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EVALUATION NOTE

EUROPEAN UNION MACROECONOMIC IMBALANCE PROCEDURE (MIP) AND TURKEY ASSESSMENT

The European Union (EU), significantly affected by the 2008 global financial crisis, implemented regulatory measures under the name of "**Six Pack"** reforms to manage the post-crisis process, strengthen co-ordination between financial and monetary policies, follow macroeconomic policies, and improve the overall oversight of these policies. With this legislation, which entered into force at the end of 2011, the economic conditions of the member countries were closely monitored. In this context, a monitoring chart containing the threshold values of various macroeconomic indicators was developed, and the sustainability of internal and external balances was taken under surveillance. With this framework, dubbed the **Macroeconomic Imbalance Procedure (MIP)**, the **MIP Scoreboard** was established, where the economic risks factoring into account the internal and external conditions of member states are regularly monitored. In the case of significant imbalances detected by the MIP Scoreboard, the relevant country is expected to implement corrective measures within a given timetable. The EU legislation on hand regulates the implementation of sanctions if the country fails to take corrective measures.

In this study, the MIP Scoreboard produced by the EU since 2011, which ensures the detection of macroeconomic imbalances and the implementation of the necessary policy

[1] https://www.tepav.org.tr/en/ekibimiz/s/1420/M.+Coskun+Cangoz_PhD
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measures, was replicated by using the official public statistics of Turkey, a candidate country, and compared with the EU's most current up-to-date indicators data from 2019. Official statistics related to the MIP are included in the 2017-2021 Official Statistics Program under the "Macroeconomic Monitoring Statistics" heading. It is aimed to produce the relevant statistics for Turkey and share them with the public by coordinating the studies with stakeholder institutions via TURKSTAT.

Prior to the completion of these studies, it is envisaged that the MIP Scoreboard published annually by the EU will be quarterly updated for Turkey as well alongside being published on the TEPAV website. As a result, the relevant data will be followed as an indicator.

1. 2008 Global Financial Crisis and MIP Structuring

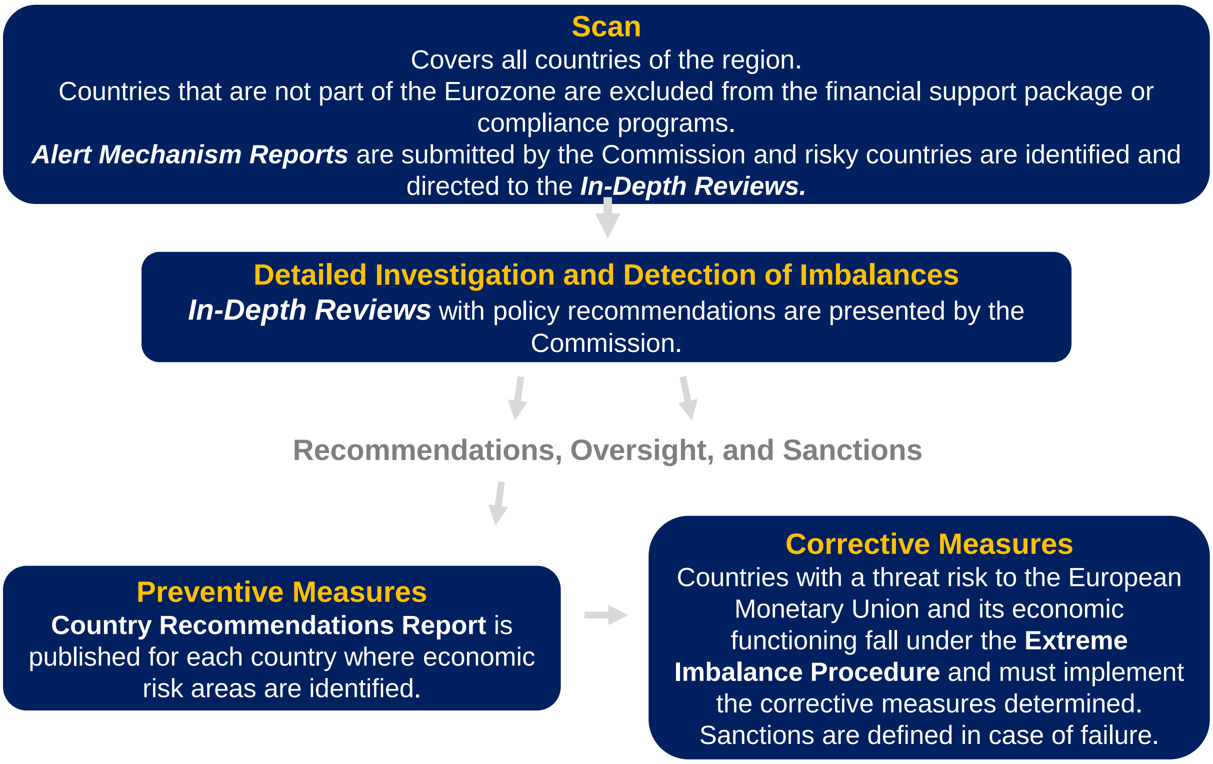
Since the establishment of the European Monetary Union, the risks of the growth, inflation, and competition indicators of member states and the balance of payments are regularly monitored by the European Commission. In the second half of the 2000s, vulnerabilities towards the housing market and current accounts were observed, especially for new members. Subsequently, with the global financial crisis of 2008, capital inflows weakened, credit supply was cut, and member states with relatively high dependence on foreign financing faced a bottleneck. In this process, the financial crisis became widespread and deepened with the disruptions in loan repayments to the housing market, which caused havoc on banks' balance sheets and necessitated emergency interventions. Budget deficits and public debt have increased significantly as a result of the expanding fiscal policies implemented within the scope of the measures taken against the crisis.

