

An Overview of Central Banks

Central banks everywhere have several things in common regardless of where they are located. They are a banker's bank, a place where banks can seek relief in turbulent times. They usually are issuers and custodians of the currency, and protect it from everything including forgery to runs on its value. Many have regulatory powers as well. And most importantly, they make monetary policy decisions.

Financial market participants view central banks' monetary policy decisions and their timing as one of the primary inputs to the investment decision-making process. Central bank decisions impact interest rates, and interest rates have a direct effect on the cost of doing business and therefore profits. Their role in setting interest rates directly is relatively new and it is only in the last 15 to 20 years that central banks have targeted them directly. For example, the Federal Reserve (Fed) began to set the federal funds rate directly in June 1989 rather than targeting monetary aggregates (M1, M2, M3). Previously, money supply was increased/decreased to achieve the desired interest rate. And there were also periods in the 1980s and before when the Fed targeted the fed funds rate even more overtly and no announcement was made. Instead, Fed watchers would have to pore over the weekly money supply data to see if there had been a policy change.

There are many commonalities—and differences—in the business of central banking. They include the way each bank adjusts interest rates, how economic data are used to help make informed decisions, differing interpretations and uses of inflation targeting, central bank cooperation both with other central banks and financial regulators, and the list goes on. And while policies may seem similar, often terminology will differ. Some of the banks are relatively transparent in their decision making while others remain opaque. Each bank applies common central bank policies in a way that is unique to their political and social environment. A key policy tool for many—but not all—central banks is inflation targeting. But we will get to that later in this chapter.

The purpose of this chapter is to give an overview of what is common and different about the Banks but leaving until later a fuller description of each Bank's development and functions. The Banks covered are the European Central Bank (ECB), Bank of England, Bank of Japan (BoJ), Bank of Canada, Reserve Bank of Australia (RBA) and the People's Bank of China (PBOC).

A FASCINATION WITH CENTRAL BANKS

Central Bank Watching—A Major Financial Market Occupation

The U.S. Federal Reserve's (Fed's) pronouncements are sliced and diced for any hints regarding policy that would affect the economy and the financial markets. And it is no different for "other" central banks. Investors in other particular geographic areas behave in much the same way as watchers in the United States. In fact, like the Fed, these other central banks can impact financial markets worldwide. Investors everywhere watch the BoJ for assurances that deflation has ended in Japan. Investors in Europe hope that the ECB will not increase rates by too much and cut off its nascent recovery. And Canadian investors watch Bank of Canada policy as they weigh the relative merit of Canadian versus U.S. investment payoffs. Bank of England watchers are wondering if interest rates can accommodate the inflationary pressures of crude oil prices and tight labor markets while at the same time, not squashing consumer demand.

Investors care about a bank's independence from political pressures. For example, the ECB did not respond to persistent and intense political pressure to lower interest rates despite anemic growth and the stronger euro during 2004 and 2005. The ECB is the newest central bank and wanted to show how free of political interference it is—political rhetoric is bound to make it do the opposite.

The BoJ used to be part of the Ministry of Finance (MoF). Now it is fiercely independent and fends off any interference from the Ministry or, for that matter, any other part of the Japanese government. It struggled over policy especially in the late 1990s and early 2000s while the economy was in the depths of a recession. And in early 2006 when it was apparent to the central bank that deflation was ending and the economy had recovered and was out of recession, the Bank staved off an avalanche of political rhetoric and proceeded to begin the normalization of its policies. The Bank continues to act for the Ministry of Finance in the currency markets, usually selling yen for dollars to deflate the yen's value.

Central bank policies provide guidance for investors. Interest rate policies provide the broad umbrella under which business is done and the banks' announcements are broadly watched and anticipated by market players. The Bank of Canada meets about every six weeks; the Bank of England, ECB, and Reserve Bank of Australia meet monthly; and the BoJ, about every three weeks, while the PBOC meets quarterly. But all can hold emergency meetings should the situation arise. Virtually all the central banks held emergency meetings in the aftermath of the terrorist attacks on September 11, 2001, for example.

A quick word about the Fed—even though I have not included the U.S. central bank within the scope of this book. (See Evelina Tainer's marvelous description of the Federal Reserve in her third edition of *Using Economic Indicators to Improve Investment Analysis*. Hoboken, NJ: John Wiley & Sons, 2006.) I would be remiss not to mention the worldwide impact of Fed policy moves. Given the U.S. position as the world's primary engine of growth, a brief recent example of its impact on global markets should be sufficient. In the run up to the Federal Open Market Committee (FOMC) meeting in May 2004, world financial markets became transfixed as they waited for the decision on interest rate policy. When the post-meeting statement indicated that an interest rate increase would occur soon, equity markets in Europe and Asia swooned but the dollar rose on the news.

