

Bank was established  
in 1993

It has the exclusive  
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coins, including commemorative  
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The primary objective of  
the CNB is to maintain  
price stability, i.e. to create  
a low-inflation environment  
in the economy.



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The CNB is the central  
bank of the Czech Republic  
and the supervisor of the  
Czech financial market.

The Czech National  
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Governor, two Vice-Governors  
and four Bank Board  
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For these instruments to work properly, the set of monetary policy instruments needs to be transparent and the CNB must have credibility. For this reason, the CNB publishes the daily banking sector liquidity position and the liquidity forecast for the given day on its website and via Bloomberg. This means that the overall liquidity position is visible to all before the regular repo tender is announced. On days when a repo

tender is announced, the results are published – through the same channels – immediately after the tender ends. The error of the previous day's forecast is published in the morning of the following day. This means the banking system is not subject to any "surprises" in the form of short-term liquidity fluctuations or CNB money market activities.

## BANKING SECTOR LIQUIDITY MANAGEMENT AND THE SINGLE TREASURY ACCOUNT

### Glossary

<b>Automatic facilities</b>	A monetary policy instrument used for providing and depositing liquidity overnight at the request of individual banks.
<b>Autonomous factors</b>	A liquidity supply item which the CNB is unable to affect. It consists of the external sector, general government, net other assets and currency in circulation.
<b>Currency in circulation</b>	An autonomous factor – cash (banknotes and coins) in circulation.
<b>Czech banking system</b>	Banks, building societies, foreign bank branches and credit unions (referred to only as "banks" in the text).
<b>Deposit facility</b>	Enables banks to deposit surplus liquidity overnight with the CNB without collateral.
<b>External sector</b>	An autonomous factor covering net external assets, i.e. assets and liabilities vis-à-vis other countries.
<b>General government</b>	An autonomous factor covering movements on the Single Treasury Account and the accounts of state funds and the National Fund.
<b>Liquidity</b>	In the context of monetary policy implementation, liquidity represents non-cash funds of banks deposited on accounts with the CNB.
<b>Liquidity-absorbing operations</b>	Repo operations in which the CNB sells securities to banks and obtains money from them in return (thereby in effect withdrawing surplus liquidity from banks) and subsequently (usually two weeks later) buys the securities back from the counterparty (thereby in effect returning liquidity to the system).
<b>Liquidity-providing operations</b>	Reverse repo operations in which the CNB buys securities from banks and pays with money (thereby in effect providing liquidity to banks) and subsequently (usually two weeks later) sells the securities back to the counterparty (thereby in effect withdrawing liquidity from the system).
<b>Lombard loan</b>	Enables banks to borrow liquidity from the CNB overnight.
<b>Minimum reserves</b>	A monetary policy instrument. The amount which banks are required to hold on their account with the CNB to cover their primary liabilities.
<b>Net other assets</b>	An autonomous factor covering, for example, movements on the accounts of the European Commission and non-bank clients and the CNB's own funds.
<b>Open market operations</b>	Open market operations are usually conducted as repo operations (see liquidity-absorbing and liquidity-providing operations).
<b>Transmission mechanism</b>	The monetary policy transmission mechanism is a chain of economic links allowing changes in the settings of monetary policy instruments to lead to the desired changes in inflation. The first stage in the transmission mechanism is therefore a change in the settings of monetary policy instruments. This engenders a change in the behaviour of the "intermediary" markets which the monetary policy instruments directly influence. The change in behaviour on these markets in turn leads – via various other "intermediary" markets – to changes on the "target" markets where the central bank wants to influence inflation.

The **primary objective** of the Czech National Bank (CNB) is to maintain price stability.<sup>1</sup> Without prejudice to this primary objective, the CNB also supports the general economic policies of the Government leading to sustainable economic growth.

