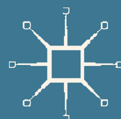
Central Bank Independence, Regulations, & Monetary Policy

From Germany and Greece to China and the United States

Ranajoy Ray Chaudhuri



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Ranajoy Ray Chaudhuri
Muhlenberg College
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CHAPTER 1

Introduction

1.1 The Origins of Banking

The practice of banking predates the introduction of standardized currency in the form of coins. Coins evolved from measures of weight. The earliest known coins date back to the seventh century B.C. and were in circulation in the Lydian kingdom, which is part of present day Turkey. Ancient Greek and Babylonian temples functioned as the world's oldest banks. Banking declined in importance after the spread of Christianity as charging interest was viewed as immoral, but was revived in the middle ages to raise funds for the Crusades with the aid of the Templars and the Hospitallers.

Italy evolved into the birthplace of modern banking. The first known foreign exchange contract occurred in Genoa in 1156 when two brothers borrowed in Genoese pounds and repaid the amount in bezants in Constantinople. Accountants working for the House of Medici in Florence developed the double-entry book-keeping method for recording credits and debits. Banca Monte dei Paschi di Siena, founded in 1472 in Siena, is currently the oldest operating bank in the world. The bank originated as a *monte pio* or mount of piety, which was a charitable pawn agency run at the behest of the Magistracies of the Republic of Siena. The institution was specifically intended for the poorer segments of the population at a time of particular hardship for the local economy. The scope of the institution rapidly evolved, especially following the charters of 1568 and 1624,

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and the institution became a bank in the classical sense of the word. It began accepting deposits and the Medici Grand Duke even started providing state guarantees to the depositors on their money by entailing the income from the pasture lands held by the state, though he asked to be indemnified by the residents of Siena for any losses incurred by him. The bank also started expanding its market to progressively larger areas of Tuscany.[1] It is currently one of the largest banks in Italy, with over two thousand branches and more than five million customers. Florence and Venice were other early centers of Italian banking. Though none of the oldest banks in either city have survived through the ages, the Acciaiuoli, Bardi, Medici and Peruzzi families were well-known for the immense power they wielded that stemmed from their banking wealth.

The second oldest continuously operating bank is the Berenberg Bank, officially known as the Joh. Berenberg, Gossler & Co. KG, based in Hamburg, Germany. It was founded in 1590 by the Flemish Berenberg family that had descended from the brothers Hans and Paul Berenberg, who fled Antwerp and came to Hamburg as Protestant refugees when the Dutch Protestants were given the choice to either convert to Catholicism or leave the country. The Berenberg Bank soon became a significant player in the field of trade, dealing in manufactured goods from Germany, silks and velvet from Italy, and colonial products from Portugal. It gradually became very successful as a merchant bank specializing in commercial loans and investment banking, financed the industrial revolution in the Hamburg area, and was extensively involved with trade with southern Europe, Scandinavia and Russia, and with North America later in the nineteenth century.[2] A significant share of the bank is owned by the family to this day.

Excluding central banks, the third spot is occupied by the oldest British bank, C. Hoare & Co. This is a private bank established by Sir Richard Hoare in 1672, with its headquarters in London. Sir Hoare started out as a goldsmith and, taking advantage of the secure premises and piles of cash, subsequently began lending money to his customers with interest; banking was hence a natural evolution. While other smaller banks were all acquired by larger ones, C. Hoare & Co. is the sole survivor among the more than 750 private deposit banks that were established during the seventeenth and eighteenth centuries in England and Wales.[3] The bank currently offers savings accounts and provides mortgages, other loans, and tax and estate planning services. Like Berenberg Bank, C. Hoare & Co. remains in the hands of the founding family.

1.2 The Pioneers in Central Banking

1.2.1 The Netherlands

The Bank of Amsterdam (*Amsterdamsche Wisselbank* in Dutch) is considered to be the forerunner of modern central banks. It was established in 1609 in Amsterdam when it was part of the Republic of the Seven United Provinces; the United Provinces had formed when Netherlands had seceded from Spanish rule in the late sixteenth century. It performed some of the activities associated with modern central banks. This was a time when Europe was fractured into many small states whose currency typically traded at a discount, and the Bank of Amsterdam accepted deposits in these myriad currencies and credited the depositors in what was known as "bank money," which traded at a premium. The bank closed its doors as a result of providing large and risky loans to the local government of Amsterdam and the Dutch East India Company and committing other financial improprieties in 1819, just a few years after the creation of the Kingdom of the Netherlands in March of 1815.

1.2.2 Sweden

The oldest central bank in the world in the modern sense of the term is Sveriges Riksbank (often referred to as *Riksbanken* in Swedish and Bank of Sweden in English), which is the central bank of Sweden. A Dutch merchant named Johan Palmstruch established a bank named Stockholms Banco in Stockholm in 1657 after obtaining a charter from King Charles X Gustav during his brief but eventful reign. One of Palmstruch's brainwaves was to use the money deposited by account holders to finance loans that were made by the bank. This is a mainstay of modern banking, but back then deposit banking and loan banking were separate activities. Stockholms Banco itself had originated as two separate charters, an exchange bank that opened its doors in 1657 and a loans bank that started operating in 1659. The two were later merged by Palmstruch, who was the general manager. Palmstruch had another major contribution to the field of banking. Sweden did not have a single unified currency at the time; the riksdaler was issued in both copper and silver. Silver appreciated in value relative to copper over time, which caused the exchange rate between the two to fluctuate. Copper currency especially depreciated in value in the year 1660. Some of this copper currency was rectangular plate money that

was huge and heavy; the ten riksdaler piece weighed around 45 pounds (or 20 kilos). Silver coins were hoarded by the Swedes, whereas copper coins were bulky. This prompted Palmstruch to issue the first European banknotes. Issuance of these notes, known as kreditivsedlar, began in 1661. The notes were easy to carry and freely transferrable, and as a result they quickly replaced the cumbersome dalers in transactions.

The downfall of Stockholms Banco was due to its issuance of far too many banknotes without securing them with the requisite collateral. The Swedish parliament decided to intervene in what was the first banking crisis in Sweden. Palmstruch was convicted by the Svea Court of Appeals of financial mismanagement; his death sentence, however, was subsequently commuted. On September 17, 1668, the charter of Stockholms Banco was transferred to the Bank of the Estates of the Realm (*Riksens Ständers Bank* in Swedish), whose name was changed to Sveriges Riksbank in 1866. The bank instituted a silver standard to stabilize the economy. To lower the chances of successful counterfeiting, Riksbank opened its own paper mill for printing bank notes in Tumba, a southwestern suburb of Stockholm, in 1755.[4] The paper was handmade and included unique watermarks and embossed stamps. The notes themselves were printed in Stockholm, and included the motto "*Hinc robur et securitas*" (From here, strength and security). Counterfeiting carried the ultimate penalty of death by hanging. The Riksbank also oversaw the establishment of the first savings banks in Sweden in the 1820s and the first mortgage institutions in the 1830s.[5]

1.2.3 United Kingdom

The royal charter for establishing the Bank of England was granted on July 27, 1694. England needed money to shore up its military in the backdrop of the War of the Grand Alliance (or the Nine Years' War) with King Louis XIV of France. England's First Lord of the Treasury, Fellow of Trinity College at Cambridge and close friend of physicist and mathematician Sir Isaac Newton, Charles Montagu devised the Bank of England Act of 1694 (also known as the Tonnage Act) as

> An Act for granting to theire Majesties severall Rates and Duties upon Tunnage of Shipps and Vessells and upon Beere Ale and other Liquors for secureing certaine Recompenses and Advantages in the said Act mentioned to such Persons as shall voluntarily advance the summe of Fifteene hundred thousand pounds towards the carrying on the Warr against France.[6]

The stated goal was to raise £1,200,000 at an eight percent interest. The subscribers would be rewarded by incorporation as The Governor and Company of the Bank of England. This worked exactly as Montagu had hoped; the requisite funds were raised in less than two weeks and the bank, sometimes referred to as the Old Lady of Threadneedle Street, established a firm foothold. The bank's first governor was Sir John Houblon, who at various times was also the sheriff of London, the mayor of London and a director of the British East India Company.

In its earliest form, the Bank of England had limited functions. It gradually acquired much of broad regulatory powers and its standing as the lender of the last resort in the country over the course of the following two centuries. The Bank Charter Act of 1844 played an especially important role. It was passed by the parliament during the prime ministership of Sir Robert Peel, who is better known for introducing Britain to the type of police officers known as bobbies or peelers during his tenure as home secretary. Bobbies wore uniforms that were different from military uniforms at the time, and did not carry guns; their only weapon was a wooden truncheon. He was also responsible for repealing the Corn Laws designed to protect corn manufacturers in Great Britain from foreign competition during his second term in office. The Bank Charter Act prohibited commercial banks in England and Wales from issuing their own banknotes. Henceforth only the Bank of England would have the power to do so. Interestingly, these regulations did not apply to Scotland and Northern Ireland; even today, three Scottish banks (Bank of Scotland, Royal Bank of Scotland and Clydesdale Bank) and four banks in Northern Ireland (Northern Bank/Danske Bank, First Trust Bank, Ulster Bank and Bank of Ireland) continue to issue pound sterling banknotes. The act also granted the Bank of England certain other privileges.[7] The ownership structure of the Bank of England gradually evolved. The bank was established clearly as a private enterprise, but over time became increasingly involved in regulation and came to be regarded as a public institution. The Overend, Gurney and Company, a London-based wholesale bank owned by a prominent Quaker family, collapsed in May of 1866 partly as a result of a steep fall in the price of railroad stocks. In the aftermath of the collapse, the panic spread. The first casualties were many other British banks and financial companies. Eventually, the panic of 1866 became an international financial crisis, compounded by the abandoning of the silver standard and the consequent shortage of gold in Italy the same year. The Bank of England was widely criticized for its reluctance to offer assistance during

this period. Many Britons in positions of power, including the businessman and journalist Walter Bagehot, advocated the Bank of England to provide liquidity to ailing banks in times of financial crises. In response, the bank adopted wider regulatory powers and became the lender of the last resort, acting to calm the financial market in this new capacity when the Barings Crisis hit Britain in 1890. The British Barings Bank had suffered huge losses on its investments in Argentina, and this time the Bank of England spent £18 million to bail out Barings instead of letting it sink.[8] The Bank of England was officially nationalized on March 1, 1946.

1.2.4 Spain

The third oldest central bank is the Bank of Spain (*Banco de España* in Spanish), established by King Charles III on June 2, 1782, in the capital city of Madrid. Its original name was Banco Nacional de San Carlos. The first director of the new institution was François Cabarrus, oddly a Frenchman. This was followed by a stint as the Banco Español de San Fernando. The current name dates back to the banking law of 1856. Like most of the other older central banks, it started as a private bank before eventually becoming public. It issued Spain's first bank notes, known as the Banco de San Carlos warrants.[9] Other functions included raising money for the state by helping in the issuance of debt instruments, providing funds for the Spanish military, making loans for commercial purposes and cracking down on fraudulent lending and other financial practices.

1.2.5 France

Banque de France followed, with its establishment as a joint stock company on February 13, 1800, during the rule of Napoleon Bonaparte as the First Consul of France.[10] The goal was to stimulate economic growth after the financial and political turmoil of the revolutionary years. However, its original scope was limited to the city of Paris.[11] In 1803, the bank received its first official charter, along with which came the right to be the sole issuer of bank notes for the next 15 years. It was overseen by a Central Committee, whose first president was Jean-Barthélémy. The bank's first few years did not go very smoothly. The government found itself short of funds, and France's gold reserves also dropped. As a result, Napoleon replaced the Central Committee with a governor and two deputy governors of his choosing in 1806; the first governor was Emmanuel Crétet,

Comte de Champmol. The headquarters was in Paris. An imperial decree in 1808 authorized the establishment of branch offices in other towns across the country as needed. The number of branches rapidly multiplied after 1850; by 1928, there were 259 branches outside Paris.[12] Banque de France was also officially placed in charge of maintaining the value of the franc by guarding against excessive foreign exchange volatility.

1.2.6 Other European Pioneers

Among other European powers that were among the first to open sovereign central banks were some of the Nordic countries. Finland opened the Bank of Finland (*Suomen Pankki* in Finnish) in Turku on March 1, 1812. This was when Finland was under the suzerainty of the Russians, with Alexander I of Russia being the Grand Duke of Finland and Lithuania. In 1819, the bank was relocated to Helsinki. Soon after seceding from Denmark, the Norwegian parliament followed with the opening of the Norges Bank on June 14, 1816. Denmark opened the Danish National Bank (*Danmarks Nationalbank* in Danish) on August 1, 1818, under King Frederick VI.[13] The first governor was Christian Klingberg. Also among the pioneers were the National Bank of Austria (*Oesterreichische Nationalbank* in German) in 1816, the Bank of Portugal (*Banco de Portugal* in Portuguese) in 1846, and the National Bank of Belgium (*Nationale Bank van België* in Dutch and *Banque nationale de Belgique* in French) in 1850.

Notes

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CHAPTER 2

The Idea of Central Bank Independence

2.1 The Advantages and Drawbacks of Central Bank Independence

Central bank independence has increasingly become an important topic of discussion among policymakers as well as people in the financial industry. The primary reason for granting autonomy to central banks is to insulate them from political pressure while making decisions regarding benchmark interest rates and other policy tools that are at their disposal. International organizations such as the Bank for International Settlements, the International Monetary Fund and The World Bank all strongly support central bank independence. The first central bank to be granted statutory independence was the Deutsche Bundesbank as a result of the Bundesbank Act of 1957.

Advocates of central bank independence point to the tendency of governments to focus too much on elections to control the institution, which is detrimental to the long-term needs of the economy. The temptation to cut interest rates before elections to create a short-term upswing to boost growth rates and lower unemployment would be strong. This boom will inevitably be followed by a downturn, creating political business cycles with more inflection points than would be entailed by regular business cycles. If the loose monetary policy caused inflation, then the newly elected or re-elected government will have to raise rates to battle it. Equally

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important is the role of expectations. If the government allows moderate to high inflation in order to maintain a focus on low unemployment, then that causes inflationary expectations to increase. This in turn leads to more inflation. Having an autonomous central bank takes these decisions out of the hands of the government. An independent central bank is likely to have more credibility with businesses as well as the general public, and hence is likely to be more effective at keeping inflationary expectations and therefore actual inflation in check. It would also be more willing to raise rates to counteract inflation even if there are negative political consequences of doing so.

Critics of central bank independence point out that central bankers are unelected officials who aren't accountable to anyone once they are nominated by the executive and confirmed by the country's legislature. For instance, there has been an ongoing debate in the United States regarding whether the Federal Reserve should be audited. The Federal Reserve Transparency Act was introduced in both the house and the senate; while it passed in the house, it died in the senate. The central bank could also have a single-minded focus on achieving its inflation target without regard to its effects on the broader economy. Inflation has ceased to be an issue on the forefront of people's minds, and a much bigger problem is broad structural changes in the economy, high unemployment and underemployment, and sluggish growth. Beginning with Alvin Hansen in the sluggish 1930s, several economists have used the phrase "secular stagnation" over the decades to denote prolonged periods of low growth rates.[1] This best describes the current scenario. Larry Summers notes that recovery after the 2008 financial crisis has been far weaker than after previous downturns.[2] Even more surprisingly, despite the cheap credit, the inflation rate has remained stubbornly below its target, a combination of monetary policy; less capital investment due to lower levels of bank lending; austerity measures in some countries; demand-side factors such as the stockpiling of cash by companies, increasing income inequality and flat real wages; and demographic changes such as an ageing population curtailing consumption to save for retirement, retiring baby boomers and falling birth rates. Many of the developed countries are in a prolonged liquidity trap, with interest rates that are so low that central banks have to take recourse to unconventional monetary policies such as using the central bank's balance sheet to influence financial conditions beyond the short-term rate, referred to as balance sheet policies or quantitative easing; actively managing expectations of the future path of the policy rate to provide extra stimulus

when rates have reached their perceived lower bound, referred to as forward guidance; and setting policy rates below zero in nominal terms, referred to as negative policy rates. While these measures were supposed to be exceptional and temporary, in many countries they risk becoming standard and permanent.[3] A third drawback is the central banks' lowering of interest rates to their lowest levels on record and keeping them at that level has created winners and losers in the process. While borrowers have benefitted from the policies, savers have been hurt.

It should be noted that the words "autonomy" and "independence" are both used interchangeably throughout the book to denote the degree of freedom of the central bank, following the convention in central banking literature. However, Lybek (1998) cautions that this can be confusing.[4] The term "autonomy" might be preferable to "independence"; while autonomy refers to the operational freedom of central banks, independence might simply indicate a lack of institutional constraints.

2.2 Types of Central Bank Independence

Central banks across the world vary widely with regard to various aspects of independence, which is typically specified by the legislative statute governing the central bank. Political autonomy includes criteria such as the governor and the board of directors being appointed without government involvement, the duration of such appointments, mandatory participation of government representatives in the board, the requirement of government approval in formulating monetary policy, and legal protections strengthening the central bank's position and some legal immunity for the governor in the event of a conflict with the government. The most independent central banks will have non-renewable terms of appointment for the governor and the board of directors to minimize the chances of the appointees trying to please the government with the goal of getting reappointed. Similarly, the terms will be longer than the electoral cycle and office-bearers can only be removed before the end of the term in case of serious misconduct. The European Central Bank, being unique, also has partial exemption from the national laws of the European Union member states.[5] Economic autonomy indicates freedom in selecting instruments, and includes factors such as automatic procedures for the government to obtain direct credit facilities from the central bank, the interest rate on and the duration of such credit, the degree of participation of the central bank in the primary market for public debt and the freedom of the central bank

in setting the discount rate. Prohibiting lending to the government or public agencies limits pressure from these agencies. A more extreme form is goal independence, where the central bank can decide its own monetary policy goal; examples are output targeting, inflation targeting, controlling the growth of money supply, and maintaining a fixed exchange rate or a currency board.

Central bank autonomy can also be measured in terms of other aspects. Financial independence means that the central bank has full control over its budget. In some countries it is not dependent on the government for funds at all, but raises the necessary cash through its own income. The central bank is also barred from lending money to the government in many countries, eliminating the impulse to monetize deficits. Legal autonomy implies that the bank is its own legal person. It can be a signatory to international agreements without requiring the prior approval of the government and can go to court if needed to enforce its independence.

It is important to note that independence does not imply a complete lack of accountability. The central bank is required to keep the legislature informed of their actions by periodically attending scheduled meetings and appearing before committees. The central bank is also accountable to either the legislature or the Ministry of Finance of the country and to the general public, albeit to varying degrees. For instance, the Federal Reserve is accountable to the Congress and to the American public.[6] The Federal Reserve publishes an exhaustive report twice a year, and the Chairperson as well as the Governors and other officials frequently testify before the Congress. The Federal Open Market Committee (FOMC) publishes a statement immediately after each of its eight regularly scheduled meetings every year and releases the full minutes for the meeting after three weeks. Complete verbatim transcripts of the meetings are released after a five-year lag. The Chairperson also holds press conferences after select FOMC meetings to discuss its monetary policy decision. The emphasis on transparency and clear communication is critical, as inflationary expectations are likely to remain more anchored if businesses, individuals and the government have a better understanding of the central bank's monetary policy goals. The Board of Governors publishes the central bank's balance sheet every week with that in mind. Finally, the financial statements of the Federal Reserve Banks and the Board of Governors are audited by an independent external auditor every year. Many of the activities of the Federal Reserve Bank are also frequently audited by the Government Accountability Office and the Board's Office of Inspector General.

2.3 Central Bank Independence Across the World

Early studies of central bank independence either focused on just one country or only looked at legal independence in developed countries due to the difficulties of measuring some of the other aspects of independence. An indicator of central bank independence that is just based on legal independence is problematic. The law can never anticipate all possible contingencies that have a bearing on the separation of powers between the government and the central bank that might arise. Moreover, even under circumstances where the law is clear, the government might push the boundaries. Beginning in the 1990s, three seminal works addressed these concerns in different ways.

The first comprehensive study of central bank independence was undertaken by Grilli et al. (1991), who compare the monetary regimes of eighteen OECD countries by building two additive legal measures of central bank autonomy.[7] The sample includes Australia, Austria, Belgium, Canada, Denmark, France, Germany, Greece, Ireland, Italy, Japan, the Netherlands, New Zealand, Portugal, Spain, Switzerland, the United Kingdom and the United States. The ability of the central bank to choose monetary policy goals is determined by the procedure for appointing the members of the central bank governing bodies, the relationship between the governing bodies and the government, and the formal responsibilities of the central bank. A greater ability to choose monetary policy goals hence indicates greater central bank independence, and the authors equate this with political independence. Political independence is enhanced if senior level appointments are not controlled by the government but left to representatives of the central bank, like in Canada and Italy; if the term of appointment is long and of fixed duration; no government representative participates in the decision-making process; prior government approval is not required to make monetary policy decisions; the constitution of the country clearly states that the primary responsibility of the central bank is monetary stability; and there is a clear procedure for the resolution of conflicts that arise between the government and the central bank. Economic independence refers to the power of the government in determining how much it can borrow from the central bank, either through direct credit facilities or by purchasing government securities in the primary market, and the nature of monetary instruments that are under the control of the central bank. Economic independence is enhanced if the government is constrained in how much it can borrow from the central

bank as well as the conditions under which it can borrow, as that can change the monetary base; for instance, direct credit to the government could be temporary, extended at the market rate and is not automatic. Other determinants of economic independence include the ability of the central bank to control the discount rate, and the existence of ceilings on loans given to private banks as they can facilitate government borrowing by increasing the private demand for government securities.

The authors come up with a simple system where they assign the country one point for every attribute of central bank independence that it possesses. The findings indicate that the central banks of Belgium, France, Japan, New Zealand, Portugal, Spain and the United Kingdom have low political autonomy; those of Canada, Italy, Switzerland and the United States are in the middle; while those of Germany and the Netherlands have high political autonomy. On the other hand, the central banks of Canada, Germany, Switzerland and the United States have high economic autonomy; Denmark, France, Ireland, Japan, the Netherlands and the United Kingdom are in the middle; while those of Greece, Italy and Portugal have low economic autonomy.

Cukierman et al. (1992) develop four measures of central bank independence.[8] These include an aggregate legal index spanning four decades from 1950 to 1989 and three indexes of actual independence, which are the rate of turnover of central bank governors, an index based on a questionnaire filled out by specialists in 23 countries, and an aggregation of the legal index and the rate of turnover. Compared to Grilli et al. (1991), they have a broader sample of 72 that includes 21 developed as well as 51 developing countries.[9] The authors also note that sometimes the spirit of the law and how frequently it is applied are more important than the letter of the law. While they code central banks according to their various characteristics related to independence like the previous study, the authors also study the actual frequency of turnover of central bank governors. One of their measures is also informed by the responses to a questionnaire from monetary policy specialists in 23 countries, where the questionnaire was specifically designed to identify divergences between the charter of the central bank and the actual practice.

The measures of legal independence include two types of information: some narrow but precise legal characteristics, and specific language from the bank charter. To minimize having to use subjective judgment, the authors look at four sets of characteristics[10]:

- The appointment, dismissal, and term of office of the chief executive officer of the bank—usually the governor
- The policy formulation cluster, which concerns the resolution of conflicts between the executive branch and the central bank over monetary policy and the participation of the central bank in the budget process
- The objectives of the central bank
- Limitations on the ability of the central bank to lend to the public sector; such restrictions limit the volume, maturity, interest rates, and conditions for direct advances and securitized lending from the central bank to the public sector

The scores range from zero, which represents the lowest level of independence, to one, which represents the highest. Given the enormous changes in global economic conditions during the sample period, with two decades on the Bretton Woods system, its demise, two oil shocks, a period of disinflation and the debt crisis, the authors used separate legal dummies for each decade. West Germany, Switzerland, Austria, Denmark and the United States, all of which are developed countries, have the highest level of legal independence; Poland, Morocco, Yugoslavia, Nepal and Qatar have the least. However, the median level of legal independence is virtually the same for developed and developing countries, standing at 0.33 and 0.34 respectively.

The rankings are quite different when looking at the turnover of central bank governors. While a higher turnover is interpreted as being indicative of greater dependence, that is not always the case as a subservient governor might also end up staying on for a longer period. The countries with the least turnover were Iceland, the Netherlands, Denmark, Luxembourg and Norway; Argentina, Brazil, Costa Rica, Western Samoa and Uruguay had the highest. This time, however, a clear difference emerges between developed and developing countries. The average turnover rates for all the developed countries are less than 0.2, which indicates an average tenure of five years. More than half of the developing countries have turnover rates exceeding 0.2, with the rate being 1.00 and 0.8 in Argentina and Brazil, meaning that their central bank governors lasted an average duration of one year and one year and three months respectively.

The questionnaire regarding central bank independence in practice was only sent to 23 countries. Some of the questions included asked about the objectives of the central bank and their practical importance, how strictly

limitations on lending were actually observed, how much subsidized credit was extended by the central bank to the private sector, the quantitative targets for money supply, the determination of the bank budget, and by how much the tenure of the governor and relevant executive branch officials actually overlapped. This measure specifically focuses on the conditions prevailing in the 1980s. The countries with the highest scores were West Germany, Costa Rica, Finland, Australia and Italy; the ones with the lowest were Ethiopia, Yugoslavia, Peru, Tanzania and Turkey. As these numbers are constructed from subjective evaluations, this index is likely to contain more noise than the others.

The authors also combine their legal index and turnover into an aggregate index of central bank independence since they capture different dimensions of independence and are also more important for different subsets of countries. To reduce the arbitrariness of the weighing mechanism, the authors set the weights equal to the coefficients from the regressions where they are used to explain the variation in their transformed inflation variable. Based on the aggregate index, West Germany, Switzerland, Austria, Denmark and the United States ranked the highest in the 1980s; Argentina, Chile, Brazil, Singapore and Western Samoa had the lowest scores.

This work was updated by Cukierman et al. (2002).[11] Using the same methodology as the 1992 paper, this study constructed a measure of legal independence of the central banks of 26 former socialist economies. The results indicate that the former socialist economies were quite ambitious in their central banking reforms despite the rocky transition from central planning to free markets. Central banks in most of these countries had substantially higher levels of central bank independence in the 1990s than developed countries did in the 1980s.

Jácome and Vázquez (2008) reviewed the central banking legislations of 24 countries in Latin America and the Caribbean in the 1990s.[12] The decade saw significant revisions to the central banking legislations in many Latin American countries following intractable inflation and other macroeconomic imbalances, with a general move toward greater central bank independence. The works of Kydland and Prescott (1977) and Barro and Gordon (1983) suggested that when governments were faced with a trade-off between inflation and unemployment, they tended to choose lower unemployment at the cost of higher inflation.[13,14] Rogoff (1985) further showed that this propensity toward higher than optimal inflation could be checked by entrusting an independent central bank

with the conduct of monetary policy.[15] These made an impact on policymakers. Chile undertook central bank reforms in 1989, El Salvador in 1991, Argentina in 1992 and 2002, Colombia in 1992, Nicaragua in 1992 and 1999, Venezuela in 1992 and 2001, Ecuador in 1992 and 1998, Peru in 1993, Mexico in 1993, Bolivia in 1995, Costa Rica in 1995, Uruguay in 1995, Paraguay in 1995, Honduras in 1996 and 2004, Guyana in 1998, Guatemala in 2001 and the Dominican Republic in 2002. By contrast, most Caribbean countries did not amend their central banking legislations in any way.

Like the Cukierman et al. (2002) study, the authors look at central bank independence both pre and post reform, and also consider other structural reforms undertaken by the countries such as liberalizing the trade regime, reforming the labor market, and privatizing state-owned enterprises.[16] The authors replicate their legal index; they also consider three alternative measures of legal independence including one that adds several new dimensions such as political autonomy, legal provisions for policy formulation, economic autonomy and accountability to it, as well as the index developed by Grilli et al. (1991).[17] Of the countries in their sample, Chile, Argentina, Bolivia, Mexico and Peru had the highest combined levels of economic and political independence *a la* Grilli et al. post central bank reforms; Jamaica, Surinam, Barbados and Belize had the lowest. Peru, Chile, Ecuador and El Salvador had the highest levels of independence *a la* Cukierman et al. post central bank reforms; Jamaica, Suriname, the Dominican Republic and Trinidad and Tobago had the lowest. This indicates considerable overlap between the two sets of rankings.

Dincer and Eichengreen (2014) calculate updated measures of transparency and independence for over 100 central banks, including those of all large and systemically significant countries, and find a general trend away from earlier central bank practices that favored confidentiality and toward both greater transparency and greater independence.[18] They discuss four reasons behind the trend. First, it can be viewed as part of a broader movement toward holding the government more responsive to public concerns. Second, as central banks become more independent, transparency becomes increasingly essential to ensure their accountability. Third, greater transparency means less of an element of surprise around policy decisions, which reduces volatility in the markets. Finally, transparency increases the credibility of the central bank to commit to its goal.

The authors find measures of central bank transparency to be the highest in Sweden, New Zealand, Hungary, the Czech Republic, the United

Kingdom and Israel; Angola, Aruba, Bermuda, the Cayman Islands, Libya, Syria and Tonga had the least transparent central banks. The analysis shows that the statistically significant determinants of transparency are GDP per capita, financial depth, openness, political stability, regulatory quality, democracy and polity. They consider four measures of central bank independence; based on the Cukierman et al. index, the Kyrgyz Republic, Latvia, Hungary, Armenia and Bosnia and Herzegovina have the most independent central banks. India, Saudi Arabia and Singapore have the least. The statistically significant determinants of central bank independence are financial depth, IMF lending and having the British common law system.

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CHAPTER 3

The United States of America

3.1 Central Banking in the Pre-Federal Reserve Era

The United States has had a long love-hate relationship with central banks. A major controversy for over a century was whether the federal government or the states should be allowed to charter banks. The private Bank of North America was chartered by the Continental Congress in 1781. It served several of the regular functions of a central bank; it managed the finances of the Congress, and Americans could pay taxes using Bank of North America certificates. The bank was also the first corporation to issue an initial public offering in the country. A branch opened in Montreal in 1837. Individual states could also charter banks. In fact, the state of Pennsylvania took over the operations of the Bank of North America after the Revolutionary War.

The federalists, especially Alexander Hamilton, Secretary of Treasury, advocated greater centralized control of banking. Specifically, a central bank could issue bank notes, be responsible for the safekeeping of public funds, make loans to the government and collect taxes on behalf of the government. This was based on the success of the Bank of England, which was established in 1694 when King William III found himself in need of funds to fight a war against France, and had since helped finance many activities of the British government. Thomas Jefferson, Secretary of State,

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was of the view that the constitution did not authorize Congress to establish a central bank; the Congress would be overstepping its boundaries if it tried to create one. The federalists prevailed, and the Bank of the United States was formed in 1791. Members of congress from New England and the mid-Atlantic states provided the bulk of support for the passage of the bill, over the opposition of many members from the South. There were, however, a few important differences between the Bank of England and the Bank of the United States. Bank of England was privately owned, whereas the Bank of the United States was a public-private partnership. The Bank of England allotted one vote per shareholder, whereas the Bank of the United States followed a weighted voting scheme where the size of holdings would determine a shareholder's voting share. Foreign investors were not allowed to vote. Finally, the Bank of England had no stipulations regarding the loans to specie ratio. The Bank of the United States, on the other hand, was subject to a cap on the ratio of loans to the amount of gold and silver held by it.[1]

The bank had a nationwide presence; its headquarters was in Philadelphia, but it had branches in several other cities. After the first office opened in Philadelphia on December 12, 1791, branches in Baltimore, Boston, Charleston and New York followed in 1792. This was followed by branches in Norfolk in 1800, Savannah and Washington, DC, in 1802 and New Orleans in 1805. The bank had a capital stock of $10 million; $8 million were held by private investors and $2 million were held by the federal government.[2] Directors were appointed in the same proportion: out of the 25 directors, 20 were chosen by private investors and five were appointed by the federal government. Most of the directors were lawyers, merchants and members of congress from the three principal cities of Boston, New York and Philadelphia. The first president of the bank was the merchant, former Supreme Court justice and former mayor of Philadelphia Thomas Willing. He had been the president of the Bank of North America and was the natural choice to lead the new bank, holding the position from 1791 to 1807.

Like most modern banks, the Bank of the United States (also known as the First Bank of the United States) accepted deposits, made loans, purchased government securities and issued bank notes. The interest rate it could charge on loans it made could not be higher than six percent per year. Unlike today's central banks, it did not conduct monetary policy or regulate other banks, and carried on business with both the government and members of the public. Farmers were suspicious of centralizing

banking powers (as bigger banks were more impersonal) and advocated chartering by the states. The bank had been chartered for a period of 20 years. The charter came up for renewal in 1811, but failed by a single vote in both the houses of the US congress despite President James Madison's support; the tally was 65–64 in favor of postponing the renewal in the House of Representatives and a 17–17 tie in the Senate, which resulted in Vice President George Clinton casting the eighteenth vote against renewing the charter. The country ceased to have a central bank after the Bank of the United States ceased operations on March 3, 1811.

The War of 1812 once again required the Congress to raise funds quickly. The confusion created by the lack of banking regulations and the wide variety of bank notes printed by individual state chartered banks compounded the need for a central bank. Hence the Congress created the Second Bank of the United States in 1816; the vote was close, but the bill passed both the house and the senate and had the blessing of the speaker of the House Henry Clay of Kentucky and of the President James Madison. The Second Bank of the United States had a capital stock of $35 million; $28 million were held by private investors and $7 million were held by the federal government. Similarly, four-fifths of the directors (20 out of –25) were chosen by the private investors and the remaining one-fifth (5 out of 25) were appointed by the US President subject to the approval of the senate.

The first president of the bank was the former Secretary of the Navy and acting Secretary of the Treasury William Jones. Jones resigned from the position in January of 1819 at a time when the bank came under intense criticism as a result of a financial crisis caused by its southern and western branches issuing too much paper currency as well as fraud in its Baltimore branch (which went into receivership). The ex-Speaker of the House of Representatives Langdon Cheves from South Carolina became the new president. In the attempt to stem inflation, Cheves overcorrected the economy by sharply reducing money supply from $8 million to $3.5 million, resulting in high levels of unemployment and large drops in property values. The third and final president of the bank was Nicholas Biddle, who was appointed in 1823. Biddle was a prodigy who entered the University of Pennsylvania at the age of 10, and later transferred to Princeton, graduating as the class valedictorian at the age of 15. After a stint as a lawyer and serving in the Pennsylvania house and senate, he took over the helm of the Second Bank. During his tenure he gradually expanded money supply so that it would keep pace with the growing economy, regulated interest rates, lend to private banks and occasionally

bailed them out. This was the closest the United States came to having a central bank in the modern sense of the term for a long period of time.

