



**MONETARY AND EXCHANGE RATE  
POLICY FOR 2010**

**Central Bank of the Republic of Turkey**

**10 December 2009**

**ANKARA**

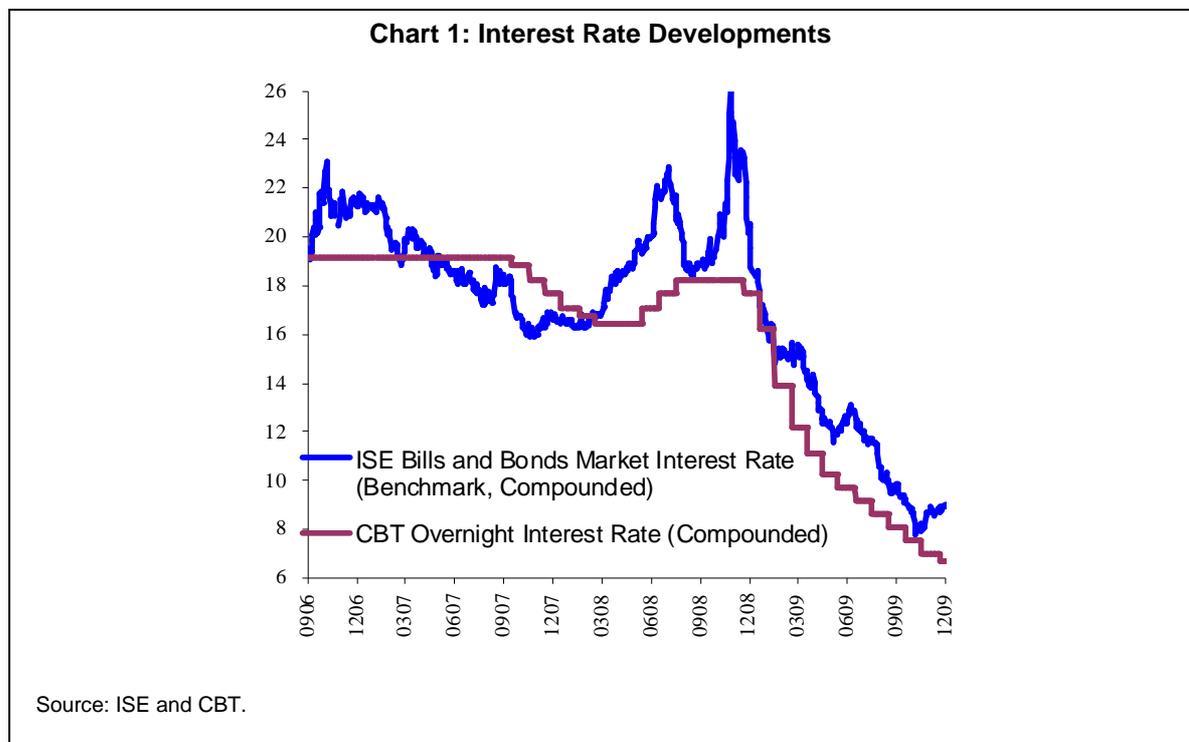
# **I. GENERAL FRAMEWORK OF THE MONETARY POLICY**

## **Overview: Monetary Policy during the Crisis**

- 1.** The effects of the financial crisis, which first started in developed countries, deepened as of the last quarter of 2008 and spread to the entire global system, were seen on economic and financial stability throughout 2009. Faced with the most severe recession in recent history, central banks were urged to take measures to limit the damage caused by the crisis on growth, employment and the financial system.
- 2.** Due to sharp depreciation of local currencies on the back of the rise in the risk aversion tendency at the onset of the crisis, central banks of emerging markets displayed a cautious stance owing to concerns about stability. However, the sharp reduction in inflation rates worldwide arising from the sudden slump in economic activity and collapse in commodity prices following the onset enabled central banks of emerging economies, whose financial markets were relatively more stable and risk premiums were more limited, to cut policy rates significantly.
- 3.** Thanks to the experience gained from domestic crises in the recent past, the Central Bank of the Republic of Turkey (the Central Bank) was able to make prompt and effective decisions, thus played its part successfully to minimize the adverse impacts of the global crisis. The resilience of the financial system coupled with the relatively limited level of risk premia provided room for maneuver for monetary policy.
- 4.** Pursuant to its projection that problems in international credit markets and the global economy following the deepening of the crisis would continue to restrain both domestic and foreign demand for an extended period, the Central Bank focused on containing the potential damage of the crisis to economic activity. Within this framework, the Central Bank launched the monetary expansion process in November 2008 and became a pioneer in cutting policy rates among the central banks of emerging markets. Projecting that the probability of undershooting the inflation target would increase, the Central Bank adopted a front-loaded policy by cutting policy rates by 650 basis points in the December 2008- April 2009 period.
- 5.** Policy implementations of the Central Bank are shaped in view of medium-term developments rather than short-term economic developments. Accordingly, despite signals of partial recovery in domestic economic activity as of the second half of 2009, judging that uncertainties pertaining to the strength and permanence of recovery in demand persisted, the Central Bank continued to ease policy rates, based on projections that recovery in economic activity and employment conditions would take a significant period of time. Within this framework, policy rates have been cut by totally 1025 basis points since the Monetary Policy Committee meeting of November 2008. Thus, Turkey lowered policy rates more than any other emerging market operating within an inflation-targeting framework.
- 6.** Reduced concerns over inflation during the crisis prepared the ground for the Central Bank to focus on economic activity and financial stability. Accordingly,

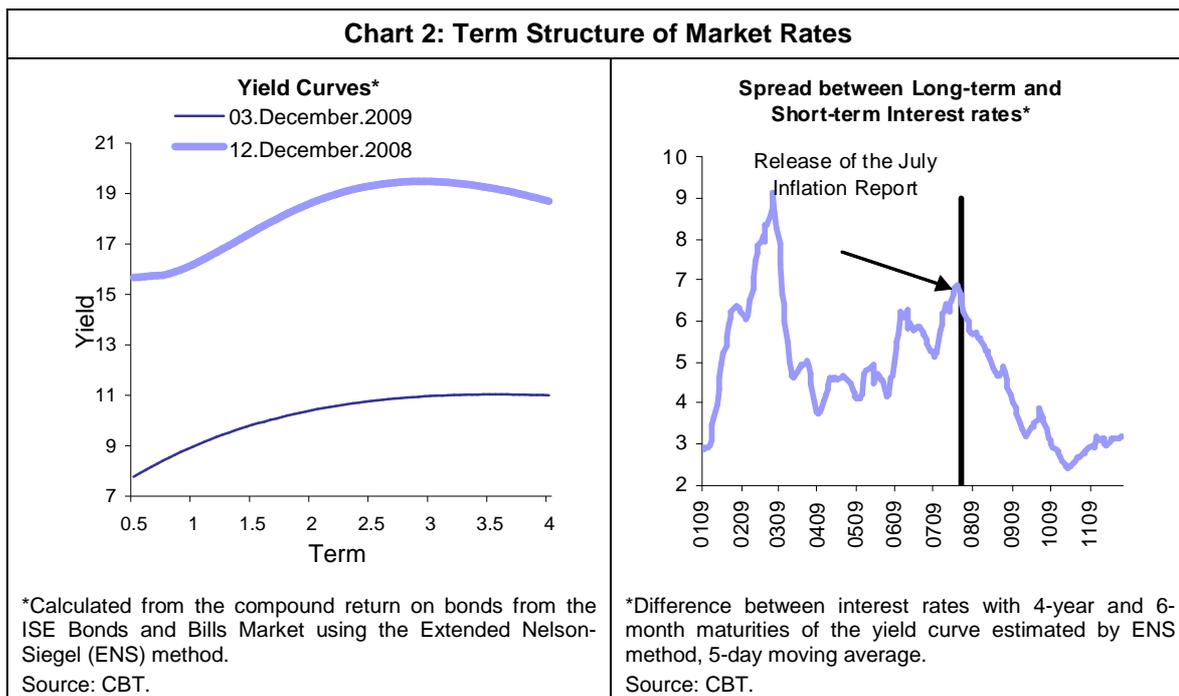
though it is still adhered to its primary objective of achieving price stability, the Central Bank took some additional measures - besides policy rate cuts - that would alleviate liquidity shortage, help the credit market operate smoothly and support the corporate sector with the aim of preventing the adverse impacts of the global financial crisis on the Turkish economy and financial stability.<sup>1</sup>

7. Developments following the initiation of policy rate-cuts have confirmed the Central Bank's projections pertaining to the magnitude of the crisis and its impact on economic activity and the inflation outlook, and have verified the accuracy of its policy decisions. This, in return, bolstered the effectiveness of the Central Bank's measures on financial variables and expectations. Consequently, the Central Bank's resoluteness over market interest rates increased and hence, market interest rates came down to historic lows following the monetary policy stance, including the periods marked by high global risk appetite (Chart 1). The downward trend in market interest rates further accelerated especially after the medium-term policy perspective was presented in the July Inflation Report.

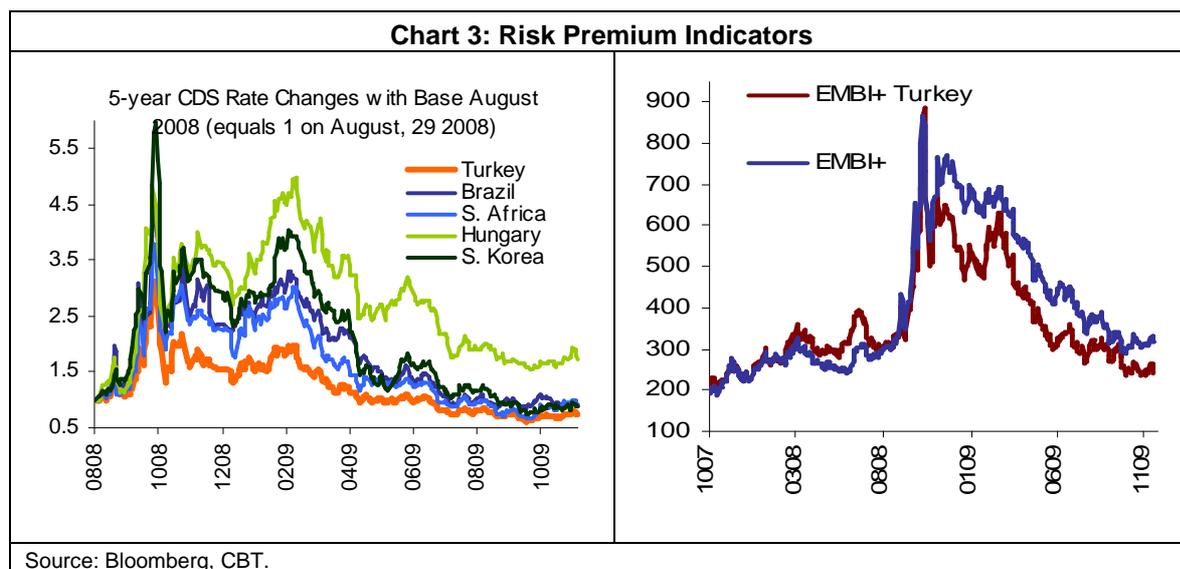


8. Market rates fell across all maturities; the decline in long-term yields was more pronounced than they were in short-term maturities and the yield curve flattened, thus showing that the achievements made in this period are not temporary (Chart 2).