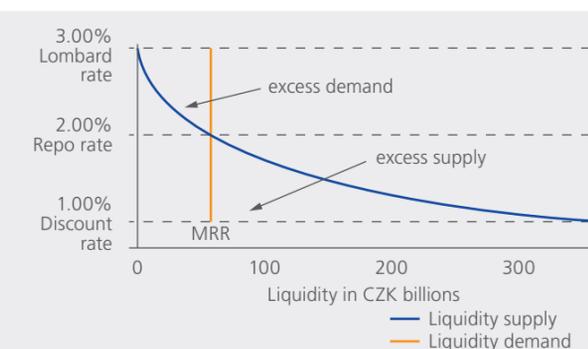
The CNB works to achieve its primary objective by means of monetary policy, and specifically by means of **inflation targeting**. In this monetary policy regime, the Bank Board sets an inflation target (annual consumer price index growth of 2% with a tolerance band of  $\pm 1$  percentage point). The main instruments for achieving the desired level of inflation are the two-week repo rate (the operational objective) and the related discount rate and Lombard rate. In practice, these rates are used to steer short-term interbank rates and subsequently – via the transmission mechanism – the price level.

### Monetary policy instruments

The **task of monetary policy implementation** is to ensure that short-term money market rates differ as little as possible from the two-week repo rate. To perform this task, the CNB has a **set of standard monetary policy instruments** consisting of open market operations, automatic facilities and minimum reserves.

Ensuring that short-term money market rates differ as little as possible from the two-week repo rate is conditional mainly on achieving a balance of supply and demand on the money market, or a **balance of liquidity supply and demand in the banking system**.<sup>2</sup> If there was a surplus of liquidity (i.e. if the supply of liquidity was greater than the demand for liquidity), short-term rates would decrease, because banks would try to place the surplus liquidity on the money market. By contrast, if there was a shortfall of liquidity (i.e. if the demand for liquidity was greater than the supply of liquidity), banks would try to get hold of liquidity and thus drive short-term money market rates upwards.

**Figure 1**  
Balancing liquidity demand and supply in the banking sector



The figure is illustrative. The rates do not reflect the current level of CNB rates, they serve as an example of liquidity supply and demand in the banking sector.

The CNB's paramount task in day-to-day monetary policy implementation is to determine the liquidity situation in the banking sector. This is done by forecasting the supply of liquidity and comparing that forecast with the demand for liquidity.

The liquidity supply comprises two items. The first item is autonomous factors, consisting of the external sector, general government, net other assets and currency in circulation. The CNB cannot influence these items fully and has to estimate them. In general, currency in circulation is the hardest to forecast, as it depends on the behaviour of the population, which is difficult to predict. Currency withdrawals depend, among other things, on seasonal effects. For example, large cash withdrawals are recorded before weekends, public holidays and summer holidays, leading to growth in currency in circulation. Another very complicated item is general government deposits, which are strongly affected by fluctuations in state budget revenues and expenditures (due, for example, to tax collection deadlines). Fluctuations in government deposits have been successfully eliminated by the establishment of the Single Treasury Account, through which an almost zero daily balance is achieved (see the box below).

<sup>1</sup> This primary objective is provided for directly in the Constitution and in Act No. 6/1993 Coll., on the Czech National Bank.  
<sup>2</sup> A balance of liquidity means a situation where the amount of money in the banking system is such that market participants have neither a surplus nor a shortfall of liquidity.



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The Czech National Bank was established in 1993

The supreme governing body of the CNB is the Bank

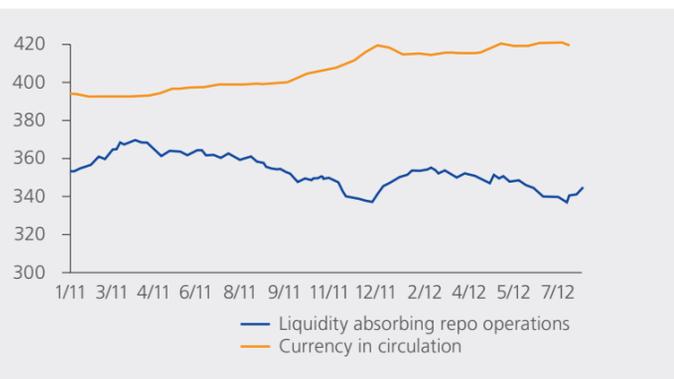
The CNB has the exclusive right to issue banknotes and coins, including commemorative