The impact of the global financial crisis in the region has shown that the macroeconomic monitoring and surveillance framework of the EU was not sufficient enough. As a result, the EU has taken steps to strengthen the surveillance and supervision structure. In this context, the economic governance system has been re-organized, the **European Semester** application that links the coordination and supervision of macroeconomic policies to annual cycles has been developed, "**Six Pack"** reforms has been implemented, and member states have started to be audited on an annual basis with the MIP taking into account the threshold values set for various macroeconomic indicators representing internal and external vulnerabilities.

Initial evaluations within the scope of the MIP are made according to a scoreboard with 14 indicators. Countries found to be at high risk with **Alert Mechanism Report (AMR)** are subject to the **In-Depth Review (IDR) process**. Preventive or corrective policy recommendations are identified for the relevant countries according to their risk situations, and these countries are expected to implement and finalize these policy recommendations within a particular timetable. It has been determined by the relevant legislation that countries that fail to implement and finalize corrective policies will be subject to sanctions amounting to 0.1 percent of GDP (Figure 1).[5]

[5] European Commission (2016)

Figure 1 - Main Stages of the Macroeconomic Imbalance Scanning



Source: European Commission, TEPAV visualization

2. MIP Scoreboard and Threshold Values

The MIP scoreboard consists of indicators determined by considering potential macroeconomic and financial risk channels that may cause internal or external vulnerabilities in the economy. The selected variables are defined by their complementary flow and stock values, allowing accurate analysis and timely detection of the accumulated risks. In addition, the scoreboard includes supportive indicators for the long-term (e.g., balance of payments, international investment position, and export share). To determine the unusual development of each indicator in the scoreboard by the EU, the threshold values were determined by examining the statistics and distributions of member states for the past period. Therefore, outlier values refer to warning levels indicating abnormal development. The 14 variables determined by this approach are classified under three main groups: **External Imbalances and Competitiveness, Internal Imbalances, and Labor Market Indicators** (Table 1). They allow for effective dissemination of information by offering a data-driven, simple and transparent framework.

