

CENTRAL BANKING

A BASIC APPROACH

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About a central bank

A **central bank**, **reserve bank** or **monetary authority**, is an entity responsible for the **monetary policy** of its **country** or of a group of member states, such as the **European Union**. Its primary responsibility is to maintain the stability of the national **currency** and **money supply**, but more active duties include controlling subsidized **loan interest rates**, and acting as a "bailout" **lender of last resort** to the **banking sector** during times of financial **crisis** (private banks often being integral to the national financial system).

It may also have supervisory powers to ensure that banks and other financial institutions do not behave recklessly or fraudulently. A central bank is usually headed by a Governor, President in the case of the European Central Bank or Chief Executive/Managing Director in the case of Hong Kong Monetary Authority and Monetary Authority of Singapore.

In most countries the central bank is state-owned and has a minimal degree of autonomy, which allows for the possibility of **government** intervening in monetary policy. An "independent central bank" is one which operates under rules designed to prevent political interference; examples include the **US Federal Reserve**, the **Bank of England** (since 1997), the **Reserve Bank of India** (1935), the **Bank of Mexico** (1993), the **Bank of Japan**, the **Bank of Canada**, the **Reserve Bank of Australia** and the **European Central Bank**.

Activities and responsibilities

Functions of a central bank (not all functions carried out by most of the Central banks):

- **implementing the basis of monetary policy setting the official interest rate - used to manage both inflation and the country's exchange rate - and ensuring that this rate takes effect via a variety of policy mechanisms**
- **monopoly on the issue of banknotes**
- **the Government's banker and the bankers' bank ("Lender of Last Resort")**
- **manages the country's foreign exchange and gold reserves and the Government's t/bs , bonds and stock**
- **regulation and supervision of the Banking and Insurance industry:**
- **regulation and supervision of all Payment Systems and Depositories**

Monetary policy

Central banks implement a country's chosen [monetary policy](#). At the most basic level, this involves establishing what form of currency the country may have, whether a [fiat currency](#), [gold-backed currency](#), [currency board](#) or a [currency union](#). When a country has its own national currency, this involves the issue of some form of standardized currency, which is essentially a form of [promissory note](#): a promise to exchange the note for "money" under certain circumstances. Historically, this was often a promise to exchange the money for precious metals in some fixed amount. Now, when many currencies are [fiat money](#), the "promise to pay" consists of nothing more than a promise to pay the same sum in the same currency.

Many central banks are "banks" in the sense that they hold assets (foreign exchange, gold, and other financial assets) and liabilities. A central bank's primary liabilities are the currency outstanding, and these liabilities are backed by the assets the bank owns. Unusually, however, central banks in jurisdictions with fiat currencies may "create" new money to back its own liabilities, to theoretically unlimited amounts.

In many countries, the central bank may use another country's currency either directly (in a currency union), or indirectly, by using a [currency board](#). In the latter case, local currency is directly backed by the central bank's holdings of a foreign currency in a fixed-ratio; this mechanism is used, notably, in [Hong Kong](#) and [Estonia](#).

In countries with fiat money, monetary policy may be used as a shorthand form for the interest rate targets and other active measures undertaken by the monetary authority.

Central vs. national

There is no standard terminology for the name of a central bank, but many countries use the "Bank of Country" form (e.g., [Bank of England](#), [Bank of Canada](#), [Bank of Russia](#)). Some are styled national banks, such as the [National Bank of Ukraine](#). In many countries, there may be private banks that incorporate the term national. Many countries have state-owned banks or other quasi-government entities that have entirely separate functions, such as financing imports and exports.

In some countries, particularly in some Communist countries, the term national bank may be used to indicate both the monetary authority and the leading banking entity, such as the [USSR's Gosbank](#) (state bank). In other countries, the term national bank may be used to indicate that the central bank's goals are broader than monetary stability, such as full employment, industrial development, or other goals.

Interest rate interventions

Typically a central bank controls certain types of short-term [interest rates](#). These influence the [stock-](#) and [bond markets](#) as well as [mortgage](#) and other interest rates. The [European Central Bank](#) for example announces its interest rate at the meeting of its Governing Council (in the case of the [Federal Reserve](#), the [Board of Governors](#)).

