## **Statistics**

## Survey of Market Participants

## The Data: Coverage, Periodicity, and Timeliness

**Coverage characteristics Purpose of the study:** The survey intends to monitor the expectations of experts and decision makers from financial and real sectors related to various economic variables.

**Data description:** The statistics cover indicators produced for tracking short-term and long-term expectations related to macroeconomic variables such as consumer inflation rate, exchange rates, interest rates, current account balance and GDP growth rate.

## Statistical concepts and definitions:

Mean: Mean is calculated by adding the values and dividing the sum by the number of observations.

**Standard Deviation:** Standard deviation is a statistic which measures how much variation or dispersion exists from the mean value. It is calculated by taking the square root of the sum of the squared differences of each observation from the mean, divided by the total number of values minus one in the data set.

**Median:** Median is the middle value of a data series sorted either in ascending or descending order. If the data series has an even number of values, the median is equal to the arithmetic mean of the two middle values.

**Mode:** Mode is the most frequently appearing value in a dataset. If there is more than one such value, the smallest one is regarded as the mode.

**The Modified Mean:** It is a statistic computed as a result of data analysis and elimination of observations judged to be atypical to develop an appropriate indicator of central tendency of a distribution. The modified mean is determined among statistics such as the arithmetic mean, the median, the mode, the mean computed by excluding outliers<sup>1</sup> and extreme outliers<sup>2</sup> as well as the trimmed mean<sup>3</sup> by analyzing outliers and extreme outliers.

If skewness<sup>4</sup> and kurtosis<sup>5</sup> values are close to those of a normal distribution, the **arithmetic mean** is regarded as the modified mean. If atypical values are identified in the distribution, the modified mean is computed by taking the **arithmetic average after excluding outliers and extreme outliers**. If skewness is relatively high, the **median**, if kurtosis is relatively high, meaning that the expectations are concentrated around a specific value, the **mode** is regarded as the modified mean.

Point Estimate: It is an estimate as a single numerical value.

**Interval Estimate:** It is an estimate of a probability distribution that gives the likelihood of a single value to fall in each specified interval. Estimates of probability distributions are asked for the 12-month and 24-month ahead inflation expectations. The intervals for estimating the probability distribution for 12-month and 24-month ahead inflation are determined according to the point estimates given by the respondents.

**Average Interval Estimate:** It is the average aggregated probability estimates at each interval of 0.01 for the 12-month and 24-month ahead inflation expectations.

Classification system: No classification is made.

<sup>&</sup>lt;sup>1</sup> **Outlier:** Values smaller than Q1-1.5\*(Q3-Q1) and greater than Q3+1.5\*(Q3-Q1); where Q1: Lower Quartile and Q3: Upper Quartile, computed by Tukey's Hinges method are defined as outliers.

<sup>&</sup>lt;sup>2</sup> Extreme Outlier: Values smaller than Q1-3\*(Q3-Q1) and greater than Q3+3\*(Q3-Q1); where Q1: Lower Quartile and Q3: Upper Quartile, computed by Tukey's Hinges method are defined as extreme outliers.

<sup>&</sup>lt;sup>3</sup> **Trimmed Mean:** It is the mean computed after excluding a certain percentage of the lowest and the highest values in a data set <sup>4</sup> **Skewness:** It is a measure of asymmetry around the mean in a set of statistical data.

<sup>&</sup>lt;sup>5</sup> Kurtosis: It is a measure of flatness or peakedness of data values relative to a normal distribution.

	Statistical population: Decision makers and experts from the financial and rea	al sectors.	
	Reference area: Türkiye.		
	Geographical level: None.		
	<b>Sector coverage</b> : Participants of the survey consist of decision makers and experts from the financial and real sectors.		
	<b>Time coverage:</b> The "Survey of Market Participants" has been conducted since available since then.	2001 and the results are	
	Coverage, n.e.s.: None.		
	Exceptional circumstances on coverage: None.		
	<b>Statistical unit:</b> Decision makers and experts who participate in the survey.		
	Base period: None.		
	Reference period: Current month.		
	Unit of measure:		
	Variable/Indicator	Unit of measure	
	Expectation of Consumer Inflation (CPI)	Percentage	
	Expectation of the US Dollar Rate in the Interbank Foreign Exchange	TRY	
	Market		
	Expectation of the Annual Current Account Balance	Billion US Dollars	
	Expectation of the Annual GDP Growth Rate	Percentage	
	Expectation of the Borsa Istanbul (BIST) Bono and Powerse Bono Market	Porcontago	
	Expectation of the Bolsa Istanbul (BIST) Repo and Reverse Repo Market	Percentage	
	Expectation of One-Week CBRT Repo Auction Interest Rate	Percentage	
Periodicity	Frequency of data collection: Monthly.		
	Frequency of dissemination: Monthly.		
Timeliness	Average production time for each release of data: 4 days.		
	Time lag - first results (days): The results pertain to the reference period.		
	<b>Time lag - final results (days):</b> The results pertain to the reference period.		
Access by the Pub	lic		
Advance dissemination of release calendar	Data release calendar is announced to the public in advance and published on each year on the website of the CBRT.	the first business day of	