Table 1 - MIP Scoreboard: Threshold Values and Descriptions*

	Indicators	Threshold Values	Descriptions (for Eurozone)
External Imbalances and Competitiveness	**Current Account Balance** Ratio to GDP, % 3-year average	-4/6%	Changes in external liabilities and sudden capital movements are within the scope of monitoring the sustainability of external debt burden and balance of payments financing. Countries that have a current account deficit above a certain level, as well as countries that give surpluses, are monitored taking into account the possible deficit positions they may cause in other economies. In this context, the threshold value is defined for both the current account deficit and the surplus.
	Net International Investment Position Ratio to GDP, %	-35%	
	Real Effective Exchange Rate CPI-based, 3-year change, %	5/11% (Eurozone) -5/-11% (Outside the Eurozone)	The existence of long-term and structural foreign trade deficits can lead to the accumulation of net external obligations and difficulty in financing. Additionally, the decline of competitiveness negatively affects potential growth, reducing the country's debt payment capacity. Threshold values for relevant indicators are more tightly defined for countries in the eurozone.
	Export Share Ratio to world exports, % 5-year change, %	-6%	
	Nominal Unit Labor Cost Index 3-year change, %	9% (Eurozone) 12% (Outside the Eurozone)	
Internal Imbalances	**House Price Index (2005=100)** Real annual change, % Ratio to GDP, %	6%	Rapid and high price changes in the housing market can negatively affect financial stability through its impact on sectoral balance sheets. Tracked as an indicator of asset prices.
	Private Sector Credit Flow Ratio to consolidated GDP, %	14%	Private sector debt, which consists of firms and households, rises to high levels, causing damage to bank balance sheets and risking negatively affecting other sectors. It is followed by complementary flow and stock values.
	Private Sector Debt Stock Ratio to consolidated GDP, %	133%	
	General Government Gross Debt Stock Ratio to GDP, %	60%	In many member states, the General Government is the most indebted sector. Since the public is indebted to other sectors at home and from foreign creditors, it is monitored to conduct comprehensive macro-financial risk analysis.
	Unemployment Rate 3-year change, %	10%	Unemployment is followed as a variable that adds social and quantitative dimension to the analysis, where the macroeconomic imbalances detected and the results of the measures taken will be monitored.
	Financial Sector Total Liabilities Unconsolidated Annual change, %	16.5%	There is a risk that financing difficulties in different sectors will shift to the real sector through the balance sheet channel. The financial sector is monitored within the scope of the intermediary function.
Labor Market Indicators	**Activity Rate** Ratio of 15-64 year old population, % 3-year change, percentage point	-0.2 percentage point	It is aimed to provide supporting information in the sub-breakdowns of the unemployment indicator, which represents the social and quantitative dimension of the compliance programs implemented with the findings.
	Long-term Unemployment Rate Ratio of 15-74 years to active population, % 3-year change, percentage point	0.5 percentage point	
	Youth Unemployment Rate Ratio of 15-24 years to active population, % 3-year change, percentage point	2 percentage point	

Source: Eurostat and TEPAV

* Coverage was expanded over time by the inclusion of total financial sector liabilities in 2012 and employment indicators in 2015. Additionally, taking into account consolidated accounts, the threshold values for private sector indicators have been reduced from 15 percent to 14 percent for credit flow and from 160 percent to 133 percent for debt stock.

3. MIP Turkey Indicators

The MIP Scoreboard, established by the Council of Europe within the scope of macroeconomic monitoring and supervision with 14 indicators, was produced for Turkey starting in 2011 to coincide with the EU's initial implementation. Therefore, the internal and external factors that pose a risk to the economy from 2011 to 2019 were evaluated and compared to their risk levels with EU countries.

Table 2 – Turkey MIP Scoreboard

External Imbalances and Competitiveness

	Current Account Balance	Net International Investment Position	Real Effective Exchange Rate	Export Share	Nominal Unit Labor Cost Index
	Ratio to GDP 3-year average	Ratio to GDP	CPI-based 3-year change	Ratio to world exports 5-year change	3-year change
2011	-5.22	-37.6	-7.0	2.4	3.1
2012	-6.37	-48.4	-2.4	9.1	3.8
2013	-6.25	-41.7	-16.0	2.1	3.2
2014	-5.09	-47.5	2.3	1.7	8.7
2015	-4.73	-44.4	-10.8	13.5	4.9
2016	-3.59	-42.3	-7.3	10.2	15.2
2017	-3.70	-53.8	-18.4	1.5	5.2
2018	-3.85	-47.3	-22.9	0.3	3.3
2019	-2.44	-45.4	-18.5	3.6	-2.0
Threshold values for EU countries	**% -4/6**	**% -35**	**% -/+5 (Eurozone) % -/+11 (Non-Eurozone)**	**% -6**	**% 9 (Eurozone) % 12 (Non-Eurozone)**

Internal Imbalances

	House Price Index	Private Sector Credit Flow	Private sector Debt Stock	General Government Debt Stock	Unemployment Rate	Financial Sector Total Liabilities
	Real annual change	Ratio to GDP	Ratio to GDP	Ratio to GDP	3-year change	Annual change
2011	-6.1	10.8	60.7	36.2	11.1	14.0
2012	7.5	9.7	62.2	32.4	9.6	15.6
2013	5.4	13.2	71.2	31.2	8.9	22.2
2014	8.1	10.2	74.2	28.5	9.1	17.3
2015	9.4	10.8	79.0	27.4	9.7	14.5
2016	2.1	6.9	84.2	28.0	10.4	19.4
2017	-5.5	9.8	84.5	28.0	10.7	19.4
2018	-21.8	2.4	83.0	30.2	10.9	23.6
2019	2.5	4.2	79.7	32.5	11.9	23.5
Threshold values for EU countries	**% 6**	**% 14**	**% 133**	**% 60**	**% 10**	**% 16.5**