"Carry trade" became a popular form of trading in the low-interest-rate years of the early 2000s. Investors took full advantage of interest rate spreads between countries to borrow in a low-interest-rate country and then invest the funds in a higher-interest-rate country. For example, when U.S. interest rates were 1 percent, it was fashionable to borrow here and invest elsewhere—perhaps Australia, where rates were as much as 425 basis points higher at that time. As U.S. rates began to climb, the paradigm changed, investors borrowed in Europe, where rates were 2 percent and below most other countries, or in Japan, where zero interest rates prevailed.

Central Bank Tasks

Regardless of which central bank you are talking about, they all have essentially the same functions. They:

- Set monetary policy.
- Determine how the economy behaves.
- Respond to economic and financial market conditions within their jurisdiction.
- Control money supply.
- Regulate the banking system.

- Issue currency (The Federal Reserve is the exception. The U.S. Treasury prints U.S. currency while the Fed puts it into circulation.)

A Primer on How Monetary Policy Works

Setting policy by directly changing interest rates is a relatively new tool for central banks. For example, the Federal Open Market Committee (FOMC) began setting targets for the fed funds rate in June 1989. And other central banks soon followed.

When a central bank decides to change the official interest rate their goal is to eventually influence the overall level of consumer and business expenditures. Beginning in November 2003 and ending in August 2004, for example, the Bank of England increased interest rates five times with the explicit intent of slowing down the housing market, where prices were skyrocketing. At the same time, they wanted to cool torrid consumer spending. The Bank uses the interest rate at which they lend to financial institutions or “repo” as the mechanism to adjust rates. When the Bank moves the “repo” rate up or down, it triggers changes in a whole gamut of interest rates, including those set by commercial banks, building societies, and other institutions for their own savers and borrowers. Interest rate changes affect financial asset prices for bonds and equities as well. The exchange rate for a country’s currency can also feel the reverberations of an interest rate change, especially when it goes against traders’ expectations. In short, lowering or raising interest rates affects spending throughout the economy.

Saving is less attractive and borrowing more attractive when interest rates are reduced. This in turn stimulates spending. Recent U.S. experience with lower-than-normal interest rates is a good example of what cheap money can do. But lower interest rates can have a negative influence on both consumers’ and firms’ cash flow. Lower interest rates reduce savings (interest) income as well as the interest payments due on loans. Lower interest rates can boost the prices of assets such as equities and houses. Higher house prices enable existing home owners to extend their mortgages in order to finance higher consumption. Higher share prices raise households’ wealth and can increase their willingness to spend. The opposite occurs when interest rates are increased.

The exchange rate can be pressured by interest rate changes. The widening (or narrowing) of the spread between interest rates in two countries impacts investment flows between the two and the consequent demand for their currencies. For example, if the United Kingdom’s interest rate was higher relative to those in the U.S. it would give British investors a higher return on assets relative to their foreign currency equivalents, tending to

make UK assets more attractive. This was particularly true during 2003 and 2004 when the fed funds rate rested at 1 percent and the Bank of England was in the process of increasing its key interest rate to 4.75 percent.

Fluctuations in currencies also can influence consumer and business demand in a variety of ways but usually via international trade. Again let us use the United Kingdom as an example. In theory, the wider spread in the country's favor should raise the value of the pound sterling, reduce the price of imports, and reduce demand for UK goods and services abroad. However, the impact of interest rates on the exchange rate is, unfortunately, seldom that predictable. The only thing predictable about the foreign exchange market is its unpredictability!

Some of these influences can work more quickly than others. And the overall effect of monetary policy will be more rapid if it is credible. But, in general, there are time lags before changes in interest rates work their way through to spending and saving decisions, and longer still before they affect consumer prices. It is estimated that the maximum effect on output can take up to about one year while the maximum impact of a change in interest rates on consumer price inflation takes up to about two years. So interest rates have to be set based on judgments about what inflation might be—not what it is today.

Interest Rates Come with a Variety of Names

Central banks have a variety of names for their policy-making interest rate even though they are basically similar and the goal is the same—to increase or decrease what banks must pay to borrow and thereby affect the whole gamut of interest rates available to borrowers. But regardless of what it is called, interest is payment for the use of borrowed money.