The tussle with states' rights advocates continued. When the bank opened a branch in Baltimore in 1817, Maryland introduced a tax on all bank notes that were not issued by Maryland banks the following year. The Second Bank of the United States was the only out-of-state bank in Maryland at the time and they refused to pay the tax; the case went to the Maryland Court of Appeals and then to the US Supreme Court. In 1819 the court affirmed the constitutionality of the bank in McCulloch v. Maryland. But with the election of Andrew Jackson, the seventh President of the United States and a strong advocate of states' rights (who believed that "such a concentration of power in the hands of a few men irresponsible to the people" was dangerous for the country), a presidential veto of the recharter bill sealed the fate of the bank. Moreover, Jackson issued an executive order removing all federal funds from the bank and allocating them to certain private banks. Biddle engineered a financial crisis by raising the interest rate to build support for renewing the charter, but the effort only generated a public backlash against the bank. Hence its charter was again allowed to lapse when it came up for renewal in 1836 at the end of its 20-year term. The bank continued as a state chartered bank in Pennsylvania until 1841, when it folded its operations. The building still stands close to Independence Hall and the Liberty Bell in downtown Philadelphia and currently houses an art museum.

3.2 The Panic of 1907 and the National Banking Commission

The period following the demise of the Second Bank of the United States was characterized by multiple financial panics, with major ones occurring roughly every ten years. A particularly severe one happened in 1907. This is commonly referred to as the Panic of 1907 or the Knickerbocker Crisis. The crisis originated from stock manipulation in the United Copper Company. The company was established in 1902 by Fritz Augustus Heinze, born and raised in Brooklyn, New York and a graduate of Columbia University. His father had wanted him to pursue higher studies in Germany, but Heinze had other plans. He headed west as a mining engineer for the Boston and Montana Company, eventually earning the epithet "copper king" of Butte, Montana along with William Andrews

Clark and Marcus Daly. The three legendary copper magnates became famous as a result of their fights over the control of the local copper mining industry; Marcus Daly was the eventual winner, with his Anaconda Copper Mining Company eventually gaining control of all the mines in Butte under the supervision of banker turned industrialist John Dennis Ryan. Augustus Heinze, along with his brother Otto Heinze and Wall Street speculator Charles Morse came up with a plan to drive up the share prices of the United Copper Company. Their scheme unraveled in October of 1907, and depositors who had accounts with Heinze's and Morse's banks began to withdraw their funds. Despite the intervention of the New York Clearing House which forced Morse to resign, the panic continued to spread. The Knickerbocker Trust Company, founded by J. P. Morgan's friend and classmate Frederick Eldridge in 1884, went under on October 22. The depositors withdrew $8 million in less than three hours, and the trust closed its doors around noon. Its then president Charles Barney shot himself on November 14, 1907. The Knickerbocker Trust was one of the largest trusts in New York and its failure had an unsettling effect on the financial system, including other large trusts like the Trust Company of America and the Lincoln Trust Company. Many of the regional stock exchanges closed; for instance, on October 23, the Pittsburgh Stock Exchange was closed for three months. The Dow Jones lost 50 percent of its value from its January 1906 high of 103 to its November 1907 low of 53. The situation was exacerbated by the April 1906 earthquake in San Francisco, which killed over 3000 people, rendered almost 300,000 homeless and destroyed four-fifths of the city. In addition to destroying the economic base of the bay area, this caused funds to flow from the east to the west coast to aid in reconstruction and caused many insurance companies to go bankrupt.

Augustus Heinze was indicted for his role in the United Copper scam in 1908, but fortunately managed to extricate himself during long drawn out court proceedings. Morse was convicted and went to prison in Atlanta. His fellow prisoner was the Italian con artist Charles Ponzi, who was serving time for smuggling Italian immigrants into the United States. Morse feigned illness by ingesting soap shavings, fooled the prison doctors and managed to get a presidential pardon from Bob Taft. After his release, Ponzi would move to Boston and become world famous for coming up with his "Ponzi scheme" involving international reply coupons. The United Copper Company never managed to recover from the failed scheme, and the company declared bankruptcy in 1913.

Rescue from the panic came in the form of J. P. Morgan and John D. Rockefeller. J. P. Morgan grew up in Hartford, Connecticut, Boston and various cities in Europe. He became a banker in 1857, taking up a position at the merchant banking firm Peabody, Morgan & Co in London. He moved to New York the following year and rose up in the firm, which was renamed J. P. Morgan & Co. in 1895 and had become one of the largest banks in the world. J. P. Morgan had helped the federal government during the financial crisis of 1893, and once again he worked with the Secretary of the Treasury George B. Cortelyou to contain the panic. He managed to convince the heads of other trust companies to lend money. The Treasury provided a considerable amount, and John D. Rockefeller personally provided $10 million. Rockefeller was at the time, the wealthiest man in America. The son of a conman, his first job as bookkeeper earned him 50 cents a day. He gradually built up and expanded his business empire; after a stint in wholesale food, his phenomenal success came in oil refining. He founded Standard Oil in Cleveland in June of 1870. Standard Oil grew rapidly until by the end of the decade it had captured more than 90 percent of the global refined oil market. It also helped develop products like petroleum jelly and chewing gum. Rockefeller was known for his philanthropy. He gave money for the founding of schools and colleges, especially ones for African American students in the South, and he also went on to establish the University of Chicago and Rockefeller University in New York. In addition, he founded the Rockefeller Foundation, which focused on public health and hygiene, medical research and patronizing the arts. Providing a personal loan to stabilize the country's banking system was a natural extension.

The government realized that it couldn't depend on the generosity of the Morgans and the Rockefellers every time there was a financial crisis. The response was the passage of the Aldrich-Vreeland Act establishing the National Monetary Commission in 1908. Nelson Wilmarth Aldrich was a Republican senator from Rhode Island. Aldrich also became the Republican leader in the senate and was the chair of the powerful Senate Finance Committee. Outside of his elected office, he was a wealthy businessman and had great family connections; his son was elected to the House of Representatives and his daughter married the only son and heir of John D. Rockefeller. Art lovers also have much to thank Aldrich for; the Payne-Aldrich Tariff Act of 1909 lowered tariffs on the import of fine arts, and the resulting import of artwork from Europe serves as the nuclei of the collection of some of the biggest American museums. The Aldrich-

Vreeland Act was primarily Aldrich's idea, and he became the chairman of the National Monetary Commission. His house co-sponsor Edward Butterfield Vreeland was a Republican member from New York and the chair of the House Committee on Banking and Currency. He later served as the vice chairman of the National Monetary Commission. The house passed the act on May 27 and the senate passed it on May 30; President Roosevelt signed it into law the same day.

The task of the National Monetary Commission was to study the financial systems of various North American and European economies and come up with a set of policies for reforming the American financial system. Senator Aldrich personally spent a significant time in Europe leading a delegation that studied their financial system. The Commission published more than two dozen reports of its findings, and one of the primary things that emerged from them was the need for having a central bank for the nation. Aldrich worked with important bankers and economists of the day on drawing up a blueprint for establishing a central bank. Some of this was conducted outside of Congressional oversight, the most famous being a secret meeting with the Assistant Secretary of the Treasury and representatives from J. P. Morgan and other important banks at the exclusive Jekyll Island Club[3] on Jekyll Island in Georgia. After almost 80 years without a functional central bank in the country, the Federal Reserve Act of 1913 that was modeled after Aldrich's recommendations finally led to the Fed opening its doors in 1914.

3.3 The Federal Reserve Act and the Federal Reserve System

The act was proposed by Congressman Carter Glass, Democrat of Virginia who introduced it in the House as H.R. 7837 on August 29, 1913, and Senator Robert Owen, Democrat of Oklahoma who introduced it in the Senate, and hence was also known as the Glass-Owen Act. The act passed the house on September 18 and the senate on December 18. Incidentally, Glass was a fiscal conservative and strong states' rights advocate, and was against President Roosevelt's New Deal. In 1920, Glass was appointed and later elected to the Senate. He turned down an offer from Roosevelt to head the Treasury in 1933 and served in the Senate until he passed away in 1946. Owen had a high profile in the Democratic Party; he sought the Democratic nomination for president in 1920, though he lost to James

Cox of Ohio. Cox, with Roosevelt as his running mate, went on to lose the general elections to another Ohioan, Warren Harding. For Owen, on the other hand, the excitement over the creation of the Fed quickly turned to sourness as the Fed focused more on maintaining the international gold standard and strengthening the American banking system than on keeping the inflation rate low and the interest rate moderate.[4]

After the differences between the house and the senate versions were ironed out by the Joint Conference Committee, President Woodrow Wilson signed the Glass-Owen Act into law on December 23, 1913. It was "an Act to provide for the establishment of Federal Reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes."[5] Section 2A outlines the monetary policy objectives of the Fed:

> The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates 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.

Like the First and the Second Banks, originally the Fed was granted a 20-year charter which would come up for renewal in 1933. However, this was amended on February 25, 1927, to state that the charter would continue until dissolved by the Congress or the forfeiture of franchise as a result of legal violations.

The act further stipulated that the Chairman of the Board of Governors shall appear before Congress at semi-annual hearings "regarding—A. the efforts, activities, objectives and plans of the Board and the Federal Open Market Committee with respect to the conduct of monetary policy; and B. economic developments and prospects for the future described in the report required." Moreover, the Board of Governors will submit a written Congressional Report on its activity twice a year at the time of the hearings:

> The Board shall, concurrent with each semi-annual hearing required by this section, submit a written report to the Committee on Banking, Housing, and Urban Affairs of the Senate and the Committee on Banking and Financial Services of the House of Representatives, containing a discussion

> of the conduct of monetary policy and economic developments and prospects for the future, taking into account past and prospective developments in employment, unemployment, production, investment, real income, productivity, exchange rates, international trade and payments, and prices.

Finally, the public should also have access to this information:

> The Board shall place on its home Internet website, a link entitled 'Audit', which shall link to a webpage that shall serve as a repository of information made available to the public for a reasonable period of time, not less than 6 months following the date of release of the relevant information, including—
>
> 1. the reports prepared by the Comptroller General under section 714 of title 31, United States Code;
> 2. the annual financial statements prepared by an independent auditor for the Board in accordance with section 11B;
> 3. the reports to the Committee on Banking, Housing, and Urban Affairs of the Senate required under section 13(3) (relating to emergency lending authority); and
> 4. such other information as the Board reasonably believes is necessary or helpful to the public in understanding the accounting, financial reporting, and internal controls of the Board and the Federal reserve banks.

Section 16 of the Federal Reserve Act authorized the issuance of Federal Reserve notes, which was to be the sole legal tender of the United States. They are printed by and injected into the economy by the Federal Reserve Banks; once in circulation, they become liabilities of the Fed. The Bureau of Engraving and Printing, which is a part of the Department of Treasury, is responsible for printing the currency. The Bureau was established in 1862 and started printing currency in 1863. The first notes printed by it are referred to as fractional currency as they were less than a dollar in denomination. It started printing all currency notes in 1877. Unlike today, currency came in various forms: the Bureau printed gold certificates (1865–1935), silver certificates (1878–1964) and Treasury coin notes (1890–1899).[6] It started issuing Federal Reserve notes in 1914. The year 1929 saw a major redesign of the notes; the design changed so that counterfeiting would be harder and the notes became smaller in dimension. The design changed further in 1991, 1996 and 2003, all of which added extra security features to the notes. The American Council of the Blind brought a lawsuit arguing that identical size for all denominations and the lack of any raised features like patterns or letterings or perforations made

it difficult for the visually impaired to tell them apart. In 2008, the United States Court of Appeals for the District of Columbia Circuit sided with the plaintiff, so another redesign is in the works. The Secretary of the Treasury has the authority to redesign Federal Reserve notes; the exception is the $1 bill, whose redesigning is prohibited by a reoccurring provision in the Treasury's Annual Appropriations Act. Currency production uses the dry intaglio method, whereby the paper doesn't need to be moistened before printing. Each printing plate prints 32 notes at a time, up from the original four as a response to increasing demand and because notes decreased in size. The backside of the notes is printed first, followed by the front, and lastly the seal and the serial number.

The Bureau is also responsible for printing various types of Treasury securities. In the past, it printed passports for the State Department and money orders for the Post Office Department, and until recently, postage stamps. It produced stamps from 1894 to 2005, when the United States Postal Service started procuring all its stamps from private printers. At various points, paper currency for Cuba, Eritrea, the Philippines, South Korea and Thailand were also designed and/or produced here.

The note printing facilities are located in Washington, DC and Fort Worth, Texas. The construction of the DC building was completed in 1880 and that of the Fort Worth building in 1991. The reason for opening a second location was two-fold: serve as an alternative in the event of an emergency in the DC area, and transporting currency to the Dallas, Kansas City and San Francisco Feds at a lower cost. The cotton-based paper that is used by the Bureau is purchased from Crane & Co., founded in the western Massachusetts town of Dalton in 1801 and now based in Boston. The first Crane to get into the paper industry was Stephen Crane, who in the late eighteenth century sold paper to the engraver Paul Revere. Revere is known for role in the Revolutionary War and his accomplishments as an industrialist, but along with John Dunlap, he was also among the earliest to print paper currency in colonial America; the paper used came from Crane's mill.

The act allows the issuance of notes of the denominations of $1, $2, $5, $10, $20, $50, $100, $500, $1000, $5000 and $10,000. The notes carry the portraits of George Washington, Thomas Jefferson, Abraham Lincoln, Alexander Hamilton, Andrew Jackson, Ulysses Grant, Benjamin Franklin, William McKinley, Grover Cleveland, James Madison and Salmon Chase respectively; all were US presidents except Franklin, who was the governor

of Pennsylvania, and Hamilton and Chase, who were both Treasury secretaries. The Treasury also issued some $100,000 bills to the Federal Reserve Banks in 1934 and 1935 against an equal amount of gold bullion. These notes did not circulate publicly. They featured a portrait of Woodrow Wilson. Each Federal Reserve note bears the inscription "this note is legal tender for all debts, public and private." The Federal Reserve Act said:

> Federal reserve notes, to be issued at the discretion of the Board of Governors of the Federal Reserve System for the purpose of making advances to Federal reserve banks through the Federal reserve agents as hereinafter set forth and for no other purpose, are hereby authorized. The said notes shall be obligations of the United States and shall be receivable by all national and member banks and Federal Reserve banks and for all taxes, customs, and other public dues. They shall be redeemed in lawful money on demand at the Treasury Department of the United States, in the city of Washington, District of Columbia, or at any Federal Reserve bank.[7]

The United States Mint, created by Congress' passage of the Coinage Act of 1792, is responsible for minting coins for circulation in the country. The mint is headquartered in Washington, DC, and has minting operations in Denver, Philadelphia, San Francisco and West Point. The mint is also in charge of the US Bullion Depository at Fort Knox in Kentucky, which stores most of America's gold and silver reserves. The immediate reason for the construction of the Bullion Depository was President Roosevelt signing Executive Order No. 6102 on April 5, 1933 "forbidding the Hoarding of gold coin, gold bullion and gold certificates within the continental United States."[8] Some economists were of the view that individual and corporate hoarding of gold was making the Great Depression worse, so the executive order directed everyone to surrender all gold coins, bullions and certificates (in excess of $100, or about 160 grams of gold) to a Federal Reserve bank, branch or agency or to any member bank of the Federal Reserve System by May 1, 1933. It exempted "customary use in industry, profession or art," which covered artists, jewelers, dentists and other occupations that customarily used gold, as well as "rare and unusual coins." Holders of gold hence had less than a month to comply, and non-compliance was subject to criminal penalties of a $10,000 fine or ten years imprisonment or both. Many people moved their gold to other countries like Switzerland, but as more and more people surrendered their gold, the gold holdings of the Fed also increased from $4 bil-

lion in 1933 to $12 billion in 1937.[9] The federal government hence needed a larger space to store its gold. The bullion vault was completed in December of 1936 and gold started being moved to the vault in January of 1937. Over the years, the vault has held many other valuable items for safekeeping; the original US Declaration of Independence and the original US Constitution are two examples. Another rather unusual side-effect of Executive Order No. 6102 is the astronomical price of the 1933 double eagle coin. The double eagle was a gold $20 piece that was minted in 1933 just months before the order was signed. None of them went into circulation as a result of the order, and most were melted down. Two of these coins were presented by the mint to the US National Numismatic Collection and several others were stolen from the mint; these remain the only surviving specimens. One of these was purchased by an anonymous bidder at a Sotheby's auction in New York for $7.59 million in July, 2002. This was the highest price ever paid at an auction for a single US coin until a 1794 silver flowing hair dollar (the first dollar issued by the federal government) broke that record in January of 2013 when it was purchased for $10.02 million. The price included $20 for "monetizing the coin," so that it became a legal tender in the United States.

The country was to be divided into at least 8 but no more than 12 Federal Reserve districts; 12 banks were established, each having jurisdiction over the commercial banks and bank holding companies located in that district. The New York Fed enjoyed more power than the others, with its Trading Desk being entrusted with conducting monetary policy and its president being always on the Federal Open Market Committee. With the Fed came greater uniformity in banking practices across the country, though some regional differences did persist (studies have shown that the impact of monetary policy changes on personal income is the greatest in the Great Lakes region and the least in the Southwest and the Rocky Mountains regions). The Fed was initially limited both in its regulatory powers and monetary policy tools; the only thing it could do to change money supply was to make/call in discount loans. It was also subject to significantly greater political control. Gradually the independence and scope of the Fed evolved, as it accidentally discovered open market operations, was given the authority to change the reserve ratio and reached The Accord with the Fed that made it truly autonomous.

All national banks had to become members of the Federal Reserve System following the passage of the Federal Reserve Act. As a membership requirement, these banks had to buy non-transferable stock in the Federal

Reserve Bank for their respective region. State banks were given the option of becoming members, but they could choose not to do so. Section 8 of the Act permits the Comptroller of the Currency to approve the conversion of state banks into national banks if shareholders owning at least 51 percent of the total shares of the bank vote to do so. The bank also needs to meet certain capital requirements and cannot be under litigation or a formal enforcement order. Once approved, the new name of the bank must contain the world "national." The final part of Section 9 dictates that state member banks could invest in promoting public welfare, especially that of low- and middle-income communities, by providing services like housing and employment. Failure to comply with the provisions of the act or the regulations of set out by the Board of Governors or ceasing to operate without a receiver or liquidating agent could lead to the bank having to surrender its Federal Reserve stock and forfeit all the rights and privileges of membership. Section 9 of the Act also permits mutual savings banks to apply to become part of the Federal Reserve System:

> Any mutual savings bank having no capital stock (including any other banking institution the capital of which consists of weekly or other time deposits which are segregated from all other deposits and are regarded as capital stock for the purposes of taxation and the declaration of dividends), but having surplus and undivided profits not less than the amount of capital required for the organization of a national bank in the same place, may apply for and be admitted to membership in the Federal Reserve System in the same manner and subject to the same provisions of law as State banks and trust companies.[10]

According to the Fed, its duties have expanded over its lifetime and now encompass four general areas.[11] First, it conducts the nation's monetary policy by influencing the monetary and credit conditions in the economy in pursuit of maximum employment, stable prices, and moderate long-term interest rates. Second, it supervises and regulates banking institutions to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers. Third, it maintains the stability of the financial system and contains systemic risk that may arise in financial markets. Fourth, it provides financial services to depository institutions, the US government, and foreign official institutions, including playing a major role in operating the nation's payments system.

The Federal Reserve Bank is usually in close communication with the executive branch, but is not subject to congressional oversight in its day-to-day activities. It is also not dependent on congressional budget or appropriations for funding. The Fed owns large quantities of US Treasury securities, and the interest income that it earns from them is its primary source of revenues. Another component is the fees it earns from the member banks for services like check clearings and fund transfers.

3.4 The Administrative Structure of the Federal Reserve System

3.4.1 The Federal Reserve Banks

The Federal Reserve System, with its headquarters in Washington, DC, consists of three entities. The first of these are the actual Federal Reserve Banks themselves. The country is divided into 12 Federal Reserve Districts, which are identified by their number and by the Reserve Bank city. Each district has one main Federal Reserve Bank, and some districts also have branches of the district headquarters in other cities located in the district. The districts are Boston, New York, Philadelphia, Cleveland (with branches in Cincinnati and Pittsburgh), Richmond (with branches in Baltimore and Charlotte), Atlanta (with branches in Birmingham, Jacksonville, Miami, Nashville and New Orleans), Chicago (with a branch in Detroit), St. Louis (with branches in Little Rock, Louisville and Memphis), Minneapolis (with a branch in Helena), Kansas City (with branches in Denver, Oklahoma City and Omaha), Dallas (with branches in El Paso, Houston and San Antonio), San Francisco (with branches in Los Angeles, Portland, Salt Lake City and Seattle). The San Francisco Fed is geographically the largest of the 12 districts, covering Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah and Washington. Economically, the New York Fed is the most important of the 12 districts, accounting for around 25 percent of the total assets of the Federal Reserve System. The New York, Chicago and San Francisco Feds together hold over 50 percent of the total assets (for example discount loans and securities) of the Federal Reserve System (Fig. 3.1).

Each of these banks is separately incorporated and owned by the private commercial banks in that district which are members of the Federal Reserve System. For example, in case of the Cleveland Fed, banks like

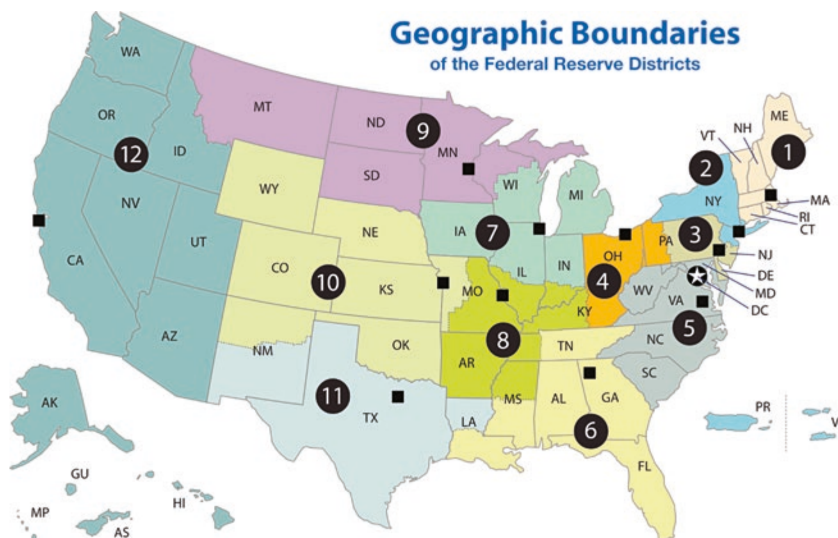

Fig. 3.1 Federal Reserve districts (Source: Commons)

National City, Huntington and Fifth-Third own shares of it. This purchase of stocks is a membership requirement. According to the Federal Reserve Act, the capital stock of each Federal Reserve bank is divided into shares that are worth US $100 each, and the outstanding capital stock can be periodically changed as the capital stock of member banks or their number vary. These shares are non-transferable. The Fed earns significant profits from its operations; the dividends paid out to these banks by the Fed are, however, limited by law to six percent annually. From 1987 all depository institutions (whether members of the Federal Reserve System or not) have to maintain reserves at the Fed, and similarly, all depository institutions now have access to discount loans.

The Federal Reserve member banks elect six directors (three Class A directors representing the member banks and three Class B directors representing the public) for each district bank. The Federal Reserve Board of Governors in Washington, DC appoints three more directors (Class C directors representing the public) for the district. These nine directors together supervise the district banks and appoint the president of the bank, subject to approval by the Board of Governors. Most Reserve Banks have at least one branch, and each branch has its own board of directors. A majority

of the directors on a branch board are appointed by the Reserve Bank, and the remaining branch directors are appointed by the Board of Governors. The directors supervise the operations of their district bank, help in the formulation of national monetary policy (the idea being that directors representing a variety of occupations, demographics and geographical areas will be able to better inform the Board of Governors), provide economic information to the Board of Governors and act as official monetary policy liaisons to the private sector and to the general public. However, they are not responsible for overseeing the bank supervisory role of the Fed.

The tasks entrusted to the Federal Reserve Banks are manifold. They are responsible for supervising the banks within the district and making discount loans to them when they are in need of funds. The banks have teams of researchers who conduct research on the economy. The banks are also responsible for injecting new currency into the economy in conjunction with the Treasury as well as for withdrawing damaged currency from circulation. They evaluate proposed bank mergers and applications by banks to expand their activities. Finally, they examine bank holding companies, which are holding corporations that own multiple banks, often located in various states.

3.4.2 The Board of Governors

The second entity of the Federal Reserve System is its Board of Governors. At the top of the system is the seven-member Board, which is based at the Federal Reserve headquarters in Washington, DC. Each of the seven governors is appointed by the US President and has to be subsequently confirmed by the Senate. To limit political control over the Fed, the governors serve one non-renewable 14-year term, with one governor's term expiring every other January. The Chairman of the Board of Governors is chosen from among the seven governors and serves a four-year term, which can be renewed. Each renewal is subject to Senate confirmation. The current and sixteenth chairman is Jerome Powell, who assumed office on February 5, 2018, taking over from Janet Yellen, the first Chairwoman in the history of the Federal Reserve. Powell was nominated to the Board of Governors by President Barack Obama in December 2011 and assumed office on May 25, 2012, initially to complete the unexpired term of Frederic Mishkin and subsequently for a full 14-year term. Powell is a moderate Republican who largely voted with Yellen, a Democrat, during their time together on the board. He is widely expected to continue most of Yellen's monetary policies, a point that he emphasized in his confirma-

tion hearings.[12] In his first public appearance as Chairman on February 27, 2018, Powell said that he would keep bolstering growth. His approach to financial regulations is different from that of his predecessor. He mentioned that while he supports keeping many of these regulations in place, several of them could be loosened or improved; for instance, capital requirement for some large banks could be reduced, allowing them to rely more heavily on borrowed money. Powell is also less likely to see addressing economic inequality as a priority.[13] While this is more of a fiscal issue, the Federal Reserve can make a difference by rigorously enforcing laws that reduce discrimination by financial institutions.

Like the Federal Reserve Banks, the Board of Governors is also entrusted with numerous tasks. The policy regarding open market operations is decided by the Federal Open Market Committee, but the Board members also serve on the committee and vote on OMOs. However, the Board of Governors has sole authority over setting the reserve requirements; it also has to approve any change in the discount rate initiated by a Federal Reserve Bank. The Board also issues regulations for implementing major federal laws governing consumer credit protection, such as the Truth in Lending Act, the Equal Credit Opportunity Act and the Home Mortgage Disclosure Act. Many of these consumer protection regulations apply to various lenders outside the banking industry as well as to banks. The Chairman of the Board advises the President on economic policy and the Board represents the United States in negotiations with foreign governments on economic matters.

3.4.3 The Federal Open Market Committee

The final entity of the system is the Federal Open Market Committee (or the FOMC). This consists of 12 voting members who meet eight times a year, or approximately once every six weeks. There is also the provision for emergency meetings of the Committee. The dozen members comprise of the seven governors and five presidents of the district banks, one of whom is always the president of the Federal Reserve Bank of New York. The remaining 4 are rotated among the other 11. Committee membership changes at the first regularly scheduled meeting of the year; in 2014, the four rotating members were Cleveland, Dallas, Minneapolis and Philadelphia.[14] The other seven district presidents are also present and participate in the discussions, but do not vote.

The FOMC is entrusted with the very important function of controlling money supply in the economy through the usage of open market operations (or OMOs). Open market operations refer to the purchase or

sale of Treasury securities in the open market. A purchase of bonds by the Fed is called an open market purchase, while a sale of bonds by the Fed is called an open market sale. A bond purchase increases the quantity of money in circulation by an equivalent amount, whereas a sale reduces the quantity. The FOMC, which is based in Washington, DC, does not actually carry out the security purchases or sales. It issues directives to the trading desk of the Federal Reserve Bank of New York, which carries out the transactions every morning. The trading desk is located on the ninth floor of 33 Liberty Street, which is the address of the Federal Reserve Bank of New York. The Federal Reserve Bank of New York enjoys this special status because of its proximity to Wall Street, where much of the network of bond-trading firms has their headquarters. The currency in circulation in the country totaled around $1.2 trillion in July 2013.

Not just anyone can engage in bond trading of a substantial magnitude with the Federal Reserve. The central bank has a list of approved primary dealers; these are the ones who engage in the bulk of the open market operations. A corporation that wishes to act as a primary dealer has to submit an application to the Federal Reserve, which then decides whether to approve or reject it. The central bank has guidelines that set the standards for primary dealers, and every primary dealer has to meet these standards both initially and on an on-going basis. A prospective dealer must be able to demonstrate an ability to provide a significant and consistent performance in operating in at least the US Treasury repo and cash markets; it should preferably also operate in one or more of the other markets in which the Federal Reserve Bank of New York transacts. Evidence of underwriting capability in these markets helps to strengthen the case of potential primary dealers. Participation in Treasury auctions is not limited to primary dealers. However, primary dealers engage in bond trading in greater volumes. The Federal Reserve Bank of New York expects prospective primary dealers to be already participating in Treasury auctions at such levels at the time of application. In addition, any potential primary dealer also has to meet a minimum capital requirement. A registered broker-dealer applying to be a primary dealer must have at least $150 million in regulatory net capital and be in compliance with all other regulatory requirements laid out by the Securities and Exchange Commission or its self-regulatory organization (SRO). A bank applying to be a primary dealer must conform to the minimum Tier I and Tier II capital standards under the Basel Accord; it must also have at least $150 million in Tier I capital as defined by the accord.[15]

Primary dealers hence assist the Federal Reserve in implementing monetary policy. The designation implies a requirement to consistently partici-

pate in open market operations based on the directives of the Federal Open Market Committee. Primary dealers are also required to provide the Federal Reserve Bank of New York's trading desk with market information and analysis that would aid in the formulation and implementation of monetary policy in the country. They have to participate in all auctions of US government debt and are expected to make reasonable markets for the Federal Reserve Bank of New York when they carry out transactions on behalf of their foreign official accountholders. Their numbers have varied between 18 and 46 between 1960 and 2014; as of February 11, 2014, there are 21 corporations that are listed as primary dealers.

Primary dealers are trading counterparties of the New York Fed in its implementation of monetary policy. They are also expected to make markets for the New York Fed on behalf of its official accountholders as needed, and to bid on a pro-rata basis in all Treasury auctions at reasonably competitive prices (Table 3.1).

Table 3.1 The Federal Reserve's primary dealers list

Bank of Nova Scotia, New York Agency
BMO Capital Markets Corp.
BNP Paribas Securities Corp.
Barclays Capital Inc.
Cantor Fitzgerald & Co.
Citigroup Global Markets Inc.
Credit Suisse AG, New York Branch
Daiwa Capital Markets America Inc.
Deutsche Bank Securities Inc.
Goldman Sachs & Co. LLC
HSBC Securities (USA) Inc.
Jefferies LLC
J.P. Morgan Securities LLC
Merrill Lynch, Pierce, Fenner & Smith Incorporated
Mizuho Securities USA LLC
Morgan Stanley & Co. LLC
Nomura Securities International, Inc.
RBC Capital Markets, LLC
RBS Securities Inc.
Societe Generale, New York Branch
TD Securities (USA) LLC
UBS Securities LLC
Wells Fargo Securities, LLC

Source: Federal Reserve Bank of New York

The Federal Reserve Bank of New York occasionally makes additions to and removals from the list. The most recent change to the list was on November 13, 2017, when Credit Suisse Securities (USA) LLC was removed and Credit Suisse AG, New York Branch added to the list of primary dealers. Prior to that, Wells Fargo Securities, LLC was added to the list of primary dealers effective April 18, 2016, and SG Americas Securities, LLC removed and Societe Generale, New York Branch added to the list of primary dealers effective December 7, 2015.

The Primary Dealers Act of 1988 introduced a system of reciprocity in granting primary dealer designations to foreign-owned dealers and banks. Foreign institutions can't be newly designated or continue to be designated as a primary dealer if they are domiciled in countries which do not accord the same competitive opportunities to American institutions as they do to domestic institutions in the areas of underwriting and distributing their government debt. This determination is made by the Board of Governors and the Federal Reserve Bank of New York; as of February 2014, firms from France, Germany, Japan, Netherlands, Switzerland and the United Kingdom are eligible to apply for primary dealership. Firms domiciled in Canada and Israel were grandfathered in under the act.

The Federal Reserve has three tools for controlling the money supply and the interest rates in its arsenal: open market operations, changing the discount rate and changing the reserve requirement. Of the three, the most important one is open market operations. The discount rate can theoretically be changed every time the Board of Governors meets, which is once every six weeks, but in reality it had been left unchanged at 0.75 percent for primary credit since February of 2010 with economic recovery in mind until its recent increase starting in December 2015. It is currently at 2.25 percent. Except for adjustment to the caps, the reserve requirement has not been changed in the United States in the past two decades.

3.5 The History of the Federal Reserve System

3.5.1 The Early Years

The Federal Reserve System was established in 1914. At the time of its creation, the Federal Reserve Act made no provisions for changing the reserve requirement. Open market operations had also not been discovered yet. Changing the discount rate was therefore the primary monetary policy tool. Contemporary officials at the Federal Reserve were followers of the Real Bills

Doctrine, tracing back to the days of Adam Smith, which implied that output drives money supply instead of the other way round. So the Federal Reserve limited itself to the passive role of ensuring that banks had sufficient reserves to meet the required reserve ratio and that they only made loans for productive purposes; productive purposes in this context referred to activities that would generate real return in the form of cash, hence the name real bills. It discouraged lending for speculation in stocks or bonds. The Federal Reserve also did not actively intervene in the economy to appease political interests which favored decentralization. By the end of the First World War, the central bank's passive policy if granting discount loans to all eligible applicants had contributed to high inflation in the economy.

Hence the Fed realized that the Real Bills Doctrine was inconsistent with the goal of price stability, and decided to be more forceful in influencing the economy. In January 1920, it began increasing the discount rate in increments from four percent to seven percent, leading to a sharp fall in money supply and a recession in 1920, 1921 and 1922. Unemployment peaked at 11.7 percent in 1921, but steadily came down thereafter; it had dropped to 6.7 percent in 1922 and 2.4 percent in 1923. After steep deflations of 10.5 percent and 6.1 percent in 1921 and 1922, the price level stabilized and the prosperous Roaring Twenties began. The period is important in the context of monetary policy for another reason. In the early 1920s, the Fed accidentally discovered open market operations. Open market operations in Treasury securities were not laid out as a major policy instrument when the Federal Reserve began its operations. The National Monetary Commission report touched upon the advantages of having a bill market (which referred to bankers' acceptances) as an essential part of a broad international money market. This was largely by reason of its value as a means of financing trade and also as an avenue for the employment of short-term funds, in addition to the Stock Exchange call loan market. Such a bill market was deemed to be necessary for making the New York money market gain more depth and breadth so that it could become competitive with London. However, this wasn't prioritized by the reports. The alternate way to engage in open market operations was via the Treasury securities market. The problem with that was the almost complete lack of short-term government securities. Government debt totaled only around $1 billion at the time, most of which was held by national banks in the form of long-term bonds carrying the circulation privilege. Short-term Treasury bonds began to be issued in significant numbers only after the United States entered the First World War in 1917.[16]

3.5.2 *The Discovery of Open Market Operations*

A lot of member banks borrowed significantly from the Federal Reserve during the First World War. The interest on these loans provided the central bank with a tidy income. This income started to dwindle as banks started paying off these loans after the war. This was a combination of the deflation of 1921 and 1922 and a substantial inflow of gold and currency from abroad. As income from discount loans was becoming its only source of revenues, the Fed needed more income and decided to purchase income-earning securities. When it did so, it noticed that there was an expansion in bank loans and deposits; furthermore, this wasn't limited to the market where the securities were purchased, but affected the entire country. The opposite happened when it sold securities. Open market operations became part of the Federal Reserve's repertoire 1923 onwards; the operations were then controlled by the regional banks and not by the Board of Governors. In particular, the trading desk of the Federal Reserve Bank of New York was under the direct control of the president of the New York Fed. Hence the Federal Reserve Bank of New York had a direct influence on the Wall Street stock and bond markets.