Labor Market Indicators

	Activity Rate	Long-term Unemployment Rate	Youth Unemployment Rate
	Ratio of 15-64 year old population 3-year change	Ratio of 15-74 years to active population 3-year change	Ratio to active population aged 15-24 years 3-year change
2011	2.7	-0.3	-2.1
2012	3.8	-1.3	-7.8
2013	2.6	-1.0	-3
2014	2.4	-0.5	-0.5
2015	2.4	-0.1	1
2016	2.4	-0.1	0.9
2017	1.6	0.3	2.9
2018	1.4	0.3	1.8
2019	-0.6	1.0	5.8
Threshold values for EU countries	**-0.2 points**	**0.5 points**	**2 points**

Source: Ministry of Treasury and Finance, CBRT, TURKSTAT, and World Bank; TEPAV calculations

III. I. External Imbalances and Competitiveness

In the MIP Scoreboard, four of the five vulnerability indicators used to measure risk in external imbalance and competitiveness were above the threshold for Turkey during the various years of 2011-2019. In this context, the **net international investment position** shows over 35 percent indebtedness, which indicates risky levels during the period of evaluation, while the upward trend it followed until 2017 is notable. The **current account balance** also exceeded the threshold value from -4% in the 2011-2015 period. Nevertheless, in the following years, the ratio of the current account balance to GDP decreased below the threshold value. This was largely due to an improvement in the foreign trade balance.

The devaluation of the Turkish lira, which is another indicator of external imbalance and competitiveness - indicated by the change of the **real effective exchange rate** - has exceeded the threshold value set for EU countries during the entire period examined except for 2012 and 2014. Although the decline in the real effective exchange rate since 2017 provides a competitive advantage in foreign trade, it points to an external imbalance with a level that reaches twice the threshold value.

The **share of exports in the world export market**, an indicator of competitiveness in international trade, increased every year for the 2011-2019 period. However, despite the high real devaluation of the Turkish lira, the increases after 2017 are substantially low.

As another indicator of competitiveness, increases in **unit labor costs** are measured in three-year periods. In this context, the unit labor cost remained below the threshold set for countries outside the Eurozone during the 2011-2019 period - excluding 2016. Unit labor costs declined in the last three-year period covering 2017-2019.

In summary, the indicators demonstrate the ongoing and structural nature of the external imbalances and require preemptive measures to reduce the riskiness. The continuation of recent improvements in the current account deficit is essential. The fluctuating course and increasing devaluation of the Turkish lira create a significant element of uncertainty and put pressure on financial stability due to high foreign currency indebtedness. In the context of other international competitiveness indicators, it is seen that Turkey is not performing below the set threshold values.

III. II. Internal Imbalances

The change in the **house price index**, which measures real price change in the housing market as an indicator of asset prices, excluding 2012, 2014, and 2015, was below the threshold value of 6 percent set for the EU countries. On the other hand, the house price index decreased by 6 percent and 22 percent in 2017 and 2018, respectively. The index value increased by 3 percent in 2019 compared to the previous year.

During the evaluation period, Turkey's **EU-defined general government debt stock data** was well below the 60 percent threshold set for EU the countries. However, although Turkey’s fiscal policy maneuvering capacity may be considered wide because its share of public debt stock in GDP has reduced from 80 percent to 30 percent between 2002 and 2018, actual fiscal policy maneuvering area is not that wide due to the unknown obligations within the scope of Public Private Partnership (PPP), other off-budget risks remaining and the Treasury's increasing foreign currency obligations.

Indicators of internal imbalance in the private sector have been below threshold values throughout the evaluation period. In this context, **the ratio of current loans used by the non-financial sector and households to GDP** was around 10 percent between 2012 and 2017, yet the rate of increase has declined in the last two years. As a result of high credit disbursement**,** the **ratio of private sector debt stock to GDP** increased from 60 percent to 80 percent during the evaluation period. Although these values were below the level of risk defined for the EU, the foreign currency liabilities of the private sector increased from $176 billion to $303 billion and the foreign exchange deficit position from $88 billion to $180 billion during the evaluation period, significantly increasing the sector's currency risk.[6]

The indicator of the change of **financial sector total liabilities** to the private sector over the years has been above or in near proximity to the threshold value of 16.5 percent for the 2011-2019 period. As of 2013, except for 2015, financial sector's liabilities have increased by an average of 20 percent each year compared to the previous year.