The one most familiar to investors is the federal (fed) funds rate. The fed funds rate is the interest rate charged by one depository institution on an overnight sale of immediately available funds (balances at the Federal Reserve) to another depository institution. The rate can vary from depository institution to depository institution and from day to day. The target fed funds rate is set by the FOMC. By setting a target fed funds rate and using monetary policy tools, that is, open market operations, discount window lending, and reserve requirements, to achieve that target rate, the Federal Reserve and the FOMC seek “to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates,” as required by the Federal Reserve Act.

The discount rate is the rate at which central banks lend or discount eligible paper. It is also known as the bank rate. In the United States, the discount rate is usually changed at the same time as the fed funds rate upon

the request of the 12 regional Federal Reserve Banks. The Bank of Japan targets its discount rate as its policy-setting rate and uses the discount rate as its policy rate for uncollateralized loans.

One of the more common terms is *repo rate* or *repurchase rate*. It is generally used to refer to the interest rate on securities repurchase agreements used by central banks to influence domestic money markets. For example, an overnight repo is used by the Bank of England to adjust interest rates.

The overnight rate is the interest rate at which major financial institution may borrow/lend overnight or one-day funds among themselves. This is common in Canada.

The Reserve Bank of Australia uses the cash rate. The *cash rate* is the rate charged on overnight loans between financial intermediaries and exerts a powerful influence on other interest rates. It forms the base on which the structure of other interest rates is built. The cash rate is determined in the money market by the interaction of demand for and supply of overnight funds.

Looking for the Magic Formula for Monetary Policy

What is the best way to operate monetary policy in order to provide the conditions for sustainable growth? Over the years, central banks tried to find the magic combination of policies that would sustain growth. They would work for a while and then become problematic. First, central banks tried fixing exchange rates to gold and some tried fixing or pegging their exchange rates to those of other countries. Some central banks tried to target credit or the growth of monetary aggregates, while many relied solely on their own judgment. Suffice it to say that all have had their problems.

Many banks now think that the best way for monetary policy to promote sustainable economic growth is to anchor expectations in the future purchasing power of money. Bitter experience has proven that when monetary policy chases short-term goals, mistakes are made, uncertainty is increased, and fluctuations in economic activity are aggravated. Now, focusing on domestic price stability is thought to be the best contribution monetary policy can make to economic stabilization and sustainable long-term growth. But only time will tell if it is the panacea its supporters think it is.

INFLATION TARGETING

New Zealand, the first country to adopt inflation targeting, did so with strong support and fairly specific instructions from its legislature. The

Reserve Bank of New Zealand Act of 1989 established the basic framework, giving the central bank the objective of “achieving and maintaining stability in the general level of prices,” with “regard for the efficiency and soundness of the financial system.” The act provided that the government and Reserve Bank jointly determine the specific inflation target and other policy objectives through Policy Target Agreements. The first of these agreements defined price stability as a range of 0 percent to 2 percent in New Zealand’s consumer price index, set a goal of achieving price stability in two years, and gave conditions that could justify breaching its inflation targeting range. Several changes since then have widened the price stability range and have introduced additional objectives, such as output growth stability. These modifications have made New Zealand’s inflation targeting much more flexible.

Canada followed New Zealand in 1991. The United Kingdom adopted a form of targeting in 1992, while Australia and Sweden followed in 1993. Subsequently, Finland and Spain adopted inflation targeting (before becoming members of the European Monetary Union) and in the last few years several developing countries have adopted this approach. Although the European Central Bank does not identify itself as an inflation-targeting regime, the Maastricht Treaty set price stability as the ECB’s primary objective, and the ECB has set an explicit numerical target for inflation.

The 1990s were a period of considerable reform and innovation in central banks around the world. Many new central banks were established, while many already established banks were given greater independence from their governments, often in exchange for a clear commitment to meet specific targets for inflation.

Governmental involvement, although important, was somewhat less explicit for Chile, Canada, and the United Kingdom. When Chile adopted inflation targeting in 1990, the move was preceded by new central bank legislation. In 1991, a joint announcement by the Canadian government and the Bank of Canada stated its target. This announcement along with the subsequent joint announcements established a target range for price stability but left the details and the responsibility for policy in the hands of the Bank. In the United Kingdom, which adopted inflation targeting in 1992, the Chancellor of the Exchequer announced the inflation goal. Though the Bank of England later gained independence, the Chancellor still sets policy goals for the Bank annually in his budget message.