3.5.3 *The Great Depression*

The young Federal Reserve's next challenge came during the Great Depression. The reasons behind the depression were manifold, but the Federal Reserve Bank of New York played a direct role in it. In the late 1920s, the New York Fed began lending money not for productive uses, but for purposes of speculation on the stock and bond markets. In response, the Board of Governors began increasing discount rates to cut off funding to the New York Fed. As the discount rate, which is uniform throughout the system, began to rise, banks throughout the country found themselves cash-strapped. Forced to cut back on borrowings, banks started to call in loans to generate reserves. This caused a lot of farmers and businesses which were banking on the loans to get rolled over to go bankrupt. The already bad situation was exacerbated by the formation of the Dust Bowl in a large part of Oklahoma and parts of Arkansas and Texas. Around 9000 commercial banks failed as a result, which was roughly a third of the total.

As the recession got progressively worse, the Federal Reserve essentially did not do much. There were several reasons why it thought that the reces-

sion did not warrant its active involvement. The Real Bills Doctrine was down but not yet out, so the Federal Reserve believed that output would create its own demand for money and the economy would take care of itself. Its only job was to ensure that banks had enough reserves when output did increase. It believed that the discount rate at the time wasn't too high, as lower rates had led to speculative or non-productive use of money. The adherence to the gold standard also led to a reluctance to print money; so in a system of fixed exchange rates and currency backed by specie, expansionary monetary policy was not an option. Inexperienced central bank officials viewed individual bank failures as regrettable consequences of bad management, but did not think that these could ultimately lead to an economic and financial collapse on such a scale. The Federal Reserve Bank of New York advocated the use of more open market operations to generate reserves for the Federal Reserve during bank panics. However, other Federal Reserve officials opposed the position of the New York Fed and it was outvoted. President Franklin Roosevelt campaigned on the basis of providing America with a New Deal to end the depression, which was an extensive set of fiscal policy measures. In addition, the Banking Act of 1933 and the Banking Act of 1935 also instituted some important changes on the monetary front. The Board of Governors was given the authority to alter the reserve requirement. The Federal Deposit Insurance Corporation (or the FDIC) was established to insure bank deposits so that depositors wouldn't lose their savings even if the bank shut down. Lastly, the United States was taken off the gold standard.

3.5.4 The Accord of 1951

The United States entered the Second World War in late 1941. Government spending shot up as a result. The Treasury issued large amounts of bonds to help finance this, and asked the Federal Reserve to assist it by keeping the interest rates low. In April 1942, the Federal Reserve committed to keeping the interest rate on Treasury bills at 3/8 percent; it also set the ceiling for long-term bonds at 2.5 percent. Whenever the interest rate rose above the target, the central bank engaged in open market purchases to make the interest rates go down again. Maintaining the interest rate at such low levels forced the Federal Reserve to give up control of the size of its portfolio, as well as suspend its other monetary policy goals. The Secretary of the Treasury was on the Board of Governors, and there was little the Fed could do. Matters between the Treasury and the Fed came

to a head when the Treasury again directed the central bank to maintain the low interest rate peg after the start of the Korean War in 1950. Both President Harry Truman and the Treasury Secretary John Snyder were in favor of keeping the interest rate low, whereas the Fed wanted to take more steps to keep inflation in check. The resulting tussle ended with the Treasury–Fed Accord of March 4, 1951. This ushered in several important changes. The Federal Reserve was granted official independent status. The Federal Open Market Committee assumed the responsibility of the trading desk of the Federal Reserve Bank of New York and hence of open market operations. Open market operations had by then become the main monetary policy instrument of the Federal Reserve as the two world wars and the New Deal had created a large US securities market, which was necessary for open market operations to work. William McChesney Martin, who became the Chairman of the Federal Open Market Committee at the time of the accord, had a big role to play in this. He argued for central bank independence in order to carry out effective macroeconomic stabilization. Martin had a three-pronged strategy for achieving this. The first was the practice of regularly moving short-term interest rates to dampen business cycle fluctuations and maintain price stability; he used the phrase “leaning against the wind” to describe this. The second was the creation of a large free market in government securities that could continue without the intervention of the Federal Reserve. Finally, it was his idea to change the responsibility for making monetary policy decisions from an Executive Committee to the Federal Open Market Committee, which was a much more democratic structure with all the governors and regional Federal Reserve presidents were full participants.[17]

3.5.5 Monetary Policy Targets

There are several approaches to conducting monetary policy, two of the main ones being focusing on inflation targeting versus focusing on output targeting. The goal of inflation targeting is price stability, but it is more than simply keeping the inflation rate below a certain target or within a certain band. Mishkin suggests that inflation targeting involves the central bank juggling several simultaneous goals.[18] The central bank has to publicly announce its short to medium-term numerical targets for inflation. It has to commit to having price stability as its primary monetary policy goal, with its decisions being based on using all relevant information instead of just monetary aggregates. Expectations about the future inflation rate play

a really important role; regular communication with the public about monetary policy goals is hence critical. There also needs to be clear accountability of the central bank for attaining its inflation objectives. In March 1990, New Zealand became the first country to officially adopt inflation targeting as its policy. Brazil, Canada, Sweden and the United Kingdom are among the countries that have switched to inflation targeting since then. The alternative is to target the nominal GDP, which is the product of the real GDP and the price level in the economy. Some economists are of the view that output targeting does a better job of stabilizing business cycle fluctuations than inflation targeting. They point out that inflation targeting lends itself to being subject to certain kinds of economic shock. Inflation targeting can react well to demand shocks like a recession in a country that is a trading partner. It doesn't do so well when it comes to supply shocks like increases in the price of oil or food; a sharp increase in the price of oil, for instance, would lead to a stagflationary episode in the country.[19]

There are other alternatives as well. Canada, for instance, is exploring the possibility of price level targeting where the central bank will adjust its policy instrument (which is usually a short-term interest rate) in order to arrive at a target level of a particular price index in the medium term. The advantage of price level targeting over inflation targeting is that inflation targeting keeps inflation in check, but there can still be considerable uncertainty in future price levels. Price level targeting will directly aim to remove this price uncertainty, and also has the potential to decrease the variability of both inflation and output. If inflation rates are near zero, then having a price level target can help reinforce perceptions that prices will increase and the inflation rate will be positive. If nominal interest rates are also close to zero, then a positive inflation rate will imply that real interest rates will be negative. Given the negative cost of borrowing, investment will pick up and economic recovery will be quicker. The principal downside is that price level targeting is new and untested, except for a brief period in Sweden in the 1930s. Shaping expectations through this brand new target might not go as intended, and economic volatility can also be higher than expected. It is unlikely that price level targeting or other alternatives will gain widespread acceptance without a lot more research on the topic.[20]

The debate over the inflation-output tradeoff has shifted considerably over the last half a century. As Walsh (1998) points out, the prevailing belief among most economists at the time was that central banks could

achieve a stable low unemployment rate by accepting a permanently high level of inflation.[21] However, pursuing such a strategy proved ineffective. Unemployment decreased and inflation increased as a result of expansionary monetary policy, but this increase in prices changed expectations. People began to believe that prices would keep going up and demanded increasingly high wages to keep up with this expected increase in prices. Employers agreed to a large extent, as they believed that the prices for their products could be raised enough to cover the higher wages. The result was a wage-price spiral instead of a stable inflation rate that was higher than before. These episodes have since led economists to believe that the long run unemployment rate and the rate of growth of the GDP depend on factors like physical capital, human capital, population growth and technological change; these factors have no direct relationship with the inflation rate. However, some economists believe that a somewhat different tradeoff does exist between the two, namely one between the variability of output and the variability of the inflation rate. If policymakers try to keep the inflation rate within a narrow band, then the fluctuations in output go up; on the other hand, if policymakers try to keep the output variability within a narrow band, then the fluctuations in the inflation rate go up.[22] Until the late 1970s, the Federal Reserve was more focused on regulating output by targeting the federal funds rate in comparison to inflation. That changed after Arthur Burns stepped down and Paul Volcker became the Chairman of the Board of Governors in October 1979; against a backdrop of double digit inflation rates, the Fed became primarily concerned with inflation. It switched to reserve targeting, focusing initially on non-borrowed reserves during the period from 1979 to 1982 and on borrowed reserves from that point on.[23] This was one of the main factors enabling the Great Moderation, or the drop in business cycle volatility since the mid-eighties.

3.5.6 The Evolution of the Federal Reserve's Macro Models

The Federal Reserve has been using econometric models for forecasting purposes since the 1960s. The oldest of these models were the MPS models (or MIT-University of Pennsylvania-Social Science Research Council models) and the MCM models (or multi-country models), which were based on the IS-LM version of the Keynesian school, along with an inflation equation based on the Phillips Curve relationship.

The MPS model, which was used by the Fed during the period 1970–1995, was largely the brainchild of Franco Modigliani at MIT, Albert Ando at the University of Pennsylvania and Frank de Leeuw at the Federal Reserve. In its early form, it was a neoclassical growth model with a vertical long run Phillips Curve that was governed by around 60 behavioral equations. Money was neutral in the long run, so a change in money supply had no effect on output or employment. Some of the other equations imposed budget constraints on various sectors of the economy. The purpose of these models was to study the propagation mechanism and the effect of monetary and fiscal policy measures on the macro economy; the three monetary policy propagation mechanisms that it focused on were the impact of user cost on investment, the impact of non-human wealth on consumption and the impact of credit rationing on housing construction.[24] The model was significantly modified in the 1970s. The collapse of the Bretton Woods system of fixed exchange rates in 1971 and the consequent demise of the era of backing the US dollar with gold necessitated changes to the international trade and balance of payments sector of the model. The new model accounted for the economic uncertainties of having floating exchange rates and accorded a significantly expanded role to international trade. The second factor was the first oil shock of 1973. Enzler and Pierce (1974) showed that a prolonged and significant rise in oil prices could lead to stagflation in the US economy.[25] Partly due to their findings, the MPS model was augmented to include energy as an input.

The same two effects also led the Fed to develop an alternative to the MPS model in the form of the MCM model. The vicissitudes of the US economy was becoming increasingly tied to the rest of the world, so the model had its roots in economist Lawrence Klein's LINK project. The LINK project brought together economists from all over the world to work on developing the first model of the global economy, so that the impact of changes to the economy of one country on the economies of others could be actually quantified. The Japanese Economic Planning Agency also used similar models. The first iteration of the MCM model dates back to the work of Guy Stevens, et al. in 1975, and its earliest use by the Fed was in 1979. At around 200 behavioral equations, it was considerably more complicated than the MPS model. Since its primary purpose was to better capture the international sector, it placed greater emphasis on the major trading partners of the United States; in addition to the United States, it included Canada, Federal Republic of Germany, Japan, the United Kingdom and the (remaining countries clubbed into

the rest of the world. The economy was described by the IS-LM framework, the Phillips Curve and a neoclassical growth model, a set-up similar to that of the MPS models. Separate equations denoted bilateral trade flows between the United States and its four major trading partners, as well as private American claims on foreign financial assets and private foreign claims on American financial assets. These collectively determine the exchange rates between the US dollar and the Canadian dollar, the mark, the yen and the pound. A section of their book compares the national models for the five countries, and yields some fascinating results. For instance, wages are the most responsive to prices in West Germany and the United Kingdom, and the least responsive to prices in the United States. To put their findings in context, Stevens, et al. also compared the results of the MCM model to both the Mundell-Fleming model and the Henderson model of the macro economy.[26]

There were only incremental changes to these models until the early 1990s. The most significant change in the theoretical foundations that the Fed drew upon during the nineties was the introduction of the Taylor Rule. This was a simple monetary rule proposed by the economist John B. Taylor in 1993 that stipulated exactly how much the Federal Reserve should change the federal funds rate in response to divergences of real actual GDP from real potential GDP and divergences of actual rates of inflation from the target rate of inflation. Mathematically, the Taylor rule states that

$$i_t = \pi_t + 0.02 + 0.5\left(\pi_t - \pi_t^*\right) + 0.5\left(y_t - \overline{y_t}\right)$$

where i_t = target FFR

π_t = actual rate of inflation (as measured by the GDP deflator)

π_t^* = desired rate of inflation (approximately 0.02)

y_t = log of real actual GDP

$\overline{y_t}$ = log of real potential GDP (as determined by a linear trend)

If $\pi > \pi^*$, the inflation rate is too high and the Fed needs to increase the real federal funds rate to restrain spending. Specifically, it needs to increase the nominal federal funds rate by more than the inflation rate to cause the real federal funds rate to go up (since real interest rate equals the nominal interest rate minus the inflation rate). The notion that the nominal federal funds rate should move more than one-for-one with the inflation rate (i.e. there should be a change in the real federal funds rate) is known as the

Taylor Principle. If $y < \bar{y}$, the economy is in a recessionary gap and the Fed needs to decrease the nominal and real federal funds rates to stimulate spending. This is achieved both through increased investment by firms and through increased consumption by households as a result of discouraging saving. Taylor, in the simplest form of the rule, suggested that the Federal Reserve should increase the real federal funds rate by 0.5 percent for every 1 percent excess of actual inflation rate over the target inflation rate, or of the excess of actual GDP over potential GDP. Similarly, the Federal Reserve should decrease the federal funds rate if actual inflation is less than target inflation or if actual GDP is less than potential GDP. The rule hence also implied that monetary policy should not make a quantitative distinction between responding to inflation shocks and to output shocks. Once commitment to the rule gained credibility, the Federal Reserve could temporarily deviate from it in order to respond to unpredictable emergencies without having to worry about inflation immediately climbing up again.[27]

The other fundamental change was regarding how expectations were modeled. Expectations play an important role in any forecasting model, and how expectations are formed is therefore an extremely important issue. In the fifties and the sixties, economists thought that expectations were formed only on the basis of past experience. The forecast for a variable would then be formed solely on the basis of past values of that particular variable. Also, it was believed at the time that people were slow to adjust their expectations in response to new information. This theory is known as adaptive expectations, and this is what was used in the MPS and MPM models. Hence if we wanted to make a guess about what the inflation rate was going to be in the next period, then mathematically, adaptive expectations of inflation would be a weighted average of past inflation rates.

$$\Pi_{t+1}^{AE} = \left(1-\lambda\right)\sum_{j=0}^{\infty}\lambda^{j}\Pi_{t-j}$$

where Π_{t+1}^{AE} = adaptive expectation of inflation at time $(t + 1)$

Π_{t-j} = inflation at time $(t - j)$

$j = 0 \Rightarrow t - j = t$

$j = \infty \Rightarrow t - j = -\infty$

$0 < \lambda < 1$ is a constant

The weights decline as we go back into the past. Following Lucas (1976), however, first the academia and then the Federal Reserve turned to the theory of rational expectations instead.[28] Agents typically use more than past data on a single variable to form their expectations; for instance, they base their inflationary forecasts on not just past inflation rates but also on present and expected future inflation rates as well as money supply and the overall state of the economy (like whether the economy is in a recession or an expansion). In addition, they quickly update their expectations if they come across new information. This is more realistic, especially in a world where accurate data is increasingly and almost instantaneously available to everyone. Hence the Lucas suggested that expectations will be identical to optimal forecasts using all available information.

As a result, the Federal Reserve started developing a new class of macro models in the nineties. Work on a successor to the MPS model began in 1991; the FRB/US model began to be used by the central bank in 1996. Beginning in 1993, a successor to the MCM model also began to be developed. The outcome was the FRB/Global model, which combines the 40 behavioral equations of the FRB/US model with approximately 200 other behavioral equations describing 11 other countries and regions. Prices are sticky in the short run and output is determined by aggregate demand; prices become perfectly flexible in the long run, and output is determined by aggregate supply. The modeling of expectations and the dynamic adjustment path to the long run equilibrium set this generation of models apart from the previous ones.[29]

3.6 The Autonomy of the Federal Reserve Bank

The Federal Reserve Bank is an independent government agency. The theoretical case for independence is strong and simple. A central bank that is influenced by electoral politics will be forced to enact expansionary monetary policies in the period before elections. While this will lower unemployment in the short run, it will lead to higher inflation rates in the long run, which can also destabilize the labor market. Independence guarantees that the central bank focuses on the monetary policy objectives that are best for the country in the long term even if some of these policies are not politically expedient. From the viewpoint of political expediency, an independent central bank also provides a convenient target when the

administration in power want to avoid accepting the responsibility for a poor economy.

While Congress has established maximum employment and stable prices as the primary monetary policy objectives of the Federal Reserve, it also set up the administrative structure of the Federal Reserve in such a way that the central bank can focus on these goals while formulating monetary policy instead of being politically pressured to pursue a certain course. The terms of the members of the Board of Governors are staggered so that the term of a Governor expires every two years. A one-term US President can hence appoint only two people to the board, in a bid to limit political influence. The chairperson of the Federal Reserve Bank is appointed for only a four-year term for the same reason, and their term does not coincide with presidential terms. The Secretary of the Treasury and the Comptroller of Currency, both political appointees, used to serve on the Board of Governors; that ended with the Treasury–Fed Accord of March 4, 1951, which resulted in the true independence of the Federal Reserve. The monetary decisions of the Federal Reserve do not have to be ratified by the Congress or the President.

Additionally, the operating funds of the Federal Reserve don't come from the congressional budgetary process, which cements its independence from the political establishment. Its principal source of funds is the interest income it accrues from its holdings of Treasury securities that are purchased through open market operations. Additional sources of operating funds are the interest income accrued from its foreign currency investments, the fees paid by depository institutions on services like check clearing, funds transfers and automated clearinghouse operations rendered by the Federal Reserve, and interest earned on discount loans.[30] In December 2017, the Board of Governors approved a $4451.3 million operating budget for 2018, which was a 5.2 percent increase from the forecasted expenses for 2017. The board has complete discretion on how to allocate this budget between its various services, which are monetary policy, open market, public programs, supervision, cash, loans to depository institutions and a catch-all "all other central bank services."[31]

At the same time, the Federal Reserve is also accountable to the general public and to Congress. In the words of former Chairman Ben Bernanke,

> As an institution, the Federal Reserve must continue to be willing to make tough decisions, based on objective, empirical analysis and without regard to political pressure. But … we must also recognize that the Fed's ability to

> make and implement such decisions ultimately depends on the public's understanding and acceptance of our actions … Ultimately, the legitimacy of our policies rests on the understanding and support of the broader American public, whose interests we are working to serve.[32]

The Chairperson of the Federal Reserve has to submit a semi-annual report on monetary policy to Congress. In the aftermath of the financial crisis, there have been concerns about the operations of the Federal Reserve, especially regarding the significant expansion of its balance sheet due to quantitative easing and its bailout of several large financial institutions. There have been calls to audit the Federal Reserve, which could adversely affect its independence.

Binder and Spindel (2016) find that the Federal Reserve's pursuit of unconventional monetary policy in a polarized era has diminished political support for the institution.[33] This has both weakened the recovery from the last crisis and called into question the ability of the Federal Reserve to respond to the next downturn. Successive generations of politicians have remade the board to reflect their own political and economic priorities, which are often partisan in nature.[34] Additionally, many of the members of the Board of Governors leave before finishing out their full term, implying that a one-term US President is often able to appoint more than two members to the board. The Congress and the Federal Reserve are interdependent in another way. Given that the Congress reaps the benefits of a strong economy, few legislators are interested in the central bank's conduct of monetary policy when the economy is sound. Hence congressional indifference effectively translates into the Federal Reserve's independence.[35] The Congress is also more likely to act during times when the electoral rewards are the greatest. If the same party controls the White House and the Congress, then voters know who to reward or assign blame. If power is divided, then voters have a harder time, in addition to the practical difficulties of getting legislation signed into law. Nonetheless, during the period from 1947 to 2014, 333 members of the house and the senate introduced 879 bills addressing the power, structure and governance of the central bank.[36]

In view of the Congress amending the Federal Reserve Act in 1977 to clarify the dual mandate, lower income Democratic voters who were more likely to be debtors than creditors and their representatives may be more suspicious of the Federal Reserve when the unemployment is high; higher income Republican voters who are more likely to be creditors than debtors and their representatives will, on the other hand, be more wary of the

Federal Reserve when the inflation rate is high. Democrats also favor stricter limits on emergency lending, while Republicans favor limiting the discretion of the Federal Reserve and the adoption of rate-setting monetary policy rules. The authors speculate that we will continue to witness both parties attempting to revisit the Federal Reserve Act during times of severe economic crises.[37]

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CHAPTER 4

The United Kingdom

4.1 The History of the Bank of England

4.1.1 The First Two Centuries

Founded on July 27, 1694, by the Ways and Means Act, the Bank of England has had a long and storied history as the second oldest and one of the most influential central banks in the world. The bank was largely the brainchild of Sir William Paterson, a merchant and banker from Scotland who helped to establish the bank despite opposition from the goldsmiths and moneylenders, the country gentry, Tories, Jacobites and a few dissident Whigs.[1] It was founded as a private institution to fund the government at a time when King William III and Queen Mary II were fighting the French under King Louis XIV in the Nine Years' War as part of a coalition with Austria, the Dutch Republic, the Holy Roman Empire, the Duchy of Savoy and Spain. The original charter of the bank stated that its purpose was to "promote the public Good and Benefit of our People."[2] Over 1200 people purchased shares totaling £1.2 million; the shareholders included the king and the queen, who held the opening entry of £10,000.[3] The bank opened for business on August 1, 1694, and the inaugural Governor was Sir John Houblon, who would subsequently become the director of the East India Company. The Court of Directors of the Bank of England consisted of 24 shareholders at the time, 8 of whom were replaced every year. The bank issued new coinage and also

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doubled as a commercial bank, accepting deposits from households and discounting British bills at six percent and foreign bills at four and a half percent to encourage the public to deposit money.[4]

The new central bank encountered its first financial crisis soon after the establishment of the South Sea Company in 1711. The South Sea Company provided the government with loans in return for trading rights in the South Seas, which was the name for South America at the time. However, the War of Quadruple Alliance broke out in 1717, with Austria, Britain, the Dutch Republic and France fighting the Spanish under King Philip V.[5] Trade benefits were consequently limited, but in 1720 the South Sea Company was given the right to service part of the national debt. This had been the exclusive purview of the Bank of England until then. The share prices of the South Sea Company rose sharply, before crashing and wiping out the savings of many investors.

Goldsmiths were the first to issue paper currency in Britain, with the first notes issued in the fifteenth century. The first documented case of fraud was in 1695, when the authorities fined Daniel Perrismore for forging 60 notes of £100 denomination.[6] However, bank notes issued prior to 1725 were handwritten, usually with the specific amount that was deposited by the customer of the bank. The Bank of England issued its first denominated bank notes in 1725, when partially printed bank notes for denominations of £20 and higher were introduced. The authorized denominations increased in increments of £10, with the highest denomination being £90. The handwritten portion was that the denomination of each bank note could be increased by up to a maximum of £9. 19s. 11d (£9.99 in today's currency) to indicate the actual amount of the deposit made.

The bank faced its second crisis in 1797, when French troops from the *La Legion Noire* (The Black Legion) landed near Fishguard in Wales as part of the French Revolutionary Wars. While the Battle of Fishguard ended quickly with the surrender of the French under Colonel William Tate, the British people panicked. Fearing that a French invasion was imminent, they rushed to the Bank of England to convert their bank notes into gold. This caused the gold reserves of the central bank to drop from £16 million to a mere £2 million. Further decline in the gold reserves was arrested when William Pitt the Younger, the Tory politician who became the youngest Prime Minister of Britain at the age of 24, issued a Privy Council Order barring the Bank of England from redeeming bank notes with gold. What followed was the Restriction Period. From 1797 to 1821,

the Bank Restriction Act of 1797 relieved the central bank of its obligation to convert bank notes into gold. This was partly to aid the war effort against France and partly the result of an overprinting of bank notes relative to the central bank's gold deposits. The Bank of England issued low denomination bank notes of one pound and two pounds due to the shortage of gold coins; forgeries became common especially as a large segment of the population was illiterate and not familiar with paper currency, and forgers were punishable by death by hanging. Convertibility was restored in 1821.

The Bank of England opened its first branch on July 19, 1826, in Gloucester. The Panic of 1825 was a financial crisis that affected Britain, beginning with a stock market crash that partly occurred due to speculative investments in South America. Some of the money was collected by General Gregor MacGregor, a Scottish soldier and con man who convinced British and French investors to invest in government bonds and land certificates of the fictional Central American country of "Poyais."[7] Six banks closed in London, and more than 60 were shuttered outside the capital. The Banque de France provided the gold needed by the Bank of England to avoid a bank run. Some economists are of the opinion that the Panic of 1825 is the first financial crisis that was not due to an external factor such as a war, but was purely the result of speculation. Several other branches of the Bank of England opened in the next few decades, including the branch at Plymouth in 1834.

The Bank Charter Act enacted on August 31, 1844, played an especially important role in the history of the central bank, imposing restrictions on commercial banks in England and Wales that issued their own bank notes. These banks could continue to issue their own notes as long as they were located more than 65 miles from London, but only after obtaining permission from the Commissioners of Stamps and Taxes; the amount circulated could not exceed the average of the amount that circulated during a designated four-week period starting on October 10, 1844, with a penalty imposed on the excess. Banks were also required to take out a separate license at every place where they issued bank notes or bills. To further encourage banks to cease printing their own bank notes, they were offered a one percent annual payment on the Bank of England bank notes that were held by them until August 1, 1856. The Commissioners of Stamps and Taxes were given the authority to examine the books of the banks issuing bank notes. The act prohibited any new commercial banks in the United Kingdom and commercial banks with fewer than seven

employees from issuing their own bank notes. Any commercial bank that ceased issuing bank notes were also proscribed from resuming issuance. The act formalized convertibility between the Bank of England notes and gold bullion at the rate of £3. 17s. 9d per ounce of standard gold.[8] It also granted the Bank of England other privileges. For instance, the Bank of England was exempted from the payment of any Stamp Duty on their bank notes.

The financial panic of 1866 marked the first time the Bank of England was asked to act as a lender of the last resort. This episode is known as the Overend Gurney financial crisis. Overend, Gurney and Company was a London-based bank that bought and sold bills of exchange at a discount. It was the largest discount bank at the time, and during the Panic of 1825, the bank stayed afloat and extended short-term loans to many other banks. However, it collapsed on May 10, 1866, largely as a result of poor investments in railway stocks. Overend, Gurney and Company had approached the Bank of England the day before it collapsed seeking a bailout, but was turned down by the central bank. Many other commercial banks as well as corporations failed during this period, which set off a prolonged debate that resulted in the central bank assuming the role of the lender of last resort.

4.1.2 The World Wars

The central bank was worried that the breakout of the First World War would create a bank run; banks were hence closed for three days and the Currency and Bank Notes Act of 1914 passed, delinking the pound and gold. The bank granted leave with full pay to its clerks who participated in the war. It also issued bonds called War Loans in 1914 to help the British government raise funds for the war, with the first batch carrying an interest rate of 3.5 percent issued in November. The government appealed to the public's sense of patriotic duty, but also offered a return that was significantly higher than the return of 2.5 percent carried by other government debt. However, while the government needed to borrow an amount approximately equal to its annual gross domestic product, only an amount that was less than a third of its £350 million target was raised. While the Bank of England initially promised to buy £39.4 million and other British banks offered to buy £60 million, only £91.1 million of the £250 million earmarked for sales to the public were actually purchased. Most of the funds that were raised came from a small group of investors and companies, many of which benefitted from the war. The bonds were sold in minimum

lots of £100 to avoid siphoning off deposits from the Post Office Savings Banks, which offered lower rates. This further limited the pool of potential buyers, as £100 was significant amount of money at the time. The number of investors who ultimately bought the bonds was a paltry 97,635, primarily concentrated in London and southeastern England, which was fewer than ten percent of the potential pool.[9] In order to maintain public confidence in the government, the Bank of England used its own reserves to purchase additional War Loans. It extended advances to its chief cashier Gordon Nairn and his deputy Ernest Harvey who purchased the bonds in their own names, and these were entered as "Other Securities" in the central bank's balance sheet. Only a few people were in the know; this group included John Maynard Keynes, who described the process as "masterful manipulation." More than a century later, the British Treasury is finally in the process of redeeming the £2 billion of remaining debt in the form of consols from the First World War that continue to pay a five percent interest to the holder.[10]

The Bank of England is currently the second largest custodian of gold in the world, next only to the Federal Reserve Bank of New York. However, throughout its history, Britain has had to periodically suspend the linkage between gold and the pound. This happened again in September 1931, when eroding trust in the pound depleted much of the gold reserves of the Bank of England. This was due to a combination of the rise of the US dollar and the collapse of the British coal industry. Trade volumes dwindled and the world entered an era of protectionism. During the Second World War, some of the operations of the Bank of England were moved to Hampshire, but its gold reserves remained in London. In an operation codenamed "Operation Bernhard," Germany flooded the country with fake £5 notes, producing half a million notes per month at the Sachsenhausen concentration camp outside Berlin by 1943. The Bank of England incorporated a metal thread into its notes to differentiate them from the fake German ones, introduced a special blue £1 note, and temporarily stopped issuing bank notes of denominations greater than five pounds. While there weren't any issues of War Loans this time, the National Savings Movement funded a large share of the cost of the war. The movement began in 1916 to enable the British government to reduce its borrowings during the First World War. The War Office, which operated from 1857 to 1964 before being subsumed by the Ministry of Defense, oversaw the War Savings Campaign beginning in November 1939, organizing Regional Savings Committees and holding Local Savings

Weeks throughout the country. Posters encouraging participation included slogans such as “Bye Bye to Hitler,” “Save your way to Victory” and “You Can Sink Submarines by Saving Sixpences.”

4.1.3 The Post-War Years

Over the years, as the bank raised more money, the number of shareholders grew. Some among them were banks and corporations, but most were individuals. Dividends were paid out annually, the amount depending on the level of profits. Shareholders owning more than £500 of Bank of England shares were entitled to vote at its annual meeting. The Bank of England was nationalized in 1946, a year after the end of the war, with the government buying all the shares of the bank from around 17,000 shareholders. Several other European countries also nationalized their central banks around that time. The government now had the power to appoint the governors and directors of the central bank. It also had the authority to issue directions to the bank, though it has never exercised this right. The nationalization was financed by the issuance of Treasury Stock at three percent interest by the then Chancellor Hugh Dalton.[11] The current capital of the bank is approximately £14.6 million, which is held by Her Majesty’s Treasury.

Hetzel (2002) mentions that the successful establishment of a peaceful Europe after the Second World War partly depended in part on the establishment of a new monetary system.[12] Led by the United States, the world moved toward freer trade with a system of fixed exchange rates while avoiding deflation. The rejection of isolationism and the embrace of multilateralism by the United States also played a crucial role, with the United States replacing punitive reparations with financial aid and encouraging an open trading system under the rules of the General Agreement on Tariffs and Trade (GATT). The cooperation among the European nations, including West Germany, was formalized in the Organization for European Economic Cooperation (OEEC). The US dollar was undervalued at the end of the Second World War, and consequently the United States had a large trade surplus. It recycled some of the resulting monetary inflows through unilateral transfers to the rest of the world. To maintain the fixed exchange rates determined by the Bretton Woods Agreement, it also encouraged its trading partners to devalue their currencies so as to revalue the US dollar in 1949. The idea was that by correcting the overvaluation of their currencies, these countries would not be forced to deflate or resort

to protectionism. As other countries began to increasingly believe that the pound would be devalued, they converted their pound holdings into US dollars, eroding the status of the pound as the global reserve currency. The British balance of payment deficit was massive. On September 18, 1949, with encouragement from the United States, Britain devalued the pound by 30.5 percent from US $4.03 to US $2.80. Nine other nations, Australia, Denmark, Egypt, India, Ireland, Israel, New Zealand, Norway and South Africa, followed Britain's lead on devaluation on the same day.[13] More than 20 other countries subsequently followed; the countries that devalued collectively accounted for approximately two-thirds of global trade.

The British economy struggled in the 1960s, experiencing a currency crisis in 1966 that it ultimately managed with support from the United States. Though Britain had a budget surplus during the first two quarters of 1967, the Arab-Israeli Six Day War in June lead to the closure of the Suez Canal and sharp increases in oil and other commodity prices. The situation was compounded by a host of external factors such as riots in Hong Kong, a civil war in Nigeria and sanctions against the Ian Smith government in Rhodesia, as well as by strikes by dock and railway workers at home that September. The pound was again devalued by 14 percent from US $2.80 to US $2.40 by the Labor government of Harold Wilson on November 18, 1967.[14] James Callaghan, the Chancellor of the Exchequer, had stated that he would resign if the currency was devalued, and was replaced by the Home Secretary Roy Jenkins. James Callaghan later became the Prime Minister following the resignation of Harold Wilson in April 1976. The pound once again came under speculative attack after the change of government, and fell below US $2 for the first time. In order to be able to continue to make debt repayments and prop up the pound, Britain was forced to approach the IMF for a loan of US $3.9 billion in September 1976. This was the largest amount ever requested from the IMF until then, and the IMF had to seek additional funds from the United States and Germany to grant the loan.[15] In return, Britain had to agree to substantial cuts in public expenditure and the budget deficit.

The formal end of the Bretton Woods system was ratified by the Jamaica Accords that were signed by a committee comprising of IMF officials in January 1976 and allowed the price of gold to float against the US dollar, the pound and other currencies. The IMF had already created the Special Drawing Rights (SDR) to supplement a shortfall in the preferred reserve assets such as gold and the US dollar. All developed countries transitioned

to a floating exchange rate system, including Britain. The European Exchange Rate Mechanism (ERM) was set up shortly thereafter on March 13, 1979, to reduce exchange rate variability across Europe. Britain joined the ERM in October 1990, but its participation was short-lived. The pound came under attack from currency speculators including George Soros. ERM rules necessitated that the pound vary by no more than six percent from the rate upon its entry, in between a three percent band on either side. A sharp rise in interest rates and intervention in the foreign currency market failed to prop up the pound, and Britain exited the ERM on September 16, 1992, resulting in the financial crash dubbed "Black Wednesday."

The financial crisis of 2008 severely affected Britain. Like the United States, Britain had heavily deregulated its economy beginning with the appointment of Margaret Thatcher as the Prime Minister in 1979. As controls on financial institutions were relaxed, many of the same factors that contributed to the crisis in the United States such as a real estate bubble, excessive and sub-prime mortgage lending and securitization also affected Britain. The Bank of England had to step in to provide financial support to the Northern Rock Building Society in 2007, and the government nationalized it with taxpayer funds in February 2008. This was the first run on a British bank in almost 150 years.[16] Complete or partial nationalizations of the Bradford and Bingley Building Society, the Royal Bank of Scotland and the country's largest mortgage lender Halifax Bank of Scotland soon after it had merged with Lloyds TSB followed. There was also a significant drop in retail sales. On October 8, 2008, eight central banks including the Bank of England, the European Central Bank and the Federal Reserve slashed interest rates by 0.5 percent in a coordinated attempt to assist their economies. In response to the crisis, the Bank of England, in 2012, decided to set up its Prudential Regulation Authority (PRA) and Financial Policy Committee (FPC). It also assumed the responsibility of supervising financial market infrastructure providers, which include recognized payment systems, central securities depositories, and central counterparties (CCPs).[17]

Mark Carney, the former Governor of the Bank of Canada, became the Governor of the Bank of England on July 1, 2013, succeeding Mervyn King, who accepted a faculty position at New York University's Stern School of Business after stepping down from the post. Carney is the first non-citizen to hold the position. He is serving an initial five-year term instead of the regular eight, and will seek British citizenship.