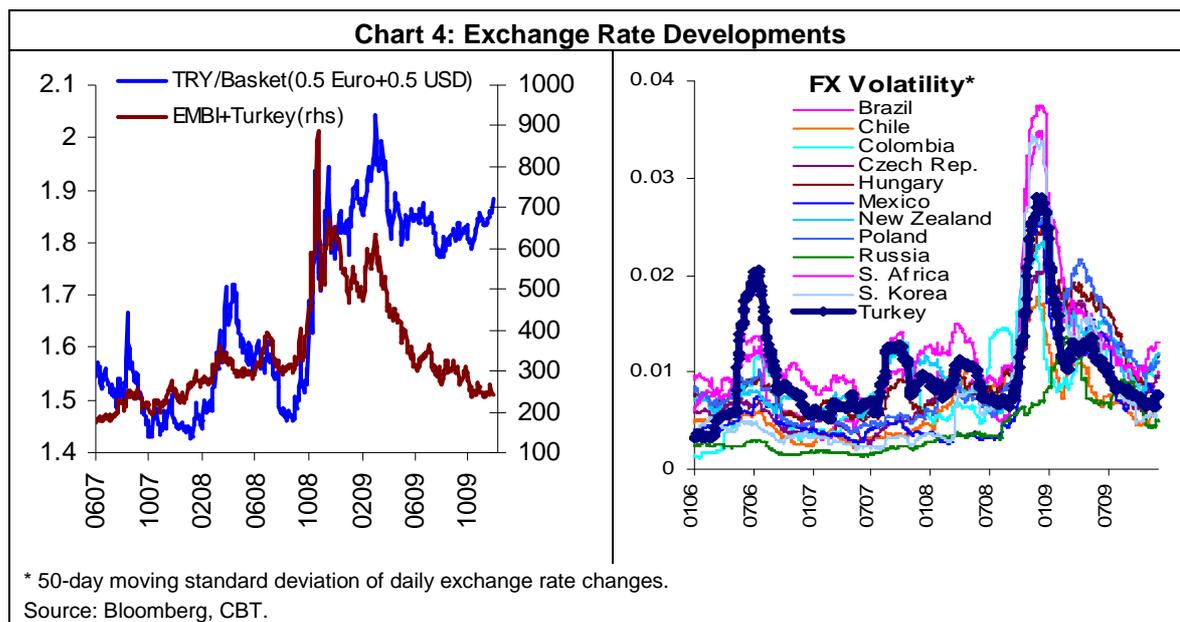
<sup>1</sup> These measures will be elaborated on in the second part of the text.



9. Many emerging economies –including Turkey-, which were once associated with significant risks, showed more resilience than expected during the crisis and this changed risk perceptions toward these countries. Moreover, the risk premium of Turkey that ranked among the top countries with respect to fragility, performed relatively better compared to the average of other emerging markets (Chart 3). This observation underlines the fact that a major part of the decline in long-term yields was driven by the change in risk perceptions and is permanent in this respect.

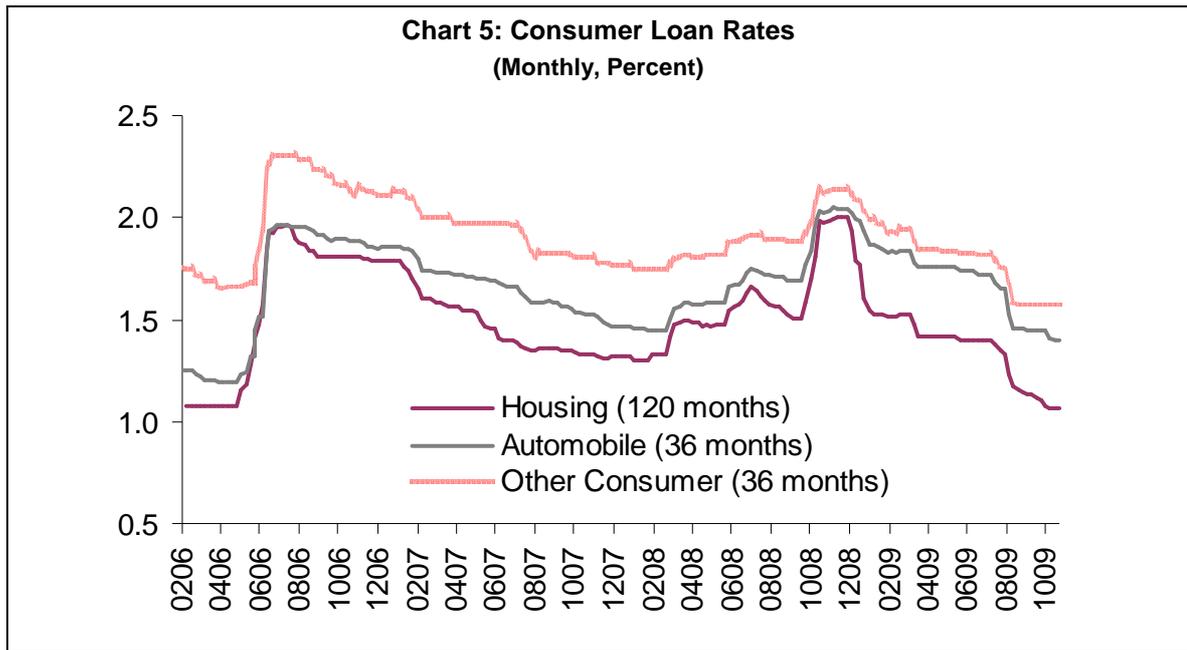


10. The improvement in risk perceptions toward Turkey can also be observed in other market indicators as well as market rates. Although the extent of policy easing in Turkey was more than that of any other emerging market economy, the Turkish lira did not significantly differ from other emerging market currencies, both in terms of changing currency values or in terms of volatility. Despite having been volatile at historically high levels and extremely sensitive to the global risk appetite, the Turkish lira displayed resistance during the crisis, which is a reflection of confidence in the Turkish economy and the Turkish financial system (Chart 4).

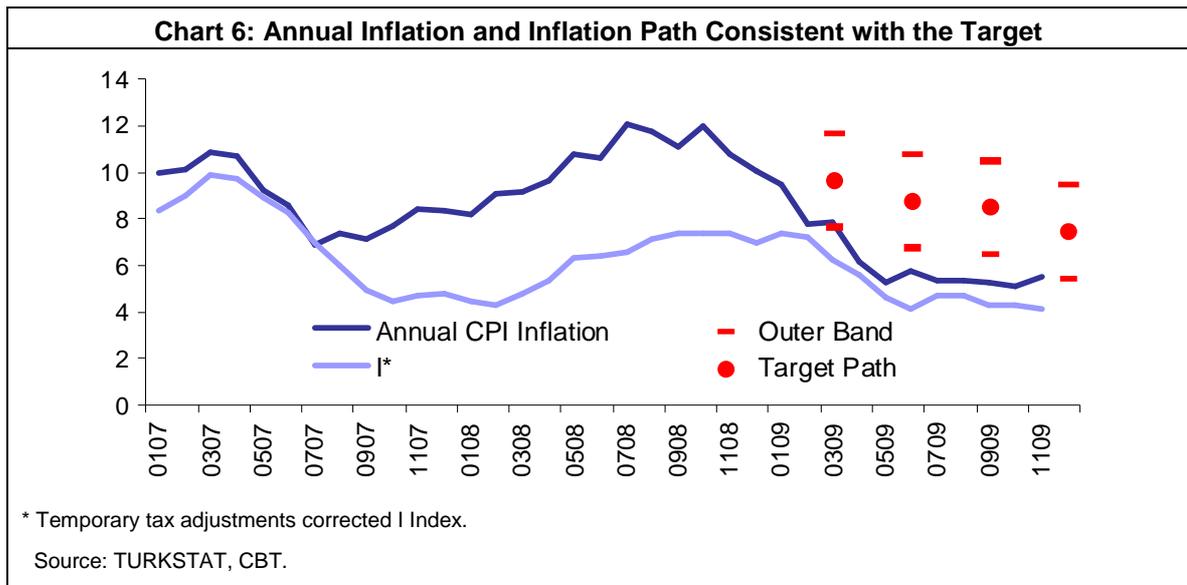


11. The downtrend in market rates has passed through to medium-term real interest rates, while real market rates went further down to historic lows. Even if the fall of real rates during times of recession is an expected incident in well-functioning economies, it is an unprecedented case for Turkey. In this sense, the current level of real rates is a positive indicator of both the effectiveness of monetary policy and the normalization of the Turkish economy.

12. The cumulative policy rate cuts and other policy measures taken by the Central Bank started to influence loan rates as of the second half of 2009 (Chart 5). Especially after the July Inflation Report, in which the Central Bank presented a medium-term policy perspective, the decline in loan rates accelerated and some positive developments were observed in credit markets towards the end of the year with the effect of the improvement in risk perceptions. Meanwhile, activity is still partly restrained owing to continued tightness in lending standards for small- and medium-sized enterprises.

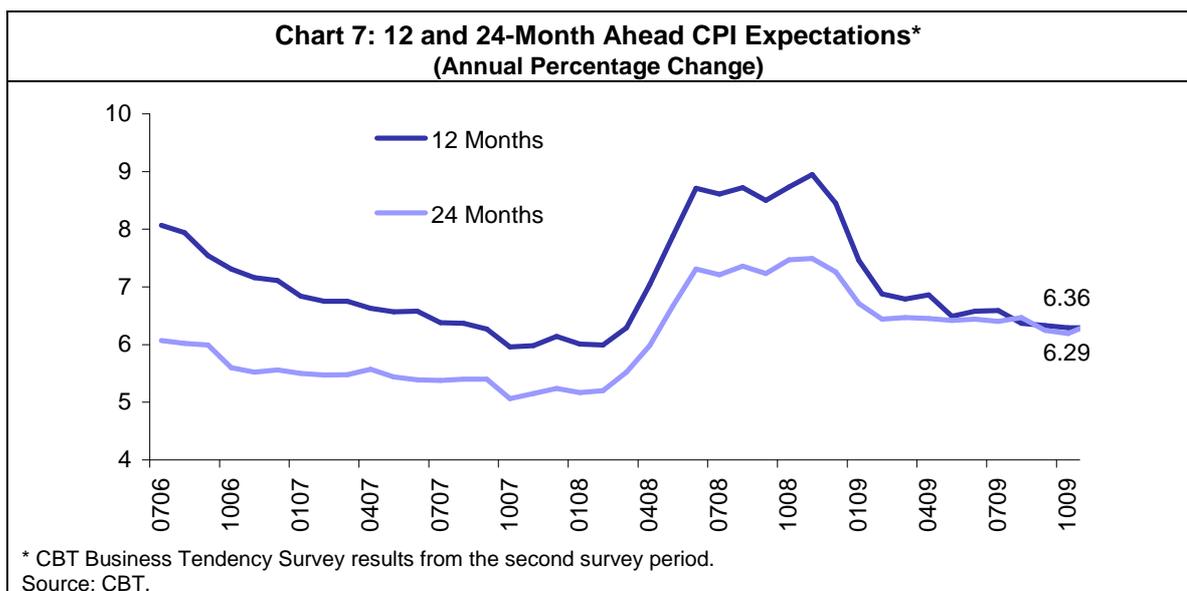


- 13.** The credit channel is expected to start supporting domestic economic activity in the upcoming period and the impact of cumulative rate cuts is expected to be more visible in the medium term. However, the rising domestic borrowing requirement of the government, ongoing problems in the global economy, and elevated levels of unemployment is projected to restrain credit expansion and the economic activity.
- 14.** In 2009, inflation stayed broadly in line with forecasts of the Central Bank and fell significantly. The Central Bank had forecasted that inflation would fall rapidly till mid-2009; then it would continue along a flat trend and display an upward trend in the last months of the year due to the base effect, while core inflation measures would continue to run at low levels. As we approach the end of 2009, we observe that inflation has followed a trend parallel to the projections of the Central Bank (Chart 6). Inflation is expected to undershoot the inflation target but to still remain within the uncertainty band.



