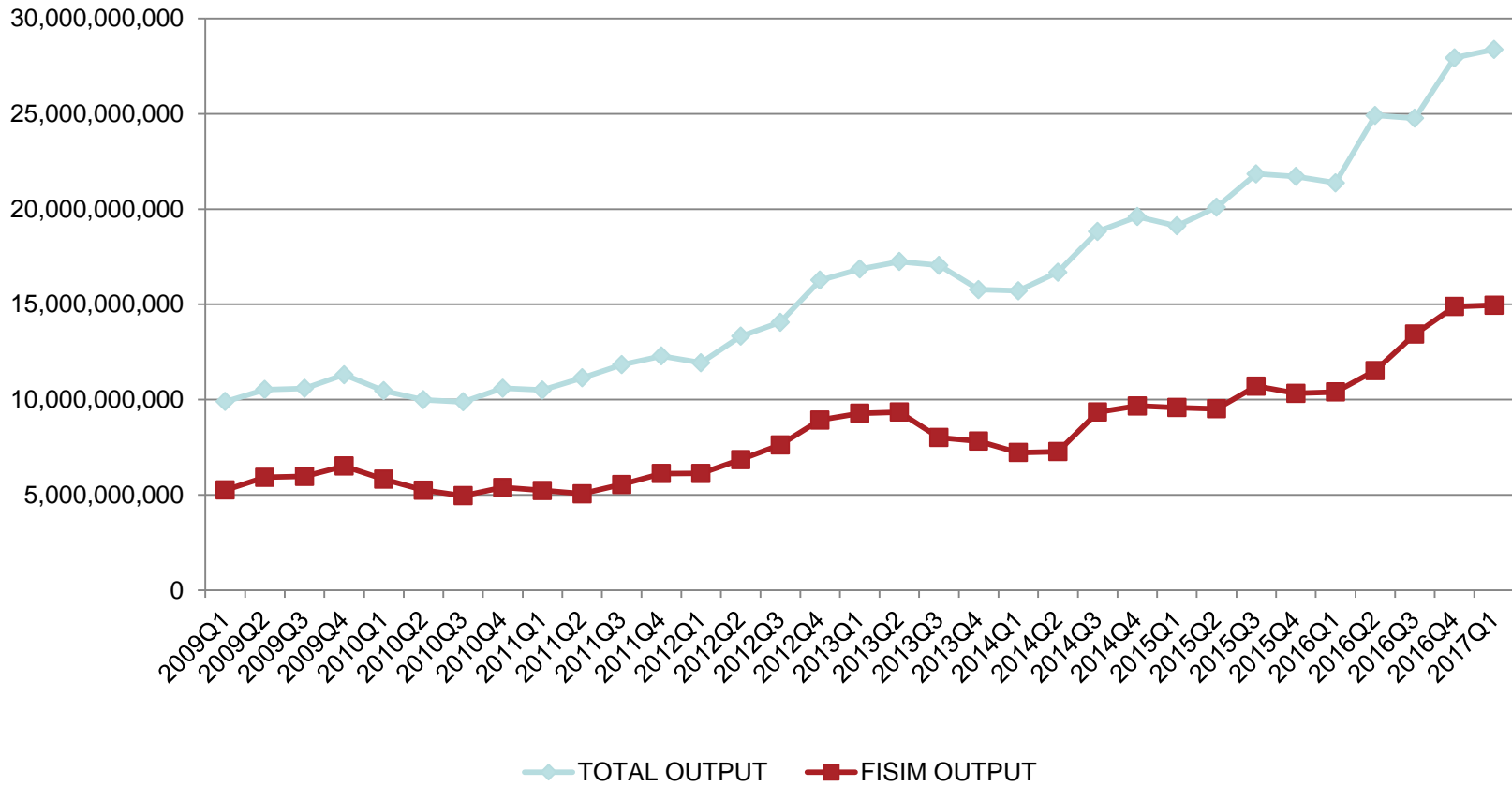
**FISIM** = FISIM on deposits + FISIM on loans

Central Bank of the Republic of Turkey Monetary and Financial Department data is used for allocation FISIM to Institutional Sectors.