The primary objective of the CNB is to maintain stability, i.e. to create

The volatility of government deposits makes them very hard to predict. However, in the Czech Republic, unlike in most advanced countries, this volatility has been minimised by the introduction of a Single Treasury Account (STA). In this system, virtually all account balances of central government and other government entities defined by law<sup>3</sup> are monitored and managed during the day so that current expenditures are covered and free funds are used effectively. The daily balance on the STA is maintained at around CZK 6 million thanks to good liquidity management. In practice, this means that the Czech National Bank – acting on behalf of the Ministry of Finance – invests any end-of-day surplus on these accounts on the financial market and covers any end-of-day shortfall by borrowing from banks.

(CNB bills) to them as collateral. Then, after an agreed time (usually two weeks) the CNB returns the liquidity plus interest to the bank (thereby in effect returning liquidity to the system) and the bank of course returns the collateral to the CNB.

Figure 2 Liquidity-absorbing repo operations and currency in circulation (daily volumes in CZK billions)



Currency in circulation is one of the main autonomous factors and inversely affects the liquidity supply. The figure shows that if currency in circulation increases, the volume of liquidity-absorbing repo operations decreases.

The CNB usually holds its liquidity-absorbing repo operations three times a week as variable rate tenders (American auctions). Liquidity-absorbing repo tenders proceed as follows. The CNB announces the expected (surplus) liquidity in the banking system and banks submit their bids for both the amount and the interest rate within a prescribed time. In the case of liquidity-absorbing operations, the official two-week repo rate is the limit rate, i.e. the maximum rate which the CNB will pay. This means that the rate at which banks deposit liquidity with the CNB must be below or at the limit rate, not above it. If the amount of liquidity that banks wish to deposit exceeds the predicted amount in the banking system as a whole, the CNB reduces the bids pro rata at the last accepted interest rate. If the liquidity-absorbing repo operation does not reach the desired amount, the CNB announces another one, for example with a shorter maturity. Standard liquidity-absorbing repo operations have a two-week maturity, but operations with different maturities can be announced as a result of a "supplementary" liquidity-absorbing repo operation or if the CNB wishes to distribute the maturities of new and previously executed liquidity-absorbing repo operations more evenly.

## Automatic facilities

Automatic facilities are another instrument complementing the regular OMOs. They allow banks to fine-tune their liquidity positions in emergencies (e.g. if a bank receives an unexpected payment or an expected payment does not arrive, or if it is unsuccessful in a liquidity-absorbing or liquidity-providing repo tender and fails to eliminate this unexpected liquidity surplus/shortfall on the interbank market). Unlike the above OMOs, which are initiated by the CNB and affect the entire banking system, automatic facilities are executed automatically at the request of individual banks and therefore have a selective effect. Automatic facilities are used for providing or depositing liquidity overnight. Specifically, there is an overnight deposit facility at the discount rate and an overnight liquidity-providing facility (a Lombard loan) at the Lombard rate. These two rates form the corridor<sup>4</sup> for movements of short-term interbank market interest rates around the two-week repo rate.

The deposit facility allows banks to deposit surplus liquidity overnight with the CNB. Banks use this facility if, for example, they are unsuccessful in a repo tender, record an unexpected inflow of funds onto their interbank accounts in the afternoon and have no way of placing the surplus liquidity on the interbank market. The facility is available on request almost until the end of the working day and the CNB provides it automatically. Conversely, the Lombard facility enables banks to borrow liquidity overnight from the CNB if they are short of liquidity. The funds are borrowed against pledged securities, a list of which is published on the CNB website. Banks have right of access to the lending facility provided that they apply for a Lombard loan by (almost) the end of working hours, and the CNB provides it automatically.