15. To sum up, with its appropriate policy decisions, the Central Bank succeeded in containing damage caused by the global financial crisis on domestic economic activity and prevented inflation from deviating from the target by a significant margin.

16. Prudent monetary policy implementations made during the crisis, the Central Bank's effective communication policy and the significant decline in inflation over the past year helped inflation expectations follow a downtrend in all maturities. It can be asserted that the current level of medium-term expectations is broadly consistent with target levels (Chart 7).



- 17.**In sum, the developments over the last year confirm that inflation targeting is a flexible strategy that enables a timely response to economic shocks. Recent experiences have confirmed that the Central Bank can focus on sudden slumps in growth and employment driven by external factors provided that it does not conflict with its price stability objective. The Central Bank will formulate its future monetary policy implementations in the light of its past experiences and with an awareness of its accumulation of credibility. It assumes great importance that economic units should closely monitor the Central Bank's future-oriented messages rather than short-term developments for the sustainability of achievements on monetary policy.
- 18.**With the support provided by the relatively robust banking system and strong position of the financial system, the Central Bank was able to bring interest rates down to single-digit figures in global financial crisis period. This is a valuable opportunity for Turkey to achieve a lasting environment of low inflation and low interest rates. In this respect, the stance adopted by fiscal policy in the medium-term is of critical importance. The consistent framework presented in the Medium-Term Program, reinforced by the arrangements to strengthen fiscal discipline, would support the relative improvement in risk perceptions toward Turkey and the decline in market rates would be a lasting one. This, in return, would lay the foundation for economic growth and employment in the medium and long run and thus contribute to the enhancement of social welfare.
- 19.**The economic fundamentals of Turkey are convenient for maintaining low interest rates for a long period of time. Turkey, along with many developing countries, successfully overcame challenge. This success will increase Turkey's importance in international markets and will facilitate the sustainability of low interest rates. Nevertheless, the elevating indebtedness levels of developed countries pose an upside risk to long-term inflation expectations and accordingly to long-term global market rates. Obviously, Turkey, which distinguishes itself from other countries with its strong banking system and prudent fiscal policies, will continue to stay relatively more resilient to the influence of such risks.
- 20.**The Central Bank will continue to take the necessary measures to contain the adverse effects of the global financial turmoil on the domestic economy. Prudent monetary policy is necessary, but not sufficient to maintain the resilience of the economy against global risks. Therefore, strengthening the commitment to fiscal discipline and the structural reform agenda is also critical for supporting the favorable outcomes of monetary policy decisions and maintaining interest rates at low levels. In this respect, commitment to harmonization with and convergence to policies of European Union as well as timely implementation of the structural reforms envisaged in the Medium Term Program remain of the utmost importance. Therefore, the Central Bank will continue to closely monitor public finance developments while determining medium term monetary policy strategies.

## **The Operational Framework of Monetary Policy**

- 21.** In line with its primary objective of achieving and maintaining price stability, the Central Bank carries out monetary policy implementations within the framework of the inflation targeting regime. The Central Bank's main policy instrument is short-term interest rates at the Interbank Money Market and the Istanbul Stock Exchange Repo-Reverse Repo Market. If necessary, required reserve ratios and other liquidity instruments can be used as supplementary instruments.

### **Inflation Targets**

- 22.** Inflation targets have been set jointly with the Government as "point target". The target variable will continue to be year-end inflation rates calculated by the annual percentage change of the Consumer Price Index (CPI) and consistent with the three-year-budget implementation, the target horizon will be maintained as three years. Accordingly, the inflation targets set jointly with the Government for 2010 and 2011 were 6.5 and 5.5 percent, respectively. The end-2012 inflation target was again set jointly with the Government as 5 percent taking into account the structural reforms that are envisaged to continue in the medium-term, the stickiness caused by years of chronically high inflation and the convergence process to developed countries.<sup>2</sup>

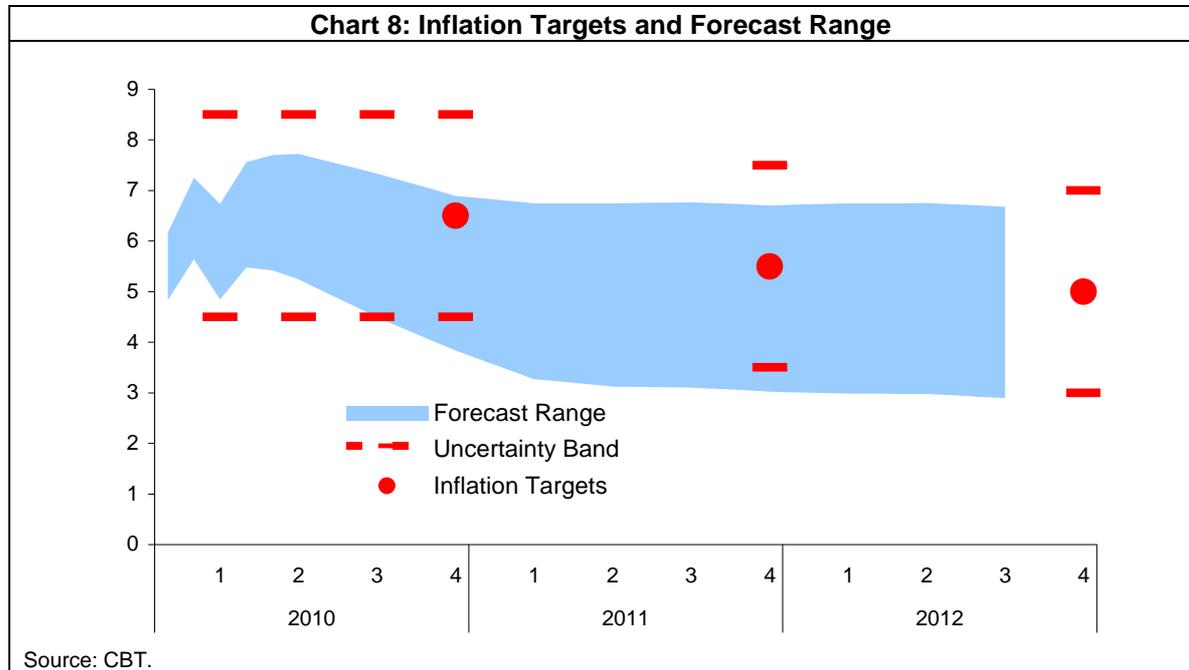
### **Accountability**

- 23.** Article 42 of CBT Law says "The Bank shall submit information to the Government in writing and inform the public disclosing the reasons of incapability to achieve the determined targets in due time published or the occurrence of the possibility of not achieving them and the measures to be taken thereof". In this respect, the Central Bank sets an uncertainty band around the point target as an easily observable and concrete criterion with the aim of enforcing the accountability and transparency mechanisms within the framework of the inflation-targeting regime. If inflation breaches this band, the accountability mechanism is enforced. As has been the case since 2006, the "uncertainty band" for the next three years has been maintained at 2-percentage points in both directions. In other words, if the absolute value of the difference between the actual inflation rate and the target rate surpasses 2 percentage points, the accountability mechanism would be enforced.
- 24.** There will be no change in the enforcement of the accountability mechanism in 2010. As inflation targets are set for year-end, as per its accountability responsibility, the Central Bank will submit a detailed open letter to the Government if the target is missed by a significant margin at the end of the year. Moreover, with the aim of reinforcing the accountability mechanism, if quarterly inflation rates deviate from the end-year target more than 2 percentage points, the reasons of the deviation and the measures that have already been taken and the

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<sup>2</sup> Factors considered while setting the 2012 inflation target are given in Annex 1.

measures that will be taken to achieve the target rate will be explained via quarterly Inflation Reports. In other words, the target of 6.5 percent will be valid throughout the whole year in 2010 with respect to accountability (Chart 8).



**25.** At this point, it would be useful to reiterate the difference between the target and the forecast. While “target” contains information pertaining to the point that inflation will head towards in the medium run (approximately 2 years), “forecast” denotes the course that inflation is envisaged to follow while heading towards the target. Therefore, it is advisable for economic units to consider the inflation target for medium-terms and the Central Bank’s inflation forecasts for shorter terms.

**26.** Inflation forecasts become more important in periods where unforeseen shocks (as was the case in 2009) jeopardize achieving the target. Therefore, in respect of ensuring full implementation of the monetary policy strategy in the upcoming period, we deem it helpful to inform the public of the course of inflation throughout 2010. As stated in the October Inflation Report, quite a low base effect was created in the first half of 2009 when the crisis was at its peak, and this is projected to lead to volatility and some mild increases in annual inflation rates until mid-2010 (Chart 8). Afterwards, as the impact of the said base effect and the tax/price increments made for the sake of budget balance fades out, inflation is expected to gradually trend downwards and stay slightly below the target at the end of 2010. We would like to reiterate here that the prospective rises in inflation were considered while formulating the monetary policy stance presented in the October Inflation Report.

## Communication Policy and Decision-Making Process

- 27.** The Inflation Report, which is a significant component of the accountability mechanism, will continue to be the main communication tool in 2010 as well. As was the case in 2009, some alternative scenarios would also be presented along with the baseline scenario when necessary. The qualitative interest rate assumptions that form the basis of forecasts will continue to be shared with the public. In cases where yield curves in the market failed to accurately reflect the monetary policy stance, the Central Bank will continue to emit concrete signals pertaining to policy rates, when deemed necessary.
- 28.** The Monetary Policy Committee (MPC) will continue to meet once a month in 2010 as well in accordance with the schedule announced in advance. The meetings will be held in two sessions. The first session, which will start at 10.00 am, will be a general session and host Central Bank authorities and specialists and authorities from the Undersecretariat of Treasury. In this session, the related bodies of the Central Bank will present reports on evaluations about economic developments and the inflation outlook to the MPC. At the second session, which only MPC members will participate in, the final evaluations about the inflation outlook will be made and the decision will be put to a vote. The decision and its brief rationale will be announced on the Central Bank website at 7.00 pm, and the English translation of the press release will be put on the website on the same day. As in previous years, the summary of the MPC Meeting will be released on the website of the Central Bank within eight working days, along with its English translation.
- 29.** As in previous years, the Inflation Report, which is the main communication tool of the monetary policy, will be published quarterly and introduced to the public at a press conference. The biannual presentations made by the Governor before the Council of Ministers and the Planning and Budget Commission of the Grand National Assembly of Turkey; the “Monthly Price Developments” reports issued on the next business day following the release of the inflation figures; the biannual “Financial Stability Report”; presentations and speeches made by the Central Bank authorities in Turkey and abroad and other press releases will play an important role in informing the public.<sup>3</sup> Working papers, booklets, Economic Notes and conferences and workshops held by the Bank will also continue to be used as effective tools of the communication policy.