There was less explicit governmental involvement in the next group of inflation targeting countries. In Sweden, which adopted inflation targeting in 1993, the government had previously announced that controlling inflation was an overriding goal for the Riksbank. At the Reserve Bank of Australia, its Governor, using broad and previously delegated authority, announced its

change to inflation targeting in a speech. Norway's Norges Bank operates under a governmental mandate declaring that the long-term objective of monetary policy is to maintain the domestic and international value of its currency. The European Central Bank operates under the authority delegated to it by the Maastricht Treaty establishing the European Community with the primary goal of price stability.

What Is Inflation Targeting?

Most major central banks' primary monetary policy goal is to contain inflation. That is, a specific number or range in which inflation or price increases must remain is set. Other goals such as sustained growth are secondary in many cases. However, two major central banks have shunned inflation targeting so far—the Bank of Japan and the U.S. Federal Reserve. While they both agree that price stability is of paramount importance, they have other goals as well.

U.S. monetary policy focuses on encouraging economic growth and achieving full employment while containing inflation. It has been under pressure to consider using an inflation target as a way to make policy more transparent. Prior to being named chairman in 2006, Ben Bernanke was a leading exponent of inflation targeting during his term on the Board of Governors. The Federal Reserve Act calls on the Fed to maintain growth of credit and the money supply “commensurate with the economy’s long-run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.” The Fed’s mandate states directly that monetary policy should aim at having the U.S. economy operate at full capacity.

The Bank of Japan has thus far spurned official inflation targeting despite pressures from the government. The suggestion implied that if the BoJ fixed an inflation target, the economy would rid itself of deflation. In the first quarter of 2006, the Bank’s inflation measure, the CPI, was no longer declining—much to the consternation of government officials, who hoped for zero interest rates a while longer to finance their astronomical fiscal deficit cheaply.

Inflation targeting generally identifies price stability as the primary objective in monetary policy. An explicit numerical target for inflation is set, including a time period over which any deviation from the target is to be eliminated. Some variations do provide escape clauses related to the pace of return to price stability. While the theme is common, there are various ways in which the target can be defined. But they boil down to either a range or a specific numerical target or a combination of both. Some are dogmatic in pursuing the target, while others are more flexible and include other considerations besides inflation into their monetary policy objective.

Three Examples of Inflation Targeting

The three more prominent monetary policies that rely on inflation targeting are those of the European Central Bank and the Banks of England and Canada. The ECB is mandated by treaty to target inflation, while the Bank of England has its inflation target set annually by the Chancellor of the Exchequer in his budget message. The Bank of Canada's target range is decided jointly by the Bank and the government every five years. Both the ECB and Bank of England use a specific numerical inflation target—2 percent, but with a difference. While the ECB sets a ceiling above which inflation should not climb, the Bank of England tends toward its target but allows for symmetry around it with a range of plus or minus 1 percent around the target. Should inflation exceed/drop more than the 1 percent, the Governor is required to write a letter or remit to the Chancellor explaining why this happened. The Bank of Canada uses a range of 1 to 3 percent and tends toward the 2 percent midpoint.

Measures of Inflation for Targeting Purposes

The various central banks tend to use different measures of inflation for policy purposes. And all are calculated somewhat differently. The ECB uses the harmonized index of consumer prices (HICP), the inflation measure for the European Union. The Bank of England recently changed its inflation measure from the retail price index excluding mortgage interest payments (RPIX) to one modeled after the HICP and called the CPI. The Bank of Canada uses a consumer price index but it is formulated differently from those used by the UK and EU. Most use a core measure of consumer prices, but do not always exclude the same items. They all, however, use a year-on-year percent change measure. The United States has several consumer price measures, but former Fed Chairman Alan Greenspan preferred the personal consumption expenditure (PCE) deflator that is calculated as part of gross domestic product (GDP) rather than the CPI, believing that it better reflects the actual change in the cost of living. The Fed monitors the PCE excluding food and energy, and it is one of the variables they forecast in their annual statement. But they also keep an eye on the CPI.

In a 2005 speech, Bank of Canada Governor David Dodge provided insight to the Canadian interpretation of inflation targeting. He explained the Bank's choice of the CPI as its particular inflation measure. Among the reasons he cited was that the CPI was familiar to Canadians and choosing a well-known indicator makes it easier to be accountable to the population and provide an explanation for the Bank's actions. Because the volatility of some CPI components can cause sharp month-to-month fluctuations, the Bank uses a core inflation measure as an operational guide. The core strips

out the eight most volatile components, along with the effect of changes in indirect taxes on the rest of the index to give a better understanding of inflation's trend.