As an indicator for evaluating the magnitude of macroeconomic imbalances that may arise due to high and sustained unemployment rates, the three-year change in the **unemployment rate** is above the EU-set threshold value of 10 percent starting from 2016.

When internal imbalance indicators are evaluated as a whole, it is worth noting that two out of six indicators have continually been above the threshold in recent years. The fluctuating housing market, increasing obligations of the financial sector, rising private sector indebtedness, and increasing foreign currency deficit position are prominent issues in terms of country risk. On the other hand, low public debt offers limited insurance against macroeconomic imbalances that may come from the private sector. It is of great importance to implement coordinated monetary and fiscal policies, which cover macro precautionary measures for permanently reducing risks originating from the private sector and the financial sector.

III. III. Labor Market Indicators

The **activity rate**, which shows the last three years of development of the economically active population between the ages of 15 and 64, was above the threshold value set for EU countries during the evaluation period, except for 2019. While the rate was at its highest level in 2012 at 3.8 percentage points, it showed a continuous decline in the following years and fell below the threshold value with -0.6 percentage points in 2019.

The three-year change rate, indicating continued improvement in the **long-term unemployment rate**, pointed out that unemployment declined in 2011-2013 and came close

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[6] See: CBRT, "Non-Financial Firms' Foreign Exchange Assets and Liabilities (Million U.S. Dollars)" table, https://www.tcmb.gov.tr/wps/wcm/connect/3ab9a993-a0b5-47f4-83b3-59c3caf27f2d/FKDFDVY2020-09.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-3ab9a993-a0b5-47f4-83b3-59c3caf27f2d-nozdSm2

to zero in 2014; starting in 2015, however, it was above the threshold set by the EU despite the reduction in the active workforce.

The **youth unemployment rate**, alongside the long-term unemployment rate, declined in the 2011-2014 period, yet has been on an upward trend since 2015. Indeed, the three-year change in the youth unemployment rate, which was 5.8 percentage points in 2019, far exceeded the threshold value set for the EU of 2 percentage points.

Labor market indicators reveal that the active labor force has decreased in a continuous structure, the youth unemployment rate has increased alongside the long-term unemployment rate starting in the 2013-2014 period, and there are imbalances in the labor market.

4. MIP Scoreboard 2019 – Eurozone, Non-Eurozone, and Turkey

The MIP, established in 2011 to monitor macroeconomic vulnerabilities in EU member states and to control member states' vulnerabilities, accompanied by the Alert Mechanism Report (AMR), prepared annually by the European Commission, has since been made available to the European Parliament. The latest report prepared by the European Commission is for 2019. The report notes the imbalances identified under the MIP to ensure the smooth functioning of economic and monetary union among member states. Moreover, AMR provides input to the EU's annual sustainable growth strategy, assesses Europe's economic and social situation, and places broad policy priorities for the EU.

Turkey's place on the MIP scoreboard for EU countries is important both as a leading indicator of potential macroeconomic imbalances and in terms of enabling the evaluation of Turkey's relative position in cooperation and competition with EU member states.

Table 3.1 – EU and Turkey MIP Scoreboard: External Imbalances and Competitiveness