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<sup>3</sup> Dates of Monetary Policy Committee Meetings and the schedule for the release of the Inflation Report and the Financial Stability Report can be found in the Annex. Religious and national festivals, official holidays and data flow calendar have been considered while determining meeting dates.

## **II. EXCHANGE RATE POLICY AND LIQUIDITY MANAGEMENT**

### **Exchange Rate Policy**

- 30.** Along with inflation targeting, the Central Bank will continue to implement the floating exchange rate regime in 2010. As stated in the annual monetary and exchange rate policy announcements, which have been published since 2002, the foreign exchange rate is not a policy tool or target under the floating exchange rate regime and it is determined by supply and demand conditions in the market. Whereas, the main factors affecting foreign exchange supply and demand are the monetary and fiscal policies implemented, international developments, economic fundamentals and expectations.
- 31.** Although there is no exchange rate level to be maintained in a floating exchange rate regime, a strong foreign exchange reserve position is very important for emerging economies like Turkey to curb the unfavorable effects of potential internal and external shocks and to boost confidence in the country. Therefore, the Central Bank holds foreign exchange buying auctions to build up reserves at times where foreign exchange supply increases relative to the foreign exchange demand.
- 32.** As meticulous in minimizing the impact on supply and demand conditions in the foreign exchange market, the Central Bank has been buying foreign exchange via transparent foreign exchange buying auctions with preannounced terms and conditions. Although the aim is to run auctions according to the pre-announced program, in case of unexpected significant developments pertaining to the foreign exchange supply, amendments to the auction programs can be made with prior notice.
- 33.** As a matter of fact, with the aim of abating potential problems in the Turkish financial markets that may arise from global developments, foreign exchange buying auctions were suspended as of October 2008, in order to keep liquidity, which is permanently withdrawn from the foreign exchange market through foreign exchange buying auctions, in the system, and hence, to further enhance the liquidity conditions of the Turkish banks. However, the Central Bank indicated in the Monetary and Exchange Rate policy for 2009 that having a strong foreign exchange reserve position is the general strategy of the Bank and in case of a recovery in liquidity conditions due to developments in international markets, the Bank may, with prior notice, resume foreign exchange buying auctions.
- 34.** Within this framework, it was observed that as a result of positive expectations related to the global economy in early August 2009, liquidity and risk appetite have regained strength and this situation, along with other emerging markets, caused an increase in capital inflows to Turkey and the foreign exchange market became relatively stable. By evaluating that this process contributed to a suitable environment for the CBT to build up foreign exchange reserves, it was decided to resume the foreign exchange buying auctions as of 4 August 2009. The maximum daily amount to be purchased in auctions was determined as USD 60 million, with USD 30 million of auction amount and USD 30 million of optional selling amount.

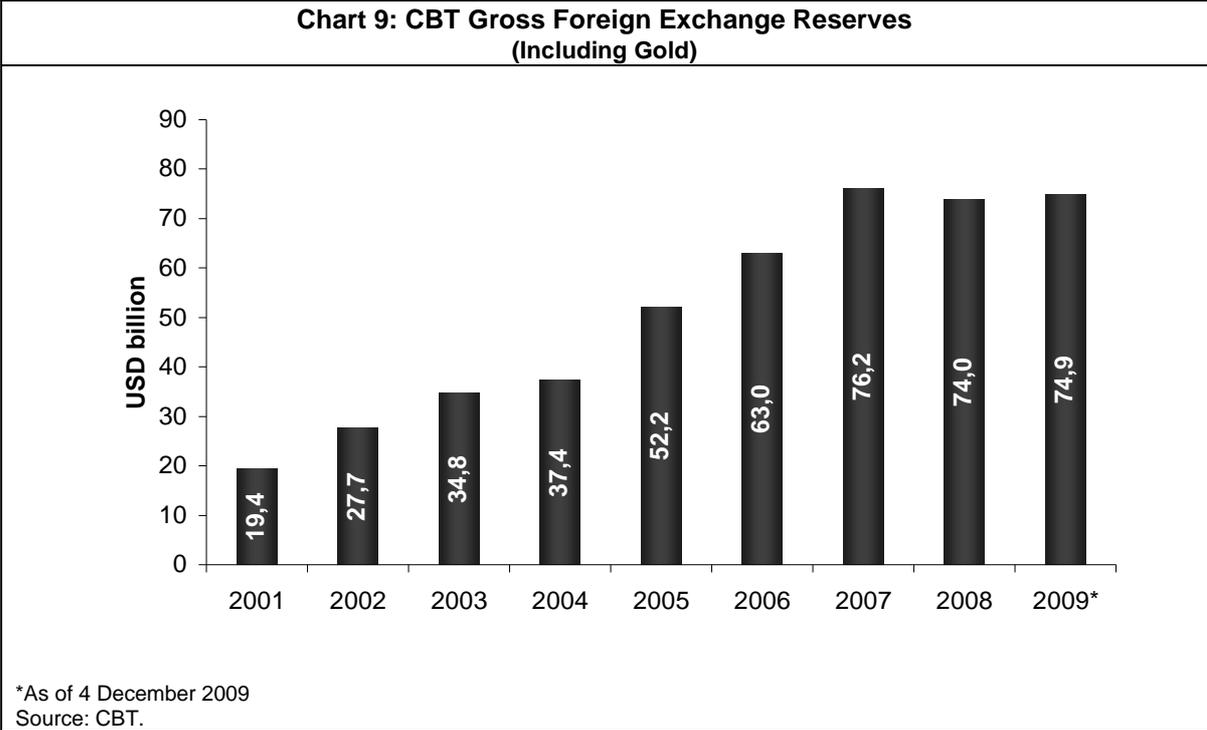
- 35.** Unless foreign exchange liquidity conditions display a significant change, the CBT will continue to hold foreign exchange buying auctions at a maximum daily amount of USD 60 million, with USD 30 million of auction amount and USD 30 million of optional selling amount, also in 2010. Nevertheless, as was the case in our previous applications, the foreign exchange supply and demand conditions will be closely monitored in the upcoming period and in the event of unforeseen developments, not only may the daily auction/optional selling amounts be changed in either direction with prior notice, but the auctions may also be suspended for a short or a long period, if deemed necessary.
- 36.** Although the Central Bank does not have any exchange rate target under the floating exchange rate regime, it continues to closely monitor exchange rate developments and may inject foreign exchange liquidity into the market through foreign exchange selling auctions in case of any unhealthy price formations in the exchange rates due to a decrease in market depth.
- 37.** As a matter of fact, as was the case in October 2008, unhealthy price formations were witnessed also in March 2009 due to a decrease in the depth of the foreign exchange market. Accordingly, to ensure smooth operation of the foreign exchange market through supporting liquidity, foreign exchange selling auctions were resumed. Foreign exchange selling auctions resumed as of 10 March 2009, with the daily amount to be sold set as USD 50 million and continued to be held until 2 April 2009 as the concerns about the depth of the foreign exchange market eased on the back of favorable developments in global markets. A total of USD 900 million was sold in the 18 auctions held within this period.
- 38.** Hence, by 4 December 2009, while the total amount of foreign exchange purchased via buying auctions reached USD 3.5 billion, USD 0.9 billion was sold through foreign exchange selling auctions. There has not been any direct intervention in the foreign exchange market in 2009 either. The total amounts of foreign exchange purchased and sold by the Central Bank from 2002 onwards are shown on a yearly basis in Table 1:

**Table 1: The Central Bank's Foreign Exchange Purchases and Sales\*  
(2002-2009; USD million)**

Year	FX Buying Auctions	FX Selling Auctions	FX Buying Interventions	FX Selling Interventions	Total Net FX Buying
2002	795	-	16	12	<b>799</b>
2003	5.652	-	4.229	-	<b>9.881</b>
2004	4.104	-	1.283	9	<b>5.378</b>
2005	7.442	-	14.565	-	<b>22.007</b>
2006	4.296	1.000	5.441	2.105	<b>6.632</b>
2007	9.906	-	-	-	<b>9.906</b>
2008	7.584	100	-	-	<b>7.484</b>
2009*	3.508	900	-	-	<b>2.608</b>
<b>Total</b>	<b>43.287</b>	<b>2.000</b>	<b>25.534</b>	<b>2.126</b>	<b>64.695</b>

\* As of 4 December 2009  
Source: CBT.

39. As illustrated in Table 1, the Central Bank has purchased a total net worth of USD 64.7 billion foreign exchange since 2002. In the said period, total FX reserves of the Central Bank increased by USD 55.5 billion, from USD 19.4 billion to USD 74.9 billion (Chart 9).



40. In addition to the foreign exchange selling auctions held with the aim of curbing potential problems in the Turkish financial markets that may arise from global developments during 2008 and 2009, the Central Bank also implemented a set of measures to increase the efficiency of the Turkish banking system and to strengthen the foreign exchange liquidity of banks. While some of these measures are aimed to supply foreign exchange liquidity directly to banks, some are related to foreign exchange deposit transactions through the intermediation of the Central Bank. Accordingly, in the last quarter of 2008, the Central Bank resumed its intermediary activities in the Foreign Exchange and Banknotes Markets - Foreign Exchange Deposit Markets; transaction limits for banks increased to USD 10.8 billion, the maturity of FX deposits borrowed by banks from the Foreign Exchange Deposit Markets was extended and the lending rate was reduced. In addition, the FX required reserves ratio was decreased by 2 percent, providing the banking system with foreign currency liquidity amounting to USD 2.5 billion.

41. Meanwhile, in order to mitigate the adverse effects of global financial turmoil on the corporate sector, new arrangements related to export rediscount credits were implemented as of 5 December 2008. Accordingly, the limit for export rediscount

credits was increased and the utilization of these credits was eased. On 20 March and 17 April 2009, in order to widen the use of export rediscount credits, additional arrangements were made to facilitate access to more firms and credit limits were raised.