He also said that the Bank uses a symmetric target and is not focused on a specific numerical target. Dodge emphasized that policy makers worry equally about inflation falling below target and about it rising above target. The symmetry provides an answer to charges that central banks target inflation at the expense of growth. Paying close attention to the deviation from target promotes timely action in response to both positive and negative demand shocks. Businesses and individuals can make long-range economic plans with increased confidence because the Bank guards against both deflation and inflation.

In the Bank's view, inflation targeting is very helpful in terms of accountability. If inflation persistently deviates from the target, it is committed to explaining the reasons why this is so, what will be done to return it to target, and how long the process should take.

The Actual Practice of Inflation Targeting

The Bank of Canada probably has the vaguest legal mandate. Its statute requires it to regulate "credit and currency in the best interests of the economic life of the nation." Despite the absence of a precise legal mandate, the details of the Bank's monetary policy objectives are reached by agreement between the Bank and the Department of Finance. The current agreement, which is renewed every five years, sets price stability as monetary policy's principal objective and sets the range for inflation as 1 percent to 3 percent, with the midpoint as the explicit target.

The Reserve Bank of Australia has a mandate most closely resembling the United States, but it is even broader and more open-ended. And although the country is considered an inflation-targeting country, it has a dual mandate rather than a hierarchical one. Their legislative mandate as stated in the Reserve Bank Act is "to [promote] stability of the currency of Australia; [maintain] full employment in Australia; and [foster] economic prosperity and welfare of the people of Australia." The explicit inflation target is 2 percent to 3 percent and is set by the central bank. It applies to the average inflation rate over a business cycle rather than a specific time horizon.

The mandate of the Bank of England is set out in Article 11 of the Bank of England Act. It sets monetary policy objectives "to maintain price stability" and "subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment." The

explicit target, which is set by the Chancellor of the Exchequer annually in his budget message, is currently 2 percent. The Governor of the Bank of England must write a letter to the Chancellor if inflation deviates by more than 1 percentage point from the target.

The European Central Bank was established by the Maastricht Treaty, which identifies price stability as the principal objective. Article 105 of the Maastricht Treaty states that “the primary objective of the [European System of Central Banks (ESCB)] shall be to maintain price stability.” The objectives mentioned include “sustainable and non-inflationary growth,” a “high level of employment,” and “raising the standard of living” among member states. The ECB’s Governing Council sets the explicit numerical inflation target, which is a ceiling of 2 percent.

INTER-CENTRAL BANK COOPERATION

Bank for International Settlements

Cooperation between the world’s central banks is visible at times of crisis, although it certainly is not limited to only those times. Cooperation is particularly apparent through the Bank for International Settlements (BIS), an international organization that fosters international monetary and financial cooperation and serves as a bank for central banks. It was established on May 17, 1930, and is the world’s oldest international financial organization. The BIS provides a forum to promote discussion and policy analysis among central banks and within the international financial community; a center for economic and monetary research; a prime counterparty for central banks in their financial transactions; and an agent or trustee in connection with international financial operations. The head office is in Basel, Switzerland, and there are two representative offices: in Hong Kong and in Mexico City.

Crisis management was apparent in the immediate aftermath of the terrorist attack on the New York World Trade Center on September 11, 2001, as central banks sought to assure global liquidity in the financial markets. In the immediate aftermath, the Bank of Canada matched the Federal Reserve’s 125-basis-point interest rate reduction in September and October, while the Bank of England reduced rates by 50 basis points. The Bank of Japan had no place to go with interest rates already at near zero. The Reserve Bank of Australia also lowered rates by 50 basis points. The European Central Bank lagged the others, gradually reducing rates by 50 basis points in September and then another 25 basis points in November.

Group of Five, Then Seven

To further international cooperation, the finance ministers and central bank chairs of the major industrial countries meet periodically to discuss common economic and financial issues. The Group of Five, originally consisting of the United States, Japan, the United Kingdom, Germany, and France, met for the first time in 1975, and in 1976 were joined by Canada and Italy. The meetings expanded to include heads of state on an annual basis usually in June or July. The finance ministers and central bank chairs generally meet quarterly. Financial markets usually pay close attention to the statements that emanate from these meetings. For example, the April 2006 meeting statement saying that Asian countries should allow their currencies to rise in value was interpreted by currency traders to mean that the U.S. dollar should decline, much to the consternation of Asian governments, who prefer a lower currency value to promote their exports.

In the next several chapters, the focus will be on individual central banks. We start with the oldest, the Bank of England, and then move onto the ECB, the newest.