4.1.4 The Impact of Brexit

In a referendum held on June 23, 2016, 51.9 percent of the voters voted for the United Kingdom to leave the European Union. The vote to leave was uneven across the different regions of the country; 62 percent and 56 percent respectively of Scotland and Northern Ireland voted to remain, and 60 percent of Londoners did the same. However, all of the remaining eight regions of England voted to secede, along with Wales. There was no difference across genders, but while a majority of white voters voted to leave, significant majorities of black and Asian voters voted to remain; 96 percent of the residents of Gibraltar voted to remain, though their votes were counted as part of the region of South West England and will have to leave the European Union as well (Fig. 4.1).

The government of Theresa May invoked Article 50 of the Treaty of the European Union on March 29, 2017, following the passage of the European Union (Notification of Withdrawal) Act of 2017, officially beginning the process of withdrawal. Article 50 states that "Any Member State may decide to withdraw from the Union in accordance with its own constitutional requirements." The article specifies that the treaty shall cease to apply to the Member State two years after the notification, hence the United Kingdom is due to leave the European Union on March 29, 2019. This two-year period can be extended if the European Union and the United Kingdom come to an understanding to do so, though that is not the intention in this case.

The British government itself has estimated that the British economy stands to lose significantly from Brexit. The analysis of the government, which was published on the government website after being initially leaked, considers three scenarios: staying in the European Union's single market, like Norway; entering into a free trade agreement with the European Union, like Canada; and trading with the European Union on the terms of the World Trade Organization. The cumulative GDP growth over the next 15 years decreases by 1.6 percent, 4.8 percent and 7.7 percent respectively under the three scenarios.[18] The analysis also finds that prospective trade deals with the Australia, China, India, New Zealand, the United States and other countries only add marginal amounts to the British GDP, and assumes that the United Kingdom will be able to replicate all of the European Union's free trade agreements, which may not be possible. While the European Union has offered to avoid tariffs on goods, it has proposed tariffs on services, which the United Kingdom was

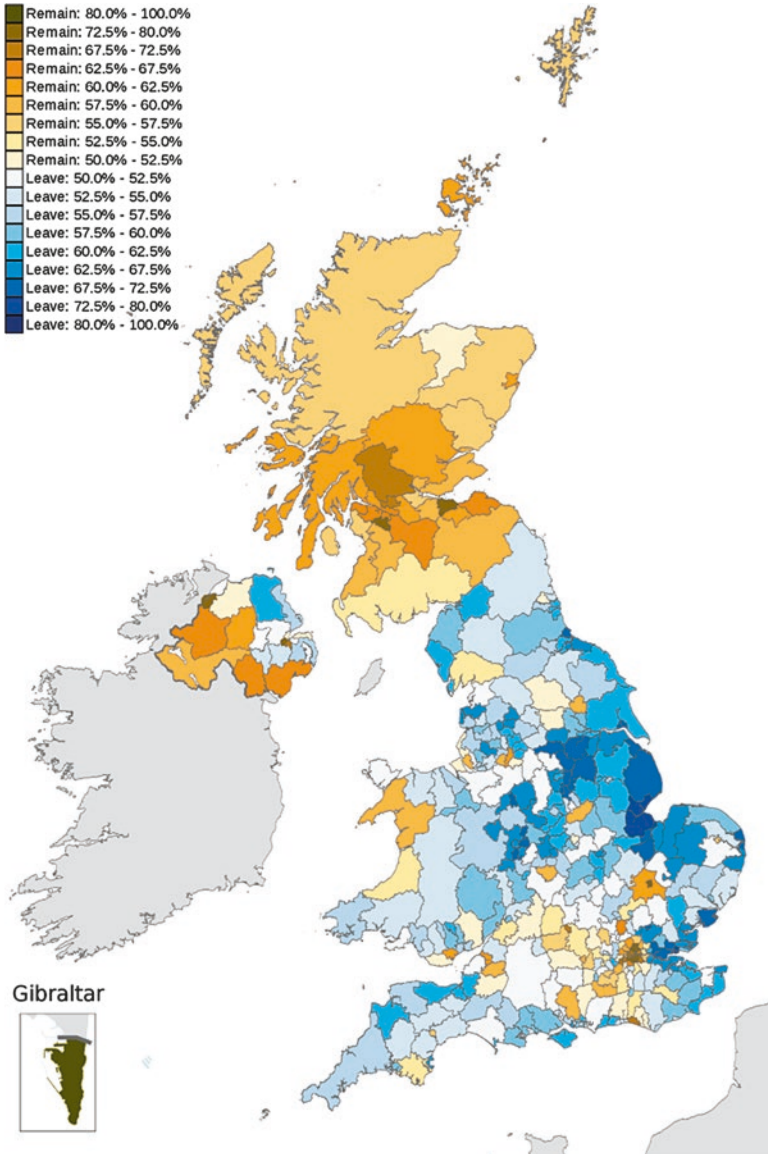

Fig. 4.1 Results of the United Kingdom's European Union Membership Referendum, 2016 (Source: Commons)

hoping to avoid. Another topic that is a sticking point is the European Union's customs union. A customs union dispenses with internal tariffs and quotas and thus facilitates trade within the block, but implements a common external tariff. Leaving the European Union obviously means also leaving its customs union, but it does not prevent the formation of a new customs union; several countries such as Andorra, Monaco and Turkey have done so with the European Union.[19] However, there are a couple of potential problems with the United Kingdom trying to negotiate a customs union. Being in a customs union makes it impossible to strike free trade deals with other countries, and free trade deals made by the European Union opens up the United Kingdom market to cheap imports without giving it reciprocal rights. This issue is also tied up with the question of whether the United Kingdom will have to reinstitute a hard border between Ireland and Northern Ireland.

The Bank of England Governor Mark Carney told business leaders at the World Economic Forum in Davos that Brexit was costing the economy of the United Kingdom around £10 billion a year. The economy grew faster than what the Bank of England had forecasted, but the rate was the lowest among the G-7 countries during the first three quarters of 2017.[20] The central bank instituted an emergency cut in the interest rate from 0.5 percent to 0.25 percent and engaged in additional quantitative easing to avoid a Brexit-induced recession; monetary policy was loosened as a result. However, inflation is also high as a result of the depreciation of the pound following Brexit, and is likely to remain so in the short term given Brexit's supply side effects. Real wages haven't grown and households have cut back on spending as a result. This has put the Bank of England in a quandary, being caught between controlling inflation and further pinching households by increasing borrowing costs.

The bank raised interest rates for the first time in a decade on November 2, 2017, bringing it back to 0.5 percent. At the same time, the bank cautioned that

> Uncertainties associated with Brexit are weighing on domestic activity, which has slowed even as global growth has risen significantly. Monetary policy cannot prevent either the necessary real adjustment as the United Kingdom moves towards its new international trading arrangements or the weaker real income growth that is likely to accompany that adjustment over the next few years.[21]

On the plus side, exports for the third quarter of 2017 increased by 8.3 percent based on year-on-year figures due to the weaker pound. Business investments have also gone up slightly and unemployment is at the lowest level since 1975.[22]

London has long been the financial epicenter of Europe and the world, but that status has been threatened by Brexit. Between a fifth and a third of the business of London-based banks involve clients in Europe, and this business is dependent on the so-called passports that enable financial firms in one European Union nation to operate in others.[23] Banks that based their European operations in London have started leasing office spaces in Dublin, Frankfurt and Paris. The Bank of England announced in December 2017 in a significant concession to the European Union that it will not require investment banks headquartered in Europe to ringfence their capital and liquidity in the United Kingdom after Brexit, easing fears that these banks would have to establish expensive new subsidiaries in the country rather than continue to operate branches. A branch is cheaper, as a subsidiary is effectively separated from its overseas parent company as it requires its own capital. They can also be more directly controlled by the head office and maintain their chief regulator in their home country.[24] Instead, wholesale banks operating in London could reapply for their existing status as either a branch or as a subsidiary.[25] There are 177 such banks and insurance companies that have branches in London. However, branches that are considered to pose a systemic risk could be forced to convert into subsidiaries. While the European Union has announced that preserving access for financial services through a trade deal is not an option for the United Kingdom and neither is a special deal with the city of London, it is planning new rules that will require investment banks in the United Kingdom to closely mirror those in the union, including with respect to bonuses that are capped at twice the annual salary, to be deemed equivalent and hence retain access.

4.2 Monetary Systems Outside England and Wales

4.2.1 Currencies in Scotland and Northern Ireland

While only the Bank of England can issue bank notes in England and Wales, three additional banks are authorized to issue bank notes in Scotland and four additional banks are authorized to issue banks notes in Northern Ireland. This privilege was granted to these banks or their predecessors in 1845 and reaffirmed by subsequent legislations, most recently the Scottish and Northern Ireland Banknote Regulations of 2009. The note-issuing banks are the Bank of Scotland; the Clydesdale Bank; and The Royal Bank of Scotland in Scotland; and the Bank of Ireland (UK); the AIB Group (UK), which trades as First Trust Bank in Northern Ireland; the Northern Bank Limited, which trades as Danske Bank; and

the Ulster Bank Limited in Northern Ireland.[26] These banks came together to form the Association of Commercial Banknote Issuers (ACBI) in November 2008, which acts as a forum to assist the Bank of England in the discharge of its responsibility of maintaining confidence in the integrity of all paper currency in the country.[27] At the end of February 2016, the three authorized banks in Scotland had an aggregate backing requirement of £4.9 billion, which comprised of £4.5 billion of notes in circulation and £0.4 billion of notes with the potential to enter circulation. The four authorized banks in Northern Ireland had an aggregate backing requirement of £2.5 billion, comprising of £2.4 billion of notes in circulation and £0.1 billion of notes with the potential to enter circulation.[28]

The banks are allowed to issue bank notes of any denomination, but if an authorized bank intends to issue bank notes of a denomination other than £1, £5, £10, £20, £50 or £100 then it must notify the Bank of England at least six months before the date of first issuance. By law, these banks are required to set aside assets worth at least as much as the value of all bank notes issued, ensuring that note holders can be reimbursed if any of the banks were to fail. The notes that must be backed fall into two categories: notes in circulation and notes with the potential to enter circulation.[29] The assets can be a combination of Bank of England bank notes, coins and funds held in a "designated backing account" at the Bank of England. At least 60 percent of the bank notes in circulation have to be backed by Bank of England bank notes and coins. Excluded notes, which consist of new notes, notes awaiting destruction, notes held by the printer, returned notes, and working stock, are held in a bank note cage in a secure vault and need not be backed.[30]

Some of the Bank of England bank notes that are held as backing assets are of enormous denominations. The Bank of England printed its first "Giant" bank note worth £1 million in 1968. It also prints "Titans" that are worth £100 million. The Bank of England prints these notes internally rather than with its normal commercial printers. The notes are then stored in the central bank vault and never leave the Bank of England building. These very large bank notes are exclusively used to back the bank notes of Scotland and Northern Ireland.[31]

4.2.2 Currencies in the British Crown Dependencies

Britain also includes several smaller islands that are administratively not a part of the United Kingdom but are dependencies of the British Crown. The Channel Islands, located between Britain and France, are divided into the Bailiwicks of Jersey and Guernsey. The Bailiwick of Guernsey com-

prises of the islands of Guernsey, Alderney, Brecqhou, Herm, Jethou, Lihou and Sark, while the Bailiwick of Jersey comprises of the island of Jersey and several uninhabited islets such as Les Dirouilles, Les Écréhous, Les Minquiers and Les Pierres de Lecq. The currency of Guernsey is the Guernsey pound and the currency of Jersey is the Jersey pound. Both bailiwicks are in a currency union with the United Kingdom and their currencies are not separate currencies but local issues of the pound sterling, similar to the issues by the banks in Scotland and Northern Ireland. Both can be exchanged at par with the pound sterling. Jersey switched from the French livre to the British pound in 1834. Guernsey switched from the French franc to the British pound in 1848 but revered to the franc in 1850. British coins only became legal tender in Guernsey in 1870 while Bank of England bank notes became legal tender in 1873. The Guernsey and Jersey pounds are legal tender only in their respective bailiwicks and can't be used elsewhere in the United Kingdom. The island of Alderney, which is a part of the Bailiwick of Guernsey, also issues its own currency, which can be exchanged at par with the pound sterling. Alderney, Guernsey and Bank of England currencies all circulate side by side on the island, along with a considerable amount of Jersey currency.

The Isle of Man is another dependency of the British Crown that is located in the Irish Sea between Britain and Ireland. The currency of the Isle of Man is the Manx pound (*Punt Manninagh* in Manx), whose notes and coins are issued by the government of the Isle of Man. Isle of Man is also in a currency union with the United Kingdom, with the local currency exchangeable at par with the pound sterling. The pound sterling is also legal tender on Isle of Man. While not required to back its currency with equivalent assets like in Scotland and Northern Ireland, the Isle of Man Currency Act of 1992's requirement of unrestricted exchange of Manx pound notes for Bank of England bank notes means that the issuance of Manx pounds is effectively regulated. The High Court of Tynwald, which is the legislature of the Isle of Man, hence pre-approves the issuance of Manx pound notes.

4.2.3 Currencies in the British Overseas Territories

There are three British overseas territories, the Falkland Islands, Gibraltar and St Helena, Ascension and Tristan da Cunha, which issue their own currencies that are at par with the pound sterling. The Falkland Islands pound (ISO 4217 code FKP) is used alongside the pound sterling in the Falkland Islands, an archipelago in the south Atlantic. The government of

the Falkland Islands has issued notes since 1899 and coins since 1974. The Argentine peso replaced the pound during the Falklands War of 1982, when Argentina briefly occupied the islands that it refers to as Las Malvinas. The separate British overseas territory of South Georgia and the South Sandwich Islands, east of the Falklands, has no permanent population.

The Gibraltar pound (ISO 4217 code GIP) notes and coins are issued by the government of Gibraltar, located on the Mediterranean at the southern tip of Spain. Until 1872, the official currency of Gibraltar was the real. It was pegged to the pound sterling at the rate of one Spanish dollar to 4s. and 4d since 1825. Spanish reals and pesetas and imported British coins also circulated. The Spanish peseta became the sole legal tender in Gibraltar in 1872.[32] The pound sterling was made legal tender in 1898. Notes have been issued by the Gibraltarian government since 1927 and coins since 1988, and circulate alongside the pound sterling.[33] The notes are backed by either Bank of England bank notes or short-term securities issued by the government of Gibraltar or the government of the United Kingdom. The amount invested in securities of or guaranteed by the Government of Gibraltar can't at any time exceed 30 percent of the value of the Note Security Fund.[34]

The Saint Helena pound (ISO 4217 code SHP) is issued by the government of Saint Helena, located in the south Atlantic, and circulates alongside the pound sterling in two of the three parts of the territory: Saint Helena and Ascension Island. The first notes were issued in 1716 and the first coins were introduced in 1821. The third island, Tristan da Cunha, adopted the pound sterling. While the South African rand had been briefly used on the island in the 1950s, a volcanic eruption on October 10, 1961, caused the entire population to be evacuated to the United Kingdom. When they returned in 1963, they brought back their savings in pound sterling and decided to make it the official currency of the island. However, Tristan da Cunha does occasionally issue its own commemorative coins.[35]

4.3 The Administrative Structure of the Bank of England

The Bank of England moved to its present location on Threadneedle Street in 1734, though the original Palladian style building designed by the architect George Sampson has since been replaced. The building was later expanded by the architect Sir John Soane, who also enclosed it with

a wall. Eventually the building was completely demolished and a new building built during 1925–1939 by the architect Sir Herbert Baker, who also designed some of the most iconic buildings in Britain's colonies, including the Union Buildings in Pretoria and the Rashtrapati Bhavan (presently the President's House and formerly the Viceroy's House) in New Delhi. However, the outer wall built by Sir John Soane still stands.

The bank is headed by the Governor, who is assisted by four Deputy Governors, who are in charge of monetary policy, financial stability, markets and banking, and Prudential Regulation. The strategy and the budget of the Bank of England are set by its Court of Directors. The court is comprised of five executive members from the Bank of England and up to nine non-executive members, all of whom are appointed by the Crown. One of the non-executive members is selected by the Chancellor to chair the court. The Governor serves on the court for a term of eight years, the Deputy Governors for a term of five years, and the non-executive members for a term of up to four years. The court also has four committees that are assigned specific tasks; these are the Audit and Risk Committee, the Remuneration Committee, the Sealing Committee and the Nominations Committee. The court is required to meet a minimum of seven times per year.

The Bank of England historically had branches throughout the country. In 1997, these were replaced by 12 regional agencies, with the former Leeds branch becoming a cash center that aided in the distribution of bank notes around Britain. The 12 agencies (with their office location in brackets) are the Agency for Central Southern England (Fareham), the Agency for the East Midlands (Nottingham), the Agency for Greater London (London), the Agency for the North East (Newcastle upon Tyne), the Agency for the North West (Warrington), the Agency for Northern Ireland (Belfast), the Agency for Scotland (Glasgow), the Agency for South East and East Anglia (London), the Agency for South West (Exeter), the Agency for Wales or the *Asiantaeth i Gymru* (Cardiff), the Agency for the West Midlands and Oxfordshire (Birmingham), and the Agency for Yorkshire and the Humber (Leeds). Each agency has a maximum of four agents as well as a small administrative team. The agents have confidential conversations with local businesses regarding their needs and general business conditions; these inputs are then shared with the Bank of England and factored into the decision-making of the Monetary Policy Committee, the Financial Policy Committee and the Prudential Regulation Authority. The summative findings are also published in the

Agents' Summary of Business Conditions eight times a year. The agents also produce Agents' Scores for their region, which rate how well different aspects of the economy are doing on a scale of −5 to +5.[36]

4.4 The Functions of the Bank of England

The mission of the Bank of England is "Promoting the good of the people of the United Kingdom by maintaining monetary and financial stability." Subject to that, the bank seeks to support the government's economic objectives, including those for growth and employment. Currently the two explicit goals of British monetary policy are maintaining stable prices and confidence in the pound. These are primarily delivered through the Monetary Policy Committee (MPC).

The MPC is the British counterpart of the Federal Open Market Committee (FOMC). It is comprised of nine members, who are the Governor, the three Deputy Governors for Monetary Policy, Financial Stability, and Markets and Banking, the Chief Economist and four external members who are directly appointed by the Chancellor. The appointment of the external members is to ensure that the committee benefits from outside perspectives. The members may be replaced or reappointed at the end of their term. A representative from Her Majesty's Treasury also sits in on the MPC meetings to ensure that fiscal authorities and monetary authorities are aware of each other's priorities and policy decisions; while they can take part in the discussions, they do not have a vote. Like the FOMC, the MPC currently meets eight times a year. This was implemented as a result of the recommendation of former Federal Reserve governor Kevin Warsh, who conducted an external review of the MPC after being approached by Governor Mark Carney.[37,38] Each MPC meeting lasts three days. On the first day, the committee discusses how to best interpret the most recent economic data; on the second day, they debate the appropriate monetary policy stance; and on the third day, they wrap up the policy discussion and vote. There is also a half-day pre-MPC meeting the week before the interest-setting meeting, when the committee is briefed on the economy by the Bank of England staff. The goal of the committee is to achieve the inflation target of the Bank of England, for which it has various tools at its disposal. The MPC determines the official bank rate, also called the Bank of England base rate or BOEBR, which is the interest rate that the Bank of England charges on overnight loans that it makes to

commercial banks at every meeting.[39] These are secure loans, with the most common security being gilt-edged securities (or gilts).[40] The committee can also make decisions regarding quantitative easing, forward guidance and foreign exchange intervention.

The Financial Policy Committee (FPC) identifies, monitors and takes action to remove or reduce systemic risks in the financial system of the United Kingdom, with the goal of enhancing the resilience of its financial system. Subject to that, the committee also supports the government's economic policy, including its objectives for growth and employment. The committee hence looks for signs of weakness in the financial system, such as unsustainable levels of leverage, debt or credit growth. The FPC has the power to direct as well as the power to recommend; specifically, it can set the countercyclical capital buffer (CCyB) rate, set sectoral capital requirements, set a leverage ratio requirement, set loan-to-value and debt-to-income limits for mortgages on owner-occupied properties, and set loan-to-value and interest cover ratio limits for mortgages on buy-to-let properties.[41] The FPC was established April 2013 in response to the financial crisis of 2008. It has 13 members, who are comprised of six Bank of England staff (the Governor, four Deputy Governors and the Executive Director for Financial Stability Strategy and Risk), five external members who are selected from outside the Bank of England for their relevant expertise, the Chief Executive of the Financial Conduct Authority, and a non-voting member from Her Majesty's Treasury. The FPC meets once a quarter, and publishes the Financial Stability Report twice a year.

The FPC works closely with the Prudential Regulation Authority (PRA) in the discharge of its duties. The PRA was also established after the 2008 financial crisis, and is responsible for the prudential regulation of banks, building societies, credit unions, insurers and major investment firms. The directions issued by the FPC are binding on the PRA. The authority has three statutory objectives[42]:

1. A general objective to promote the safety and soundness of the firms it regulates.
2. An objective, specific to insurance firms, to contribute to securing an appropriate degree of protection for those who are or who may become insurance policyholders.
3. A secondary competition objective.

The objective of the PRA isn't zero bank failures, but rather to ensure that any future bank failure does not cause a significant turmoil in the financial industry. The Prudential Regulatory Committee (PRC) is comprised of 12 members, who are the Governor, four Deputy Governors, the Chief Executive of the Financial Conduct Authority, and six other external committee members who are selected for their relevant expertise.

While the Bank of England had been acting as a settlement agency for payment systems since the nineteenth century, it introduced its real-time gross settlement (RTGS) system in 1996. Since different institutions use payment systems developed by different payment system providers, an intermediary is necessary for the final settlement of funds. Most British payment systems use the RTGS to settle accounts between banks, building societies and other financial institutions. The average daily amount settled is around £500 billion, which is around a third of Britain's gross domestic product.[43] The Bank of England also operates the Clearing House Automated Payment System (CHAPS), which is one of the largest high-value payment systems in the world. There are over 25 direct participants as well as over 5000 financial institutions that make CHAPS payments through one of the direct participants.[44] Financial institutions and large businesses use CHAPS to settle money market and foreign exchange transactions; corporations use CHAPS for high value and time-sensitive payments including payments to suppliers and tax payments; solicitors and conveyancers use CHAPS to complete housing and other property transactions; and individuals can use CHAPS to buy big ticket items such as a car or make a deposit toward a house purchase. The RTGS/CHAPS Board has ten members, and is chaired by the Deputy Governor for Markets and Banking.

4.5 The Autonomy of the Bank of England

For most of its life, the Bank of England was a privately owned institution that was primarily answerable to its shareholders. The Bank of England was nationalized in 1946, a year after the end of the Second World War. The government now owns the central bank and has the power to appoint its governors and directors. While that is the case with all central banks, the Bank of England lacked true autonomy for decades and for all intents and purposes was an agent of the Treasury. On May 6, 1997, the Labor government of Tony Blair granted the Bank of England operational independence to determine monetary policy by setting interest rates without

being subject to political pressure.[45] At the same time, two of the bank's traditional responsibilities were taken away from it, viz. the management of the national debt and the supervision of the banking system.[46] The rationale given for focusing the bank on a single objective was the avoidance of conflicts of interest.

A special team put together the structure of the Monetary Policy Committee in a brief three-week period.[47] The introduction of the Monetary Policy Committee also democratized the bank by acting as a check on the powers of the Governor. Until then, interest rates could change at any time on any given day. The timings of the rate cuts were often guided by elections. While the arbitrariness of interest rate changes decreased after the introduction of the inflation targeting system in 1992, which saw the introduction of regular monthly meetings between the Governor, the Chancellor of the Exchequer, and their advisers, it still didn't completely go away. Under the present system, the inflation target, which is currently at two percent, is set by the government. The independence is in the ability of the Bank of England to decide on the appropriate interest rate and quantitative easing to achieve this inflation target. These decisions are made by the Monetary Policy Committee by a majority vote without any governmental pressure. The effects of central bank independence on the economy are obvious. The United Kingdom's struggles with inflation are mostly gone. Inflation was as high as 8.5 percent in 1991 and at an astounding 27 percent in 1975. From a seemingly insurmountable problem, inflation as a major concern has largely receded from the minds of consumers and producers. The granting of operational independence to the Bank of England also helped to clarify the boundaries of the duties of the Treasury and the central bank. The Treasury became focused on fiscal matters, while the Bank of England focused on monetary policy.

The Bank of England has often been criticized as not being able to prevent the financial crisis of 2008 and focusing too much on attaining its inflation target. However, even on this front, the United Kingdom's participation in the behind-the-scenes negotiations and the coordinated interest rate cuts by the central banks of multiple countries in October 2008 was only possible due to the independence of its central bank. Moreover, the hands of the Bank of England have been tied since 1997, when its banking sector supervisory role was taken away. At the time of the financial crisis, that responsibility was shared by the Treasury, the Bank of England and the Financial Services Authority, creating overlapping jurisdictions and confusion.[48] While the monetary stimulus in the form of low

interest rates and quantitative easing helped the United Kingdom weather the crisis, Prime Minister Theresa May said in a speech at the Conservative Party Conference on October 5, 2016, that the same policies had significantly redistributed wealth in the country.[49] The losers were the savers, as interest rates had plummeted, while the winners were the borrowers and those who held stocks, bonds and real estate, as the value of these assets had risen. Her spokesperson later clarified that she wasn't planning to intervene in the autonomous decision-making of the central bank.

As a public body, however, the Bank of England is answerable to both the parliament and the general public. The bank holds public meetings with the House of Commons Treasury Committee when they publish their Inflation Report and their Financial Stability Report. The bank also holds a press conference on the day the reports are published.

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CHAPTER 5

Germany and the European Central Bank

5.1 The Reichsbank

Before the unification of Germany in 1871, each of the German independent states issued their own currency that were linked, at different rates, to a silver coin containing 16⅔ grams of pure silver called the Vereinsthaler. The states also had their own central banks, the *notenbanken* (note banks). The Reichsbank, Germany's first central bank, was established on January 1, 1876, soon after the founding of the *Deutsches Reich* (German Empire) following unification.[1] The legislation establishing the Reichsbank was introduced in the Reichstag in 1874 and passed in 1875. The Prussian civil servant and politician Hermann von Dechend was the first president of the bank. The initial currency issued by the Reichsbank was the goldmark, so-called as the mark was linked to gold at the rate of 358 milligrams per mark. This new goldmark was introduced at the rate of three marks to one Vereinsthaler; hence three marks were traditionally referred to as a thaler even after the use of the Vereinsthaler was discontinued. The goldmark was introduced in 1873 and became the sole legal tender on January 1, 1876. Bank notes were issued by the Reichsbank, the *Reichskassenschein* or the imperial Treasury, and the banks in some of the states such as Baden, Bavaria and Saxony; the denominations were 20, 50, 100 and 1000 marks. The papiermark replaced the goldmark on August 4, 1914, when the First World War forced the Reichsbank to delink the

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mark and gold. Coins made from cheaper metals like aluminum, zinc and iron were introduced during the war.

Emperor Wilhelm II and the German government decided to finance the war entirely by borrowing because, with the memory of the Franco-Prussian War of 1870–1871 in mind, they believed that Germany would win the war and hence be able to easily pay off the debt. Instead, after their loss in the war, the Treaty of Versailles, signed in 1919, asked Germany to give up its colonies, cede Alsace and Lorraine to France, and accept responsibility for the damage caused by it and its allies. The Weimar Republic was asked to pay reparations to the Allied Powers; the London Ultimatum assessed the amount at 132 billion goldmarks in 1921. The payments had to be made in hard currency; as war-ravaged Germany did not have the funds to make the payments, they resorted to printing papiermarks which were then used to buy foreign currency to make the payments. As the papiermark plummeted in value, paying reparations became impossible. Upper Silesia was transferred by the Allies to Poland in October 1921. French and Belgian troops invaded Germany in January 1923 and occupied the industrial heartland of the Ruhr Valley to demand the resumption of payments, to be made in-kind in the form of coal. German workers went on strike to protest the invasion, and the German government decided to continue to pay them during their passive resistance, necessitating the printing of even more papiermarks. What followed was the highest hyperinflation the world has seen, with the exceptions of Hungary and Zimbabwe. The total currency in circulation in Germany was six billion marks in 1913. In November 1923, a loaf of bread cost 428 billion marks and a kilogram of butter approximately 6000 billion marks in Berlin.[23] The exchange rate had fallen to 4200,000,000,000 marks to the dollar by the end of that month. The inflation made holding money extremely costly. Germans reacted by reducing the amount of real marks they held, achieving the reduction in the purchasing power of the mark by increasing the price level in excess of the amount of paper marks issued.[4]

As the papiermark became worthless, the rentenmark was introduced on October 15, 1923, to replace the papiermark at the rate of one trillion papiermark to one rentenmark. The sub-unit of the rentenmark was the rentenpfennig. The introduction of the new currency to successfully stabilize the hyperinflation was the plan of Hans Luther, the German Minister of Finance who subsequently became the Chancellor of Germany. The exchange rate was pegged at the prevailing value of 4200 billion marks to the dollar. Since there wasn't enough gold available to back the new cur-

rency, it was instead backed by real goods such as farmlands and industrial real estate. Payments on the properties were made twice a year, in April and in October. Luther balanced the budget using a combination of emergency tax decrees and spending cuts, and ceased paying wages to the striking workers in the Ruhr Valley.

While rentenmark notes and coins continued to circulate, the reichsmark became the new official currency of Germany on August 30, 1924. It was equal in value to the rentenmark, and divided into 100 reichspfennig. With the economy getting back on track, the reichsmark was once again put back on the gold standard and the Reichsbank granted institutional independence, following the recommendation of the Dawes Committee chaired by the former US Vice President Charles Dawes, who won the Nobel Peace Prize for his work on the committee. During the Nazi era, the government consolidated its power, taking over the control of the Reichsbank. When Germany and Austria were unified in 1938, the reichsmark replaced the schilling to become the official currency of Austria. With the progress of the war, special reichsmarks were issued for use by the German army, while the Allied forces issued the AM-mark or the Allied Military Currency. The Reichsbank operated until 1945, after which monetary policy was taken over by the *Bank deutscher Länder* (Bank of the German States) in West Germany and the *Staatsbank* (State Bank of the German Democratic Republic) in East Germany. The reichsmark continued to circulate in West Germany until June 20, 1948, when it was replaced by the Deutsche mark, and until June 23, 1948, in East Germany, when it was replaced by the East German mark.[5]

5.2 The Deutsche Bundesbank

5.2.1 The History of the Deutsche Bundesbank

After Reichsbank ceased its operations, the *Bank deutscher Länder* took over as the monetary authority after its establishment on March 1, 1948. Of the four occupation zones in Allied-occupied Germany, the bank initially oversaw foreign exchange controls in the American and British occupation zones in Germany.[6] On June 21, 1948, the *Bank deutscher Länder* introduced the Deutsche mark as the new currency in the American, British and French zones. It held coin-issuing rights from 1948 to 1950, but that right passed on to the German federal government on July 8, 1950.[7] The bank remained under Allied control until 1951.

The Basic Law for the Federal Republic of Germany, the post-war constitution of the country, was adopted in May 1949; among other things, it called for the establishment of a central bank that would issue currency in Article 88. The Bundesbank Act was signed on July 26, 1957, and the Deutsche Bundesbank was established on August 1, 1957, by merging the two-tier system set up by the Allies consisting of the *Bank deutscher Länder* and the central banks of the various German states, which were known as *Landeszentralbanken* (or the land central banks or LZB). The *Landeszentralbanken* became the regional headquarters of the new central bank, but retained their name, and were governed by the *Vorstand*, which was the executive board comprising of the president and the vice president. The *Zentralbankrat* (Central Bank Council) of the previous two-tier system continued to be the supreme governing body of the new central bank, but was reconstituted to comprise of the presidents of the *Landeszentralbanken* and a board of directors based in Frankfurt. The Deutsche Bundesbank is hence a relatively young central bank. Given West Germany's outsized importance to the European economy and its considerable trade surplus, the bank had a huge influence on Europe, and continues to play a bigger role than any other country in the current European System of Central Banks. The bank also won international respect for its control of inflation.

As the Bretton Woods system came to its definitive demise in March 1973, many countries including West Germany transitioned from fixed to floating exchange rate regimes. While this freed up the Deutsche Bundesbank from focusing on the exchange rate of the Deutsche mark and allowed it to pursue an independent domestic monetary policy, it also faced a greater burden in ensuring domestic price stability. If the exchange rate is not pegged, rational private agents understand that an independent central bank is free to choose any monetary expansion path. Hence excessive inflation expectations may build up if the authorities are not able to provide credible guidance. The Deutsche Bundesbank realized that it had to come up with a new strategy to control inflationary expectations. After discussions with German academics and the German Council of Economic Experts, it decided on the simultaneous announcement of an inflation goal and a target growth rate for a designated monetary aggregate consistent with the inflation goal as the solution. The initial annual target, chosen for the year 1975, was a point target of eight percent of the central bank money (CBM) stock. The CBM is approximately the monetary base minus the excess reserves.[8] After overshooting the target by two percent,

the Deutsche Bundesbank decided to switch to an average annual growth target of eight percent from 1976 to 1978.[9] The official goal of the Deutsche Bundesbank was to keep the inflation rate from rising above its "unavoidable" level, which was determined to be two percent per year for every year since 1986. The central bank refrained from reducing the target to zero percent because the official price index could overstate the true inflation rate since it had a tendency to undercompensate for improvements in the quality of goods. There was, however, not a blind commitment to the monetary targets, and flexibility was built into the policy rule with the expectation that the central bank would not be penalized for missing the monetary target if inflation was under control. The monetary targets themselves could be changed in light of new information, though the Deutsche Bundesbank made use of this option only once, during the early stages of reunification in 1991.[10]

The fall of the Berlin Wall and the subsequent reunification of East and West Germany on July 1, 1990, posed new challenges for the central bank. The bank became responsible for the conduct of monetary policy for a larger region and a bigger population, and the Deutsche mark became the sole legal tender across all of reunified Germany. The decision of Chancellor Helmut Kohl to convert the East German mark at par with the Deutsche mark, against the wishes of the Deutsche Bundesbank, led to inflationary pressures and the resignation of the President of the central bank. The Bundesbank Act of 1957 was amended and the organizational structure of the Deutsche Bundesbank altered to accommodate the reunification. The *Landeszentralbanken* districts were reorganized on October 22, 1992, when the merger of several of the land central banks shrunk their number from 16 to 9. The administrative structure of the Deutsche Bundesbank was completely overhauled in 2002, when the name *Landeszentralbanken* was done away with; the banks are now branches of the Deutsche Bundesbank and the districts are now administrative subdivisions of the Deutsche Bundesbank.