Every bank, building society, foreign bank branch and credit union is required to hold minimum reserves. At present, each bank and credit union holds its minimum reserves on its account with CNB Clearing ("payment system account") and/or on a deposit and withdrawal account if such an account has been opened, or on a special minimum reserve account.<sup>5</sup> The reserve requirement is currently 2% of the primary liabilities of the bank/credit union to non-banks with maturity up to 2 years. The minimum reserve system operates on the averaging principle, i.e. each bank or credit union is required to maintain over a maintenance period (of approximately one month – starting on the first Thursday of the respective month and ending on the Wednesday before the first Thursday of the following month) an average end-of-day balance on its minimum reserve account equal to or greater than the reserve requirement set for the given maintenance period. The funds on these accounts are remunerated at the two-week repo rate up to the pre-specified volume of minimum reserves.

Monetary policy factors are the second supply item. These factors are almost fully under the CNB's control and consist mainly of automatic facilities and repo operations payable on a given date. By contrast, liquidity demand consists mainly of the minimum reserves and the level of compliance with the reserve requirement on the given day of the maintenance period for the banking sector as a whole.

By comparing the predicted liquidity supply with liquidity demand we obtain the expected liquidity situation in the banking sector and thus also a recommendation for the direction and amount of the open market operation that should keep the market in balance. If liquidity supply exceeds liquidity demand, the system has surplus liquidity and the CNB withdraws liquidity equal to the difference between supply and demand. Conversely, if liquidity demand exceeds liquidity supply, the CNB provides liquidity equal to the difference between supply and demand.

## Open market operations (OMOs)

The CNB achieves balanced liquidity in the banking sector using the monetary policy instruments described above. Open market operations (in particular two-week liquidity-absorbing repo operations and liquidity-providing repo operations) have a dominant role in the monetary policy instrument system. This is because the declared repo rate is used in such operations. Using two-week liquidity-absorbing and liquidity-providing repo operations, the CNB can systematically ensure balanced liquidity in the banking system, thereby preventing undesirable deviations of short-term market rates from the repo rate. Owing to the persistent liquidity surplus in the Czech banking sector (for historical reasons), the CNB must withdraw liquidity and therefore usually conducts two-week liquidity-absorbing repo operations. Banks deposit their surplus liquidity with the CNB (the CNB thus in effect absorbs surplus liquidity from banks) and in return it provides securities

## Minimum reserves

Last but not least, we should mention the system of minimum reserves, which – as a monetary policy instrument – is significant from the perspective of the primary determination of liquidity needs in the banking system. In the Czech environment of a substantial liquidity surplus, however, this role is declining and the minimum reserves serve mainly as a cushion for the smooth functioning of the interbank payment system.

The accuracy of the banking sector liquidity forecast prepared by the CNB is very important as it affects the subsequent actual liquidity position in the banking sector. If the forecast is inaccurate, the amount and direction of OMOs could be set incorrectly. This would result in an imbalance in the banking sector, but banks would not be able to eliminate this imbalance on the interbank market (by borrowing liquidity from other banks or depositing surplus liquidity with other banks). Such a mistake by the CNB would ultimately be paid for by banks, which would have to make repeated use of the automatic facilities in order to top up their liquidity. In a situation where the automatic facility rates form a corridor around the repo rate, banks with surplus liquidity would lose the option of obtaining higher remuneration in liquidity-absorbing repo operations (at the two-week repo rate), as they would only receive the discount rate. Banks with a liquidity shortfall would have to pay penalty interest at the Lombard rate.

The above facts, however, do not fully reflect the actual functioning of the banking sector in a situation of extraordinarily low rates. Owing to the very unfavourable economic situation, the CNB Bank Board decided in November 2012 to cut interest rates to a historical low and set the discount rate and the repo rate at the same – almost zero – level. When the discount rate and the repo rate are equal, banks lose the incentive to take part in two-week repo tenders, as they can achieve the same returns through repeated use of the overnight deposit facility. In practice, the loss of this incentive was reflected in higher amounts of liquidity deposited in the deposit facility than in repo tenders.

<sup>4</sup> The corridor around the repo rate is usually  $\pm 1\%$ , but in certain situations, such as the lowering of the repo rate to almost zero in autumn 2012, the corridor may be asymmetric (on 2 November 2012, the repo rate was set at 0.05%, the discount rate also at 0.05% and the Lombard rate at 0.25%).

<sup>5</sup> Banks open special minimum reserve accounts if they have no payment system account.