Both the Federal Reserve and the ECB are composed of one or more central bodies that are responsible for the main decisions about interest rates and the size and type of open market operations, and several branches to execute its policies. In the case of the Fed, they are the local Federal Reserve Banks, for the ECB they are the national central banks.

Interest rate interventions are the most common and are dealt with in more detail below.

Limits of enforcement power

Contrary to popular perception, central banks are not all-powerful and have limited powers to put their policies into effect. Most importantly, although the perception by the public may be that the "central bank" controls some or all interest rates and currency rates, economic theory (and substantial empirical evidence) shows that it is impossible to do both at once in an open economy. [Robert Mundell's "impossible trinity"](#) is the most famous formulation of these limited powers, and postulates that it is impossible to target monetary policy (broadly, interest rates), the exchange rate (through a fixed rate) and maintain free capital movement. Since most Western economies are now considered "open" with free capital movement, this essentially means that central banks may target interest rates or exchange rates with credibility, but not both at once.

Even when targeting interest rates, most central banks have limited ability to influence the rates actually paid by private individuals and companies.

Even the US must engage in buying and selling to meet its targets. In the most famous case of policy failure, [George Soros](#) arbitrated the [pound sterling's](#) relationship to the [ECU](#) and (after making \$2B himself and forcing the UK to spend over \$8B defending the pound) forced it to abandon its policy. Since then he has been a harsh critic of clumsy bank policies and argued that no one should be able to do what he in fact did.

The most complex relationships are those between the [yuan](#) and the [US dollar](#), and between the [Euro](#) and its neighbours. The situation in [Cuba](#) is so exceptional as to require the [Cuban peso](#) to be dealt with simply as an exception, since the US forbids direct trade with Cuba but US dollars are ubiquitous in its economy.

Policy instruments

The main monetary policy instruments available to central banks are [open market operation](#), [bank reserve requirement](#), [interest-rate policy](#), [re-lending and re-discount](#) (including using the [term repurchase](#) market), and [credit policy](#) (often coordinated with [trade policy](#)). While [capital adequacy](#) is important, it is defined and regulated by the [Bank for International Settlements](#), and central banks in practice generally do not apply stricter rules.

To enable open market operations, a central bank must hold [foreign exchange reserves](#) (usually in the form of [government bonds](#)) and [official gold reserves](#). It will often have some influence over any official or mandated [exchange rates](#): Some exchange rates are managed, some are market based (free float) and many are somewhere in between ("managed float" or "dirty float").

Interest rates

By far the most visible and obvious power of many modern central banks is to influence market interest rates; contrary to popular belief, they rarely "set" rates to a fixed number. Although the mechanism to do differs from country to country, most use a similar mechanism based on a central bank's ability to create as much [fiat money](#) as required.

The mechanism to move the market towards a 'target rate' (whichever specific rate is used) is generally to lend money or borrow money in theoretically unlimited quantities, until the targeted market rate is sufficiently close to the target. Central banks may do so by lending money to and borrowing money from (taking deposits from) a limited number of qualified banks, or by purchasing and selling bonds. As an example of how this functions, the [Bank of Canada](#) sets a target [overnight rate](#), and a band of plus or minus 0.25%. Qualified banks borrow from each other within this band, but never above or below, because the central bank will always lend to them at the top of the band, and take deposits at the bottom of the band; in principle, the capacity to borrow and lend at the extremes of the band are unlimited.[1] Other central banks use similar mechanisms.

It is also notable that the target rates are generally short-term rates. The actual rate that borrowers and lenders receive on the market will depend on (perceived) credit risk, maturity and other factors. For example, a central bank might set a target rate for overnight lending of 4.5%, but rates for (equivalent risk) five-year bonds might be 5%, 4.75%, or, in cases of [inverted yield curves](#), even below the short-term rate. Many central banks have one primary "headline" rate that is quoted as the "Central bank rate." In practice, they will have other tools and rates that are used, but only one that is rigorously targeted and enforced.