5.2.2 The Administrative Structure of the Deutsche Bundesbank

The Deutsche Bundesbank is a federal institution with legal personality under public law. Its capital, which amounts to 2.5 billion euro, is owned by the Federal Republic of Germany, and its financial year is the calendar year. The bank is domiciled in Frankfurt am Main. The supreme governing body of the Deutsche Bundesbank is the *Vorstand* (Executive Board).

The board consists of the President, the Vice President and four additional members. The appointment of the President, the Vice President, and one other member is made based on the proposal of the federal government, while the other three members are appointed based on the proposal of the Bundesrat (the Federal Council that represents the 16 federated states of Germany) in agreement with the federal government. All the board members are formally appointed by the President of Germany. The normal length of appointment is eight years; shorter terms are allowed under exceptional circumstances, and the minimum permissible term is five years.[11] The Executive Board deliberates under the chairmanship of the President or Deputy President. Decisions are taken by a simple majority of the votes cast, with the chairman having the casting vote in the event of a tie. The Executive Board can allocate responsibility for dealing with specific matters to one of its members; it can also delegate tasks to the *Hauptverwaltungen* (Regional Offices).

There are currently 35 Deutsche Bundesbank *Filialen* (branches) located in Augsburg, Berlin, Bielefeld, Bochum, Chemnitz, Cologne, Dortmund, Dusseldorf, Erfurt, Essen, Frankfurt am Main, Freiburg, Göttingen, Hagen, Hamburg, Hanover, Karlsruhe, Koblenz, Leipzig, Ludwigshafen, Magdeburg, Mainz, Munich, Neubrandenburg, Nuremberg, Oldenburg, Osnabrück, Regensburg, Reutlingen, Rostock, Saarbrucken, Stuttgart, Ulm, Villingen-Schwenningen, and Würzburg. The bank is planning to streamline its operations by further decreasing the number of branches, which are spread among nine regions.

The regions (with the location of their respective *Hauptverwaltung* in brackets) are Baden-Württemberg (Stuttgart); Bavaria (Munich); Berlin and Brandenburg (Berlin); Bremen, Lower Saxony and Saxony-Anhalt (Hannover); Hamburg, Mecklenburg-Vorpommern and Schleswig-Holstein (Hamburg); Hesse (Frankfurt am Main); North Rhine-Westphalia (Dusseldorf); Rhineland-Palatinate and the Saarland (Mainz); and Saxony and Thuringia (Leipzig).[12] Each Regional Office is headed by a President of the Regional Office, who is subject to the authority of the Executive Board of the Deutsche Bundesbank. Each of these Regional Officers also has a *Beirat* (Advisory Board), which meets regularly with the President of the Regional Office to discuss the execution of the tasks for the region. The board meets twice a year and has no more than 14 members. Not more than half of its members can be chosen from the banking sector; the other members are selected from trade and industry, commerce, the insurance sector, the liberal professions, agriculture, and from

among wage and salary earners.[13] All members of the Advisory Board are nominated by the government of that state and are appointed by the President of the Deutsche Bundesbank for a three-year term.

5.2.3 *The Functions of the Deutsche Bundesbank*

The Deutsche Bundesbank adopted its own mission statement for the first time in 2016. The mission complements the common vision of the Eurosystem, of which the Deutsche Bundesbank is a constituent national central bank[14]:

> Contribution to stability:
>
> As an integral part of the ESCB, we contribute to the primary objective of ensuring monetary stability and share responsibility for the stability of the financial system. In addition, we ensure stable payment and settlement systems and ensure national cash supply. We perform tasks of European and national banking supervision, we manage the foreign reserves of Germany and work for a broad anchoring of our culture of stability in the public sphere.
>
> Our employees are our greatest asset:
>
> The high personal and professional competence of our employees, their commitment and our research form the basis for the fulfillment of our tasks.
>
> Independence:
>
> The legally anchored independence as well as the given tasks are the yardstick of our actions. In doing so, we respect the rules of an open market economy with free competition. We regard the foundations of monetary union as enshrined in the Maastricht Treaty as indispensable in order to successfully fulfill our tasks.

The principal functions of the bank are the conduct of monetary policy and the supervision of the financial and monetary system, the banking system, and cash and non-cash transactions.[15] The central objective of monetary policy in the euro area is to ensure price stability. The Deutsche Bundesbank is no longer responsible for the day-to-day conduct of monetary policy since the introduction of the euro. Neither is it a lender of the last resort. The President of the Deutsche Bundesbank participates in the monetary policy decisions of the European Central Bank Council. The implementation of the monetary policy decisions in Germany is also the responsibility of the Deutsche Bundesbank.

The bank monitors the German financial and monetary system, analyzes systemic risks, and serves on national, European and international committees such as the German Financial Stability Committee (AFS), the European Systemic Risk Board (ESRB), the relevant bodies of the Bank for International Settlements (BIS) and the Financial Stability Board (FSB) to recognize warning signs and prevent financial crises. The Deutsche Bundesbank identifies and assesses risks to the stability of the financial system as part of its macroprudential mandate, which the legislator granted it in early 2013 through the Financial Stability Act, and acts when necessary through the Financial Stability Committee (FSC) to ensure financial stability.[16] It also publishes a report on German financial stability every year.

The supervision of banks in the Eurozone has been carried out by the Single Supervisory Mechanism, consisting of the European Central Bank and the national competent authorities of the participating countries, since 2014. Banking supervision in Germany is under the shared jurisdiction of the Deutsche Bundesbank and the *Bundesanstalt für Finanzdienstleistungsaufsicht* (Federal Financial Supervisory Authority or BaFin), though the central bank has the bulk of the responsibility. The banking supervisory authority does not intervene directly in individual transactions of the banks, but sets framework regulations based on the German Banking Act (KWG). The Deutsche Bundesbank supervises approximately 2000 credit institutions and 1500 other financial services institutions throughout the country by conducting regular on-site audits to assess their solvency, liquidity and risk management. On the basis of these audits, the Deutsche Bundesbank compiles a comprehensive risk classification and assessment called the bank supervisory risk profile for each institution at least once a year. If the supervisors see the need for action, then they submit a proposal to BaFin.[17]

The Deutsche Bundesbank has the sole right to issue euro bank notes in Germany in conjunction with the European Central Bank. It is the responsibility of the bank to ensure that there are sufficient euro bank notes and coins of high quality at all times. It ensures the distribution of the currency to the banks, removes counterfeit bank notes from circulation, and replaces damaged bank notes and coins. Of the seven euro bank note denominations, the 20 and 50 euro bank notes in particular are the particular focus of counterfeiters.[18] In Germany, the Federal Ministry of Finance has the sole right to issue coins even after the introduction of the euro; these coins are then injected into circulation with the help of the Deutsche Bundesbank.

As an increasing share of payments become cashless, any disruption in the payment system affects businesses, international trade, and confidence in the currency. The Deutsche Bundesbank offers settlement and billing services to ensure that payments inside and outside the country are processed smoothly. TARGET (Trans-European Automated Real-time Gross Settlement Express Transfer System) is the central bank's payment system for the rapid settlement of real-time credit transfers throughout the Eurozone. The system is jointly owned by the European Central Bank and the Eurozone national central banks. It was launched on January 4, 1999, and replaced by TARGET2 on May 19, 2008. The Deutsche Bundesbank has been a part of both, with the German system being known as TARGET2-Bundesbank. Additionally, it also issues Bundesbank checks issued by account holders with an auditor's report upon request, agreeing to redeem the check within eight days. Finally, the central bank, on behalf of public administrations, and in exceptional cases by credit institutions, undertakes the opening of letters of credit for the benefit of a beneficiary abroad and the provision of bank guarantees abroad.

The Deutsche Bundesbank is entitled to order, collect and publish statistics in the fields of banking and the monetary system from all credit institutions, German financial investment management companies (*Kapitalverwaltungsgesellschaften*) and externally administered investment corporations (*extern verwaltete Investmentgesellschaften*).[19]

The Regional Offices of the Deutsche Bundesbank supervise the credit institutions and financial service providers in their region. Commercial banks can refinance themselves with the Deutsche Bundesbank in exchange for depositing collateral. In addition to granting loans backed by collateral, these offices can trade in the open market by buying and selling claims, marketable securities and precious metals outright (spot or forward) or under repurchase agreements. The branches of the Deutsche Bundesbank are subordinate to the head offices for that region. They provide the economy with euro bank notes and coins. They also offer free and indefinite exchange of Deutsche mark bank notes and coins of any amount to individuals.[20]

5.2.4 The Autonomy of the Deutsche Bundesbank

The Deutsche Bundesbank was one of the first central banks to be granted a considerable degree of independence. The fight for independence dates back to the Central Bank Council of the *Bank deutscher Länder* meetings of April 4 and 5, 1950, whose minutes read,

> The Central Bank Council, with complete seriousness and gravity, finds that the independence of the central bank system (…) is an absolutely decisive element of securing the currency's stability and maintaining confidence in the currency (…) The validity of this belief becomes particularly apparent in today's Germany, whose population saw its currency collapse twice in the space of a human lifetime owing to actions by the government; the population is therefore understandably particularly suspicious of government influence on senior central bank officials.[21]

Article 12 of Part III of the Bundesbank Act states that

> In exercising the powers conferred on it by this Act, the Deutsche Bundesbank shall be independent of and not subject to instructions from the Federal Government. As far as is possible without prejudice to its tasks as part of the European System of Central Banks, it shall support the general economic policy of the Federal Government.

The powers of the bank are cemented by Article 29 of Part VII, which says that the Executive Board with the *Zentrale* (Central Office) located at the legal domicile of the bank shall have the status of a *oberste Bundesbehörde* (supreme federal authority), while the Regional Offices and branches shall have the status of *Bundesbehörden* (the federal authorities). The President of the Deutsche Bundesbank appoints the Bank's civil servants and is the supreme institutional authority who has full disciplinary powers and represents the bank both in and outside the courtroom. Grilli et al. (1991) assign the Deutsche Bundesbank a slightly higher independence score than the Federal Reserve as the Deutsche Bundesbank President is guaranteed a longer term (eight years) than the Federal Reserve Chairperson (four years).[22]

The bank is also financially independent. Article 27 of Part VI says that 20 percent of the net profit, but at least 250 million euro, shall be transferred to the statutory reserves until they equal 2.5 billion euro and the statutory reserves may only be used to offset a decline in value and to cover other losses; the balance shall be paid to the Federal Republic of Germany.

It is largely due to its statutory independence that the Deutsche Bundesbank was able to accord primacy to lowering inflation rather than unemployment and did such an admirable job of maintaining the value of the Deutsche mark and keeping inflation in check. The average annual inflation rate in West Germany was lower than in any of the other OECD countries from the end of the Bretton Woods system in 1973 to 1989, the year before the German reunification.[23] While the hyperinflation after the First World War and the suppressed inflation during the Third Reich created a strong

desire for monetary stability in Germany, the central bank was able to pursue that goal free of political pressure. To that effect, it has aggressively managed short-term interest rates, with the exception of the period between the First Oil Shock and the Second Oil Shock. Article 20 of the Bundesbank Act of 1957 also prohibited the central bank from financing government deficits. According to Neumann (1999, 2006) and Lohmann (2003), it was also the first central bank that provided the public with an intelligible numerical framework that facilitated the evaluation of its policy course from the outside, which increased its credibility with economists, bankers and finance industry professionals and journalists and enhanced its success.[24,25,26] The European Central Bank largely follows the Bundesbank model due to the success of the latter. The European Union now makes central bank independence a prerequisite for admission to the Economic and Monetary Union.

However, the guarantee of statutory independence of the bank by the Bundesbank Act does not mean that the bank is not subject to political pressures. The resignation of Karl Otto Pöhl as the President of the bank in 1991 over the German government's populist decision to exchange East German marks for Deutsche marks one-for-one is a case in point. The federal government of Germany also has discretion over exchange rate agreements, thus stepping on the central bank's jurisdiction.

5.3 The European Central Bank and the European System of Central Banks

5.3.1 The History and Administrative Structure of the European Monetary Authorities

Formal economic cooperation in Europe started with the formation of the European Coal and Steel Community (ECSC) in 1951, and the European Atomic Energy Community (Euratom) and the European Economic Community (EEC) by the Treaties of Rome in 1957. The signatories for both treaties were Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany. The goal was the removal of trade and tariff barriers to form a common market. Denmark, Ireland and the United Kingdom joined the EEC in 1973. The governments and central banks of these nine countries created the European Monetary System (EMS) in 1979. The EMS introduced the exchange rate mechanism (ERM), which establishes fixed exchange rates between the currencies of the participating countries. Greece joined the EEC in 1981, followed by Spain and Portugal in 1986.

The EEC morphed into the European Union (EU) when the 12 members signed the Maastricht Treaty, which includes a provision for the establishment of the European Central Bank, on February 7, 1992. The treaty came into force on November 1, 1993. Austria, Finland and Sweden joined the EU in 1995.[27]

The first step toward creating a centralized European monetary authority was taken on July 1, 1990, with the launch of Stage One of the Economic and Monetary Union. This stage included complete freedom for capital transactions; increased co-operation between central banks; the free use of the European Currency Unit, which was the forerunner of the euro; and the improvement of economic convergence. Stage Two was implemented on January 1, 1994. This stage included the establishment of the European Monetary Institute (EMI); a ban on the granting of central bank credit; increased co-ordination of monetary policies; strengthening of economic convergence; outlining a process leading to the independence of the national central banks, which was to be completed by the date of establishment of the European System of Central Banks at the latest; and preparatory work for Stage Three. The two main tasks of the EMI were to strengthen central bank cooperation and monetary policy coordination, and to prepare for the establishment of the European System of Central Banks (ESCB), for the conduct of the single monetary policy and for the creation of a single currency in the third stage.[28] Stage Three started on January 1, 1999. This stage included the irrevocable fixing of conversion rates; the introduction of the euro; the conduct of the single monetary policy by the ESCB; the launch of the intra-EU exchange rate mechanism (ERM II); and the Stability and Growth Pact coming into effect. The Stability and Growth Pact aimed to ensure budgetary discipline within the EMU (Fig. 5.1).[29]

The legal basis for the single monetary policy are the Treaty on the Functioning of the European Union and the Statute of the European System of Central Banks and of the European Central Bank. The statute established the European Central Bank (ECB) and the ESCB effective June 1, 1998. The ECB took over the individual monetary policy operations of 19 central banks of countries that together make up the Eurozone on January 1, 1999. These central banks were National Bank of Austria (Austria), National Bank of Belgium (Belgium), Central Bank of Cyprus (Cyprus), Bank of Estonia (Estonia), Bank of Finland (Finland), *Banque de France* (France), *Deutsche Bundesbank* (Germany), Bank of Greece (Greece), Central Bank of Ireland (Ireland), *Banca d'Italia* (Italy),

Fig. 5.1 Member states of the European Union (Source: Commons)

Latvijas Banka (Latvia), Bank of Lithuania (Lithuania), Central Bank of Luxembourg (Luxembourg), Central Bank of Malta (Malta), *De Nederlandsche Bank* (Netherlands), *Banco de Portugal* (Portugal), *Banka Slovenije* (Slovenia), *Národná banka Slovenska* (Slovakia) and *Banco de España* (Spain) (Fig. 5.2).

The apex decision-making body of the ECB is the Governing Council, which comprises of the six members of the Executive Board, plus the governors of the national central banks of the 19 Eurozone countries. The council typically meets twice a month in Frankfurt. It assesses the economic situation and monetary developments and makes its monetary policy decisions every six weeks, and discusses its other responsibilities at the other meetings. The responsibilities of the council are as follows[30]:

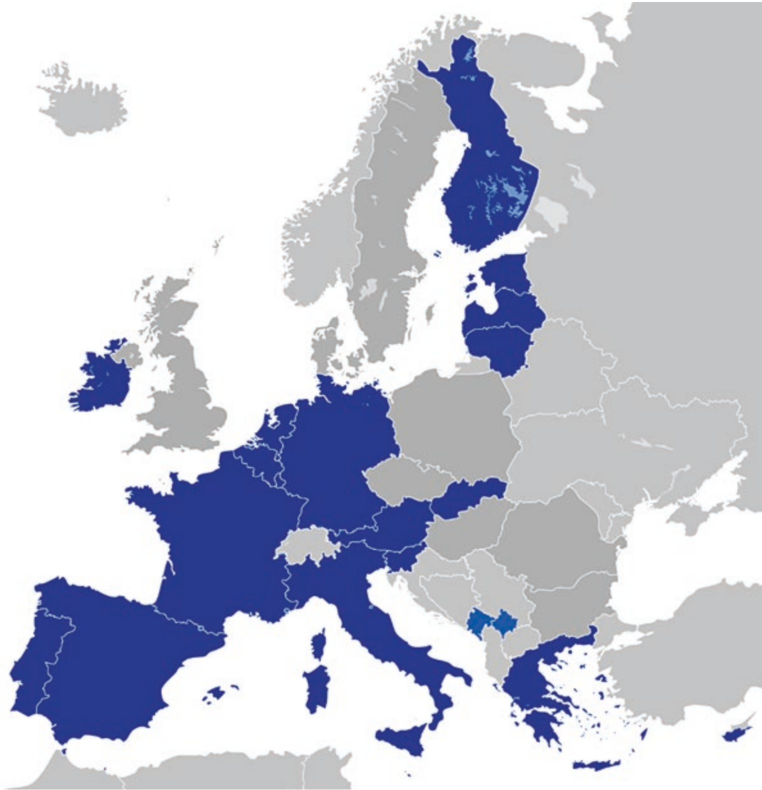

Fig. 5.2 The Eurozone countries (Source: Commons)

(a) To adopt the guidelines and take the decisions necessary to ensure the performance of the tasks entrusted to the ECB and the Eurosystem.

(b) To formulate monetary policy for the euro area. This includes decisions relating to monetary objectives, key interest rates, the supply of reserves in the Eurosystem, and the establishment of guidelines for the implementation of those decisions.

(c) In the context of the ECB's new responsibilities related to banking supervision, to adopt decisions relating to the general framework under which supervisory decisions are taken, and to adopt the complete draft decisions proposed by the Supervisory Board under the non-objection procedure.

The conduct of monetary policy in the Eurozone is under the purview of the Executive Board. The Executive Board is comprised of the President, the Vice-President and four other members, all of whom are appointed by the European Council. All the Executive Board members are appointed for an eight year non-renewable term. The initial appointments made in 1998 were of varying lengths so that all the members would not need to be replaced in the same year. The responsibilities of the board are[31]:

(a) To prepare Governing Council meetings.
(b) To implement monetary policy for the euro area in accordance with the guidelines specified and decisions taken by the Governing Council. In so doing, it gives the necessary instructions to the euro area NCBs.
(c) To manage the day-to-day business of the ECB with the support of the Chief Services Officer.
(d) To exercise certain powers delegated to it by the Governing Council. These include some of a regulatory nature.

The capital of the ECB comes from the national central banks of all the 28 European Union member states and amounts to €10,825,007,069.61. Of the Eurozone national central banks, the *Deutsche Bundesbank*, *Banque de France* and *Banca d'Italia* are the largest shareholders of the ECB with 17.9973, 14.1792 and 12.3108 percent of the capital key respectively. The Eurozone national central banks together hold 70.3915 percent of the capital. Of the non-Eurozone national central banks, the Bank of England is the largest shareholder with 13.6743 percent of the capital key. The shares of the national central banks are calculated using a key which reflects the respective country's share in the total population and the gross domestic product of the European Union, which are weighed equally. The ECB adjusts the shares every five years and whenever a new country joins the European Union; the calculations are based on the data provided by the European Commission. The net profits and losses of the ECB are allocated among the national central banks. An amount determined by the Governing Council but not exceeding 20 percent of the net profits is transferred to the general reserve fund, subject to a limit equal to 100 percent of the capital. In the event of a loss, the shortfall is offset against the general reserve fund of the ECB; if needed, the Governing Council can offset it against the monetary income of the relevant financial year in proportion to the national subscriptions.[32]

The European System of Central Banks (ESCB) consists of the European Central Bank (ECB) and the national central banks of the 28 countries that make up the European Union. In addition to the central banks of the 19 Eurozone countries, the ESCB includes Bulgarian National Bank (Bulgaria), Croatian National Bank (Croatia), Czech National Bank (the Czech Republic), *Danmarks Nationalbank* (Denmark), *Magyar Nemzeti Bank* (Hungary), *Narodowy Bank Polski* (Poland), National Bank of Romania (Romania), *Sveriges Riksbank* (Sweden) and Bank of England (the United Kingdom).

The introduction of the euro shook up the foreign exchange market. After an increase in the volume of foreign exchange traded for several years in a row, trading volumes fell as the euro eliminated the need for currency conversions among the countries of the Eurozone. Not all countries adopted the euro at the same time. The countries that switched to the euro at the time of its launch on January 1, 1999, were Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Monaco, the Netherlands, Portugal, San Marino, Spain, and Vatican City. Greece joined on January 1, 2001; Slovenia on January 1, 2007; Cyprus and Malta on January 1, 2008; Slovakia on January 1, 2009; Estonia on January 1, 2011; Latvia on January 1, 2014; and Lithuania on January 1, 2015. All of these countries had varying lengths of time when both the euro and the preceding national currency could be used in transactions, though these periods have now passed for all these countries. However, most of these countries (Austria, Belgium, Germany, Estonia, Ireland, Latvia, Lithuania, Luxembourg, Slovakia, and Slovenia) allow people to exchange the old currency for euros indefinitely. The countries that limit the exchange window for bank notes are France (February 17, 2012), Italy (February 28, 2012), Finland (February 29, 2012), Greece (March 1, 2012), Cyprus (December 31, 2017), Malta (January 31, 2018), Spain (December 31, 2020), Portugal (February 28, 2022), and the Netherlands (January 1, 2032).[33] For coins, all countries except Austria, Estonia, Germany, Ireland, Latvia and Lithuania have finite deadlines for exchanges, most of which have passed.[34] The conditions necessary for the adoption of the euro are referred to as the “convergence criteria”; these are the achievement of a high degree of sustainable convergence (economic convergence) and the compatibility of each country’s national legislation with Articles 108 and 109 of the EC Treaty and the Statute of the ESCB (legal convergence).[35]

5.3.2 *Monetary Policy of the Eurozone*

The European Union treaty and the statute of the European Central Bank and the European System of Central Banks states that the primary goal of the monetary policy of the Eurozone is maintaining price stability. On October 13, 1998, the Governing Council adopted the definition of price stability as the year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below two percent. This precise and quantitative definition of price stability served three primary goals. First, it made monetary policy in the Eurozone transparent and predictable. Second, the performance of the monetary authority could be evaluated against an objective measure. Third, it helped to anchor inflationary expectations and hence enhance the credibility of the policy.[36] Avoiding deflation is just as important as avoiding inflation, since it entails similar costs to the economy as inflation. Once deflation occurs, there is the risk of it becoming entrenched as nominal interest rates cannot fall below zero.[37]

Monetary policy in the Eurozone operates through the short-term interest rate. The ECB offers two standing facilities; the lending facility and the deposit facility work as the corridor that limits the fluctuation in the overnight rate. The central monetary policy instrument of the Eurosystem is the weekly main refinancing operations, referred to as main tenders, with a regular maturity of one week. The main refinancing operations and the longer term refinancing operations are carried out according to a non-binding calendar that is published by the Eurosystem at least three months before the beginning of the year for which it is valid. The monetary policy framework of the Eurosystem lays out the mechanism for decentralizing the decisions taken by the Governing Council to implement monetary policy in the euro area. The monetary policy operations are then conducted on a uniform basis in all the member countries, with the Deutsche Bundesbank being responsible for implementing the Eurosystem monetary policy in Germany with its German business partners. The monetary policy framework of the Eurosystem ensures the participation of a large circle of counterparties.

The Eurosystem requires its credit institutions to hold minimum reserves in Eurosystem accounts, and credit institutions subject to the reserve requirement can avail of the Eurosystem's standing facilities and participate in Eurosystem open market operations through standard tenders. Article 18 of the European System of Central Banks statute requires the provision of sufficient collateral for all Eurosystem credit operations; a wide range of eligible assets can be used as collateral for these Eurosystem credit operations.

The financial and sovereign debt crisis that began in 2007 prompted the Governing Council of the ECB to take a number of exceptional monetary policy measures, altering the regular monetary policy framework. All regular monetary policy refinancing operations were currently carried out as a full-allotment tender. The minimum reserve requirements were lowered, the collateral requirement altered and foreign currency liquidity offered to stabilize the banks. The Governing Council has implemented temporary monetary policy purchase programs and targeted longer-term refinancing operations (TLTROs) in addition to the existing monetary policy framework since 2014. The Asset Purchase Program (APP) was expanded to include covered bonds (the Covered Bond Purchase Program 3 or CBPP3), asset-backed securities (the Asset-Backed Securities Purchase Program or ABSPP), bonds of Eurozone central governments, issuers with funding mandates and European institutions (the Public Sector Purchase Program or PSPP), and corporate bonds (the Corporate Sector Purchase Program or CSPP). The APP purchased €80 billion worth of assets per month until March 2017 and €60 billion per month since April 2017. All of the special monetary policy measures are explicitly temporary and can be terminated by the Governing Council based on monetary policy requirements.[38]

Following in the footsteps of the Federal Reserve, beginning on October 26, 2017, the European Central Bank started winding down the emergency measures it had taken top prop up the economy and aid recovery following the financial crisis a decade ago. The bank waited until the Eurozone had witnessed four years of uninterrupted economic growth and falling unemployment before it started doing so.[39]

5.3.3 *The Autonomy of the European Central Bank*

The independence of the European Central Bank from political interference is one of the principal tenets of monetary policy in the Eurozone, and this autonomy is constitutionally protected by the treaty establishing the European Community as well as the statute of the European System of Central Banks. An independent central bank is perceived to be more credible by the public. The concept of independence includes institutional independence, legal independence, personal independence of the members of its decision-making bodies, functional and operational independence, and financial and organizational independence.[40]

Institutional independence is guaranteed by Article 108 of the European Community treaty, which states that

> when exercising the powers and carrying out the tasks and duties conferred upon them by this Treaty and this Statute, neither the ECB, nor a national central bank, nor any member of their decision-making bodies shall seek or take instructions from Community institutions or bodies, from any government of a Member State or from any other body. The Community institutions and bodies and the governments of the Member States undertake to respect this principle and not to seek to influence the members of the decision-making bodies of the ECB or of the national central banks in the performance of their tasks.[41,42]

Both the ECB and the national central banks are treated as persons for legal purposes, and the ECB can bring a case to the European Court of Justice if they are hindered by a member state or a European Community institution. Personal independence is reinforced by relatively long fixed terms of office; a minimum term of office for the national central bank governors is five years and subject to renewal, and the minimum term of office for members of the Executive Board is eight years, though their terms are non-renewable. A member of any of the decision-making bodies of the ECB may not be dismissed in a discretionary manner on the grounds of past policy performance; they can only be compulsorily retired if they are unable to perform their duties or are found guilty of serious misconduct. Functional and operational independence stems from the ECB being vested with all the powers needed to achieve its primary objective of price stability. The ECB has all the instruments needed for the conduct of efficient monetary policy at its disposal, and is authorized to independently decide how and when to use them. The Eurosystem also has a monopoly on bank note issuing and the member states' right to strike coins is subject to approval by the ECB and restricted to low denominations; hence the ECB has complete control over the monetary base in the Eurozone. The official foreign exchange holdings are concentrated within the Eurosystem since the ECB controls both the use of these holdings as well as the residual working balances in foreign currencies of the member states. Furthermore, Article 101 of the European Community treaty prohibits the Eurosystem from lending to the public sector, thereby precluding the purchase of public debt on the primary market by the Eurosystem. Lastly, both the ECB and the national central banks have their own financial resources and hence enjoy financial and organizational independence. The capital of the ECB is subscribed and paid up by the national central banks, and the ECB has its own budget that is independent from that of the European Union.[43]

5.4 The Euro

5.4.1 The History of the Euro

The precursors to the euro were the European Unit of Account (EUA) and the European Currency Unit (ECU). The EUA was a unit of account used in the European Communities, which referred to three international organizations, the European Coal and Steel Community (ECSC), the European Atomic Energy Community (EAEC or Euratom), and the European Economic Community (EEC), from 1975 to 1979. This was a basket of European currencies that was initially worth the same as an SDR, at US $1.20635. The basket was comprised of the following currencies (with the respective weights in brackets): the Deutsche mark (29.17 percent), the French franc (19.49 percent), the pound sterling (15.83 percent), the Italian lira (12.52 percent), the Dutch guilder (10.45 percent), the Belgian franc (8.71 percent), the Danish krone (2.82 percent), the Irish pound (0.70 percent), and the Luxembourg franc (0.31 percent).[44] The EUA was replaced as the unit of account at par by the ECU on March 13, 1979. Then weights of various currencies in the EUA varied over time. At the time of replacement by the euro, the basket was comprised of the following currencies (with the respective weights in brackets): the Deutsche mark (31.96 percent), the French franc (20.32 percent), the pound sterling (12.45 percent), the Dutch guilder (9.98 percent), the Belgian franc (8.18 percent), the Italian lira (7.84 percent), the Spanish peseta (4.14 percent), the Danish krone (2.65 percent), the Irish pound (1.09 percent), the Portuguese escudo (0.7 percent), the Greek drachma (0.44 percent), and the Luxembourgish franc (0.32 percent). Exchange rate variability among these currencies was reduced using the European Exchange Rate Mechanism (ERM), which was a semi-pegged system with fixed exchange rate margins, but with exchange rates that were variable within those margins. Currencies were allowed to fluctuate within −2.25 percent to +2.25 percent of the Parity Grid, except the Italian lira, the Portuguese escudo, the Spanish peseta and the pound sterling, which were allowed to fluctuate within −6 percent to +6 percent.[45] The ECU was replaced at par by the euro on January 1, 1999.

The euro is the official currency of the European Union, and is subdivided into 100 cents. The name of the currency was officially adopted at the Madrid European Council, which was held on December 15 and 16, 1995. The Presidency Conclusions state that

> The name of the new currency is an important element in the preparation of the transition to the single currency, since it partly determines the public acceptability of Economic and Monetary Union. The European Council considers that the name of the single currency must be the same in all the official languages of the European Union, taking into account the existence of different alphabets; it must be simple and symbolize Europe. The European Council therefore decides that, as of the start of Stage 3, the name given to the European currency shall be Euro. This name is meant as a full name, not as a prefix to be attached to the national currency names.[46]

While the euro was introduced as an accounting currency that could only be used for electronic transfers, travelers' checks, and suchlike on January 1, 1999, actual euro bank notes and coins entered circulation on January 1, 2002, in 12 countries with a combined population of 308 million. The countries were Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. This was, and remains, the world's largest monetary changeover. The European Central Bank (ECB) oversaw bank note production at 15 locations; production began in July 1999.[47] While individual countries were responsible for minting their own coins, the bank acted as a neutral assessor of coin quality to ensure their usage in vending machines across the Eurozone. The new currency was distributed to banks and retailers from September 2001 to ensure a smooth transition, and more than half of all cash transactions were in euros just one week after the introduction. Following a dual circulation period that lasted up to two months in some countries, when both the euro and the former national currency could be used for payments, the euro became the sole legal tender on March 1, 2002.[48] Even after the former national currencies ceased to be legal tender, the national central banks continued to accept them for varying periods of time; some national central banks will keep accepting them indefinitely.

Having a single currency offers many advantages. Exchange costs are eliminated, along with fluctuating exchange rates. There is more cross-border trade and more foreign investment, leading to higher economic growth. Access to cheaper imports acts as a check on inflation. Consumers in the country also have more product choices. A larger market and regular usage by over 300 million people has also given the European Union more power on the international financial stage and made the euro the second largest reserve currency after the US dollar.[49]

The ECB and the Eurosystem collectively manage the euro. The ECB and the national central banks jointly issue euro bank notes; the ECB issues 8 percent of the total value of bank notes, while the remaining 92 percent are issued by the national central banks of the Eurozone countries in proportion to their respective shares in the capital key of the ECB, the three largest shares being those of Germany, France and Italy.[50] The denominations issued are 5, 10, 20, 50, 100, 200 and 500 euros. Coins are issued in the denominations of 1, 2, 5, 10, 20 and 50 cents and 1 and 2 euros. All coins have a common side showing the denomination and a national side depicting an image chosen by the issuing country.

The value of the euro peaked against the US dollar in July 2008, when it was worth US $1.60. Since then, it has depreciated due to the financial crisis and the sovereign debt crisis, though it has consistently traded above US $1.20. The euro is currently the second most frequently traded currency in the foreign exchange market, with a market share that is smaller than only the US dollar. It is also the world's second most important reserve currency. Of the foreign exchange reserves held by central banks, 62 percent are in US dollars while 24 percent are held as euro deposits. The four key determinants of a currency's potential to be a reserve currency are economic and trade patterns, the depth of the financial market, the confidence in the value of the currency, and inertia from previous use. On all four counts, the United States comes out on top. However, the economic policies pursued by the United States itself can threaten the dominance of the US dollar, boosting the profile of the euro.[51]

5.4.2 The Euro Outside the Official Eurozone

Some Eurozone countries have dependent territories in other parts of the world that use the euro as their official currency (Fig. 5.3). Most of these overseas countries and territories are under the jurisdiction of either France or the United Kingdom. French territories include French Guiana, Saint Pierre and Miquelon, Guadeloupe, Martinique, Saint Martin, Saint Barthélemy, La Réunion and Mayotte. All of these territories use the euro. France also has three overseas collectivities in the Pacific: French Polynesia, New Caledonia and the Wallis and Futuna Islands. These collectivities use the *Change Franc Pacifique* (Pacific Franc Exchange) or the CFP franc, a currency created by France in 1945 (along with the *Communauté Financière d'Afrique*, or the *Coopération financière en Afrique centrale*, or the CFA franc that is used by over a dozen countries in western and central Africa) whose value is pegged at approximately 119 to the euro. Most British ter-

ritories use a combination of the British pound sterling and their own locally issued pounds. For instance, Gibraltar, which is located next to Spain, uses the Gibraltar pound; the Gibraltar pound is pegged to the British pound at par value. The Falkland Islands, off the Argentine coast, use the Falkland Islands pound interchangeably with the British pound; it is pegged to the latter at par value. Of the islands that comprise the British overseas territory of Saint Helena, Ascension and Tristan da Cunha in the southern Atlantic, Saint Helena and Ascension use the Saint Helenian pound, which is also pegged to the British pound at par value. The British pound is also legal tender on both islands. The island of Tristan da Cunha, on the other hand, only uses the British pound despite being a part of the same overseas territory. The principal exceptions to this are the British sovereign base areas of Akrotiri and Dhekelia on the island of Cyprus, which use the euro, having switched on January 1, 2008, along with the rest of the island. Some of the British territories in the Caribbean and the northern Atlantic, such as the British Virgin Islands and the Turks and Caicos Islands, use the US dollar; others use it alongside their own currency, such as the Bermudian dollar in Bermuda, which is pegged to the US dollar at par value. Both currencies circulate freely. The Pitcairn Islands in the southern Pacific, the majority of whose inhabitants are the descendants of the mutineers on Royal Navy's HMS Bounty and their Tahitian partners, use the New Zealand dollar.