- 42.** On 20 February 2009, considering the developments with regard to interest rates in international money markets, the Central Bank readjusted the conditions for the foreign exchange liquidity facility provided to the banking system in order to ensure orderly liquidity flow in the financial system and efficient functioning of credit markets by increasing foreign exchange liquidity flow in the interbank foreign exchange market. Within this scope, in the Foreign Exchange Deposit Markets, the maturity of the FX deposit borrowed by banks from the CBT was extended from one month to three months, and accordingly, the maturity of matched interbank transactions in the said market was extended from a maximum of one month to three months. Moreover, the lending rate for transactions, which the Central Bank is a party to, was reduced from 7 percent to 5.5 percent for US Dollar and from 9 percent to 6.5 percent for Euro.
- 43.** The Central Bank, when deemed necessary, will continue to take additional measures within its means prudently in order to ensure the smooth functioning of the FX market and to support FX liquidity. Within this framework, in case of unhealthy price formations due to a decrease in the depth of the foreign exchange market, foreign exchange selling auctions may be resumed under the basic principles of the floating exchange rate regime, transaction limits for banks in the Foreign Exchange and Banknotes Markets might be raised, and the FX required reserve ratio might be further reduced to a limited extent.
- 44.** Besides, the Central Bank will continue to closely monitor exchange rate developments as usual and will directly intervene in the market through purchase or sale, in case of any unhealthy price formations in exchange rates due to speculative behavior stemming from a decrease in market depth.
- 45.** Moreover, the purchase/sale transactions of “foreign exchange against foreign exchange,” “foreign exchange against foreign banknotes” and “foreign banknotes against foreign banknotes” conducted between the Central Bank and institutions authorized to operate in the Foreign Exchange and Banknotes Markets will continue in 2010.
- 46.** Especially in case of a lasting recovery in the liquidity conditions due to developments in the international markets, the FX required reserve ratios might be increased and the Central Bank might cease to perform its intermediary function in the Foreign Exchange Deposit Market. However, even in such a case, banks will still be able to borrow foreign exchange deposits from the CBT within the predetermined borrowing limits.
- 47.** In view of the fact that financial stability is one of the prerequisites for price stability, the Central Bank has always taken the necessary measures in order to ensure the efficient operation of Turkey’s foreign exchange market and will continue to do so. Nevertheless, bearing in mind that under the current exchange rate regime, economic agents operate in an environment of exchange rate risk,

they should establish and employ mechanisms that will ensure efficient risk management.

## **Liquidity Management**

- 48.** The main policy instrument of the Central Bank is short-term interest rates. Therefore the Committee determines the monetary policy stance by setting the level of short-term interest rates. Liquidity management is an important factor, which ensures that short-term interest rates remain at the level set and which determines the efficiency of monetary policy. While drawing up the general framework of liquidity management, the Central Bank takes into consideration the following objectives: (i) ensuring that short-term interest rates would remain at or revolve around the level set by the Committee, (ii) ensuring the efficient and stable operation of money markets by preventing excessive volatilities in short-term interest rates of the money market, (iii) ensuring smooth functioning of the payments system, (iv) ensuring that the tools used support the effective functioning of the transmission mechanism, (v) to have anthe operational structure with sufficient flexibility against unexpected developments in the markets. In order to attain these objectives and to increase the efficiency of monetary policy, the level of liquidity in the market and its distribution in the banking system should also be taken into account while drawing up the general framework of liquidity management.
- 49.** The liquidity level in the market determines the types and maturities of liquidity management tools to be used. So long as the liquidity surplus or liquidity shortage in the market remains at reasonable levels, it is appropriate to manage liquidity via open market operations with overnight or one-week maturities. However, excessive levels of liquidity surplus or shortage may lead to looser or tighter monetary conditions than the short term interest rates would imply.. If liquidity surplus reaches excessive levels, the banking system may extend credits at a faster pace than desired by loosening credit conditions; whereas if the liquidity shortage reaches excessive levels, due to the highly concentration of liquidity providing operations on short-term maturities, the banking system would operate extremely cautious, which in turn may cause credit conditions to tighten and monetary policy to underperform. Therefore, the diversification of tools in use and the extension of their maturities, depending on the level of liquidity, increase the efficiency of liquidity management. To illustrate this, if the liquidity shortage increases, primarily long-term repo transactions may be required. If the liquidity shortage continues to expand and becomes permanent, the utilization of tools that will provide permanent liquidity to the market, such as the purchase of government securities and the reduction of the required reserve ratio might be considered.
- 50.** Liquidity in the market is mainly determined by the following factors:
- i) Changes in money base,
  - ii) The Central Bank's transactions against TL,
    - a. Net foreign exchange purchase/sales transactions against TL,

- b. Interests paid/earned for open market operations, interests paid by the Central Bank for TL reserve requirements and current expenditures,
  - c. Export rediscount credits (extended in TL, collected in foreign exchange),
  - d. Government securities purchase/sales transactions in the market.
- iii) The Treasury's transactions against TL,
- a. The spread between redemption and issue of net TL government bonds, excluding redemptions to the Central Bank,
  - b. Primary surplus/deficit inflows/outflows,
  - c. Privatization and Savings Deposit Insurance Fund (SDIF)-related TL transfers and other public transactions.

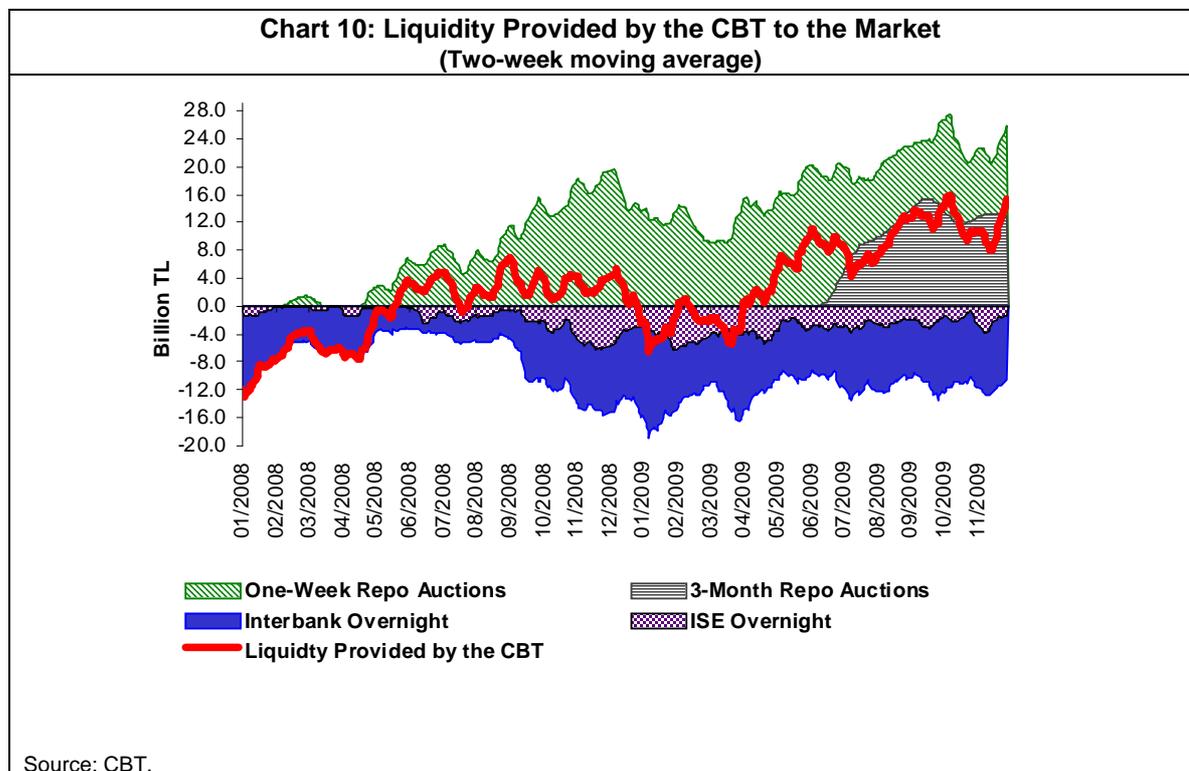
As they determine the TL-denominated borrowing requirement, the Treasury's net FX-denominated collections or payments including domestic and external borrowing, the Treasury's redemption to the CBT and the 'sCBT profit transfers can all indirectly affect liquidity in the market.

**51.** Excess liquidity conditions, which were created by government bond purchases of by the Central Bank in 2001 from public banks and banks within the SDIF, and large amounts of FX purchases during the following years, prevailed in the market until May 2008. The liquidity shortage that emerged in the market in May 2008 continued with an increasing trend in the following period. Although the Central Bank, from time to time, withdrew the excess liquidity via TL deposit transactions in TL and via liquidity bills during the period prior to May 2008, the excess liquidity was mainly withdrawn via TL deposit transactions in the Interbank Money Market within the CBT and reverse repo transactions in the Repo and Reverse Repo Market of the Istanbul Stock Exchange (ISE), on an overnight basis. Thus, the Central Bank's overnight borrowing rate announced in the post-2001 crisis period, when a liquidity surplus emerged, became a benchmark interest rate for the monetary policy.

**52.** Meanwhile, liquidity does not display an even distribution in the financial system and among banks. Especially investment funds and certain banks have a liquidity surplus while other banks face significant liquidity shortage. Some banks with liquidity surplus prefer to lend their excess liquidity to the Central Bank in the Interbank Money Market owing to factors such as transaction costs and tax differences as long as interest rates in the secondary market do not significantly exceed the Central Bank borrowing rate. The amount lent to the Central Bank range from TL 4 to 9 billion, albeit with occasional significant changes depending on the distribution of liquidity among banks. When the excess liquidity in the market drops below the range of TL 4-9 billion, it exerts upward pressure on the overnight interest rates in money markets and the overnight interest rates in the Repo and Reverse Repo Market of the ISE, which is considered a main money market in Turkey, may surpass the Central Bank's borrowing rate - a benchmark for monetary policy. Therefore, in order to prevent tightening in monetary

conditions and/or any potential fluctuations in overnight interest rates at times when the net liquidity surplus in the market drops below the said level, the Central Bank should inject liquidity to the market, of an amount more than the net market need via repo auctions on the one hand, and on the other, withdraw the emerging liquidity surplus via overnight transactions.

53. Within this context, in the period following May 2008, when the net liquidity surplus remained below TL 4-5 billion, the Central Bank started to inject more liquidity into the market than required via regular repo auctions with one week maturities to ensure a minimum liquidity surplus of TL 4-5 billion in the market at end of day. Then the excess liquidity in the market was withdrawn at the end of the day through overnight transactions. Thus, overnight interest rates were not allowed to surpass the Central Bank's borrowing rate; resulting in the Bank's borrowing rate continuing to be a reference for the markets. Since October 2008, on account of increased fluctuations in international financial markets and in order to mitigate the adverse effects of fluctuations on Turkish markets and to dissipate concerns that may arise in money markets, the Central Bank has provided the market with liquidity in an amount significantly above the net liquidity need via one-week repo auctions, so that the market would have excess liquidity of usually more than TL 7 billion at the end of the day (Chart 10). Therefore, at times of increased volatility in the market, concerns that may stem from the uneven distribution of liquidity within the system were dissipated, effective functioning of money markets was ensured and fluctuations in market interest rates were prevented.