	Current Account Balance	Net International Investment Position	Real Effective Exchange Rate	Export Share	Nominal Unit Labor Cost Index
	Ratio to GDP 3-year average	Ratio to GDP	CPI-based 3-year change	Ratio to world exports 5-year change	3-year change
Turkey	-2.4	-45.4	-18.5	3.6	-2.0
Belgium	0.1	50.6	2.6	-3.08	5.3
Bulgaria	2.5	-31.2	4.5	15.43	19.5
Czechia	0.6	-20.3	8.7	5.09	14.4
Denmark	8.0	76.9	-0.2	2.6	1.4
Germany	7.4	71.7	2.1	-1.11	7.9
Estonia	1.7	-21.4	6.2	1.99	19.9
Ireland	-1.6	-174.0	-1.4	71.02	-4.4
Greece	-2.1	-155.9	0.3	3.65	1.7
Spain	2.3	-73.9	1.7	2.64	4.0
France	-0.7	-22.9	1.6	-0.45	1.3
Croatia	2.6	-50.3	1.5	22.52	4.7
Italy	2.7	-1.5	0.2	-2.63	3.2
Cyprus	-5.2	-122.3	-0.1	13.67	5.2
Latvia	0.1	-41.7	3.7	3.57	17.0
Lithuania	1.4	-24.1	3.7	16.75	16.4
Luxembourg	4.7	56.2	2.0	10.27	11.9
Hungary	0.7	-43.7	0.3	5.9	10.0
Malta	5.1	54.6	1.3	18.11	8.5
The Netherlands	10.5	90.0	2.4	0.73	5.9
Austria	1.8	12.1	2.1	1.39	5.5
Poland	-0.4	-49.4	2.8	25.07	9.2
Portugal	0.5	-100.3	-0.4	8.52	7.6
Romania	-4.0	-43.5	0.2	17.89	24.5
Slovenia	5.9	-15.4	1.0	15.95	8.4
Slovakia	-2.3	-66.3	2.6	1.89	14.5
Finland	-0.9	3.6	0.2	4.57	0.8
Sweden	3.3	18.2	-8.3	-5.07	8.2
United Kingdom	-3.9	-26.2	-2.9	-1.35	8.8
Threshold values for EU countries	**% -4/6**	**% -35**	**% +/-5 (Eurozone)** **% +/-11 (Non-Eurozone)**	**% -6**	**% 9 (Eurozone)** **% 12 (Non-Eurozone)**

Source: Eurostat, TEPAV calculations

Table 3.2 – EU and Turkey MIP Scoreboard: Internal Imbalances

	House Price Index	Private Sector Credit Flow	Private Sector Debt Stock	General Government Debt Stock	Unemployment Rate	Financial Sector Total Liabilities
	Real annual change	Ratio to consolidated GDP	Ratio to consolidated GDP	Ratio to GDP	3-year change	Unconsolidated Annual change
Turkey	2.5	4.2	79.7	32.5	11.9	23.5
Belgium	2.5	3.8	179.1	98.1	6.2	4.6
Bulgaria	4	5.6	91.8	20.2	5.2	5.8
Czechia	6.2	3.1	80.8	30.2	2.4	5.6
Denmark	1.5	11.4	221.2	33.3	5.3	13.1
Germany	4.3	5.4	105.4	59.6	3.4	7.3
Estonia	4.4	3.8	97.8	8.4	5.2	12.5
Ireland	0	-9.1	202.4	57.4	5.8	15.5
Greece	6.5	0.8	109.9	180.5	19.4	11.5
Spain	4.1	1.3	129.4	95.5	15.5	0.9
France	2.3	8	153.3	98.1	9.0	7.5
Croatia	8.1	1.7	91.2	72.8	8.8	6.8
Italy	-0.6	0.2	106.6	134.7	10.6	3.8
Cyprus	2.6	2.7	259.1	94	8.9	3.9
Latvia	5.8	1.5	67.1	36.9	7.5	4.6
Lithuania	4.9	3	55.1	35.9	6.5	4.1
Luxembourg	8	3.8	318.7	22	5.6	3.3
Hungary	12.8	3.2	66.6	65.4	3.8	17.8
Malta	4	8.5	123.7	42.6	3.8	4.4
The Netherlands	4.8	0	234	48.7	4.0	6.1
Austria	3.9	4.5	120.1	70.5	5.0	4.3
Poland	6.7	3.3	74	45.7	4.0	4.2
Portugal	8.7	2.2	149.2	117.2	7.5	0.0
Romania	-1.7	2	46.7	35.3	4.3	10.4
Slovenia	4.8	0.8	68.7	65.6	5.4	9.9
Slovakia	6.2	5	91.6	48.5	6.8	4.9
Finland	0	7.6	147.5	59.3	7.6	7.6
Sweden	0.5	9.8	203.9	35.1	6.6	10.6
United Kingdom	-0.3	2.8	154.7	85.4	4.0	3.3
Threshold values for EU countries	**% 6**	**% 14**	**% 133**	**% 60**	**% 10**	**% 16.5**