Of the Caribbean islands that formed the erstwhile Netherlands Antilles, a former constituent country of the Kingdom of the Netherlands, Aruba introduced its own currency, the florin, in 1986, replacing the Netherlands Antillean guilder. The florin is pegged at 1.79 to the US dollar. The Netherlands Antilles was administratively dissolved in September 2010, and Bonaire, Saba and Sint Eustatius adopted the US dollar on January 1, 2011. The islands of Curaçao and Sint Maarten continue to use the Netherlands Antillean guilder, though they are working toward replacing it with the newly created Caribbean guilder.[52] Further north, Greenland and the Faroe Islands, both autonomous countries within the Kingdom of Denmark, do not issue their own currencies but rather use their own versions of the Danish krone: the Greenlandic krone and the Faroese króna respectively. The ISO 4217 code DKK covers all three.[53] The remaining European autonomous regions, all of which use the euro, are the Azores and Madeira, both of which are administered by Portugal, and the Canary Islands, which are under Spanish administration. Additionally, Ceuta and Melilla are two autonomous Spanish cities located on the northern coast of Africa; they both share a land border with Morocco and are separated from Spain by the Mediterranean Sea. Both cities use the euro as their official currency.

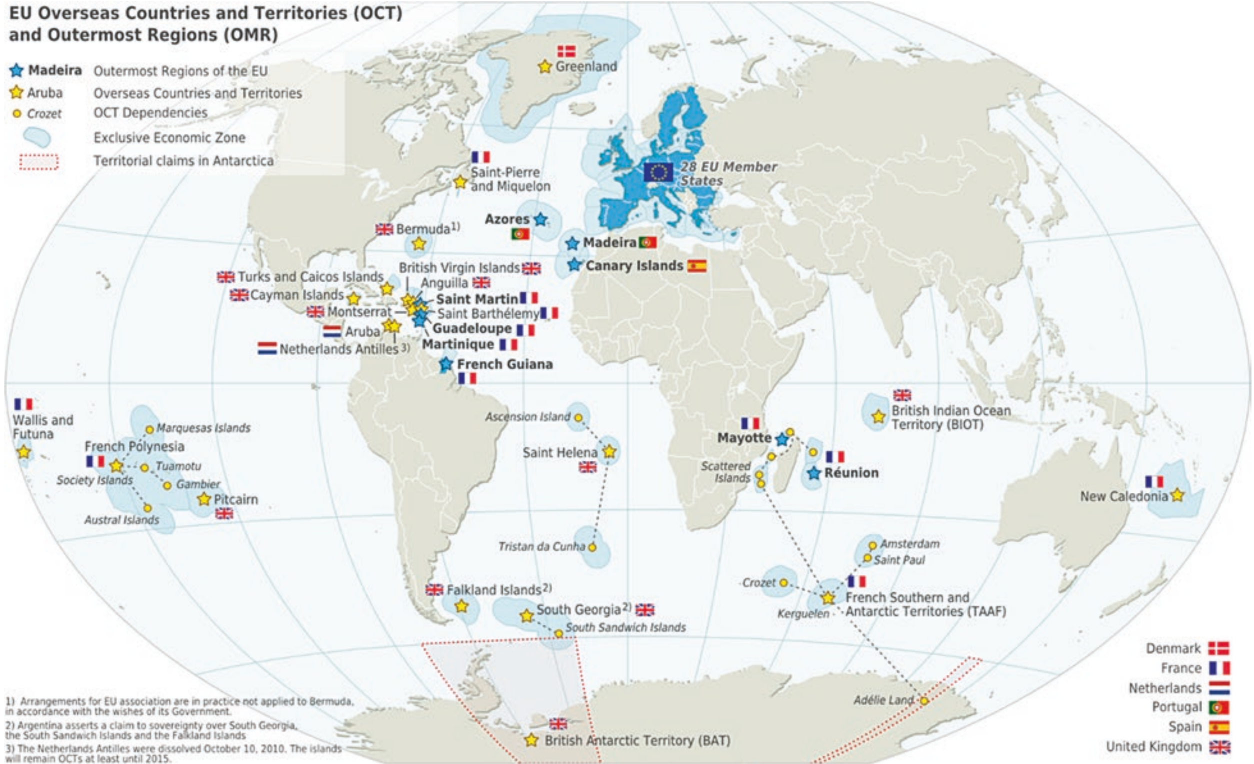

Fig. 5.3 European Union outermost regions, overseas countries and territories and dependencies (Source: Commons)

In addition, there are several European microstates that historically did not have their own currencies and are also not a part of the European Union. The reasons are a combination of treaties signed in the past, other historical factors, and the fact that the European Union membership dues are too high for small countries with tiny populations to afford. These countries are Andorra, Liechtenstein, Monaco, San Marino and Vatican City. Their populations (2016 estimates) are 77,281; 37,666; 38,499; 33,203; and under 1000 respectively (Fig. 5.4).

Most of these countries had their own currencies prior to the introduction of the euro. The currencies of Monaco, San Marino and Vatican City were the Monegasque franc (which was pegged to the French franc), the

Fig. 5.4 European microstates (Source: Commons)

Sammarinese lira (pegged to the Italian lira) and the Vatican lira (also pegged to the Italian lira) respectively. Monaco does not have a central bank. It signed a foreign exchange controls agreement with France on April 14, 1945, and under the terms of that agreement, the operating and supervision laws that apply to French banks also apply to Monaco's –33 banks. The French deposits guarantee fund also covers Monegasque financial institutions, which also have access to the French central bank's payment facilities.[54] The Central Bank of the Republic of San Marino, a private legal entity with mixed public and private participation, was established in 2005 by the merger of the *Istituto di Credito Sammarinese* (San Marino Credit Institute) and the *Ispettorato per il Credito e le Valute* (Inspectorate for Credit and Currencies), a process that started with Law Number 83 in 2003 and was completed with Law Number 96 in 2005. The state has to hold a majority of its 2500 shares by law (it currently holds 67 percent), while the rest are held by Sammarinese banks, financial corporations and insurance companies.[55] The European Central Bank now performs some of its functions, though the Central Bank of the Republic of San Marino is not a member of the European System of Central Banks. A narrow majority (50.28 percent) of votes cast in a 2013 referendum voted in favor of San Marino applying to join the European Union, but the proposal did not move forward as the number of yes votes fell below the threshold of 32 percent of total registered voters that formed the quorum. The functions of the central bank in Vatican City is performed by the *Amministrazione del Patrimonio della Sede Apostolica* (Administration of the Patrimony of the Apostolic See or APSA), the agency of the Roman Curia established by Pope Paul VI on August 15, 1967 to oversee the finances of the Holy See. The APSA was reorganized and its scope downsized by transferring some of its duties to the Vatican's Secretariat for the Economy on February 24, 2014, but it has continued to function as both the Treasury and the central bank for the Vatican.[56] All three nations signed monetary agreements with the European Union before the introduction of the euro, which they adopted as their official currencies starting January 1, 1999. They have been allowed to mint a certain limited quantity of their own euro coins since January 1, 2002, though none are allowed to print their own banknotes. Monaco is entitled to mint 1/500th the volume of euro coins minted by France each year. San Marino is allowed to mint euro coins up to a maximum value of €1,944,000 per year. Vatican City is allowed to mint euro coins up to a maximum of €1000,000 per year, with an additional maximum of €300,000 in certain special years.[57]

These coins are legal tender and are used in transactions, though they are also prized by numismatists because of their limited circulation. All three also issue euro collector coins, which are not legal tender. As is the case elsewhere in the Eurozone, euro currencies from other jurisdictions are also legal tender in these countries.

Andorra never had its own currency and used both the French franc and the Spanish peseta, the two countries that border it, as de facto legal currencies before the introduction of the euro. It did not have official agreements with either country, and this informal system continued even after both countries switched to the euro. Andorra eventually signed a monetary agreement with the European Union on June 30, 2011.[58] The agreement came into force on April 1, 2012.[59] The country got permission to start issuing its own euro coins from July 1, 2013; after some delays, partly the result of the minting responsibilities being split between France and Spain, the first batch of Andorran coins went into circulation on January 15, 2015. The 10, 20 and 50 cents coins were the first denominations to go into circulation, followed by the 1, 2 and 5 cents, the 1 euro and the 2 euros. The 1, 2 and 5 cents and 1 euro coins are minted in Madrid, Spain and the 10, 20 and 50 cents and 2 euro coins are minted in Paris, France.[60] Andorra also does not have a central bank; the *Institut Nacional Andorrà de Finances* (Andorran National Institute of Finance or INAF) performs the supervisory, regulatory and disciplinary functions of the central bank.[61]

The fifth microstate, Liechtenstein, is a member of the European Economic Area and the European Free Trade Area, and enjoys the right of free movement of goods, services, labor and capital. However, it does not use the euro. Liechtenstein used the Austrian krone, which was divided into 100 heller, until 1920. Its own currency, the Liechtenstein franc, has only been issued for collection purposes since the last two batches meant for general circulation were struck in 1924 and 1930. There was only one emergency bank note issue by the *Liechtensteinische Landesbank* (National Bank of Liechtenstein), the central bank of the country, which happened in 1920 when 10, 20 and 50 heller bank notes were printed.[62] Liechtenstein decided to switch to the Swiss franc as its official currency in 1920 due to the dissolution of the Austro-Hungarian Empire at the end of the First World War. This was cemented by a customs treaty with Switzerland, which was signed in 1924, and a monetary union with Switzerland, which went into effect on November 25, 1981. As a result, its monetary policy is conducted by the Swiss National Bank, which is the central bank of Switzerland.

The country's own central bank, *Liechtensteinische Landesbank*, was established on December 5, 1861 as the *Zins- und Credit-Landes-Anstalt im souverainen Fürstenthume Liechtenstein* (National Interest and Credit Institution in the Sovereign Principality of Liechtenstein).[63] Its Board of Directors is comprised of five to seven members who are elected by the General Meeting of Shareholders for a term of three years. Members may be re-elected twice. The Chairman is also appointed by the General Meeting; after the expiry of three terms of office, they may, in substantiated cases, be re-elected for an extraordinary two-year term.[64] By law, a majority of its shares are held by the state; of the 30.8 million LLB shares, the state owns 17.7 million (or 57.5 percent).[65] The LLB also enjoys a state guarantee from the Principality of Liechtenstein, one of only 11 countries that currently have a AAA rating.[66] The monetary union treaty allows Liechtenstein to mint coins, but doesn't allow it to print bank notes.

None of these microstates, however, have representation on the European Central Bank. Neither are they a part of the European System of Central Banks (ESCB), which consists of the European Central Bank (ECB) and the national central banks of the 28 countries that make up the European Union.

Lastly, there are a couple of countries that have been using the euro unilaterally, without any official agreement with the European Union. These are the Balkan countries of Kosovo and Montenegro, both of which adopted the euro in 2002.[67] Neither country has a currency of its own, nor do they mint their own euro coins. Montenegro switched from the dinar of the former Socialist Federal Republic of Yugoslavia to a dual currency system of the dinar and the German mark. The Montenegrin government decided to make the mark the only legal tender in 2001, but switched to the euro at the same time as Germany.[68] Kosovo used the Yugoslav dinar, the German mark, the US dollar and the Swiss franc before 2002, and similarly adopted the euro on January 1, 2002. Unauthorized use of the euro would normally trigger sanctions, but despite neither country meeting explicitly laid out euro convergence criteria, the European Union has not moved to block their use of the euro.

5.4.3 Currencies Pegged to the Euro

There are a number of countries that keep their currency pegged to the euro. These include three countries in Europe: Bosnia and Herzegovina, whose currency is the convertible mark, pegged at 1.95583 to the euro;

Bulgaria, whose currency is the lev, also pegged at 1.95583 to the euro; and Macedonia, whose currency is the denar, pegged at 61.505 to the euro.[69,70,71] In addition, the Danish krone is pegged to the euro due to ERM II. A far greater number of African countries are pegged to the euro, either due to bilateral or multilateral arrangements. The countries that are on the CFA franc, which include Benin, Burkina Faso, Guinea-Bissau, Ivory Coast, Mali, Niger, Senegal and Togo, which use the West African CFA franc (ISO code XOF), and Cameroon, Central African Republic, Chad, Republic of the Congo, Equatorial Guinea and Gabon, which use the Central African CFA franc (ISO code XAF), have the currency pegged at 655.957 to the euro. Countries that used the CFA franc in the past but now use their own currency are Guinea, Madagascar and Mauritania. Mali left in 1962 and started issuing Malian francs but rejoined in 1984, while Madagascar and Mauritania are the only two countries to issue non-decimal currencies, with the Malagasy ariary divided into five iraimbilanja and the Mauritanian ouguiya divided into five khoums. Three African island nations also have their currencies pegged to the euro; these are the Cape Verde, Comoros and São Tomé and Príncipe. Their currencies are the Comorian franc, the Cape Verdean escudo and the dobra, pegged at 491.96775, 110.265 and 24,500 to the euro respectively. Morocco, which is trying to move to a more flexible exchange rate system, has the Moroccan dirham pegged to a currency basket where, since 2017, the euro has a 60 percent weight and the US dollar has a 40 percent weight.[72] In the Pacific, the CFP franc is used in the three French overseas collectivities of French Polynesia, New Caledonia, and Wallis and Futuna; the CFP franc is pegged to the euro at 8.38 euros per 1000 CFP francs.[73]

Notes

1. Despite the establishment of the Reichsbank, four of the *notenbanken* continued to operate until 1914. These were the ones for Baden, Bavaria, Saxony and Württemberg.
2. Webb, S. B. (1989). *Hyperinflation and stabilization in Weimar Germany*. Oxford: Oxford University Press.
3. Bresciani-Turroni, C. (1937). *The Economics of Inflation. A Study of Currency Depreciation in Post-War Germany*. London: G. Allen & Unwin Ltd.
4. Hetzel, R. L. (2002). German Monetary History in the First Half of the Twentieth Century. *Federal Reserve Bank of Richmond Economic Quarterly*, 88(1), 1.

5. Upon reunification with West Germany, the East German mark was replaced by the Deutsche mark as the official currency on July 1, 1990. The East German mark was converted at par to the Deutsche mark for wages, prices, and savings up to a certain level; above par for pensioners; and below par for children.
6. The four zones were the American, British, French and Soviet zones; Belgium was allocated an area within the British zone and Luxembourg was allocated an area within the French zone.
7. Deutsche Bundesbank. DM Banknotes and Coins. https://www.bundesbank.de/Navigation/EN/Tasks/Cash_management/DM_banknotes_and_coins/dm.html;jsessionid=0000tutLlUxSJmXNIvDvNmy6kvH:-1?nsc=true&https=1 (accessed September 16, 2017).
8. The Deutsche Bundesbank switched to targeting M3 in 1988. Significant currency growth in 1987 led to a large expansion of the CBM, and the central bank felt that a broader aggregate like M3 was more stable.
9. Neumann, M. J. (2006). Pre-Commitment and Guidance Lessons from the Bundesbank's History. *In Monetary Policy: A Journey from Theory to Practice* (8–16). Frankfurt am Main: European Central Bank.
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15. Deutsche Bundesbank. Tasks. https://www.bundesbank.de/Navigation/EN/Tasks/tasks.html?https=1 (accessed September 13, 2017).
16. Deutsche Bundesbank. Financial and Monetary Stability. https://www.bundesbank.de/Navigation/EN/Tasks/Financial_and_monetary_system/financial_and_monetary_system.html?https=1 (accessed September 14, 2017).

17. Deutsche Bundesbank. The Bundesbank's role in banking supervision: Operational tasks. https://www.bundesbank.de/Navigation/EN/Tasks/Banking_supervision/Rolle/Operativ/operative_aufgaben.html?https=1 (accessed September 25, 2017).
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CHAPTER 6

Greece

6.1 The Greek Origins of Standardized Coinage

The standardized system of coins, as we know it, originated in ancient Greece. While money has been documented from earlier centuries in the form of precious metal ingots, rings, coils and other pieces, these bore no mark of authority. The kingdom of Lydia in Asia Minor (present day Turkey) was the first to adopt coins during the reign of King Alyattes. The period coincided with the height of the Lydian kingdom, approximately around 600 B.C., when it covered much of western Turkey and was governed from the capital city of Sardis or Sardes (*Sfard* in Lydian, a now-extinct member of the Anatolian branch of Indo-European languages). Lydia eventually became a part of the First Persian Empire after being defeated by Cyrus the Great, before being subsumed by the Roman Republic and then the Roman Empire. The reign of Alyattes, who belonged to the Mermnad dynasty and was the son of King Sadyattes, is considered to be the greatest period in Lydian history; there were a series of military victories, along with economic prosperity, the introduction of coinage as a medium of exchange, and the establishment of permanent shops. Lydia was also the first region to discover how to separate naturally occurring gold and silver, a technology that helped it amass great wealth. It was also perfectly positioned at the juncture of major trade routes spanning Europe to the west and Western Asia to its east (Fig. 6.1).

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Fig. 6.1 The Kingdom of Lydia (Source: Commons)

These earliest coins were made of electrum, which is a naturally occurring alloy that is primarily a mix of gold and silver. Lydia controlled the Paktolos River, which was rich in electrum-laden quartz that the Lydians obtained by sifting the sand from the river bed. The Paktolos River is where, according to Greek mythology, King Midas of Phrygia bathed to wash away his curse of getting everything he touched converted into gold. The coins bore a stamp of a lion's head, with a sunburst on its forehead that represented the Royal House of Mermnadae.[1] The weights of the coins were standardized, with one stater being equivalent to 168 grams of wheat. The most common denomination of these coins was a trite, which was one-third of a stater. Other denominations were the half-slater; the hekte, which was 1/6th of the stater; the hemihekte, which was 1/12th of a stater; as well as 1/24th of a stater; 1/48th of a stater; and 1/96th of a stater.

The absence of Lydian staters unearthed from other regions seems to indicate that these earliest coins were probably not used in international trade, but for transactions within the kingdom such the payments of state workers' salaries and tax payments. The kingdoms that were the next to issue standardized coins were states in nearby Ionia, including Miletos, Ephesos, and Phokaia, though none issued them as extensively as Lydia.[2] While the Chinese probably developed coinage independently, the Lydian coins were the precursors to the coins of ancient Greece and ancient Rome, and through these, those of early Middle East and India. This is also confirmed by the Greek historian Herodotus in "The Histories," which he authored in 440 B.C. The precursor to Greek banks were the

temples of ancient Greece. The temples of Apollo, Delphi and Olympia all became large depositories of wealth. However, unlike modern banks, while the temples provided secure storage, they did not pay any interest on their deposits.

6.2 Greek Central Banking Before the Bank of Greece

The National Bank of Greece (*Εθνική Τράπεζα της Ελλάδος* or *Ethniki Trapeza tis Elladas*), one of the largest banks in Greece, can be viewed as the precursor to a Greek central bank.[3] A Swiss banker named Jean-Gabriel Eynard teamed up with a Greek banker and auditor at the Greek Court of Audit named Georgios Stavros to open the bank; Stavros was the inaugural director of the bank, until he passed away in 1869.[4] The statute of the bank was published on April 8, 1841, and bank opened its doors on January 22, 1842. Its initial public offering was on the same day, when the bank sold 3402 shares for 1000 drachmas each; the Greek state held 1000 of these. The new bank issued its own bank notes. Though these bank notes were nominally convertible, allowing the noteholders to redeem them for silver or gold was rarely allowed in reality. The bank faced a minor crisis in May 1842, when it was reported in the press that Greek state Treasury clerks were reluctant to accept them. The bank note issuing privilege of the National Bank of Greece was renewed for another 30 years on December 16, 1861; the bank offered 2000 news shares the next day.

Belgium, France, Italy and Switzerland formed the Latin Monetary Union in 1865, when they agreed to implement the same standard for their commodity money and guarantee mutual acceptance of their coins. Greece also decided to adopt this system and the treaty confirming Greece's acceptance was ratified by the Greek parliament on November 5, 1868. However, the system wasn't actually adopted until the issuance of a royal decree on January 1, 1883, due to other administrative priorities as well as recurrent wars with Turkey.[5]

Greek support for Crete's uprising against the Turks led to the first of these wars. When the Greek government asked the National Bank of Greece for a 100 million drachma loan toward the war costs, the bank refused. The government, under Prime Minister Dimitrios Voulgaris responded by announcing the introduction of paper money issued by the state on December 24, 1868, leading to a de facto suspension of the

note-issuing privileges of the bank. This resulted in a bank run on the National Bank of Greece, and the National Bank of Greece together with the Ionian Bank, which also issued bank notes, decided, on December 30, to extend a 21 million drachma loan to the government to salvage the situation. Their bank notes stopped being convertible into precious metals at this time in exchange; nominal convertibility was reinstituted again on July 15, 1870. The Commercial and Credit Bank of Greece, established by Andreas Syngros, a Greek expatriate from Constantinople, was also granted bank note issuing privileges on April 14, 1872. The Greeks decided to seize the opportunity provided by the Russo-Turkish War of 1877–1878 to try to liberate the Greek population of Thessaly from Ottoman suzerainty; the Greek government borrowed 20 million drachmas from the National Bank of Greece and the Ionian Bank to finance the war, and the convertibility of their bank notes was suspended in return.[6]

Convertibility was restored by royal decree on December 31, 1884; the gold and silver reserves of the National Bank of Greece fell by nearly half within eight months of the decree due to the public redeeming their bank notes. On September 6, 1885, Bulgaria annexed Eastern Rumelia, an autonomous territory within the Ottoman Empire created by the Treaty of Berlin in 1878, creating tensions in Greece as there was a significant Greek population in Eastern Rumelia. The government obtained a loan from the National Bank of Greece, the Ionian Bank, and the Privileged Bank of Epirus and Thessaly, the convertibility of their bank notes being suspended in return. On December 10, 1885, the bank notes issued by these three banks became legal tender throughout Greece; until that point, each of the three banks had their own territories within the country where their bank notes were legal tender.

The Greek government of Prime Minister Charilaos Trikoupis defaulted on its loan payments in 1893, and by January 1894, the value of paper drachmas had collapsed to 170 to the gold franc. The three principal foreign bondholders of Greek bonds, Sir Mountstuart Grant Duff of Great Britain, John Ornstein of France and Max Staevie of Germany, arrived in Athens on June 23, 1884, demanding that all state revenues to be ceded to a company that would be set up by the banks that issued the loans and threatening military intervention otherwise. While the fallout from the default continued, new complications arose regarding the status of Crete and the Greco-Turkish War of 1897. Greece lost the war, and the Treaty of Constantinople, signed on December 4, 1897, stipulated the setting up of a six-member International Financial Commission (officially known by

its French name the *Commission Internationale Financière de la Grèce*) that would control Greek revenues for the twin purposes of the repayment of the defaulted loans and the making reparation payments to Turkey.[7] An autonomous Cretan State was established on the island of Crete in 1898 by the intervention of the Great Powers following the war, and the Bank of Crete (*Trapeza Kritis*) established on May 10, 1899, which was granted the authority to issue bank notes.

The National Bank of Greece gradually acquired a monopoly over the issue of bank notes in Greece. The Privileged Bank of Epirus and Thessaly was acquired by the National Bank of Greece in 1899, when the latter purchased the shares of the former for 208 drachmas per share.[8] The bank expanded outside Greece in 1907 with the opening of its branch in Cyprus. The National Bank of Greece acquired the Bank of Crete in 1919. The Ionian Bank lost its note-issuing privilege in 1920, and eventually sold all of its Greek assets to the Commercial Bank of Greece in 1957. The assets of the Ionian Bank on the neighboring island of Cyprus was sold to the Chartered Bank. The days of the National Bank of Greece as the unchallenged de facto central bank of Greece, however, was cut short. The League of Nations were of the view that the National Bank of Greece had clear conflicts of interest and other incompatibilities in conducting a public policy function like issuing bank notes alongside its commercial banking business.[9]

6.3 The Bank of Greece

6.3.1 The History of the Bank of Greece

The Bank of Greece (*Τράπεζα της Ελλάδος* or *Trapeza tis Elladas*) is the central bank of Greece. The proposal to establish a Greek central bank was came from the League of Nations in order to help the Greek government's tackle its persistent budgetary problems. The League of Nations was an international organization founded in 1920 at the Paris Peace Conference of 1919 after the end of the First World War to determine the terms to be followed by the defeated Quadruple Alliance consisting of Germany, Austria-Hungary, the Ottoman Empire and Bulgaria. The League of Nations was of the view that the National Bank of Greece had a clear conflict of interest while executing its functions as a commercial bank and while executing its central banking duties and Greece hence needed a separate central bank. The bank's establishment was recommended by Annex

IV to the Geneva Protocol of 15 September 1927 which granted a loan of nine million pound sterling to Greece by the League of Nations. The Legislative Decree of November 10, 1927 titled the "Ratification of the agreement dated 27 October 1927, regarding the waiver by the National Bank of Greece of its privilege of issuing banknotes and the establishment of a new bank under the name "BANK OF GREECE," and the Statute of the Bank of Greece annexed thereto" followed.[10] The Statute of the Bank of Greece was ratified by Law 3424/7 in December 1927 and listed in Government Gazette A 298, and the new central bank began its operations on May 14, 1928. The share capital of the bank was 400 million drachmas when it was established, divided into 80,000 shares of 5000 drachmas each.[11] Some of the assets, principally gold and government debt, as well as liabilities, principally the issuing of bank notes and government deposits, were transferred from the National Bank to the Bank of Greece.[12]

The first Governor of the bank was Alexandros Diomidis. The Bank of Greece is headquartered in Athens, across the street from the three historical buildings of the Academy, the University, and the National Library. The building housing the headquarters was designed by the architects K. Papadakis and N. Zoumpoulidis; the foundation of the building was laid in 1933 and the building officially inaugurated on April 4, 1938.[13] A new building, inaugurated on January 28, 2004, houses the Banking Supervision Department, the Supervised Institutions Inspection Department, the Private Insurance Supervision Department, the Financial Stability Department, the Resolution Unit, and the Museum of the Bank of Greece.[14]

The Axis powers, comprising the German *Achsenmächte*, the Italian *Potenze dell'Asse*, and the Japanese *Sūjikukoku*, occupied Greece from April 1941 to October 1944. The Governor of the Bank of Greece, Kyriakos Varvaresos, followed the Greek government in exile during this time. The Bank of Greece's gold reserves were transferred first to South Africa and then to London for safekeeping. The collaborationist governments in Greece fired Varvaresos in 1941 and initially briefly appointed Miltiadis Negrepontis as the Governing Counsellor from April 24, 1941 to July 3, 1941, subsequently appointed Dimitrios Santis from July 3, 1941 to January 20, 1943, and finally appointed Theodoros Tourkovasilis from April 19, 1943 to April 13, 1944 as the Governors. After the liberation of mainland Greece by the Workers' and Peasants' Red Army, all dismissals and appointments of administrative personnel by the occupation-era government related to the Bank of Greece were voided by the post-war administration.

The Second World War ended with the Greek economy in ruins, with industrial production at a third of the pre-war level and bank deposits in real terms at one-thirtieth of the levels recorded in 1939. The government decided that close cooperation between the central bank and the government was needed, and the mechanism through which it was effected was the Currency Committee, which was established in 1946. The committee was comprised of the Minister of National Economy who acted as the chairman, four other ministers and the Governor of the Bank of Greece, and was assigned the responsibility of determining the monetary, credit and foreign exchange policies of the country.[15]

The Currency Committee, which had taken away much of the independence of the Greek central bank, was finally abolished in 1982; most of its responsibilities were transferred to the Bank of Greece via Law 1266 of 1982. However, a complex system of direct controls remained in place until the late 1980s, whereby the national government was responsible for formulating overall economic policy whereas the central bank was responsible for implementing monetary and exchange rate policies under a two-tier approach. The Greek financial sector was deregulated in the 1980s, which changed the role of the Bank of Greece as the financial regulator. Among other significant changes, the Bank of Greece was no longer obligated to provide credit in any form to the public sector beginning in 1994. Additionally, until 1994, the Bank of Greece used to accept deposit liabilities, mainly in the form of social security funds, from public organizations used these funds to purchase government securities which were then held in the central bank's own account. Once monetary financing was prohibited, the Bank of Greece started acting solely as the manager of the portfolio of government securities that were directly owned by public organizations. The role of the bank again changed significantly in 1998, when the drachma became a part of the European Exchange Rate Mechanism, whose goal was to reduce exchange rate variability in preparation for the introduction of the common currency on January 1, 1999. The intermediate monetary policy target became the stability of the exchange rate of the drachma; monetary and credit variables were monitored as indicators.

The statute of the Bank of Greece was amended by the decisions of the General Meeting of Shareholders of the Bank of Greece that were held on December 22, 1997, and April 25, 2000, and subsequently ratified by Laws 2609/98 and 2832/00 respectively, to meet the requirements of the Economic and Monetary Union of the European Union. The amend-

ments explicitly stated price stability as the primary objective of the central bank, guaranteed the independence of the central bank, and ensured its accountability to the parliament of Greece. The Monetary Policy Council was established at the Bank of Greece and entrusted with the responsibility for monetary policy and exchange rate policy, working as a part of the European System of Central Banks following the guidelines and instructions provided by the European Central Bank.

The Bank of Greece is partly owned by the government of Greece. The percentage of shares that are owned by the state was initially capped at ten percent; the limit is currently set at 35 percent. The shares of the Bank of Greece have traded on the Athens Exchange since June 12, 1930. Article 1 of the statute establishing the Bank of Greece establishes the duration of the bank to be until December 31, 2050; this date can be extended by a decision of the General Meeting of its shareholders, and subsequently ratified by a decree.

6.3.2 The Administrative Structure of the Bank of Greece

The administrative and decision-making bodies of the Bank of Greece are the General Meeting of Shareholders, the General Council, the Executive Committee, the Monetary Policy Council, the Governor and Deputy Governors, the Credit and Insurance Committee, and the Resolution Measures Committee.[16]

The highest decision-making body of the Bank of Greece that represents all its shareholders is the General Meeting of Shareholders. The General Council convenes the Ordinary General Meeting once a year, no later than the month of April. The General Meeting of Shareholders approves the Bank of Greece's Annual Report and balance sheet, appropriations to reserves and other special funds, determination of dividends and any other disposal of net profits; elects or removes of members of the General Council and the Auditors and determines their fees; discharges members of the General Council and the Auditors from all personal responsibility; proposes amendments to the Statute of the Bank, with the exception of capital increases, which are then submitted to the Greek parliament; and makes proposals on any other matter that is submitted to the General Meeting of Shareholders by the General Council. Extraordinary General Meetings can be convened by the General Council whenever they are deemed necessary.

The General Council of the Bank of Greece is comprised of the Governor, the two Deputy Governors, the three remaining members of the Monetary Policy Council, and six Councilors. The council is answerable to the General Meeting of Shareholders, and oversees the general management of the Bank. It is granted statutory powers to make decisions on issues that are not specifically reserved for the General Meeting of Shareholders, the Monetary Policy Council, the Executive Committee, or the Governor of the bank.

The Executive Committee of the Bank of Greece is comprised of the Governor and the Deputy Governors. It is convened by the Governor; in the absence of the Governor, the Deputy Governor replacing him can convene the committee. Decisions are made when a majority of two members agree, one of which must be the Governor, unless the Governor is replaced as previously mentioned. Two is also the number that constitutes the quorum. If the quorum is not achieved, then a General Council member can be appointed to also participate in the Executive Committee. The General Council appoints three of its members, other than the members already participating in the Executive Committee, every year to monitor the functioning of the Executive Committee. These monitors report to the General Council. Macroprudential supervision by the Bank of Greece is carried out through decisions that are undertaken by the Executive Committee.

The Monetary Policy Council has a significant role in the economy, even as a part of the European System of Central Banks. The Monetary Policy Council is tasked with analyzing economic and monetary developments, and examining the implications of the formulated monetary policy within the Eurozone framework. The council also decides issues concerning the conduct of exchange rate policy, the operation and efficiency of payment systems and means of payment, as well as the issue of euro bank notes. In all of these tasks, the council bases its decisions on the guidelines and instructions provided by the European Central Bank. The Monetary Policy Council consists of the Governor of the Bank of Greece who acts as the chairperson, the two Deputy Governors, and three other members who are appointed for renewable six-year terms. The selections are based on the proposal by the Council of Ministers that is in turn based on the opinion of the Governor and confirmed by a presidential decree.

The Governor and the two Deputy Governors are all appointed by a presidential decree based on the proposal by the Council of Ministers that is in turn based on the proposal of the General Council. The length of the

term for both the Governor and the Deputy Governors is six years. The Governor chairs the meetings of both the General Council and the Monetary Policy Council, and participates in the Executive Committee. The Governor also represents the Bank of Greece before judicial authorities. The Governor manages the Bank of Greece's assets and oversees its general business on behalf of the General Council; they also make decisions on any issues that are not specifically under the purview of the Executive Committee, the General Council or the Monetary Policy Council. They are a member of the Governing Council of the European Central Bank, and get to decide on all other matters related to the European System of Central Banks with the exception of the tasks specifically assigned to the Monetary Policy Council. The Governor is allowed to delegate any of their duties to any of the Deputy Governors; the senior Deputy Governor automatically replaces the Governor when the Governor is unable to be present or execute their duties for any reason.

The macroprudential supervisory powers of the Bank of Greece are carried out through the acts of the Governor of the Bank of Greece or through their delegated bodies. The Credit and Insurance Committee is entrusted with issuing decisions pertaining to the supervisory responsibilities of the Greek central bank; these encompass decisions regarding the establishment and operation of credit institutions, financial institutions and insurance companies and imposing sanctions and fines on individuals as well as legal entities. The committee is also tasked with issuing special decisions authorizing the release of reserves held by public entities either for lending or for financing investments. The Credit and Insurance Committee is comprised of the Governor of the Bank of Greece, who also acts as the Chairman; the Deputy Governor who is in charge of the Banking Supervision Department; and the Directors of the Banking Supervision Department, the Private Insurance Supervision Department, the Government Financial Operations and Accounts Department, the Supervised Institutions Inspection Department, and the Financial Stability Department. The meeting is chaired by the Deputy Governor when the Governor is unable to attend. The secretaries to the committee are appointed from either the Banking Supervision Department or the Private Insurance Supervision Department.

The powers of the Bank of Greece in matters of credit institutions are discharged through the acts of the Executive Committee or its authorized bodies. The Resolution Measures Committee is entrusted with issuing all the decisions and recommendations of the Bank of Greece in this context.

The Resolution Measures Committee is comprised of the Deputy Governor to whom the Resolution Department reports, who acts as the Chairman, and the Directors of the Payment and Settlement Systems Department, the Statistics Department and the Financial Operations Department. If the Deputy Governor is unable to be present, then they are replaced by a member of the General Council. The Chairman has the casting vote in case of a tie. The secretary to the Committee is appointed from the Resolution Department.