- 54.** The net liquidity shortage in the market was TL 10.1 billion at end-2008 and the Central Bank injected TL 20.1 billion worth of liquidity into the market via one-week repo auctions and withdrew TL 9.9 billion excess liquidity at overnight maturity at the end of the day. Moreover, with a view to reduce the adverse effects on the credit mechanism caused by the concentration of funding done via repo auctions at short-term maturities, the Central Bank resumed repo auctions with three-month maturities on 19 June 2009 in response to the increasing liquidity shortage in the market and the possibility that the shortage may become permanent. In the following period, more than half of total funding was generally carried out via repo auctions with three-month maturities. Meanwhile, in order to reduce intermediation costs and support effective functioning of the credit market, the Central Bank reduced the Turkish Lira required reserve ratio, from 6 percent to 5 percent on 16 October 2009, thus provided the banking system with TL 3.3 billion worth of permanent liquidity.
- 55.** As of 4 December 2009, while the net liquidity shortage in the market was TL 23.3 billion, the Central Bank injected a total of TL 30.2 billion worth of liquidity, of which TL 16.0 billion was injected via one-week repo transactions and TL 14.2 billion via three-month repo transactions. The Bank withdrew TL 6.9 billion worth of day-end excess liquidity via overnight transactions (Table 2).

**Table 2: Changes in Liquidity and Central Bank Funding  
(Billion TL)**

	<b>31.12.2008</b>	<b>04.12.2009</b>	<b>Change</b>
<b>Liquidity Shortage in the Market</b>	<b>10.1</b>	<b>23.3</b>	<b>13.2</b>
Funded via 1-Week Repo Auctions	20.1	16.0	-4.0
Funded via 3-Month Repo Auctions	0.0	14.2	14.2
Withdrawn in IMM and ISE at Overnight Maturity	-9.9	-6.9	3.0

The main items affecting liquidity in the market in 2009 are given in Table 3.

**Table 3: Factors Affecting Liquidity  
(Billion TL)**

	<b>31.12.2008</b>	<b>04.12.2009</b>	<b>Impact</b>
<b>Money Base</b>	<b>62.7</b>	<b>61.0</b>	<b>1.7</b>
Currency Issued	31.7	38.8	-7.1
Free Deposits	30.9	22.2	8.8
<b>CBT Operations Affecting Liquidity in the Market</b>			<b>6.6</b>
Net FX Purchase against TL			3.7
CBT Interest Payments and Other Payments			1.6
Export Rediscount Credits			1.3
<b>Public Operations (excl. Redemptions to CBT)</b>			<b>-21.5</b>
Redemption of Net TL-Denominated Government Bonds (Redemption-Issue)			-19.3
Primary Surplus Inflow			-2.9
TL-denominated privatizations and other operations			0.8

Accordingly, in the period of 2 January-4 December 2009, while the Central Bank's foreign exchange purchases, interest payments and other payments along with export rediscount credits boosted liquidity by TL 6.6 billion the Treasury's operations eroded liquidity by a total of TL 21.5 billion. On the other hand, the decrease in the monetary base by a total of TL 1.7 billion led to an increase in liquidity.

**56.** The most significant factors that will affect liquidity conditions in the market in 2010 are increase in money base, amount of the Central Bank's FX purchase/sale transactions against TL, amount of credit to be used in the event of an agreement with the International Monetary Fund and purchase of government securities by the Central Bank.

**57.** Within the scope of the operation aimed at reducing the overnight borrowing requirement of public banks and banks within the SDIF in the post-crisis period of February 2001, the Central Bank purchased TL 14 billion worth of government bonds between 9 April and 30 May 2001 from the said banks, for its portfolio for open market operations. These securities, with one-year maturity, were exchanged between 25 July and 6 August 2001 with TL 15.8 billion worth of securities including their accrued interest rates, to securities maturing in 2003-2006. These securities plus accrued interests, in turn, were exchanged on 30 October 2001 and 1 November 2001 with government securities totaling TL 18.8 billion. The maturities of these government securities varied between 2006 and 2010; their coupon payments were annual and coupon rates were CPI indexed. A portion of these securities amounting to TL 10.8 billion matured and the Central Bank was left with TL 8.0 billion worth of government securities in its portfolio for

open market operations as of 10 December 2009, excluding those securities that had been purchased under agreements to resell through repo transactions. Currently, TL 5.0 billion of securities in the open market operations portfolio will mature on 10 May 2010 and TL 1 billion will mature on 10 July, 10 September and 10 December 2010, respectively. Thus, the adverse effects of the 2001 crisis on the Central Bank's balance sheet will be erased.

- 58.** In order to limit the fluctuation band for overnight interest rates, the Central Bank announces overnight borrowing and lending rates in the Interbank Money Market under its auspices as well as in the Repo and Reverse Repo Market of ISE, and accepts every bid on borrowing rates without imposing any limit when there is excess liquidity in the market. The borrowing rate announced by the Central Bank on the said markets will continue to stand as the benchmark interest rate for monetary policy, in the absence of a technical rate cut. In the upcoming period, the Central Bank does not envisage any technical rate cut in the short term due to lingering uncertainties regarding liquidity conditions and the uneven distribution of liquidity within the system. Therefore, the Bank will continue to manage liquidity in such a way that overnight interest rates in markets realize at the level of the announced borrowing rate. In other words, the Central Bank will continue to inject liquidity into the market of an amount above the net market need via repo auctions at the start of the day and to withdraw the excess liquidity at the end of the day via overnight transactions, so as to minimize fluctuations in overnight interest rates and possible concerns related to access to liquidity.
- 59.** Meanwhile, the variety and flexibility of the tools used by the Central Bank have recently played an instrumental role in the effective management of liquidity and the maintenance of stability in money markets despite fluctuations in foreign markets. While the Central Bank carries out borrowing transactions in the Interbank Money Market without requiring collateral, it conducts reverse repo transactions at the ISE against government securities in its portfolio. The Central Bank's reverse repo transactions at the ISE can change depending on liquidity conditions in the market and the distribution of liquidity in the system. Previous data indicate that the Bank's transactions at the ISE usually stayed below TL 5-6 billion, yet increased up to TL 10 billion, albeit rarely. Therefore, considering all probabilities related to liquidity, the Central Bank has to keep government securities in its portfolio for open market operations on technical grounds in order to control interest rates in the Repo and Reverse Repo Market of the ISE and to maintain the diversity of tools, as well as operational flexibility in liquidity management.
- 60.** Therefore, taking into account that the government securities in its portfolio will mature in 2010, the Central Bank will purchase a limited amount of government securities. On another note, Article 56 of the Law on the Central Bank of the Republic of Turkey, which states "The Bank shall not, grant advance and extend credit to the Treasury and to public establishments and institutions, and shall not purchase debt instruments issued by the Treasury and public establishments and institutions in the primary market." prohibits the Bank from direct purchasing of government securities from the Treasury. It is for this reason that the Central Bank will establish a portfolio of government securities via outright purchases from the secondary market in line with the program announced below. The said purchase transactions will not aim to support the Treasury's borrowing program,

and will only be conducted for technical reasons in conformity with monetary policy objectives. Nevertheless, while these purchases will boost the liquidity in the market, they will relieve the pressure of redemptions to the Central Bank on the banking system balance sheet. Government securities will be purchased within the scope of a specific program and in line with the following principles:

- i) In the light of current data, it is foreseen that government securities that will be purchased due to technical reasons by end-2010 will approximately amount to TL 8 billion. Thus, the amount of government securities envisaged to be purchased will comprise only a limited portion –7 percent– of the Central Bank’s analytical balance sheet as of 4 December 2009.
- ii) Considering that government securities purchases will be less than 5 percent of the domestic borrowing amount envisaged in the Treasury’s base scenario of 2010, they are not expected to have a significant impact on market conditions. Yet, due attention will be paid to ensure that purchase transactions do not affect market interest rates, hence the yield curve, and that interest rates for transactions reflect market conditions. For this purpose;
  - a. The Central Bank will make sure that purchase of government securities does not concentrate on specific maturities; but on various maturities from one to five years.
  - b. Accordingly, TL-denominated discounted, fixed and variable rate coupon government securities will be eligible for purchase transactions, yet the Bank will make sure that these securities are liquid in the secondary market.
  - c. Purchase transactions will be carried out in small amounts and within an extended period.
- iii) Auctions for purchase transactions will be held under the traditional method, in compliance with Application Guidelines for Open Market Operations and auctions will start on 23 December 2009.
- iv) Auctions will be held on Wednesdays and Fridays every week in the period of 23 December 2009 - 23 June 2010, with each auction amount being a maximum of TL 100 million. Thus, the Central Bank will be able to purchase a maximum of TL 5 billion worth of government securities, via 50 auctions. Purchases in the following periods will be carried out in weeks deemed necessary.
- v) Government securities to be purchased via auctions will be announced on Reuters’ “CBTL” page at 10:00 a.m. on the first working day of each month; whereas the securities to be purchased at each auction shall be announced at 10:00 a.m. on the auction day.
- vi) In auctions to be held in December 2009, government securities with ISIN codes TRT030811T14 and TRT110511T17 will be purchased.
- vii) Auctions will be held on Wednesdays and Fridays at 1:30 p.m. with value dates as Thursday and Monday, respectively, and the results will be announced no later than 2:00 p.m. on Reuters’ “CBTM” page.

- viii) All banks and intermediary institutions eligible to participate in Open Market Operations at the Central Bank are allowed to participate in the auctions.

- 61.** The amount of government securities to be purchased by the Central Bank is almost set. Nevertheless, uncertainties regarding the amount of FX sale/purchase transactions against TL in the market coupled with the amount of credit to be released if an agreement is made with the International Monetary Fund make it difficult to provide an accurate projection for 2010 liquidity conditions. In addition to purchases of government securities, it is foreseen that the Central Bank will continue with FX purchases throughout 2010 under the current FX buying program. However, if Turkey does not borrow from the International Monetary Fund, the net liquidity shortage in the market is expected to display a limited decline and a limited increase in the first half and second half of the year, respectively. In this scope, the funding requirement via repo auctions is anticipated to continue in line with the Central Bank's strategy of leaving excess liquidity in the market at the end of the day. On the other hand, if an International Monetary Fund loan is utilized, the liquidity shortage in the market is foreseen to decrease remarkably and the market is predicted to post temporary net liquidity surplus of limited amounts from time to time, depending on the amount and method of credit utilization. If this scenario materializes, the Central Bank will gradually reduce funding through three-month maturity repo auctions in line with the decreasing funding requirement, and the basic funding instrument will continue to be one-week maturity repo auctions.
- 62.** Current data suggest that, at least in the first half of 2010, there will be no permanent and high levels of liquidity shortage; therefore, need for a technical interest rate cut (mentioned in previous annual press releases), is not expected to arise. Nonetheless, significant changes in factors determining liquidity in line with market developments can change the projections on liquidity and lead to a permanent liquidity shortage. In such a case, the Central Bank, after considering the distribution of liquidity within the system, may opt for one-week maturity repo auction rate to be the monetary policy reference interest rate and to adjust the overnight lending and borrowing interest rates downward in order to facilitate this. As elaborated below, a technical interest rate cut will merely imply a technical arrangement to facilitate a change in operational structure due to the permanent change in liquidity conditions where short-term interest rates are maintained at current level. Thus it shall not in any way imply the easing of monetary policy.