The first issue is to find the distribution of the institution sector's share (S.11, S.12, S.13, S.14 and Export) in total loans and deposits, then these rates are multiplied by FISIM of loans and deposits.

Import of FISIM is not available.

Intermediate consumption of FISIM is allocated to non-financial corporations, other financial corporations, general government, households as owners of dwellings and non-profit institutions serving household by using the output distribution of the sectors in SUT 2012.





## Output of banks – other countries

	NL	FI	DK	TR	UK	FR	IT	LX
<b>FISIM</b>	<b>70%</b>	<b>70%</b>	<b>53%</b>	<b>51%</b>	<b>50%</b>	<b>44%</b>	<b>34%</b>	<b>23%</b>
Commissions and fees	30%	30%	47%	49%	50%	56%	66%	77%
Output	100%	100%	100%	100%	100%	100%	100%	100%

## Allocation FISIM to Institutional Sector

Used the Central Bank of the Republic of Turkey Monetary and Financial Department data.

FISIM is allocated by industry to non-financial corporations, financial corporations and general government in accordance with SUT 2012. The full breakdown of the A\*86 (NACE two digit) industry level in the Turkish national accounts system uses the output of the respective industries as a key.

It is assumed that the consumption of FISIM by companies involved in financial service activities, except (NACE 64) other than financial intermediaries is negligible.

The general government sector's share of FISIM consumption is allocated across the industries based on the share of output by NACE.

Allocating FISIM among user industries is based on the output of each industry. Total intermediate consumption of FISIM attributable to the non-financial corporation's sector, households and NPISHs is allocated to industries by the proportion of their output prior to the allocation of FISIM.

That is, the output share of an industry is multiplied with total FISIM to arrive at each industry's FISIM.

FISIM allocated to households broken down into intermediate consumption (dwelling loans of households) and final consumption.

The following table shows the impact of FISIM on GDP and GNI.

# PARTICIPATION BANKS-SECTORAL BREAKDOWN

# FISIM

## 2009 base

- Allocation of FISIM by institutional sector (calculated by separately for loans and deposits)

Sector	Loans	Deposits	Total = loans + deposits
S.11	0,59	0,61	
S.12	0,05	0,05	
S.13	0,10	0,10	
S.14	0,19	0,17	
S.15	0,02	0,02	
S.2	0,05	0,05	
	1,000	1,000	

Sector	Loans (A)	Deposits (B)	FISIM by ins. sector
S.11	FISIM on loans * 0,59	FISIM on deposits * 0,61	A + B
S.12	FISIM on loans * 0,05	FISIM on deposits * 0,05	A + B
S.13	FISIM on loans * 0,10	FISIM on deposits * 0,10	A + B
S.14	FISIM on loans * 0,19	FISIM on deposits * 0,17	A + B
S.15	FISIM on loans * 0,02	FISIM on deposits * 0,02	A + B
S.2	FISIM on loans * 0,05	FISIM on deposits * 0,05	A + B

# FISIM

FISIM allocated by activities

The FISIM output value is allocated according to the ratio of the output values to the NACE.

## Impact of FISIM on GDP and GNI,

Year	GDP	FISIM	GNI	FISIM/GDP	FISIM/GNI
2009	999.192	23.686	986.793	2%	2%
2010	1.160.014	21.434	1.149.826	2%	2%
2011	1.394.477	21.962	1.382.057	2%	2%
2012	1.569.672	29.548	1.557.248	2%	2%
2013	1.809.713	34.466	1.792.780	2%	2%
2014	2.044.466	33.513	2.025.902	2%	2%
2015	2.337.530	40.144	2.311.023	2%	2%