The Bank of Greece is partly owned by the government of Greece. The percentage of shares that are owned by the state was initially capped at 10 percent; this limit was subsequently increased to 35 percent. The shares of the Bank of Greece have traded on the Athens Exchange since June 12, 1930. The bank currently has 17 branches, 5 outlets and 32 agencies.[17]

The Bank of Greece is a member of the European System of Central Banks (ESCB). The European System of Central Banks comprises of the European Central Bank and the national central banks of the 28 countries that make up the European Union; these are *Oesterreichische Nationalbank* of Austria, *Banque nationale de Belgique* of Belgium, the Bulgarian National Bank, *Hrvatska narodna banka* of Croatia, the Central Bank of Cyprus, *Česká národní banka* of the Czech Republic, *Danmarks Nationalbank* of Denmark, *Eesti Pank* of Estonia, *Suomen Pankki* of Finland, *Banque de France* of France, *Deutsche Bundesbank* of Germany, the Bank of Greece, *Magyar Nemzeti Bank* of Hungary, the Central Bank of Ireland, *Banca d'Italia* of Italy, *Latvijas Banka* of Latvia, *Lietuvos Bankas* of Lithuania, *Banque centrale du Luxembourg* of Luxembourg, *Bank Ċentrali ta' Malta* of Malta, *De Nederlandsche Bank* of the Netherlands, *Narodowy Bank Polski* of Poland, *Banco de Portugal* of Portugal, *Banca Națională a României* of Romania, *Národná banka Slovenska* of Slovakia, *Banka Slovenije* of Slovenia, *Banco de España* of Spain, *Sveriges Riksbank* of Sweden, and the Bank of England of the United Kingdom. Decision-making at the ESCB happens through the General Council, the Governing Council, and the Executive Board. The primary objective of the ESCB is price stability in the European Union; other objectives include better monetary and financial cooperation between the member states of the European Union, both within and outside the Eurozone. The monetary authority of the Eurozone is the Eurosystem and not the ESCB, as some of the European Union states chose to not adopt the euro. The Eurosystem comprises of the European Central Bank and the national central banks of the 19 countries that are a part of the

Eurozone; these are Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

6.3.3 *The Functions of the Bank of Greece*

Article 1 paragraph (b) of the Legislative Decree of November 10, 1927, explicitly states that the provisions of the Statute of the Bank of Greece have the force of law and, more specifically, the force of a superior law prevailing over any other provision of domestic law.[18] The statute of the Bank of Greece has been repeatedly amended since then, with a view to modernize the operational framework of the central bank as well as to bring it in line with the provisions of the Treaty on European Union and the Statute of the European System of Central Banks.

Article 2 identifies the main tasks of the central bank as to[19]:

(a) define and implement monetary policy. The concept of monetary policy shall be understood to include credit policy
(b) conduct the policy on the exchange rate of the drachma against other currencies, within the framework of exchange rate policy chosen by the Government, following consultation with the Bank of Greece
(c) hold and manage the country's official foreign reserves, consisting of the foreign exchange and gold reserves of the Bank of Greece and of the State, and carry out foreign exchange operations
(d) supervise credit institutions and other enterprises and institutions of the financial sector, as well as insurance companies, in accordance with Article 55A hereof
(e) promote and oversee the smooth operation and efficiency of payment systems and means of payment, as well as of trading, settlement and clearing systems for over-the-counter transactions in securities and other financial instruments, in accordance with Article 55 point (5) hereof
(f) have the exclusive privilege of issuing banknotes which have the status of legal tender within the territory of Greece
(g) act as treasurer and fiscal agent for the State, in accordance with Articles 45 et seq. hereof

The article further specifies that since the adoption of the euro as the currency of Greece, the Bank of Greece shall no longer autonomously per-

form the tasks under (a), (b), (c) and the European System of Central Banks-related tasks under (e) above. The Bank of Greece has been allowed to issue euro bank notes that are legal tender from the same date, in accordance with the provisions of Article 106 of the Treaty establishing the European Community and Article 16 of the Statute of the European System of Central Banks. It also issues coins, whose quantity is subject to the approval of the European Central Bank; the denominations and technical specifications of euro coins are determined in accordance with the provisions of Article 106 (2) of the Treaty establishing the European Community.

The statute states that the Bank of Greece's primary objective is to ensure price stability; without prejudice to this primary objective, the bank is directed to support the general economic policy of the government. The statute safeguards the independence of the bank from the government or any organization and outlines the nature of its accountability to the parliament of Greece. The bank also has supervisory responsibilities, overseeing the private banks in Greece. Law 3867/2010 merged the Committee for the Supervision of Insurance Companies, which had been established by law 3229/2004, with the Bank of Greece, thereby also making it responsible for overseeing the private insurance companies in Greece.

The statute provides that the Bank of Greece shall be an integral part of the European System of Central Banks, and shall act in accordance with the guidelines of the European Central Bank. Many of the historical functions of the Bank of Greece were therefore taken over by the European Central Bank in 2001. The Eurosystem-related tasks of Bank of Greece relate to monetary policy, foreign exchange and reserve assets, payment and settlement systems, financial stability, statistics, and banknotes and coins.[20]

The Bank of Greece participates in the formulation of the single monetary policy for the Eurozone and helps to implement the policy in Greece, based on the guidelines and instructions of the European Central Bank. The central bank provides liquidity to domestic credit institutions through main and long-term refinancing operations, provides credit institutions with marginal lending and deposit facilities to increase or decrease liquidity, and maintains the minimum reserve accounts of the Greek domestic banks. With regard to foreign exchange and reserve assets, the bank manages a part of the European Central Bank's foreign exchange and gold reserves according to the instructions of the European Central Bank.

The Bank of Greece also oversees payment systems within the country and works on improving their reliability and efficiency. The bank monitors

international developments in the area of fund transfer infrastructures, compiles and analyzes payment statistics, and explores ways of risk management for risks associated with payment systems and operational risks of infrastructures. The Bank of Greece has been a member of TARGET2 from May 19, 2008; TARGET2 is the new trans-European automated real time gross settlement express transfer system, which is principally used for large interbank fund transfers and payments connected with the implementation of the Eurosystem's monetary policy. It is based on an integrated central technical infrastructure called the Single Shared Platform, which is operated by the three central banks *Banque de France* of France, *Deutsche Bundesbank* of Germany, and *Banca d'Italia* of Italy. While it is designed for the Eurozone, it is also available to non-Eurozone countries. The Bank of Greece operates the Greek portion of the TARGET2 system by monitoring payment flows and intraday liquidity requirements and collecting data on the system.

As the central bank, the Bank of Greece is responsible for ensuring financial stability by identifying and working to overcome vulnerabilities in the Greek financial system. The bank also works on the effective management of financial crises in conjunction with other relevant authorities. The bank also monitors the banking sector and analyzes banking risks, oversees the insurance industry and developments within that industry, and examines undertakings in collective investments.

The Bank of Greece collects statistical data from monetary financial institutions or MFIs, which are the banks and money market funds. The variables of interest are bank rates as well as loans, deposits, other assets and other liabilities of MFIs. These numbers are then shared with the European Central Bank, which uses them for the purposes of calculating the average interest rate in the Eurozone and compiling Eurozone monetary and credit aggregates.

The bank issues legal tender euro bank notes based on prior authorization by the European Central Bank; it is also responsible for the circulation and handling of euro bank notes and coins in Greece. It is the job of the central bank to ensure that the supply of the different denominations of bank notes are adequate, either through the Bank of Greece Printing Works (IETA) or through cash shipments from other countries, and that they are safely stored, transported, and eventually recycled or destroyed. The Bank of Greece controls the bank notes and coins in circulation in the country by processing them using high-technology machines to ensure the quality of the bank note and separate the counterfeit bank notes from

the genuine ones. These operations are carried out at all of the Bank of Greece branches; however, the majority occur at the Cash Processing and Distribution Centers located in Athens and in Thessaloniki.

The non-Eurosystem related tasks of the Bank of Greece relate to supervision, payment and securities settlement system, reserve assets, acting as treasurer and fiscal agent of the government, compiling statistics, and research and publications.[21]

The Bank of Greece is charged with supervising and monitoring credit institutions, insurance firms, reinsurance firms, and insurance intermediaries. In case of the credit institutions, the supervision is conducted according to the Basel II framework governing the capital adequacy of internationally active banks interpreted in the context of Greek law, and the Bank of Greece rules regarding the solvency, liquidity, capital adequacy and concentration risk of supervised institutions. The central bank also examines the quality of corporate governance as well as internal control systems such as those regarding Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT). The bank is also responsible for guidelines on transaction transparency and the clarity of transaction terms. With regard to the insurance industry, insurance and reinsurance companies based in Greece and their foreign branches abroad, insurance companies based in other countries within the European Union or the European Economic Area and conducting operations in Greece either under the right of establishment or under the freedom to provide services, insurance companies based in other countries that are outside the European Union and the European Economic Area and conducting operations in Greece, and insurance intermediaries are all under the supervisory umbrella of the Bank of Greece. The principal objectives of the macroprudential policy of the central bank are ensuring an appropriate level of credit growth and leverage, including preventing and mitigating any excessive credit growth and leverage; preventing and mitigating excessive maturity mismatch and market illiquidity; limiting direct and indirect exposure concentrations; limiting the systemic impact of misaligned incentives with a view to reducing moral hazard; and strengthening the resilience of financial infrastructures.[22]

In terms of the payment and securities settlement system, the Bank of Greece is responsible for overseeing the System for Monitoring Transactions in Book-Entry Securities, which is the system through which all transactions involving Greek government bonds in both the primary market and the secondary market are settled. The bank is also responsible for the oper-

ation of the Electronic Secondary Market for Securities (HDAT), which is a regulated secondary market for Greek government securities and bonds or other fixed-income debt securities issued by corporations and other entities with the guarantee of the Greek government that was created to promote efficiency, pricing transparency, and liquidity. HDAT has issued the official daily price bulletin for government securities under Law 2651/98 since March 15, 1999.[23]

The bank is responsible for holding and managing Greece's official reserve assets. This includes the foreign exchange and gold reserves of the Bank of Greece and the Greek government. The bank provides the funds required for Greece's participation in international organizations such as the International Monetary Fund, manages government transactions that are carried out in foreign currencies, and ensures the readiness to provide additional liquidity in foreign exchange to the European Central Bank if the European Central Bank is required to intervene in foreign exchange markets.

The Bank of Greece maintains current and time deposit accounts of the government and legal persons in public law in euro and foreign exchange, both for meeting domestic requirements and for servicing the external debt. It also carries out payment and collection activities on behalf of the government and legal persons in public law with regard to their foreign counterparties, and provides intermediation services for their international financial activities.

The bank compiles and publishes financial data on the domestic economy. This includes data on financial institutions such as the average interest rates applicable to different types of deposits and loans, data on the balance of payments, and specialized statistical surveys on topics like household indebtedness. The bank publishes a lot of this data in the bimonthly Bulletin of Conjunctural Indicators. The collection of this data both helps to inform the bank's own decision-making and also fulfills its European Central Bank requirements. It also keeps the public informed and helps researchers working on the Greek economy.

The statutory obligations of the Bank of Greece include conducting research and publishing reports. It hence publishes the Annual Report on the Greek economy every year in April. It also publishes two reports on monetary policy every year, a Monetary Policy Annual Report in February and a Monetary Policy Interim Report in October; these are submitted to Greek parliament and the cabinet. The key indicators of the Greek economy, both at the national and at the regional level, are printed in the

Bulletin of Conjunctural Indicators and the Bulletin of Regional Conjunctural Indicators; both of these are monthly publications. The researchers at the Bank of Greece conduct extensive research on monetary policy, national and regional economic development, and issues of policy. The bank organizes training courses, meetings, conferences, and lectures; invites domestic and foreign scholars to visit the bank and collaborate with its researchers; and publishes the studies on its website, in the semi-annual Economic Bulletin and in their Working Papers series.

6.3.4 The Autonomy of the Bank of Greece

The Bank of Greece had considerable independence for the first two decades after its establishment, resulting in monetary stability in the country at a time of international economic turmoil. Things changed due to the Second World War and the civil war that followed, when the government decided to exert greater control over monetary policy. A government committee called the Currency Committee was created in 1946 to formulate monetary and credit policies as well as interest rates. This effectively abolished the independence of the central bank. Greek participation in the Bretton Woods system, the devaluation of the drachma and the role played by Xenophon Zolotas, the powerful Governor of the Bank of Greece who was previously a professor of Economics at Athens University and later served as the interim prime minister of the country, did lead to sustained monetary stability until the collapse of the Bretton Woods system. The Regime of the Colonels, the military government of Greece, collapsed on July 24, 1974, with the establishment of the Third Hellenic Republic under the presidency of Michail Stasinopoulos. However, the Currency Committee continued to control monetary policy, with which largely included accommodating the funding of public deficits and wage increases despite protests from the central bank.

The Bank of Greece regained its independence when the Currency Committee was finally abolished in 1982 and most of its responsibilities transferred to the Bank of Greece. After 1990, the Greek government became more mindful of the fiscal deficit; the gradual abolishment of the obligation of the Bank of Greece to fund the public sector around this time significantly increased both its economic independence and credibility. However, even after the ratification of the Maastricht Treaty in 1992, two Governors of the Bank of Greece were forced out in less than two years, indicating the extent of political interference in the

activities of the bank and continuing to underscore the need to have an independent central bank. The final draft law granting independence to the Bank of Greece, "Settlements for the Bank of Greece," was finally tabled in the Greek parliament on September 25, 1997, and passed in December 1997.[24]

Since joining the Eurozone, the obvious loss of autonomy experienced by the Bank of Greece has been giving up the ability to conduct an independent monetary policy. As part of the European System of Central Banks, the Bank of Greece does assist the European Central Bank in fulfilling its mission and carrying out its monetary policy directives, but it can no longer make money supply and inflation rate decisions on its own. At the same time, the Bank of Greece is statutorily obligated to work closely with the national government; this also does impose a reasonable degree of oversight on the central bank. Article 5B of the statute establishing the Bank of Greece states that the bank shall submit to the Greek Parliament and to the Council of Ministers an annual report on the monetary policy of the previous and the current year. During the course of the year, the bank shall also submit a supplementary report on monetary developments and monetary policy as well as a report on the exercise of its supervisory function during the previous year to the Greek Parliament. Furthermore, the Governor of the Bank of Greece, when requested, shall appear before the competent parliamentary committee to comment on matters relating to the bank's fields of competence.[25]

What most policymakers and members of the public agree on is that it is critical that the independence of the Bank of Greece not be eroded in any way. The central bank has been under attack during the past few years from those who resist the autonomous decision-making, transparency and strict governance at the institution. The political establishment controlled the banking system in the not too distant past, and there are elements within the current political establishment who would like to see the autonomy of the institution lessened and a political appointee chosen to lead it. The Bank of Greece would then go in the direction of the Hellenic Statistical Authority or ELSTAT, which had disastrous results in terms of statistical recordkeeping in the country. Additionally, while fiscal policy may be driven largely by electoral considerations, an independent central bank would ensure that monetary policy continues to remain countercyclical and in the best interest of the Greek economy.

6.4 The Greek Sovereign Debt Crisis

The Eurozone witnessed its first sovereign debt crisis in 2010, when Greece's yawning fiscal deficit and high levels of national debt led to severe economic tensions in the common currency area. Greece joined the European Monetary Union and adopted the euro as its currency in 2001. According to the guidelines of the Maastricht Treaty, countries that are a part of the European Monetary Union are required to limit their fiscal deficits to 3 percent of their GDP and their public debt to 60 percent of the GDP; the fiscal deficit of Greece was 13 percent of the GDP in 2009, while its public debt was 115 percent of the GDP.[26] Greece announced in October of that year that it had been understating its deficit figures for years. The Bank of Greece had issued warnings about the crisis, which resulted mostly from the high levels of government spending increases. The situation was made worse by declining economic growth, falling tax revenues, lower labor competitiveness in Greece compared to other Eurozone countries, and high nominal wage rigidity.

Numerous rating agencies downgraded Greek sovereign bonds and the costs of Greek debt financing rose sharply. Most international banks and foreign investors have sold their Greek bonds and other holdings, so they are no longer vulnerable to what happens in Greece.[27] The extraordinary situation led to the International Monetary Fund and the European Commission implementing their first fiscal stabilization and financial assistance program for a Eurozone country. Greece, the IMF and the European Commission initially agreed on a three year €110 billion rescue package in May 2010 designed to cover Greece's sovereign borrowing needs for the next two and a half years; of this amount, €30 billion came from the IMF and €80 billion came from other Eurozone countries. It also included €10 billion to assist the beleaguered Greek banking sector. The ultimate figure provided to Greece exceeded €240 billion. The Greek government undertook a series of austerity measures to both reduce the budget deficit and slow down the rise in national debt as a condition for the acceptance of the funds; the goal was to reduce the fiscal deficit-GDP ratio to 7.6 percent in 2011, 6.5 percent in 2012, and below 3 percent in 2014. The measures included deep budget cuts, sharp tax increases, downsizing the government, cracking down on tax evasion and making the country more business friendly.

There were important arguments to be made on both sides. If Greece were to leave the Eurozone, then it would regain the ability to carry out

independent monetary policy measures and have exchange rate flexibility. On the other hand, the economy of Greece expanded quickly and the Greek government acquired more credibility as a result of the decision to join the European Monetary Union. The very low levels of currency mismatches in the Greek banking system would have made it relatively easier to withdraw from the Eurozone. The country could go back to the drachma or introduce a new currency, but the cost of doing that would be considerable. Finally, the treaties do not have a provision for withdrawal from the European Monetary Union. This was before Brexit, and the United Kingdom retained the pound sterling as its currency even as it forged closer ties with the rest of Europe on political and other economic issues as a part of the European Union. Greece also lacked the clout and financial services powerhouse status that London enjoyed. Hence a withdrawal by Greece would have taken it into uncharted waters.

Argentina, whose fiscal position was much better than Greece's, defaulted on its debt in 2001 and was forced to end the peg between the Argentinian peso and the US dollar. However, Greece, unlike Argentina, was supported by other Eurozone countries and used a currency that was not vulnerable to speculative currency attacks. One of the primary objectives of the European Central Bank is to maintain economic stability in the Eurozone. Additionally, as economic turmoil in any one country can affect the financial stability of the entire region, member countries have a strong incentive to not give each other up and bail each other out instead. The European Union also needed Greece's help to deal with the migration crisis. In addition, Greek banks had quite low sovereign exposure; public debt was only 11 percent of Greek bank assets in December 2009, and Greek banks experienced almost no currency mismatches as around 90 percent of both their assets and their liabilities were denominated in euros. Finally, just 1.5 percent of Greek public debt was denominated in a foreign currency in December 2009. The Argentine experience has shown that postponing an unavoidable debt restructuring increases the ultimate costs of doing so, and that orderly restructuring is far preferable to the chaos of unilateral default under extreme duress. The sovereign debt crisis episode was a difficult experience for the Greeks, but it could have become much worse if the country had continued to try and paper over its fundamental economic issues.[28]

The problems faced by Greece hasn't yet gone away. Unemployment rate in the country, according to the latest available figures, is at 21 percent, and its economy has shrunk by a quarter since the start of the crisis. The

bailout funds have mostly gone toward paying Greece's international creditors rather than made their way into the domestic economy.[29] Greece defaulted on a €1.6 billion repayment to the IMF on June 30, 2015, making it the first developed country to not be able to make a payment to the IMF on time. The last bailout for Greece also ran out on the same day. Banks in the country closed for a week, ATM withdrawals were restricted to 60 euros per day, and monetary outflows from the country banned.[30] The Greek Prime Minister Alexis Tsipras called a referendum to be held on July 5, 2015, regarding whether or not Greece should accept the bailout conditions proposed by the Juncker Commission (the European Commission currently in office, headed by the former Luxembourg Prime Minister Jean-Claude Juncker), the IMF and the European Central Bank. Greek voters responded by an overwhelming 61 percent to 39 percent vote rejecting austerity in July 2015. The repayment terms were rearranged with the lenders following the referendum, and Greece was promised additional funds of between €82 billion and €86 billion over the next three years in return for further reforms to the pension system, raising the value added tax, privatize more state assets, reform the judicial system, and guarantee the independence of the Hellenic Statistical Authority or ELSTAT given the publication of misleading statistics in the past. The Bank of Greece continued to perform its statutory responsibilities to the best of its abilities during this period, especially with regard to protecting financial stability by managing to avoid a banking crisis.[31] However, Seyler and Levendis (2013), while agreeing with the policy decisions of the Bank of Greece, find that the European Central Bank pursued an expansionary monetary policy during this time.[32] A tightening of the European Central Bank's monetary policy could have counteracted the excessive fiscal stimulus, in the form of profligate deficit spending by the Greek government to finance unsustainable social programs, and contained the crisis to some extent.

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CHAPTER 7

The Russian Federation

7.1 Central Banking Before the Russian Federation

7.1.1 *Central Banking in the Russian Empire*

The Russian Empire's banking system was overhauled and the State Bank of the Russian Empire was founded in Saint Petersburg by imperial decree on June 12, 1860, during the reign of Czar Alexander the Second. The bank was transformed from the National Commercial Bank, which was established in 1817.[1] The share capital of the bank was 15 million rubles and its reserve capital was 3 million rubles. The first governor of the State Bank of the Russian Empire was A. L. Stiglitz, who served from 1860 until 1866, while the last governor, serving at the time of the Russian Revolution in 1917, was I. P. Shipov. The establishment of the central bank was part of spate of economic reforms that were undertaken when capitalism was gaining ground in the Russian Empire while considerable state interference in the economy was still needed. The State Bank of the Russian Empire was essentially a short-term commercial credit bank that transferred, deposited money and opened current bank accounts. Its statutory mission was to boost trade turnovers and strengthen the monetary system. The bank's responsibilities included discounting bills of exchange and other government and public interest-bearing securities and foreign

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bills, buying and selling gold and silver, receiving payment on bills and other fixed-term monetary documents for the account of trustees, accepting deposits, giving loans, and buying government securities for its own account.[2]

The history of the State Bank of the Russian Empire can be divided into two broad phases.[3] During the first phase, which lasted from its founding in 1860 until 1894, the bank was for the most part an auxiliary institution of the Ministry of Finance, and most of its resources were absorbed by the direct and indirect financing of the State Treasury. The bank assisted with many of the functions of the Finance Ministry, such as the placement of government securities; foreign debt service; the issuance by the order of the Minister of Finance of hazing loans to the strategically important industries; serving the pay-off payments and receiving state taxes; conducting buy-out transactions and handling the related paperwork; propping up the state mortgage banks; establishing and subsequently supporting commercial banks; and handling bankrupt banks by subsidizing, financing, acquiring or taking into receivership by the State Bank before being sold. The cost of all settlement operations were, in theory, covered by the State Treasury; however, persistent budget deficits meant that the State Treasury did not have the funds needed. As a result, the State Bank of the Russian Empire spent a large fraction of its profits to cover these costs every year until 1872. The outstanding government debt to the bank was finally settled in 1901.

During the second phase, which began when the State Bank of the Russian Empire adopted the New State Bank Charter in 1894, the share capital of the bank was increased to 15 million rubles and the reserve capital to 5 million rubles as a result of a rapid increase in the volume of banking operations. Armed with its new powers, the bank introduced sweeping monetary reforms in the country in the 1880s; these reforms were launched in 1895 and completed in 1898. The results included the introduction of the gold standard in the Russian Empire and the State Bank of the Russian Empire acquiring the right to issue currency in 1897. The charter also granted the bank the right to extend industrial loans, much of which were small loans to small and medium scale industries, farmers and artisans. The institution evolved into a true bank's bank, the process accelerating after the monetary crisis of 1905–1906 that was caused by the Russo-Japanese War. A two-tier banking system had developed in Russia by then; the State Bank of the Russian Empire was at its apex, along with a number of joint-stock commercial banks. The State Bank increasingly

refused to be a direct lender to the economy after 1905, preferring instead to undertake lending through the joint-stock commercial banks. These commercial banks received large loans amounting to around 80 percent of the total loan accounting and operations.[4] When the First World War began in 1914, the bank had become one of the most influential lending institutions in Europe whose gold reserves were the largest in the world. The gold reserves, whose ratio never fell below 93 percent except in the crisis year of 1906 and on average exceeded 100 percent, were kept in the basement of the bank. The State Bank regulated Russia's money circulation and foreign exchange settlements.

Despite all the rights that came with the charter of 1894, the State Bank of the Russian Empire was noticeably different from many European central banks by the nature of its activities and tools, and especially with respect to its dependence on the Ministry of Finance. After the Russian Revolution of 1905, which led to constitutional reforms and the establishment of the State Duma, the introduction of the multi-party system, and adoption of the Russian Constitution of 1906 ending the absolute power of the czar and replacing it with power-sharing between the czar and an elected parliament, these issues regarding the central bank were raised in the State Duma but ultimately shelved due to recurring economic crises and the onset of the First World War.

7.1.2 Central Banking in the Soviet Union

After the October Revolution of 1917, the State Bank of the Russian Empire was converted into a credit institution of the new Soviet government based on the decree "On the nationalization of the banks" signed by Vladimir Lenin on December 14, 1917. There was a state monopoly on banking, and the State Bank was the only bank. The joint-stock commercial banks from imperial Russia were nationalized and merged with the State Bank, which became known as the People's Bank of the RSFSR.[5] There was a brief period in January 1920 when the bank was closed. With the proclamation of the New Economic Policy in October 1921, however, it was formally re-established on November 16, 1921, as the State Bank of the RSFSR on the basis of resolutions passed by the All-Russian Central Executive Committee (VTsIK) and the Council of People's Commissars (SNK) on October 3, 1921, and October 10, 1921, respectively. It became the State Bank of the Union of Soviet Socialist Republics, or the Gosbank, in 1923. Gosbank was one of the three Soviet economic authorities, along

with Gosplan or the State Planning Committee and Gossnab or the State Committee for Material Technical Supply.

The bank has hence played an enormous role in the history of the Soviet Union as well as that of independent Russia. It was the only bank in the Soviet Union, except the long-term investment banks Prombank, Selkhozbank, Vsekobank and Tsekombank, for five decades until Mikhail Gorbachev's perestroika. It did not act with a profit motive but rather acted as a policy instrument of the government. It aided the industrialization of the country during the First Five Year Plan. It was impossible to industrialize the USSR by traditional methods, that is, by accumulating financial resources inside the country and using foreign loans. The population lacked the required savings, while foreign loans could not be obtained for economic (the world was in the grip of an economic crisis) and political reasons. As a result industrialization in the USSR was financed by money emission. Throughout the entire period of phasing out the NEP the Soviet authorities tried to find the simplest means by which the state could distribute funds between the various sectors of the economy. It helped with the mobilization of national economy and supplied the Army during World War II, and contributed to the postwar reconstruction of the national economy. During the Second World War (1941–1945) it issued cash to cover the budget deficit, increasing the money supply fourfold. To normalize money circulation a confiscatory monetary reform was conducted in 1947, during which old money was exchanged for new at the rate of ten to one, cash accounts in the savings banks were re-evaluated and all state loans, except the 1947 loan, were converted. The bank was under the direct control of the government, and was used to provide loans to individuals and industries with ties to the party and to promote compliance with the Soviet Five Year Plans.

The Statute of the State Bank of the RSFSR, passed by VTsIK on October 13, 1921, said that it was an economic organization established "to assist by credit and other banking operations the development of industry, agriculture and goods turnover and also the concentration of monetary turnovers and the implementation of other measures designed to establish proper money circulation." The bank had the right to extend loans to industrial and commercial enterprises based on different forms of ownership, farms and self-employed handicraftsmen "only if they were solvent and their financing was economically justified." The State Bank was a part of the People's Commissariat of Finance (Narkomfin), directly accountable to the People's Commissar (Minister) of Finance.

In November 1921 the State Bank was granted the exclusive right to conduct operations with foreign currency and valuables. It also set the official price of precious metals and the official exchange rate, regulating private trade in gold, silver and foreign currency on stock exchanges and checks and bills of exchange drawn in foreign currency, which were permitted in 1922.[6]

As the banking system was reorganized in February 1928, most short-term credit operations began to be concentrated in the State Bank. It also took control of many branches of joint-stock banks, which began to play an auxiliary role in crediting the economy. Long-term lending was conducted mainly by the Bank for the Long-Term Crediting of Industry and Power Engineering (BDK) specially created for this purpose, the Central Utilities and Housing Bank (Tsekombank) and partly the Central Agricultural Bank (TsSKhbank) (Fig. 7.1).

Eventually, due to President Gorbachev's policy of perestroika or the restructuring of the political and economic systems of the Soviet Union, a few other banks were established. These included Promstroybank, or the USSR Bank of Industrial Construction; Zhilstoybank, or the USSR Bank of Residential Construction; Agrobank, or the USSR Agricultural Bank; Vneshekonombank, or the USSR Internal Trade Bank; and Berbank, or the USSR Savings Bank.

Fig. 7.1 Jurisdiction of the Gosbank (Source: Commons)

7.2 Central Banking in the Russian Federation

7.2.1 The History of the Bank of Russia

The Bank of Russia, officially the Central Bank of the Russian Federation, was founded on July 13, 1990. It inherited the mantle of the central bank from the Russian Republic Bank of the State Bank of the Union of Soviet Socialist Republics, originally known as the State Bank of the RSFSR and accountable to the Supreme Soviet of the Russian Soviet Federative Socialist Republic. The bank was responsible for the circulation of money, monetary regulation, foreign economic activity, and the regulation of the activities of joint-stock and co-operative banks. The Statute of the Central Bank of the RSFSR (Bank of Russia), accountable to the Supreme Soviet of the RSFSR, was approved in June 1991.

However, the Soviet Union ceased to exist and the Commonwealth of Independent States came into being just a few months later in November 1991. The period between July 1990 and December 1991 was a time of conflict between the Central Bank of the RSFSR (Bank of Russia) and the State Bank of the Union of Soviet Socialist Republic. The State Bank of the Union of Soviet Socialist Republics was finally disbanded on December 20, 1991, and all its assets, liabilities and property in the RSFSR were transferred to the Central Bank of the RSFSR (Bank of Russia). The Central Bank of the RSFSR was declared to be the only regulatory body for monetary and foreign exchange regulations in the RSFSR; the former State Bank of the Union of Soviet Socialist Republics tasks of issuing money and setting the exchange rate for the ruble were transferred to it. The Central Bank of the RSFSR was instructed to assume complete control of the assets, technical facilities and other resources of the State Bank of the Union of Soviet Socialist Republics and all its institutions, enterprises and organizations before January 1, 1992. A few months later, the Central Bank of the RSFSR was renamed the Central Bank of the Russian Federation (Bank of Russia).[7]

The tasks of the Bank of Russia evolved with the transformation of the Russian economy from the planned era of the Soviet Union and in response to the specific challenges that came before it. It began to buy and sell foreign exchange in the currency market that it established, and set and publish the official exchange rates of all foreign currencies against the ruble. Another milestone occurred in December 1992, from which point the Bank of Russia was no longer required to provide cash services for the

federal budget as a result of the establishment of a single centralized federal Treasury system. The bank also stopped extending loans to finance the federal budget deficit and providing centralized loans to individual sectors of the economy in 1995. However, as the agent of the Ministry of Finance, it organized the government securities market, known as the GKO market, and began to participate in its operations even as it pulled away from other areas of the government.

The Bank of Russia took steps toward restructuring the banking system in order to improve the performance of Russian commercial banks and increase their liquidity in the aftermath of the financial crisis of 1998. Insolvent banks were shuttered. More importantly, two offices were established that went on to play a very significant role in the recovery of the banking sector along with the Bank of Russia; these were the Agency for Restructuring Credit Institutions (ARCO) and the Inter-Agency Co-ordinating Committee for Banking Sector Development in Russia (ICC). The Russian banking sector had largely recovered from the crisis by the middle of 2001 as a result of the combined work of the Bank of Russia, the ARCO and the ICC.[8]

To ensure the stability of the Russian banking system, the Bank of Russia set up a supervisory and inspection system for commercial banks as well as a system of foreign exchange regulation and control in a series of steps during the period from 1992 to 1995. It followed up with a project designed to improve banking supervision and prudential reporting by introducing international financial reporting standards (IFRS) in the country in 2003. This project resulted in the implementation of comprehensive range of measures, including ensuring credible accounting and reporting by the credit institutions; raising requirements for the content, amount and periodicity of information to be published; and introducing accounting and reporting standards that matched international best practices. Additional measures dealt with disclosing information regarding the real owners of the credit institutions, exercising control over their financial position, and tightening the requirements for the executives of the credit institutions and their business reputation.

The central bank has had to pay additional attention to some specific problems during the past 15 years. The first related to the specific risks connected with the price dynamics for certain financial assets, especially real estate. The unchecked practice of extending loans to related parties had led to high risk concentrations for some Russian banks, which prompted the Bank of Russia to overhaul its banking regulation methods

by increasing the emphasis on substantive risk-oriented supervision. The second related to the fictitious capitalization of banks, a rather common occurrence at the time. To prevent banks from artificially overvaluing or undervaluing the required ratios, the central bank issued a number of regulations in 2004; these included "On the Procedure for Creating Loan Loss Reserves by Credit Institutions" and "On Banks' Required Ratios." Third, the central bank standardized the procedures for compiling and presenting data on housing mortgage loans extended by credit institutions in 2003 in response to the increase in the number of credit institutions extending mortgage loans to the public. Finally, it adopted the Federal Law "On Insurance of Personal Bank Deposits in the Russian Federation" in December 2003. The law provided a legal, financial and organizational framework for the mandatory personal bank deposits insurance system; it also established an institution tasked with implementing the mandatory deposit insurance functions and outlined the procedure for paying deposit compensation. An overwhelming majority of Russian banks currently participate in the deposit insurance program, and insured deposits account for almost 100 percent of total personal deposits with Russian banks.

The success of Bank of Russia has been mixed; after a rocky transition to the free market came the Russian financial crisis of 1998, when the bank was forced to first devalue the ruble and then let it float. It also defaulted on its debt. Several factors contributed to the crisis: some like high fiscal deficits, rent-seeking by those close to the administration and the war in Chechnya were unrelated to monetary policy, while the central bank was to blame for others like the highly overvalued ruble. Several years of growth fueled largely by energy exports aided the recovery. However, a fall in oil prices and western sanctions over Ukraine and electoral interference, among other factors, have currently pushed the Russian economy toward a recession, and the Bank of Russia is facing the difficult task of balancing avoiding a run on the ruble with boosting economic growth.

7.2.2 The Administrative Structure of the Bank of Russia

The Bank of Russia is headed by the Governor; the post has been held by Elvira Nabiullina since 2013, when she became the second woman to hold the position after Tatiana Paramonova, who was the Acting Chairwoman of the bank in 1994–1995. She has drawn a lot of praise from both within and outside Russia, is widely regarded as one of the best central bank governors right now, and was recently reappointed to a second five-year term.[9]

Next in the hierarchy are four First Deputy Governors and five Deputy Governors. The Governor can appoint and dismiss the Deputy Governors and allocate duties among them.[10] The Chief Auditor and the Chief Accountant round out the senior management team.[11] The State Duma of the Federal Assembly of the Russian Federation appoints and dismisses the Governor of the Bank of Russia based on the recommendation of the President of the Russian Federation. The State Duma also appoints and dismisses the members of the Bank of Russia Board of Directors based on the recommendation of the Governor of the Bank of Russia, provided that the President of the Russian Federation is in agreement.