## **Operational Framework Of Liquidity Management**

- 63.** The Central Bank shall sustain the existing operational framework for liquidity management that enables flexible and efficient liquidity management in 2010 as well. Accordingly, if market liquidity conditions materialize parallel to current projections and if the technical interest rate cut mentioned above does not materialize, the operational framework for liquidity management will be as follows:
- i) The Central Bank will continue to announce overnight borrowing and lending rates between 10:00 a.m.– 12:00 p.m. and 1:00 p.m. – 4:00 p.m. in the Interbank Money Market within the Central Bank. In case of

a liquidity shortage during the day, banks will be able to borrow at the Central Bank's lending rate against collateral within their limits. In the event of excess liquidity, banks will be able to lend Turkish Lira to the Central Bank at the Central Bank's borrowing rate without any limit.

- ii) The current implementation of the Late Liquidity Window Facility will continue. Banks will be able to borrow from the Central Bank against collateral, and lend to the Central Bank without any limit between 4:00 p.m. – 5:00 p.m. and on the last working day of the required reserve maintenance period between 4:00 p.m. – 5:15 p.m.
- iii) The Central Bank will continue one-week repo auctions as long as the market is in need of liquidity. The Central Bank will announce the amount of repo auction on the days that there is liquidity shortage on Reuters' "CBTF" page at 10:00 a.m. Provided that no extraordinary fluctuations are observed in the markets, the Central Bank, while determining the amount of the auctions, will endeavor to maintain the average auction interest rate as close as possible to the borrowing rate of the Central Bank announced for intraday transactions.
- iv) Weekly repo auctions will be held at 11:00 a.m. and the results will be announced on Reuters' CBTG page no later than 11:30 a.m. The traditional method will be used in auctions; in other words, the interest rate offered in the awarded bid shall be effective.
- v) In case of unforeseen excessive liquidity shortage during the day, which would exert excessive pressure on money market interest rates, the CBT may announce "Intra-day Repo Auctions" in addition to the regular ones announced at 11:00 a.m.
- vi) The primary dealer banks will be able to conduct repo transactions within the framework of open market operations, between 10:00 a.m. – 12:00 p.m. and 1:00 p.m.–4:00 p.m.

## **Technical Interest Rate Cut and the New Operational Framework**

**64.** If a decision for a technical interest rate cut is made parallel to the rearrangement of the operational framework for liquidity management;

- i) The Central Bank benchmark interest rate will be the interest rates of one-week maturity repo auctions to be held regularly, which are the basic funding instrument. The repo auction interest rate will match the Central Bank borrowing interest rate applicable to intraday transactions prior to the technical interest cut.
- ii) The overnight borrowing interest rate announced in the Interbank Money Market within the Central Bank and ISE Repo-Reverse Repo Market shall be below the rate set for one-week repo auctions, while the overnight lending rate shall be above the rate of the said auction.
- iii) The method of one-week maturity repo auctions will be modified. Accordingly;

- a. One-week maturity repo auctions will not be held via the traditional method; but the quantity auction method. In other words, the interest rate on the repo auction will be set by the Committee. Additionally, banks and intermediaries will only quote quantities for repo auctions with a one-week maturity. For instance, if the Committee decides the interest rate of one-week maturity repo auctions is to be 6.50 percent, then it will remain as 6.50 percent unless the Committee changes this.
  - b. In the case of liquidity shortage due to unforeseen reasons, thus leading to a decision to hold an intra-day repo auction, such auctions will be held at the interest rate set for one-week repo auctions by the Committee via the quantity auction method.
  - c. Each bidder shall make an offer for the amount announced for that day at the most and the funding amount to be raised via the auction will be distributed to participants according to the ratios of their bids to the auction amount.
  - d. Other guidelines governing auctions and transactions shall remain unchanged.
- iv) In the case of a temporary liquidity surplus, the Central Bank will hold reverse repo auctions and/or TL deposit buying auctions with a one-week maturity subject to the same conditions and with the interest rate announced for the one-week repo auctions.
  - v) Fixed rates will be applicable only to repo, reverse repo auctions and TL deposit buying auctions with a one-week maturity. Repo and reverse repo auctions or other auctions with maturities longer than one-week that the Central Bank may hold within open market operations will continue to be held under the traditional method and the price/interest rate will be formed under market conditions.
  - vi) According to the new operational structure, overnight interest rates are mainly expected to fluctuate between the Central Bank borrowing interest rate and the interest rate of the liquidity facility provided to primary dealer banks during the day. However, under normal conditions, while determining the amounts of the auctions for repo, reverse repo and TL deposit auctions with one-week maturities, the Central Bank, will endeavor to prevent both excessive fluctuation of the ISE Repo-Reverse Repo Market overnight interest rates, which is an indicator of secondary money market interest rates, and the systematical formation of the said rates significantly below or above the repo auction interest rates.

**65.** Additionally, with a view to preventing fluctuations in overnight interest rates and enhancing the flexibility of the banks' liquidity management, the Central Bank will introduce flexibility in the provision of the TL required reserve liabilities as of 8 January 2010. Accordingly, banks will be allowed to carry over 10 percent of the required reserves for any period to the following period or carry over the excess amounts, which cannot exceed 10 percent of the required reserves for any period to the following period. Meanwhile, as per the current Application Guidelines for Open Market Operations, institutions are required to fulfill their liabilities regarding

open market operations until 4 pm. In order to facilitate the operational transactions of banks, the said period shall be extended to 4:45 p.m.

- 66.**An increase in liquidity shortage in the market and the concentration of funding by the Central Bank repo auctions in short-term maturities may have adverse effects on both the liquidity management of banks and the functioning of the credit mechanism. Therefore, depending on the level of the liquidity shortage and the needs that may arise regarding the efficient functioning of the credit mechanism, the Central Bank may efficiently use the provision of the required reserves as well as long-term repo and government securities purchasing transactions. Thereby, the TL-denominated required reserve ratios may be reduced.
- 67.**In the case of an excessive increase in the liquidity surplus in the market due to favorable international market conditions, in order to enhance the effectiveness and flexibility of monetary policy and liquidity management strategy, primarily, sales of Central Bank liquidity bills with maturities up to 91 days and government securities previously purchased from the market will be actively utilized. When deemed necessary, Turkish Lira deposit buying auctions with standard maturities of 1, 2 and 4 weeks and reverse repo auctions with maturities up to 91 days will also be used actively. Additionally, TL-denominated required reserve ratios may also be increased.
- 68.**The Central Bank, with the primary goal of achieving and maintaining price stability, as entrusted to it by law, will also continue its practices to enhance the effectiveness of monetary policy and liquidity management in 2010. Accordingly, the Central Bank may change not only its liquidity management strategy, but also the overnight borrowing and lending interest rate margins when necessary.

## **ANNEX-1: FACTORS CONSIDERED WHILE SETTING THE 2012 INFLATION TARGET**

In many developed countries implementing an inflation-targeting regime, the target rate of inflation consistent with price stability ranges between 1 and 3 percent. In the Eurozone, which is a natural reference point for Turkey, a rate below 2 percent and a rate close to this is adopted for the medium term. On the one hand, the structural transformation that Turkey has been undergoing in recent years, the rigidities brought about by the experience of high inflation rates in the past and the convergence to developed countries; make it more plausible to set a relatively higher inflation rate compared to developed countries at this stage. On the other hand, the inflation target to be set should be compatible with price stability, the primary objective of the Central Bank, and thus should be low enough not to challenge the decision-making processes of economic agents. In this context, in the light of the experience gained in 2006-2009 period, the inflation target for 2012 has been set as 5 percent.

Below, the reasons for setting relatively higher inflation targets in Turkey compared to developed countries at this stage are explained in detail.

### ***Factors Specific to the Turkish Economy and the Ongoing Structural Reform Process***

One of the main factors that may necessitate setting a higher inflation rate target compared to developed countries is the sectoral rigidities specific to Turkey. Even though the Turkish economy has come a long way in recent years regarding structural arrangements to eliminate obstacles to price stability, the current high intermediation costs, inefficiencies in distribution channels, rigidities in labor market regulations<sup>4</sup> and imperfect competition conditions in some sectors affect pricing behaviors adversely.

The long distribution chains from producer to end user and the spillover effect of pricing behaviors in each phase can exacerbate repercussions of the shocks to the economy on inflation. This can pose a risk in terms of the effect of the sub-items on inflation, especially those with low price elasticity and high shares in the consumer inflation basket, like fresh fruit and vegetables. Moreover, in other sectors with too many links in the distribution chains and poor competition conditions, a downward rigidity can emerge in the effects of the shocks to the economy, and this can adversely affect pricing behaviors as well.

The ongoing structural reform process influences pricing behaviors not only in the private sector, but also in the public sector. The uncompleted reforms to improve the quality of fiscal discipline weaken the predictability of inflation. As the budget structure is not flexible enough, measures towards improving public balances can occasionally exert additional pressure on inflation.

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<sup>4</sup> OECD Economic Survey of Turkey, OECD, Paris, July 2008.

In summary, although the structural reform process accelerated in the 2000's, it has not yet been completed in many sectors, which necessitates setting a higher inflation rate target compared to developed countries at this stage.

### ***Rigidities formed by the High Inflation Period in the Past***

While setting inflation targets, the relative importance of the rigidities in pricing behaviors in the economy should also be considered. Due to the prolonged period of high and sticky inflation in Turkey, price increases and inflation expectations show resistance against falling below a certain threshold value.<sup>5</sup> The said inflation rigidity has tended to break in recent years; however, in 2006-2008 period, due to supply-side global shocks, inflation remained above targets, reducing the pace of improvements in this area. Besides, the tendency to "rounding" inherited from the high-inflation period (ignoring the fraction, failing to spread the use of kuruş) also deteriorates pricing behavior particularly in low-priced goods and services.<sup>6</sup> This type of behavior, coupled with the downward price rigidities, creates an upward pressure in inflation rates.

### ***Convergence Process to the European Union***

The experiences of developing countries, which have recently completed their accession process to the European Union (EU) indicate that prices in those countries converged to the average price level of the EU while in the process of membership, which led to an additional increase in general price level. Therefore, while setting the short and medium-term inflation targets in Turkey, the following developments, which will probably be experienced within the convergence process, should be considered: (i) relative price changes due to improvements in efficiency and quality of the goods subject to foreign trade, (ii) price adjustments stemming from quality improvements in goods that are not subject to foreign trade and (iii) price developments stemming from harmonization with EU legislation.

For those developing countries, the convergence process to the developed countries can bring about improvements in efficiency and quality of goods subject to foreign trade, while it can lead to improvements in quality of goods that are not subject to foreign trade. Consequently, this gives way to additional price increases particularly in goods groups that are not subject to foreign trade within the convergence period.<sup>7</sup> This was observed especially in transition countries undergoing the harmonization

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<sup>5</sup> Besides the said rigidity, some sectors may be rigid due to their economic structures. For instance, as services prices are generally less open to foreign trade, competition and efficiency gains, price increases in this sector can follow a more rigid course. In other words, within the general disinflation process, disinflation materializes much slower in these sectors.

<sup>6</sup> This is also seen in increases in rents.

<sup>7</sup> As a matter of fact, country experiences indicate that countries within the accession process experience higher relative price changes than those of EU-members. (Coorey, S., Mecagni, M., Offerdal, E., (1998) "Disinflation in Transition Economies: The Role of Relative Price Adjustment", "Moderate Inflation: The Experience of Transition Economies", Co-Publication of the IMF and the Hungarian National Bank, Pages 230–279).

process to the EU. Hence, these countries were in a position to consider the said effects while setting their inflation targets.