"The rate at which the central bank lends money can indeed be chosen at will by the central bank; this is the rate that makes the financial headlines." - [Henry C.K. Liu, in an Asia Times article explaining modern central bank function in detail](#) He explains further that "the US central-bank lending rate is known as the [Fed funds rate](#). The Fed sets a target for the Fed funds rate, which its [Open Market Committee](#) tries to match by lending or borrowing in the [money market](#)... a fiat money system set by command of the central bank. The Fed is the head of the central-bank snake because the US dollar is the key reserve currency for international trade. The global money market is a US dollar market. All other currencies markets revolve around the US dollar market." Accordingly the US situation isn't typical of central banks in general.

A typical central bank has several [interest rates](#) or monetary policy tools it can set to influence markets.

- **Marginal Lending Rate (currently 4.75% in the Eurozone) A fixed rate for institutions to borrow money from the CB.**
- **Main Refinancing Rate (3.75% in the Eurozone) This is the publicly visible interest rate the central bank announces. It is also known as *Minimum Bid Rate* and serves as a bidding floor for refinancing loans (In the US this is called the [Discount rate](#)).**
- **Deposit Rate (2.75% in the Eurozone) The rate parties receive for deposits at the CB.**

These rates directly affect the rates in the [money market](#), the market for short term loans.

Open Market Operations

Through [open market operations](#), a central bank influences the money supply in an economy directly. Each time it buys [securities](#), exchanging money for the security, it raises the money supply. Conversely,

selling of securities lowers the money supply. Buying of securities thus amounts to printing new money while lowering supply of the specific security.

The main open market operations are:

- **Temporary lending of money for collateral securities** ("Reverse Operations" or "**repurchase operations**", otherwise known as the "repo" market). These operations are carried out on a regular basis, where fixed **maturity** loans (of 1 week and 1 month for the ECB) are auctioned off.
- **Buying or selling securities** ("Direct Operations") on ad-hoc basis.
- **Foreign exchange operations** such as **forex swaps**.

All of these interventions can also influence the **foreign exchange** market and thus the exchange rate. For example the **People's Bank of China** and the **Bank of Japan** have on occasion bought several hundred billions of **U.S. Treasuries**, presumably in order to stop the decline of the **U.S. dollar** versus the **Renminbi** and the **Yen**.

Capital requirements

All banks are required to hold a certain percentage of their assets as capital, a rate which may be established by the central bank or the banking supervisor. For international banks, including the 55 member central banks of the **Bank for International Settlements**, the threshold is 8% (see the **Basel Capital Accords**) of risk-adjusted assets, whereby certain assets (such as government bonds) are considered to have lower risk and are either partially or fully excluded from total assets for the purposes of calculating **capital adequacy**. Partly due to concerns about **asset inflation** and **term repurchase** agreements, capital requirements may be considered more effective than deposit/reserve requirements in preventing indefinite lending: when at the threshold, a bank cannot extend another loan without acquiring further capital on its balance sheet.

Reserve requirements

Another significant power that central banks hold is the ability to establish reserve requirements for other banks. By requiring that a percentage of liabilities be held as **cash** or deposited with the central bank (or other agency), limits are set on the **money supply**.

In practice, many banks are required to hold a percentage of their deposits as **reserves**. Such legal **reserve requirements** were introduced in the nineteenth century to reduce the risk of banks overextending themselves and suffering from **bank runs**, as this could lead to knock-on effects on other banks. *See also* **money multiplier**, **Ponzi scheme**. As the early 20th century **gold standard** and late 20th century **dollar hegemony** evolved, and as banks proliferated and engaged in more complex transactions and were able to profit from dealings globally on a moment's notice, these practices became mandatory, if only to ensure that there was some limit on the ballooning of **money supply**. Such limits have become harder to enforce. The **People's Bank of China** retains (and uses) more powers over reserves because the **yuan** that it manages is a **non-convertible currency**.