Source: Eurostat, TEPAV calculations

Table 3.3 – EU and Turkey MIP Scoreboard: Labor Market Indicators

	Activity Rate	Long-term Unemployment Rate	Youth Unemployment Rate
	Ratio of 15-64 year old population 3-year change	Ratio of 15-74 years to active population 3-year change	Ratio to active population aged 15-24 years 3-year change
Turkey	-0.6	1.0	5.8
Belgium	1.4	-1.7	-5.9
Bulgaria	4.5	-2.1	-8.3
Czechia	1.7	-1.1	-4.9
Denmark	1.6	-0.4	-2.1
Germany	1.3	-0.5	-1.3
Estonia	1.4	-1.2	-2.3
Ireland	0.6	-2.6	-4.3
Greece	0.2	-4.8	-12.1
Spain	-0.4	-4.2	-11.9
France	0.3	-1.2	-4.9
Croatia	0.9	-4.2	-14.7
Italy	0.8	-1.1	-8.6
Cyprus	2.6	-3.7	-12.5
Latvia	1.0	-1.6	-4.9
Lithuania	2.5	-1.1	-2.6
Luxembourg	2.0	-0.9	-1.9
Hungary	2.5	-1.3	-1.5
Malta	5.3	-1.5	-1.4
The Netherlands	1.2	-1.5	-4.1
Austria	0.9	-0.8	-2.7
Poland	1.8	-1.5	-7.8
Portugal	1.8	-3.4	-9.7
Romania	3.0	-1.3	-3.8
Slovenia	3.6	-2.4	-7.1
Slovakia	0.8	-2.4	-6.1
Finland	2.4	-1.1	-2.9
Sweden	0.8	-0.4	1.2
United Kingdom	0.8	-0.4	-1.8
Threshold values for EU countries	**-0.2 yp**	**0,5 yp**	**2 yp**

Source: Eurostat, TEPAV calculations

The MIP Scoreboard data for 2019 indicate the differences between the EU and Turkish economies:

- Macroeconomic imbalances that emerged after the crisis in EU member states are gradually improving, and improvements especially in high labor unit costs affecting competitiveness, current account balances and credit growth that feeds housing prices are prominent. In contrast, while Turkey's net international investment position deficit increased during the same period, the Turkish lira suffered a high real devaluation, and the vulnerabilities that became evident after 2017 persisted in 2019.

- Vulnerabilities associated with imbalances in stock-based private sector and general government debt in EU member states remain high despite being offset by low interest rates. Moreover, expectations foreseeing a decline in economic growth do not indicate favorable future conditions for the decline in the debt levels and the reduction of debt-induced imbalances. Turkey's data, on the other hand, do not indicate risks in terms of private sector and general government debt levels, but the high level of foreign currency liabilities increase sensitivity to exchange rate shocks. Furthermore, supporting the private sector through credit expansion to boost economic activity has increased financial sector liabilities and, in turn, became an important source of vulnerability. On the other hand, during the same period, the inflation outlook also diverges negatively.

- In parallel with the reduction of macroeconomic vulnerabilities and the improvement of economic conditions, indicators of the labor market were below the threshold values in almost all EU member states. Real wage increase that was below labor productivity by 2017, reversed in 2018 and 2019 and contributed to the expansion of domestic demand as a result of the decline in the long-term unemployment and youth unemployment rate. However, unemployment rates have continued to rise in Turkey during the same period, and nominal unit labor costs decreased.

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ANNEX 1 - Explanations and Data Sources Regarding Turkey's MIP Scoreboard

External Imbalances and Competitiveness

		Source
Current Account Balance	Ratio to GDP 3-year average	(1) CBRT Balance of Payments and Related Statistics, 2) TURKSTAT Periodic Accounts, GDP At Current Prices (Based in 2009); (3) TEPAV calculations
Net International Investment Position	Ratio to GDP	(1) CBRT Balance of Payments and Related Statistics, International Investment Position, Net, Annual; (2) TURKSTAT Periodic Accounts, GDP At Current Prices (Based in 2009); (3) TEPAV calculations
Real Effective Exchange Rate	CPI-based 3-year change	(1) CBRT Statistical Data, Real Effective Exchange Rate (CPI Based, 2003=100); (2) TEPAV calculations
Export Share	Ratio to World Exports 5-year change	(1) World Bank, World Development Indicators, Export of goods and services (Current $); (2) TEPAV calculations
Nominal Unit Labor Cost Index	3-year change	(1) TURKSTAT Periodic Accounts, GDP by Income Method (Based in 2009); (2) TURKSTAT Central Distribution System, Workforce Statistics; (3) TEPAV calculations