In those countries and regions undergoing the convergence process to the EU, it is a widely acknowledged phenomenon that price level gradually increases and thus inflation rates follow a higher course for some time, compared to those in developed countries.<sup>8</sup> Recently, within the context of studies carried out by TURKSTAT in cooperation with EUROSTAT and OECD, a cross-comparison of price levels was made in “Consumption Goods and Services” for 37 countries involved in the European Comparison Program.<sup>9</sup> According to the results of the study relying on the data of 2008, while the average price level of EU-27 was 100 in consumption goods and services, the related price level index in Turkey was 73. Turkey’s average price level being below that of EU members suggests that a price level convergence that may be witnessed within the convergence process to the EU should be taken into consideration while setting inflation targets.

Moreover, in the accession process, as a part of the harmonization with the Acquis Communautaire in the field of legislation, the liberalization in administered prices and the changes in tax policies can also be influential on prices.

### ***Considerations Regarding the Measurement of Price Indices***

A fixed consumption basket is used in price indices; therefore the quality of the goods included in the basket is also assumed to remain unchanged over the course of time. Having said that, the quality of goods – technology-intensive consumer electronics, clothing etc, in particular – does improve in time, which necessitates periodical quality adjustments. In this context, some biases may arise in the measurement of consumer price indices. Recent studies show that biases originating from quality, new products and shopping center substitution may be at significant levels.<sup>10</sup> In developing countries, where quality improvements and innovations are experienced more frequently, this influence may be even more evident.

### ***Effect of External Factors***

While setting medium term targets, analyzing past contributions as well as the possible effects of the items within the CPI on inflation – on which the domain of the Central Bank is limited – is significant in setting inflation targets. Within this scope, an analysis of the development of the sub-categories of inflation in recent years suggests that the contribution of sub-categories like unprocessed food, energy, gold,

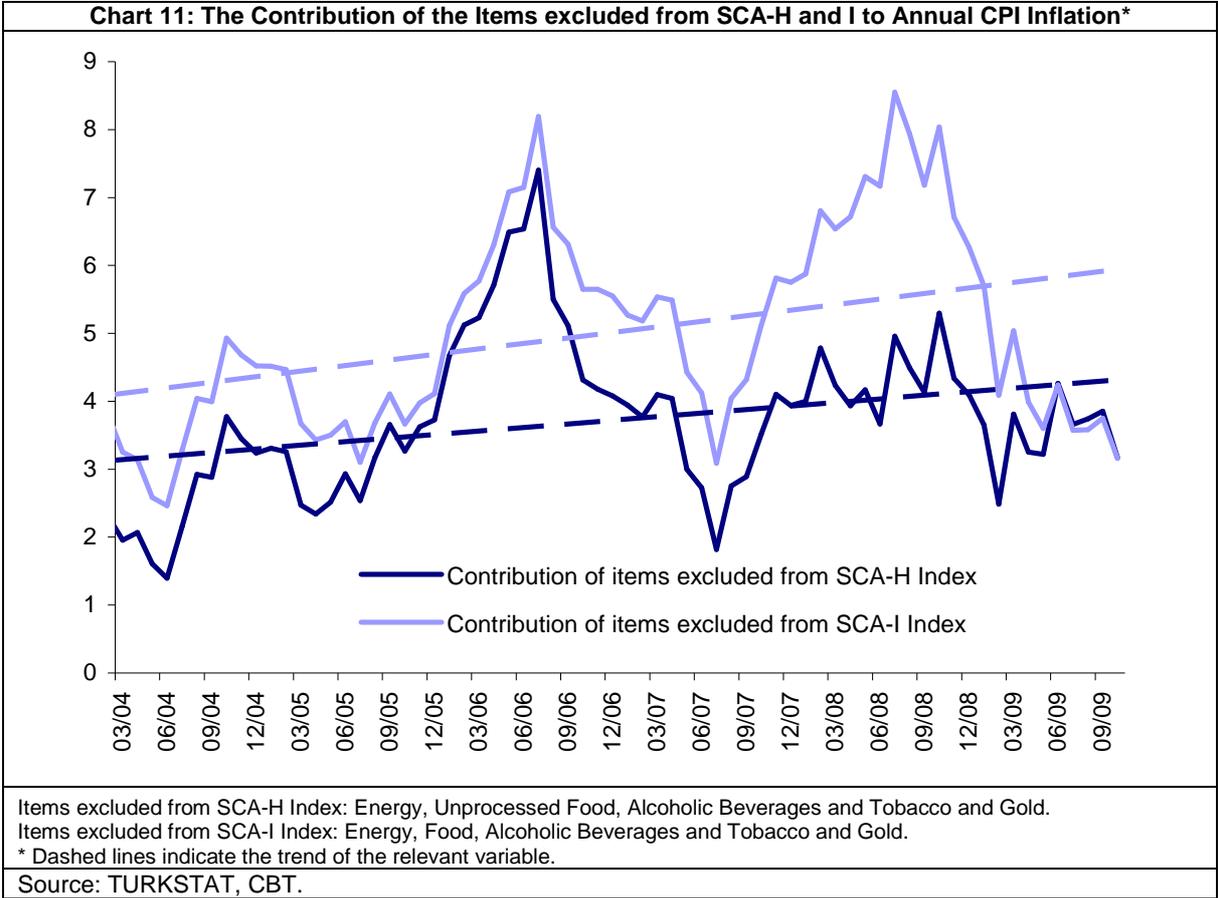
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<sup>8</sup> Padoa-Schioppa, T. (2000), “Remarks delivered by Tommaso Padoa-Schioppa (Member of the Executive Board of the European Central Bank)”, High-level Seminar with EU-candidate Countries, Paris, December 2000.

<sup>9</sup> TURKSTAT (2009), “Purchasing Power Parity, Consumption Goods and Services 2008”, TURKSTAT News Bulletin No: 128, Ankara, July 2009.

<sup>10</sup> Yörükoğlu, M. (2009), “Difficulties in Inflation Measurement and Monetary Policy in Emerging Market Economies”, BIS Papers, Forthcoming.

tobacco – which are relatively beyond the sphere of influence of monetary policy – to inflation fluctuated in a range between 1.4 and 7.4 percentage points (Chart 11).



For instance, the average contribution of items excluded from the H-index (energy, unprocessed food, alcoholic beverages and tobacco and gold prices) to annual inflation since 2004 has been 3.7 percentage points.<sup>11</sup> In other words, assuming that the contribution by the said items to CPI in the upcoming period will be similar to that in the last five years, in order that an annual target like 2 percent similar to developed countries can be attained by the Central Bank in average consumer inflation, deflation is essential in the core price indices.<sup>12</sup> Especially in economies like Turkey, where nominal price rigidities are high, considering that some firms may opt to cut production instead of reducing prices and that this may have adverse effects on economic activity, targeting a reasonable inflation level compatible with the economic foundations gains more importance.

<sup>11</sup> The contribution to annual inflation in the items excluded from SCA-H is minimum 1.40 and maximum 7.40 percentage points, while the said figures are 2.46 and 8.55 percentage points, respectively for those excluded from SCA-I.

<sup>12</sup> Given this average contribution, in order for inflation to materialize at an average level of 5 percent, the annual rate of increase in the H index should be approximately 2 percent.

In the upcoming period, along with the recovery from the global crisis, the expectation that global commodity prices will continue to increase and additional measures that may be required to improve the budget balance indicate that items excluded from the H-index may continue to increase faster than the average inflation. Moreover, it should also be taken into account that the share of the items excluded from the H index within the consumption basket is higher for Turkey compared to that of developing countries. Differentiation in consumption patterns between developed and developing countries can cause inflation to realize higher in developing countries. To illustrate this, in the consumption basket of developing countries, food comprises a relatively large share; whereas in developed countries, high-tech products have a larger share.<sup>13</sup> As a result of this, high productivity gains in technology-intensive products have reflected positively on inflation rates of developed countries. Contrary to this, factors like the rapid transition from agriculture to industry and to the services sector in developing countries, the low level of productivity in agriculture and the increasing weight of developing countries within global demand can accelerate the increase in world food prices. All these developments combined with the high share of food in the consumption basket, engenders a higher inflation rate for developing countries.

In summary, even if price hikes in sub-categories are similar for all countries, due to disparities in consumption patterns, higher inflation figures may be expected in developing countries.<sup>14</sup> Developments in global inflation rates within the 2006-2008 period underpin this view.

## **Conclusion**

Owing to the structural factors summarized above, it is assessed that a higher inflation target should be set in Turkey in the short and medium term compared to developed countries. Meanwhile, it is important for sustainable growth and social welfare that this target is set in line with the Central Bank's primary objective of price stability in a way that does not hamper the decision making processes of economic agents and at a level that will keep inflation uncertainty low. Considering past experiences along with all these factors, the inflation target for 2012 has been set as 5 percent.

Targeting an attainable and easy-to-remember inflation rate of 5 percent will also contribute to breaking up past rigidities in pricing behaviors and inflation expectations. When the structural transformation, convergence and reform processes are completed, the targeting of lower inflation rates will be possible.

In addition to inflation targets, the width of the "uncertainty band" is also determined as part of the monetary policy strategy, to serve accountability. An analysis of the

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<sup>13</sup> There is an inverse relationship between the share of food expenditures within the total consumption expenditures and the level of income. According to Seale et al. (2003), while the share of food in countries with low income levels is 53 percent, it is 17 percent in countries with high income levels (Seale, J., Regmi, A. ve Bernstein, J. (2003), "International Evidence on Food Consumption Patterns", United States Department of Agriculture, Washington, DC).

<sup>14</sup> Yörükoğlu, M. (2008), "Convergence and Dynamics of Inflation", CBT Conference, Globalization, Inflation and Monetary Policy, İstanbul, November 2008.

course of the sub-items of inflation in recent years suggests that sub-items like unprocessed food, energy and gold, which are relatively beyond the sphere of influence of monetary policy, have contributed about 4 percentage points on average to inflation over the last five years. In addition, 93 percent of the time, monthly figures are observed to have remained within the band of 2 to 6. Within this context, an uncertainty band of 4 percentage points in width (in other words, to be defined as  $\pm 2$  percentage points around the target) will be reasonable. With the anticipation of no significant development to permanently change this distribution in the medium term, the uncertainty band shall be maintained as 2 percentage points in both directions in the next three years.

## **ANNEX-2: CALENDAR FOR 2010 MPC MEETING DATES, INFLATION REPORTS AND FINANCIAL STABILITY REPORTS**

<b>MPC Meeting Dates</b>	<b>Inflation Report</b>	<b>Financial Stability Report</b>
14 January, Thursday	26 January, Tuesday	
16 February, Tuesday		
18 March, Thursday		
13 April, Tuesday	29 April, Thursday	
18 May, Tuesday		26 May, Wednesday
17 June, Thursday		
15 July, Thursday	27 July, Tuesday	
19 August, Thursday		
16 September, Thursday		
14 October, Thursday	26 October, Tuesday	
11 November, Thursday		
16 December, Thursday		7 December, Tuesday