Even if reserves were not a legal requirement, prudence would ensure that banks would hold a certain percentage of their assets in the form of cash reserves. It is common to think of commercial banks as passive receivers of deposits from their customers and, for many purposes, this is still an accurate view. This passive view of bank activity is misleading when it comes to considering what determines the nation's money supply and credit. Loan activity by banks plays a fundamental role in determining the money supply. The money deposited by commercial banks at the central bank is the real money in the banking system; other versions of what is commonly thought of as money are merely promises to pay real money. These promises to pay are circulatory multiples of real money. For general purposes, people perceive money as the amount shown in financial transactions or amount shown in their bank accounts. But bank accounts record both credit and debits that cancel each other. Only the remaining central-bank money after aggregate settlement - **final money** - can take only one of two forms:

- **physical cash, which is rarely used in wholesale financial markets,**
- **central-bank money.**

The currency component of the money supply is far smaller than the deposit component. Currency and bank reserves together make up the monetary base, called **M1** and **M2**.

Exchange requirements

To influence the money supply, some central banks may require that some or all **foreign exchange receipts** (generally from exports) be exchanged for the local currency. The rate that is used to purchase local currency may be market-based or arbitrarily set by the bank. This tool is generally used in countries with non-convertible currencies or partially-convertible currencies. The recipient of the local currency may be allowed to freely dispose of the funds, required to hold the funds with the central bank for some period of time, or allowed to use the funds subject to certain restrictions. In other cases, the ability to hold or use the foreign exchange may be otherwise limited.

In this method, money supply is increased by the central bank when the central bank purchases the foreign currency by issuing (selling) the local currency. The central bank may subsequently reduce the money supply by various means, including selling bonds or foreign exchange interventions.

Margin requirements and other tools

In some countries, central banks may have other tools that work indirectly to limit lending practices and otherwise restrict or regulate capital markets. For example, a central bank may regulate **margin lending**, whereby individuals or companies may borrow against pledged securities. The margin requirement establishes a minimum ratio of the value of the securities to the amount borrowed.

Central banks often have requirements for the quality of assets that may be held by financial institutions; these requirements may act as a limit on the amount of risk and leverage created by the financial system. These requirements may be direct, such as requiring certain assets to bear certain minimum **credit ratings**, or indirect, by the central bank lending to counterparties only when security of a certain quality is pledged as **collateral**.

Examples of use

The [People's Bank of China](#) has been forced into particularly aggressive and differentiating tactics by the extreme complexity and rapid expansion of the economy it manages. It imposed some absolute restrictions on lending to specific industries in 2003, and continues to require 1% more (7%) reserves from urban banks (typically focusing on export) than rural ones. This is not by any means an unusual situation. The US historically had very wide ranges of reserve requirements between its dozen branches. Domestic development is thought to be optimized mostly by reserve requirements rather than by capital adequacy methods, since they can be more finely tuned and regionally varied.

Banking supervision and other activities

In some countries a central bank through its subsidiaries controls and monitors the banking sector. In other countries banking supervision is carried out by a government department such as the UK Treasury, or an independent government agency (eg UK's [Financial Services Authority](#)). It examines the banks' [balance sheets](#) and behaviour and policies toward [consumers](#). Apart from refinancing, it also provides banks with services such as transfer of funds, [bank notes](#) and [coins](#) or foreign currency. Thus it is often described as the "bank of banks".

Many countries such as the United States will monitor and control the banking sector through different agencies and for different purposes, although there is usually significant cooperation between the agencies. For example, [money center banks](#), [deposit-taking institutions](#), and other types of financial institutions may be subject to different (and occasionally overlapping) regulation. Some types of banking regulation may be delegated to other levels of government, such as state or provincial governments. Any [cartel](#) of banks is particularly closely watched and controlled. Most countries control [bank mergers](#) and are wary of concentration in this industry due to the danger of [groupthink](#) and runaway lending bubbles based on a [single point of failure](#), the [credit culture](#) of the few large banks. In finance generally, [diversification](#) reduces [financial risk](#), including diversity of [point of view](#).