Internal Imbalances

House Price Index	Ratio to real annual GDP change	(1) CBRT Statistical Data, Housing and Construction Statistics, House Price Index; (2) TURKSTAT Inflation and Price, CPI (2003=100); (3) TEPAV calculations
Private Sector Credit Flow*	Ratio to unconsolidated GDP	(1) CBRT Monetary and Financial Statistics, Financial Accounts, Sectoral Financial Accounts, Consolidated Transaction; (2) TEPAV calculations
Private Sector Debt Stock*	Ratio to unconsolidated GDP	(1) CBRT Monetary and Financial Statistics, Financial Accounts, Sectoral Financial Accounts, Consolidated, Stock; (2) TEPAV calculations
General Government Gross Debt Stock	Ratio to GDP	(1) Ministry of Treasury and Finance Statistics, EU Defined Debt Statistics; (2) TEPAV calculations
Unemployment Rate	3-year change	(1) TURKSTAT Central Distribution System, Workforce Statistics; (2) TEPAV calculations
Financial Sector Total Liabilities	Unconsolidated annual change	(1) CBRT Monetary and Financial Statistics, Financial Accounts, Sectoral Financial Accounts, Unconsolidated, Stock; (2) TEPAV calculations

Labor Market Indicators

Activity Rate	Ratio of 15-64 year old population 3-year change	(1) TURKSTAT Central Distribution System, Workforce Statistics; (2) TEPAV calculations
Long-term Unemployment Rate**	Ratio of 15-74 years to active population 3-year change	(1) TURKSTAT Central Distribution System, Workforce Statistics; (2) TEPAV calculations
Youth Unemployment Rate	Ratio to active population aged 15-24 years 3-year change	(1) TURKSTAT Central Distribution System, Workforce Statistics; (2) TEPAV calculations

*The definition of private sector includes non-financial organizations, households, and non-profit organizations serving households. Debt stock and credit flow calculations are based on credit and debt securities.
** The long-term unemployment rate covers those who have been unemployed for more than 1 year.

ANNEX 2 - MIP Scoreboard Legend Formulas

External Imbalances and Competitiveness

		Formula
Current Account Balance	Ratio to GDP 3-year average	$[[(CA / GDP)_t + (CA / GDP)_{t-1} + (CA / GDP)_{t-2}] / 3] * 100$
Net International Investment Position	Ratio to GDP	$[\text{Net International Investment Position}_t / GDP_t] * 100$
Real Effective Exchange Rate	CPI-based 3-year change	$[[(REER)_t - (REER)_{t-3}] / (REER)_{t-3}] * 100$
Export Share	Ratio to World Exports 5-year change	$[[(Export_{TR} / Export_{World})_t - (Export_{TR} / Export_{World})_{t-5}] / (Export_{TR} / Export_{World})_{t-5}] * 100$
Nominal Unit Labor Cost Index	3-year change	$[(\text{Unit Cost of Labor})_t – (\text{Unit Cost of Labor})_{t-3}) / (\text{Unit Cost of Labor})_{t-3}] * 100$

Internal Imbalances

House Price Index	Ratio to real annual GDP change	$[((HPI_t / CPI_t) – (HPI_{t-1} / CPI_{t-1})) / (HPI_{t-1} / CPI_{t-1})] * 100$
Private Sector Credit Flow*	Ratio to unconsolidated GDP	$[\text{Private Sector Total Credits}_t / GDP_t]*100$
Private Sector Debt Stock*	Ratio to unconsolidated GDP	$[\text{Private Sector Debt}_t / GDP_t]*100$
General Government Gross Debt Stock	Ratio to GDP	$[\text{General Government Gross Debt Stock}_t / GDP_t]*100$
Unemployment Rate	3-year change	$[\text{Unemployment Rate}_t + \text{Unemployment Rate}_{t-1} + \text{Unemployment Rate}_{t-2}] / 3$
Financial Sector Total Liabilities	Unconsolidated annual change	$[\text{Financial Sector Total Liabilities}_t / GDP_t]*100$

Labor Market Indicators

Activity Rate	Ratio of 15-64 year old population 3-year change	$[\text{Employment Rate}_t + \text{Employment Rate}_{t-1} + \text{Employment Rate}_{t-2}] / 3$
Long-term Unemployment Rate**	Ratio of 15-74 years to active population 3-year change	$[\text{LT Unemployment Rate}_t + \text{LT Unemployment Rate}_{t-1} + \text{LT Unemployment Rate}_{t-2}] / 3$
Youth Unemployment Rate	Ratio to active population aged 15-24 years 3-year change	$[\text{Youth Unemployment Rate}_t + \text{Youth Unemployment Rate}_{t-1} + \text{Youth Unemployment Rate}_{t-2}] / 3$

*The definition of private sector includes non-financial organizations, households and non-profit organizations serving households. Debt stock and credit flow calculations are based on credit and debt securities.
** The long-term unemployment rate covers those who have been unemployed for more than 1 year.