	Link to data release calendar:	
	<b>Data release policy:</b> The institutions and the organizations which are subscribers of the data delivery system are informed about the publication of the results just after they are made available on the website of the CBRT.	
Simultaneous release to all interested parties	Simultaneous release: The results of the survey are released simultaneously.	
	Pre-release data share with press or other specific users under special agreements: Not shared.	
Integrity		
Dissemination of terms and conditions under which official statistics are produced, including those relating to the confidentiality of individually identifiable information	<b>Responsibility for collecting, processing, and disseminating statistics:</b> The Surveys and Indices Division of the Data Governance and Statistics Department of the CBRT is responsible for collecting, processing and disseminating the statistics.	
	Data sharing and coordination among data producing agencies: Not shared.	
	<b>Confidentiality of individual reporters' data:</b> In accordance with Article 43, Paragraph 5 of CBRT Law No. 1211, as amended on April 25, 2001 by the Law No. 4651, which states that "the Bank may not publish or disclose the statistical information having a private and personal nature nor may it submit these to any official authority or private body other than the Banking Regulation and Supervision Agency. This information shall not be used for purposes other than those of statistical nature nor as means of evidence." the data shall be deemed as confidential and will not be exposed to third parties.	
	<b>Staff, facilities, computing resources, and financing:</b> A total of 5 people work in the process of collecting, processing, controlling, analyzing and publishing the data and 2 of them graduated in statistics. When any technical problem is encountered during the preparation of the statistical data, IT Department supports immediately to solve the flaws.	
	<b>Monitoring user requirements:</b> The "Statistics Users Survey" is conducted via the website of the CBRT.	
	<b>Quality policy:</b> Publishing up-to-date, reliable, timely, and transparent statistics in compliance with international standards.	
	<b>Quality monitoring:</b> There are various micro and macro level controls in order to ensure quality standards. In addition, the frame of the survey is updated occasionally.	
	Impartiality of statistics: Necessary measures to produce unbiased statistics are taken.	
	<b>Data sources:</b> Decision makers and experts from financial and real sectors.	
	Methodology:	
	<b>Sampling Method:</b> A non-probability sampling method based on the participation of selected respondents is applied. The participants are selected among the decision makers and experts from the financial and real sectors. Participation in the survey is voluntary.	
	<b>Modes of dissemination:</b> The aggregated survey results are published on the website of the CBRT along with a report summarizing the monthly developments. The data are also available as a time series in the "Electronic Data Distribution System (EDDS)" of the CBRT.	

	<b>Commenting on erroneous interpretation and misuse of statistics:</b> After the data is published, media is tracked regularly in order to prevent misuse of data.
	<b>Disclosure of terms and conditions for statistical collection, processing, and dissemination:</b> Responses to the survey are submitted during three days in the second or third week of the related month via the web based system of the CBRT and the aggregated results are published on the second business day after the completion of data collection.
	Seasonal adjustment: Seasonal adjustment is not applied.
	Legal acts and other agreements on collection, processing, and dissemination of statistics:
	<ul> <li>Article 43, CBRT Law No. 1211, as amended on April 25, 2001 by the Law No. 4651</li> <li>Turkish Statistics Law No. 5429 - Official Statistics Program</li> </ul>
Identification of internal government access to data before release	None.
ldentification of ministerial commentary on the occasion of statistical releases	Statistics are published along with a report without any interpretation.
Provision of information about revision and advance notice of maior	<b>Revision schedule:</b> Results are not subject to revision, and therefore there is no any revision schedule.
changes in methodology	<b>Identification of preliminary and/or revised data:</b> The responses received are not taken into consideration and the results are not revised after the survey period.
	Advance notice of major changes in methodology, source data, and statistical techniques: Major changes in methodology and statistical techniques are announced on the website of the CBRT in advance.
Quality	
Dissemination of documentation on methodology and sources used in preparing statistics	The documentation on methodology used in preparing the statistics is available under the related heading on the website of the CBRT.
Dissemination of component detail, reconciliations with	<b>Internal consistency:</b> Consistency checks are made systematically. The statistics in the same data set are internally consistent with each other.
related data, and statistical frameworks that support statistical	
related data, and statistical frameworks that support statistical	<b>Temporal consistency:</b> Comparable time series starts from 2013. Detailed explanations for the statistics covering the period 2001-2012 can be accessed via the following link:
related data, and statistical frameworks that support statistical cross-checks and provide assurance of	<b>Temporal consistency:</b> Comparable time series starts from 2013. Detailed explanations for the statistics covering the period 2001-2012 can be accessed via the following link: <u>Methodological Changes</u>
related data, and statistical frameworks that support statistical cross-checks and provide assurance of reasonableness	Temporal consistency: Comparable time series starts from 2013. Detailed explanations for the statistics covering the period 2001-2012 can be accessed via the following link:         Methodological Changes         Intersectoral and cross-domain consistency: Survey of Market Participants statistics are consistent with other data sources or statistics.
related data, and statistical frameworks that support statistical cross-checks and provide assurance of reasonableness	Temporal consistency: Comparable time series starts from 2013. Detailed explanations for the statistics covering the period 2001-2012 can be accessed via the following link:         Methodological Changes         Intersectoral and cross-domain consistency: Survey of Market Participants statistics are consistent with other data sources or statistics.
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