"Independence"

Advocates of central bank independence argue that a central bank which is too susceptible to political direction or pressure may encourage economic cycles ("[boom and bust](#)"), as politicians may be tempted to boost economic activity in advance of an election, to the detriment of the long-term health of the economy and the country. In this context, independence is usually defined as the central bank's operational and management independence from the government.

In addition, it is argued that an independent central bank can run a more [credible](#) monetary policy, making market [expectations](#) more responsive to signals from the central bank. Recently, both the Bank of England (1997) and the European Central Bank have been made independent and follow a set of published [inflation targets](#) so that markets know what to expect. Even the [People's Bank of China](#) has been accorded great latitude due to the difficulty of problems it faces, though in the [People's Republic of China](#) the official role of the bank remains that of a [national bank](#) rather than a central bank, underlined by the official refusal to "unpeg" the yuan or to revalue it "under pressure". PBoC independence can thus be read more as independence from the US which rules the financial markets, not from the

[Communist Party of China](#) which rules the country. The fact that the CPoC is not elected also relieves the pressure to please people, increasing its independence.

Governments generally have some degree of influence over even "independent" central banks; the aim of independence is primarily to prevent short-term interference. For example, the chairman of the U.S. Federal Reserve Bank is appointed by the [President of the U.S.](#), and his choice must be confirmed by the [Congress](#).

The powers of such appointed positions are usually highly limited. The main decisions on monetary policy, to name but one example, are made by privately appointed figures independently of any elected political powers. Such is the case with the [Monetary Policy Committee](#) of the [Bank of England](#), where the majority power is elected by and given to members of private [corporations](#).

[International organizations](#) such as the [World Bank](#), the [BIS](#) and the [IMF](#) are strong supporters of central bank independence. This results, in part, from a belief in the intrinsic merits of increased independence. The support for independence from the [international organizations](#) also derives partly from the connection between increased independence for the central bank and increased transparency in the policy-making process. The [IMF's FSAP](#) review self-assessment, for example, includes a number of questions about central bank independence in the transparency section. An independent central bank will score higher in the review than one that is not independent.

History

In Europe prior to the [17th century](#) most money was [commodity money](#), typically [gold](#) or [silver](#).

However, promises to pay were widely circulated and accepted as value at least five hundred years earlier in both Europe and Asia. The medieval European [Knights Templar](#) ran probably the best known early prototype of a central banking system, as their promises to pay were widely regarded, and many regard their activities as having laid the basis for the modern banking system. At about the same time, [Kublai Khan](#) introduced [fiat currency](#) to [China](#), which was imposed by force by the confiscation of [specie](#). However, it was [colonialism](#) and the introduction of a large global [commodity market](#), mostly managed by the [British Empire](#) with its vast sea power - the [Royal Navy](#).

The oldest central bank in the world is the [Bank of Sweden](#), which was opened in [1668](#) with help from [Dutch](#) businessmen. This was followed in [1694](#) by the [Bank of England](#), created by [Scottish](#) businessman [William Paterson](#) in the [City of London](#) at the request of the [English](#) government to help pay for a war. The [US Federal Reserve](#) was created by the [U.S. Congress](#) through the passing of the [Glass-Owen Bill](#), signed by President [Woodrow Wilson](#) on [December 23, 1913](#).

The [People's Bank of China](#) evolved its role as a central bank starting in about 1979 with the introduction of market reforms in that country, and this accelerated in 1989 when the country took a generally capitalist approach to developing at least its export economy. By 2000 the PBoC was in all senses a modern central bank, and emerged as such partly in response to the [European Central Bank](#). This is the most modern bank model and was introduced with the [euro](#) to coordinate the European national banks, which continue to separately manage their respective economies.

External links and Thanks

- **Henry C K Liu (n.d.). [Banking Bunkum: A critique of the role of central banks around the world](#)**
- **[List of central bank websites at the Bank for International Settlements](#)**
- **[Central Bank Rates](#) Live and current rates of the world's major central banks**
- **"The Moneymasters" [documentary on central banking](#)**
- **www.bankofgreece.gr**
- **www.ecb.int**
- **www.bis.org**
- **The evolution of the Central Banks - Goodhart**

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