The Russian Federation is territorially divided into eight federal districts, which refer to groupings of multiple federal subjects that are combined for administrative convenience. The Bank of Russia also divides the country into the same regions, along the lines of the United States being divided into 12 Federal Reserve districts but with the central bank district lines aligning with the administrative boundaries in case of Russia. The seven original Russian central banking districts that date back to May 18, 2000, are the Central Federal District, whose main branch is in Moscow; the North-Western Federal District, whose main branch is in Saint Petersburg; the Southern Federal District, whose main branch is in Krasnodar; the Volga-Vyatka Federal District, whose main branch is in Nizhny Novgorod; the Ural Federal District, whose main branch is in Ekaterinburg; the Siberian Federal District, whose main branch is in Novosibirsk; and the Far Eastern Federal District, whose main branch is in Vladivostok. Each of these federal districts are divided into smaller regional divisions; the Central Federal District has the most, with 16, while the Ural Federal District has the least, with 6.[12] The eighth district is the North Caucasus Federal District, which was only carved out on January 19, 2010. Its administrative center is Pyatigorsk (Fig. 7.2).

The Bank of Russia is divided into a very large number of structural units, which is a bureaucratic holdover from the Soviet era. Its offices and departments are the Head Office; the Bank of Russia Executive Office; the Statistics and Data Management Department; the Research and Forecasting Department; the Cash Circulation Department; the National Payment System Department; the Accounting and Reporting Department; the Department for Market Access and Activity Termination of Financial Institutions; the Financial Resolution Department; the Corporate Affairs Department; the Banking Supervision Department; the Risk Analysis Service; the Banking Regulation Department; the Systematically Important

Fig. 7.2 Federal districts of Russia: 1—Northwest; 2—Ural; 3—Siberia; 4—Far East; 5—Central; 6—Volga-Vyatka; 7—South; 8—North Caucasus (Source: Commons)

Banks Supervision Department; the Service for Ongoing Banking Supervision; the Bank of Russia Chief Inspection; the Market Operations Department; the Market Services Department; the Financial Stability Department; the Financial Monitoring and Foreign Exchange Control Department; the Monetary Policy Department; the Financial Market Strategy Department; the Financial Market Development Department; the Insurance Market Department; the Collective Investment and Trust Management Department; the Securities Market and Commodity Market Department; the Microfinance Market Department; the Reports Processing Department; the Department for Countering Misconduct; the Service for Consumer Protection and Financial Inclusion; the Legal Department; the Field Institutions Department; the Information Technology Department; the Financial Technology, Projects and Process Management Department; the Human Resources Department; the Financial Department; the Internal Auditing Department; the International Cooperation Department; the Public Relations Department; the Administrative Department; the Procurement Examination, Methodology and Control Department of the Bank of Russia; the Procurement Department of the Bank of Russia; the Real Estate Department; the Main Office of the Bank of Russia Real Estate; and the Main Office of Security and Information Protection.

7.2.3 The Functions of the Bank of Russia

Federal Law No. 86-FZ, titled "On the Central Bank of the Russian Federation (Bank of Russia)" and dated July 10, 2002, lays out the status, purposes, functions and powers of the Bank of Russia. Article 3 of the act states that the goals of the Bank of Russia are to protect the ruble and ensure its stability, promote the development and strengthen the Russian banking system, ensure the stability and development of the national payment system, and develop the financial market of the Russian Federation and ensure its stability.[13] The bank also develops and implements a national monetary policy, issues cash, and acts as the lender of the last resort for credit institutions and organizes the credit institution refinance system.

One of the most integral part of the Bank of Russia's portfolio is conducting the monetary policy of the Russian Federation. The Bank of Russia sums up the monetary policy mechanisms that it uses as follows[14]:

1. The change in the amount of money in the economy (money supply) is achieved through three main mechanisms: bank operations in the lending market, budget operations, and foreign currency operations of the banking system with the real sector of the economy. In modern Russia, the bulk of emission is achieved through bank operations related to lending to the economy.
2. Changes in the banking sector liquidity are achieved using monetary policy instruments and independent factors that can be grouped as follows: fluctuations in demand for cash, expenditure and replenishment of budget accounts with the central bank, central bank operations in the domestic foreign exchange market, and other factors. Currently, budget operations provide for the largest contribution to changes in the banking sector liquidity (among the independent factors).
3. Banking sector liquidity (which characterizes relations within the banking system), on the one hand, and money supply and lending (which characterize the relationship between the banking system and the real sector), on the other, represent different aspects of banking activity. Factors that affect liquidity may fail to affect money supply, and vice versa. The impact of the bank's liquidity on its lending activity is limited.

The Bank of Russia has adopted an inflation targeting regime as its monetary policy objective; its priority is hence price stability, or equiva-

lently, sustainably low inflation. Given some of the unique structural features of the Russian economy, the target was to reduce the inflation rate based on the consumer price index to four percent by 2017, as calculated for Russia by the Federal State Statistics Service (or Rosstat), and maintain it within that range in the medium run. The reasons for the particular value are the need for development of competition and market institutions, production effectiveness and diversification, the consumption structure in the country, and price volatility in certain groups of goods and services. After 2017, Russia will not be setting specific dates for the delivery on the inflation target; rather, it will seek to keep inflation permanently anchored near the chosen level. The central bank was indeed successful with regard to the former; the inflation rate fell steeply from 15.55 percent in 2015 to 7.07 percent in 2016, and decreased further to 3.69 percent in 2017. This level is the lowest in its history. The monetary policy affects the economy through its impact on the interest rates, the benchmark rate being the Bank of Russia key rate. The bank makes its decisions after taking into account the pass-through effect of monetary policy on the economy, the economic outlook at the time, and risk assessment associated with achieving the inflation target over the mid-term horizon. It also factors in possible threats to sustainable economic growth and financial stability.

The Bank of Russia realizes, based on the experiences of other countries, that making the four percent inflation target a reliable benchmark for all the economic agents in the country takes a while. In the Monetary Policy Guidelines for 2018–2020, the bank reiterates the importance of anchoring inflation near four percent in order to build up confidence in the central bank's policy and bring down inflationary expectations, which are consistently high in Russia and shoot up even in response to temporary price fluctuations. The bank is being very deliberate in its examination of financial developments and price responses, and is following a conservative and balanced approach in its key rate determination and economic forecasting.

Transparency and effective communication of the goals and outcomes of monetary policy is especially critical for building up trust among Russia's economic agents in order to lower inflationary expectations. It doesn't make it easier that Russia is also hurting from low oil and gas prices at the moment, which are its biggest export earners.[15] If inflation deviates from its target due to any reason, then the Bank of Russia will share with the public in detail the reasons behind the deviation, its duration and persis-

tence, and its impact on inflation expectations. It will also explain when the key rate movement will bring inflation back to the target level.

A related element of the Bank of Russia's monetary policy is anchoring interest rates in the economy at a level that makes deposits and other ruble-denominated saving assets attractive. Consistently low inflation will hence ensure the welfare of Russians. The incentives to save in rubles will lead to moderate levels of demand that do not outpace production in the country, thereby keeping inflation and imbalances in the real and financial sector in check. Once the inflation rate is anchored at around four percent and inflationary expectations are down, the Bank of Russia envisions room for a further key rate cut within this approach. The key rate is currently at 8.25 percent, and the bank plans to bring it down to the 6 to 7 percent range in the years ahead.[16] The composition of goods and services in a representative consumption basket can vary across households due to age, family composition, income and location. This does not contradict the four percent target; in fact, the expectation is for prices to vary less across product groups and regions once the inflationary expectations stabilize around the anchor.

Finally, it should be pointed out that the monetary policy reforms of the Bank of Russia are happening in conjunction with the Russian government's efforts to address fiscal issues and structural challenges faced by the economy. Addressing structural challenges, continuing with economic development, and using economic stimuli when appropriate will also improve effectiveness of the Bank of Russia's monetary reform measures in the future. The bank points out that in particular, lower monopolization in many economic sectors is going to increase the flexibility of the commodities market, supply and prices, thereby increasing their sensitivity to changes in consumer activity, especially when caused by the key rate. Higher levels of territorial and professional mobility of the Russian labor force, lower administrative and institutional barriers for starting new businesses, and further development of transport and logistic infrastructure are needed to make this a reality. Another challenge that needs to be addressed is the extreme level of income and wealth inequalities in Russia. Narrowing these will lead to higher levels of savings and increased social stability as well as increase the central bank's influence on prices by boosting effective demand, as medium income households are especially sensitive to changes in interest rates and prices and adjust their levels of consumption and savings accordingly.

The Russian Federation adopted a new fiscal rule, which came into effect at the beginning of 2017, with the aim of reducing the dependence of the Russian economy as well as Russia's government finances on global oil market cycles in the medium run. The Russian economy needs to diversify further and depart from its focus on commodity exports and import dependency in order to become less sensitive to external shocks and achieve more balanced development. The bank hopes that when coupled with the inflation targeting regime, this will limit the impact of external conditions on the real exchange rate and hence the competitiveness of Russian products.[17] It should be noted that this is the third attempt at implementing a similar rule. However, this rule is different in three ways and therefore holds greater promise. First, it provides greater predictability to medium-term budgeting by designating that the portion of oil and gas revenues that the federal government can spend in a given year will be determined by a fixed oil price benchmark. This level is $40 per barrel, in 2017 prices. Though oil prices have recovered somewhat since then and are currently in the mid-$50s, the increases in shale oil coupled with the move toward greener and renewable energy sources suggest that oil prices may remain permanently lower. Second, the rule protects the National Welfare Fund (NWF), which is the Russian rainy day fund, by restricting the use of oil and gas windfalls. If the balance in the Bank of Russia's account at the NWF falls below five percent of the GDP, then withdrawals from the NWF will be capped at one percent of the GDP during the following year. If actual oil prices end up exceeding the benchmark price, then the difference will be saved in the NWF. Third, the rule is simple to carry out, monitor, and communicate to the general public.[18] The Russian government will continue to use the conservative $40 per barrel gas price forecast as it drafts its budget for the next three years. Though revenues are expected to be 630 billion rubles (US $10.6 billion) higher in 2018 than originally anticipated, the Russian government is planning to use the bulk of it to reduce the budget deficit from the 2.1 percent of the GDP that is forecast for 2017 to a targeted 1.6 percent in 2018, 0.9 percent in 2019, and 0.8 percent in 2020.[19]

As the central bank, the Bank of Russia holds the exclusive right to issue ruble bank notes and coins. Coins are struck at the Moscow and Saint Petersburg mints that are run by the joint stock company Goznak. Goznak was established in Saint Petersburg on September 4, 1818, during the reign of Czar Alexander I, who placed it in charge of his Minister of Finance, Dmitry Guriev. Goznak is now headquartered in Moscow and

completely owned by the Russian government. Bank notes are printed at the Moscow and Perm printing factories. The equipment at the printing factories allows the company to combine the traditional bank note production methods such as the offset, screen, intaglio, relief printing and Orlov methods with additional operations such as screen printing, foil overlaminating and microperforation.[20] In addition to printing Russian bank notes, the company also prints bank notes on behalf of several other countries, including Angola, Guatemala, Lebanon, Tajikistan, and Yemen. Goznak has also supplied bank note paper to China, Indonesia, Nigeria, and several other countries in Africa, Asia and Latin America.[21] The bank note paper is produced at the Krasnokamsk and St. Petersburg paper mills run by the company. The mills make durable and water-resistant bank note paper of varying security levels, and a unique set of overt and covert security features is selected for each type of paper. Goznak widely uses watermarks, continuous, local and with a strip design, in the manufacture of bank note paper. Depending on the nature of the image, the watermark can be either one-tone (light or dark), two-tone (halftone), filigree, or combined. Another security feature that is widely used by Goznak are embedded security threads of varying widths, as well as solid, windowed, metallized (dark in transmitted light) or unmetallized (light in transmitted light), with microtext (dark on a light background or light on a dark background) both with or without UV luminescence. One of the more innovative security threads developed by the company jointly with the Center of Computer Holography allows for the mobile kinetic effect; the usage of modern nano-optic technology allows the images on the thread to move relative to each other when tilted.[22] The figures on the bank notes also change color when turned 180 degrees.

In terms of macroprudential regulations, the Bank of Russia oversees banks, non-banking financial institutions, and certain aspects of corporations. It is responsible for supervising the activities of credit institutions and banking groups; making decisions on the state registration of credit institutions; issuing, suspending and revoking banking licenses to credit institutions; making decisions on the state registration of non-governmental pension funds; exercising regulation, control and supervision over the activities of non-credit financial institutions in compliance with federal laws; registering securities issues, prospectuses and reports on the results of securities issues; exercising control and supervision over the compliance by issuers with the requirements of federal legislation on joint-stock companies and securities; and exercising regulation, control and supervision

over corporate governance in joint-stock companies. It also approves industry accounting standards for credit institutions, the Bank of Russia, and non-credit financial institutions, the chart of accounts for credit institutions and the procedure for its application, the chart of accounts for the Bank of Russia and the procedure for its application. The Bank of Russia protects the rights and legitimate interests of shareholders and investors in the financial markets, insurers, insured persons, and beneficiaries recognized as such in accordance with the insurance legislation, and also insured persons in the system of compulsory pension insurance, depositors and participants of a non-governmental pension fund in the system of non-governmental pension insurance. The bank also pays compensation for household deposits with bankrupt banks uncovered by the compulsory deposit insurance system in the cases and according to the procedure established by the federal law, and is responsible for overseeing compliance with the requirements of federal legislation on countering the illegal use of insider information and market manipulation.

The countercyclical capital buffer rate for the means of capital adequacy calculation is kept at zero level by the Bank of Russia. The credit gap, which is the main reference indicator recommended by the Basel Committee on Banking Supervision, was still negative at the end of 2017 despite gradual recovery from its economic woes. This indicated that credit activity in Russia is below its long-term trend. The recovery of credit has been quite uneven across market segments. While the mortgage portfolio has been growing at a high rate even as the quality of the mortgage portfolio remained high, the growth of unsecured consumer loans became positive only in June 2017. Corporate lending is growing moderately for the ruble portfolio but contracting for the foreign exchange portfolio.[23]

The Bank of Russia services budget accounts from all levels of the Russian budget system, unless Russian federal laws stipulate otherwise, by effecting settlements as per the instructions of the authorized parties that are responsible for budgets at various levels. The bank also analyzes the Russian economy, makes forecasts, and publishes the corresponding statistical data.

On the international front, the central bank manages the country's international reserves; organizes and exercises foreign exchange regulation and foreign exchange control pursuant to federal legislation; sets the procedure for effecting settlements with international organizations, foreign states and legal entities and private individuals; sets and publishes official exchange rates of foreign currencies against the ruble; takes part in

the compiling of Russia's balance of payments forecast and organizes the compiling of Russia's balance of payments; takes part in the development of the methodology for compiling Russia's financial account within the national account system and organizes the compiling of Russia's financial account; keeps official statistical records of direct investments to and from Russia in compliance with federal legislation; establishes independently the statistical methodology of direct investments to and from Russia, the list of respondents, approves the procedure for their submitting of primary statistical data on direct investments, including the methods of federal statistical review; and acts as the depository of the International Monetary Fund's funds that are in the Russian currency and conducts operations and transactions provided by the Articles of Agreement of the International Monetary Fund and the agreements with the International Monetary Fund.

7.2.4 Autonomy of the Bank of Russia

The Constitution of the Russian Federation enshrines the autonomy of the Russian central bank. Article 75 in chapter 3, which deals with the federal structure of Russia, states that "The protection and ensuring the stability of the rouble shall be the major task of the Central Bank of the Russian Federation, which it shall fulfil independently of the other bodies of state authority." It also mentions that "The monetary unit in the Russian Federation shall be the rouble. Money issue shall be carried out exclusively by the Central Bank of the Russian Federation."[24] Though the Bank of Russia is not a body of state power, its powers are, in effect, the functions of a body of state power as their implementation implies the use of state compulsion. The Bank of Russia performs its functions and exercises the powers granted to it by the constitution as well as federal law independently from the federal bodies of state power, regional authorities and local governments. The legislative powers of the Bank of Russia signify its exclusive right to issue regulations that are binding on the federal bodies of state power, regional authorities, local governments and all legal entities and private individuals on matters placed within its purview by federal laws. Article 104 of the Constitution of the Russian Federation states that while the bank does not have the power to initiate legislation, it is involved in the law-making process by virtue of issuing its own regulations and also because the drafts of federal laws and statutory acts of federal bodies of executive power concerning the functions of the Bank of Russia have to be submitted to the Bank of Russia for consideration and approval.[25]

The Bank of Russia is a legal entity. While its authorized capital and all other properties are federal property, the bank has both proprietary and financial independence. It has full powers to own, use and manage its properties, including its international reserves, as long as it is in compliance with federal laws. Bank of Russia property may not be seized or encumbered without its consent, unless the federal law stipulates otherwise. The Bank of Russia is financially independent as it covers its expenses from its own revenues. The bank is allowed to defend its interests in court, including in international courts, the courts of foreign states and courts of arbitration. The state is not liable for the Bank of Russia's obligations, and neither is the Bank of Russia liable for the state's obligations.

The bank is accountable to the State Duma of the Federal Assembly of the Russian Federation. If the National Financial Board so advises, then the State Duma has the right to audit the financial and economic activities of the Bank of Russia and its divisions and establishments. In addition, the State Duma holds parliamentary hearings on the activities of the central bank. The Governor of the Bank of Russia also presents the annual report on the activities of the central bank and the guidelines for the single state monetary policy in the State Duma every year.

Apart from the constitution, articles 1 and 2 of the Federal Law "On the Central Bank of the Russian Federation (Bank of Russia)" also guarantee the independent status of the bank. The bank has been given considerable operational leeway by the government of the Russian Federation in its managing of the domestic economy and the exchange rate system.

7.3 The Currency of the Russia Federation

7.3.1 The Ruble During Imperial Russia

The first mention of the ruble dates back to a thirteenth century birch branch manuscript from Novgorod, one of the most significant historic cities in Russia, an important center of the Varangian state of Kievan Rus', and the subsequent seat of the Novgorod Republic. At the time, however, the ruble wasn't a currency but simply a unit of account. The most commonly used coin, especially in the southern Russian principalities, was the silver *denga* (plural *dengi*, a commonly used word for money in Russian); one of these was worth half a kopek.

The first czar to mint ruble coins was Alexei the First, though he ended up abandoning the new monetary system. The ruble was the world's first

decimal currency, having been decimalized in 1704 when one silver ruble coin was set equal to 100 copper kopek coins by Czar Peter the Great in his successful reform of the Russian monetary system. Peter the Great also standardized the amount of silver in one ruble, setting the amount at 28 grams. Higher denominations of gold and platinum coins were also introduced. Bank notes were first introduced during the reign of Czarina Catherine the Great, when the Assignation Bank was established in Saint Petersburg, along with a branch in Moscow, in 1769 to issue paper money. The first bank notes were printed in the same year; the initial denominations were 25, 50, 75 and 100 rubles.

7.3.2 The Ruble During the Soviet Era

The Russian imperial ruble was replaced by the Soviet ruble in 1917. The first Soviet rubles to be issued were bank notes that were printed in 1919. The notes lacked uniformity, and some were only printed on one side. The denominations printed were 1; 2; 3; 5; 10; 15; 25; 50; 60; 100; 250; 500; 1000; 5000; 10,000; 25,000; 50,000; and 100,000 rubles. Additionally, short-term Treasury certificates of one million, five million and ten million rubles were also issued. The first Soviet coins to be minted were silver 10, 15, 20 and 50 kopeks and 1 ruble, in 1921. Copper coins in additional denominations of one, two, three and five kopeks were introduced in 1924, and copper half kopeks were introduced in 1925. A parallel currency called chervonets, which contained 7.74232 grams of fine gold and was fully convertible and on the gold standard, was introduced by the Soviet government in 1923 as part of the New Economic Policy; the chervonets, which were worth ten rubles, existed both in paper form (for the denominations of 1, 3, 5, 10 and 25 chervonets) for domestic circulation and as gold coins for international payments. Chervonets continued to be issued intermittently until the monetary reform of 1947. Over the course of Soviet history, the ruble was redenominated several times; the last redenomination occurred during the Monetary Reform of 1991 under President Mikhail Gorbachev, when the public were given a three-day window from January 23 to January 25, 1991, to exchange their old currency for the new at the rate of ten to one.

After the Soviet Union broke up on December 26, 1991, the newly independent countries introduced their own currencies but continued to use the Soviet ruble in tandem for varying lengths of time. The Soviet ruble was used until 1992 in Russia until replaced by Russian ruble, in

Ukraine until replaced by Ukrainian karbovanets, in Estonia until replaced by Estonian kroon, in Latvia until replaced by Latvian rublis, and in Lithuania until replaced by Lithuanian talonas; until 1993 in Belarus until replaced by Belarusian ruble, in Georgia until replaced by Georgian lari, in Armenia until replaced by Armenian dram, in Kazakhstan until replaced by Kazakhstani tenge, in Kyrgyzstan until replaced by Kyrgyzstani som, in Moldova until replaced by Moldovan cupon, in Turkmenistan until replaced by Turkmenistan manat, and in Uzbekistan until replaced by Uzbekistani so'm; until 1994 in Azerbaijan until replaced by Azerbaijani manat; and until 1995 in Tajikistan until replaced by Tajikistani ruble. Several of these currencies were redenominated or completely replaced by new currencies as the young nations developed their economies. Three of them, Estonia, Latvia and Lithuania, now use the euro.

At the present time, only the currencies of Russia and Belarus are still called the ruble; they are distinct currencies that are officially the Russian ruble and the Belarusian ruble. They are divided into 100 kopek and copeck respectively. The Belarusian ruble has gone through several iterations. After the break-up of the Soviet Union, the first Belarusian ruble was assigned the ISO code BYB and replaced the Soviet ruble at the rate of one Belarusian ruble for ten Soviet rubles. A second ruble was introduced in 2000. This was assigned the ISO 4217 code BYR and replaced the first ruble at the rate of 1 BYR for 1000 BYB. Based on a November 2015 decision, another redenomination happened in July 2016, when a third ruble was introduced. This was assigned the ISO 4217 code BYN and replaced the second ruble at the rate of 1 BYN for 10,000 BYR. The second and third rubles circulated parallelly from July 1, 2016, to December 31, 2016. A five-year window from January 1, 2017 to December 31, 2021, was given to the members of the public to exchange the second rubles for the third rubles. Wages, pensions, educational scholarships, cash balances in bank accounts, and balance sheets of enterprises and institutions are all being recalculated in the course of the redenomination.[26] Belarus also issued coins for general circulation for the first time after the third redenomination; the denominations are 1, 2, 5, 10, 20 and 50 copeck, and 1 and 2 ruble.[27]

7.3.3 The Ruble During the Russian Federation Era

Tracing its origins to the periods of the Russian Empire and the Soviet Union, the Russian ruble is the currency of the Russian Federation. The ruble is subdivided into 100 kopeks. The Russian ruble (ISO 4217 code

RUR) replaced the Soviet ruble (ISO 4217 code SUR) on par in Russia on July 14, 1992. It had to be redenominated due to the 1998 financial crisis and was assigned the new ISO code RUB. The new rubles were exchanged for the old rubles at the rate of 1000 old RUR for 1 new RUB.

The general circulation coins that are struck at the Moscow and Saint Petersburg mints operated by the joint stock company Goznak are cold-struck in bronze, steel, nickel or cupro-nickel alloys. The 1, 2, 5 and 10 ruble coins are minted in nickel or brass plated steel; the 1 and 5 kopek coins are minted in cupronickel plated steel; and the 10 and 50 kopek coins are minted in brass-plated steel. In addition, commemorative coins made of gold, copper, steel, bronze, cupro-nickel and other alloys are minted at these mints for the Bank of Russia.[28] Bank notes are printed in the denominations of 5, 10, 50, 100, 200, 500, 1000, 2000 and 5000 rubles. Russia is one of a few countries that also prints commemorative bank notes; a 100 ruble bank note was printed to celebrate the Olympic Games in Sochi in 2013, and another 100 ruble bank note was printed to celebrate the "reunification" of Crimea and Russia in 2015.[29]

The Bank of Russia announced on November 10, 2014, that it was abandoning the ruble trading band and converting it into a freely floating currency beginning in 2015. The ruble had depreciated by nearly 30 percent against the dollar over the course of 2014 as plunging oil prices and Western sanctions over the Ukraine crisis reduced Russia's exports and investment inflows. The central bank had kept the ruble in a nine-ruble trading band against a dollar-euro basket, but began to gradually limit its interventions in the foreign exchange market.[30] This prolonged period of softening the transition was meant to increase the readiness of market participants and the Russian economy to move to a floating rate. The floating exchange rate acts as a built-in stabilizer of the economy, which is its primary advantage compared to the managed rate. It helps the economy adjust to changing external conditions and smoothens the impact of external factors. For instance, when oil prices rise, the ruble appreciates and therefore reduces the risk of overheating the economy. Similarly, when oil prices fall, the ruble depreciates and in the process provides support for domestic manufacturers by increasing the price competitiveness of their products; this can lead to more exports, including not just oil exports but non-resource exports as well, and by stimulating import substitution. The effects of the floating exchange rate policy are borne out by the differential effects of the last two turbulent episodes in the Russian economy. Both were caused by deteriorating external conditions which saw an abrupt and

substantial fall in oil prices. During the 2008–2009 crisis, the Russian GDP decreased by more than ten percent, while during the 2015–2016 crisis, the decline was slightly more than three percent despite a comparable fall in the price of oil. The Russian economy has hence become more resistant to these external shocks as a result of the floating exchange rates.[31]

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CHAPTER 8

India

8.1 The Origins of Central Banking in India

Before India had its own central bank, the normal tasks that are carried out by the institution were largely undertaken by the Imperial Bank of India. The Imperial Bank of India was formed in Bombay (present day Mumbai) by merging the three Presidency banks on January 27, 1921. The British East India Company established three presidencies, which were the forerunner of provinces, to govern their territory in India. The presidencies grew out of the presidency towns, which were the three largest trading posts of the British. The Madras Presidency was the first to be established, in 1640, in southern India. The Bombay Presidency followed in 1668. The primary trading post in western India had been the port city of Surat in the present-day state of Gujarat, but the importance of the city slowly declined after the headquarters of the East India Company was shifted to Mumbai in 1687. The third presidency was the Bengal Presidency, which was the largest of the three and housed Calcutta, the capital of British India. All three banks were established by royal charter, and were limited liability joint stock companies. The Presidency banks hence consisted of three institutions: the Bank of Calcutta, which was established on June 2, 1806, and became the Bank of Bengal on January 2, 1809; the Bank of Bombay, which was established on April 15, 1840; and the Bank of Madras, which was incorporated on July 1, 1843.[1] All three of the Presidency banks had the right to issue paper currency until

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1861 alongside a select few other private banks; this privilege was taken away by the Paper Currency Act of 1861, which granted the Government of India the sole right to issue bank notes. Once the three banks were merged, the resulting Imperial Bank of India became the largest bank in the country.[2]

The idea of a central bank for British India originated in 1926, when the Royal Commission on Indian Currency and Finance or the Hilton-Young Commission suggested the establishment of a central bank with two principal goals in mind: separating the control of monetary affairs from that over fiscal affairs, which was the jurisdiction of the government, and developing the banking sector in India. A bill introduced in the Legislative Assembly in 1927 went nowhere, and ended up being withdrawn. A new bill, the Reserve Bank of India Act of 1934, was introduced a few years later, following the publication of the White Paper on Indian Constitutional Reforms in 1933, which recommended the creation of a central bank. The bill received the Governor General's assent and formally established the Reserve Bank of India, which opened its doors in Kolkata on April 1, 1935.[3] John Maynard Keynes envisioned an independent central bank for India on a level of authority that was at par with that of the Treasury. However, Montagu Norman, the governor of the Bank of England from 1920 to 1944, contemplated "a Hindoo marriage" between the Bank of England (the dominant spouse) and the Reserve Bank of India (the subservient wife), whereby in return for formal advisory services, the Reserve Bank of India was to yield to the Bank of England "the right to determine the disposition of its funds and generally cooperate with it in matters affecting the good management of [the] sterling."[4] Like the Bank of England, the Reserve Bank of India was initially owned by private shareholders; 99.56 percent of the shares were privately held, while the remaining 0.44 percent were held by the central government. It was nationalized on January 1, 1949, shortly after India's independence from the British, with the passage of the Reserve Bank (Transfer to Public Ownership) Act of 1948 and compensation having been paid to the private shareholders.

At the time, it served as the central bank for a much larger territory that also encompassed present day Bangladesh, Myanmar (formerly Burma) and Pakistan. Myanmar was separated from the rest of India in 1937, which was also the year when the Central Office of the Reserve Bank of India was permanently moved to Mumbai.[5] Pakistan and India were partitioned at midnight on August 15, 1947; the Reserve Bank of India continued to

oversee Indian monetary policy, while the State Bank of Pakistan, established by the State Bank of Pakistan Order 1948, took over the monetary responsibilities of Pakistan.[6] The former East Pakistan, in turn, split from West Pakistan to become the country of Bangladesh in 1971.[7]

8.2 The Indian Rupee

8.2.1 The Currency System of British India

As is the case with other parts of the world, the early trade in India was predominantly carried out through the barter system. The earliest form of commodity money widely used in India was cowry shells. The era of standardized metal coins followed, and the earliest date back to well over two millennia. *Arthashastra*, an economic and political treatise written in the third century B.C. by Chanakya, who was the prime minister of the first emperor of the Maurya dynasty, Chandragupta Maurya, references gold coins (*Suvarnarupa*), silver coins (*rupyarupa*), copper coins (*tamararupa*), and lead coins (*sisarupa*).

During the early British period, each of the three Presidencies, the Madras Presidency, the Bombay Presidency and the Bengal Presidency, initially had its own monetary system. The coins of the Bengal Presidency were modeled on Mughal coin patterns; those of the Madras Presidency were based on a combination of South Indian motifs in terms of design and metrology (the Pagoda) and Mughal patterns; and those of the Bombay Presidency were based on a combination of Mughal and English patterns. The British obtained permission from the Mughal Emperor Farrukhsiyar during his brief reign to coin Mughal money at the Bombay mint in 1717; these coins were based on English patterns. The gold coins were termed *carolina*, the silver coins *anglina*, the copper coins *cupperoon* and tin coins *tinny*. Matthew Boulton of Birmingham invented a steam operated coin-stamping machine in 1786 that could strike up to a 120 coins per minute and established the Soho Mint in 1788; this was far more sophisticated than its competitors at the time, and in 1792 Boulton signed his first contract with the East India Company to produce coins. The monetary system of the Bengal Presidency was 1 pie = 1/3 pice = 1/12 anna; 1 pice = 1/4 anna = 1/64 rupee; 1 anna = 1/16 rupee; and approximately 15 rupees = 1 mohur; this eventually became the standard monetary system of unified British India as well as early post-independence India.

As the English gradually became the predominant colonial power in India, a uniform currency system was introduced throughout British India following the passage of the Coinage Act of 1835. New coins with the portrait of King William IV on the obverse and the denomination on the reverse, with inscriptions in both English and Persian, were issued in 1835.[8] Queen Victoria became the Queen of the United Kingdom of Great Britain and Ireland on June 20, 1837, and the Empress of India on May 1, 1876, and subsequent coins bore her effigy. Following the Indian Rebellion of 1857, also known as the Sepoy Mutiny because it started as a mutiny of the *sepoys* (private soldiers) of the East India Company in the town of Meerut near Delhi, control of India passed from the East India Company to the British crown. The first issue of coinage under the crown was in 1862. She was succeeded by her son Edward VII upon her death in 1901, and the coins struck bore his effigy. The Indian Coinage Act of 1906 passed during his reign standardized the composition of coins and dictated the establishment of mints; one rupee was 180 grains silver 916.66 standard, half rupee was 90 grains, and quarter rupee was 45 grains. George V inherited the throne from Edward VII in 1910. The First World War led to a severe shortage of silver, which prompted the administration to issue paper currency in the denominations of one rupee and two and a half rupees; the smaller denomination silver coins were issued in cupro-nickel. British India did not issue currency during the brief reign of Edward VIII in 1936; neither did the British back home. However, the Indian princely states of Jaipur, Jodhpur and Kutch issued coins bearing Edward VIII's name. The rule of George VI followed that of Edward VIII, which saw the Second World War and India gaining independence. War-related scarcity led the British to alter the composition of the rupee coin and introduce the quaternary silver alloy coins containing 50 percent silver, 40 percent copper, 5 percent nickel and 5 percent zinc in 1940; these were replaced by pure nickel coins in 1947.

Paper currency originated in China around a thousand years ago. The first bank to issue bank notes in India was the Bank of Hindostan in the year 1770; they continued to issue bank notes until 1832. The General Bank of Bengal and Bihar followed by issuing promissory notes between 1773 and 1775[9] The Bengal Bank issued bank notes between 1784 and 1791.[10] Commercial Bank and some other banks also issued bank notes at the time.[11] The Government of India took over the printing of bank notes in 1861 as a result of the Paper Currency Act, which was largely the vision of Sir James Wilson, who was the first Finance Member in the Executive

Council of the Viceroy of India.[12] In that capacity, Sir Wilson was responsible for introducing a new tax structure as well as a new paper currency. When he passed away in Calcutta after only a year in India, the task of implementing his vision fell on his successor Samuel Laing, who significantly altered some of Sir Wilson's original proposals. With some exceptions, most bank notes initially used in British India were printed by Thomas De La Rue & Company, Limited, of Basingstoke in the United Kingdom; the company was founded by Thomas De La Rue, a hat maker, stationer and printer who moved to London in 1821 and initially printed playing cards before branching out to postage stamps and bank notes.[13]

The Office of Controller of Currency was established in 1913, and this took over the issuance and redemption of currency from the Currency Department of the government.[14] The Government of India continued to issue bank notes until the establishment of the Reserve Bank of India on April 1, 1935; during the British era, the Reserve Bank of India initially issued bank notes bearing the portraits of George V, and in 1938 that of George VI. The only exception was the one rupee note, which was reintroduced as a war-time measure in August 1940; this is the only Indian bank note that had the status of a coin, and the Government of India continued to issue them until 1994. The first paper currency to be printed by the Reserve Bank of India was a five rupee note in January 1938.[15] Among the denominations printed by the Reserve Bank were 10,000 rupee bank notes, which is the largest denomination ever to be printed in India; these were demonetized after independence.

8.2.2 Currencies of Other European Colonies in India

It should be noted that British India wasn't the only jurisdiction in India issuing currency. Among the various colonial rulers of India apart from the British, the largest territory was held by Portugal. The Portuguese State of India (*Estado Português da Índia*) traced its origins to Pedro Álvares Cabral's arrival in Calicut, in the present-day state of Kerala, on September 13, 1500, where he set up a factory and warehouse. At one point, the Portuguese possessions in India were divided into two provinces: The Northern Province included Daman and Diu, along with Salsette, Bombay (present day Mumbai) and Baçaim. The Southern Province included Goa and portions of the Malabar (Kerala) coast; the island of Sri Lanka and the Indian Ocean archipelago of Maldives were also briefly ruled from Goa.

The initial currency of Portuguese India was the xerafim. The Portuguese administration then introduced a new silver coin that was worth two xerafims and called it the rupia. The Portuguese Indian rupia became the currency of the territory from 1668 to 1958; the xerafim became a sub-unit of the new rupia. The rupia was divisible into 750 bazarucos, 600 réis (singular real), 20 pardaus (singular pardao), or 10 tangas until 1871. After 1871, the convertibility was changed to 960 réis or 16 tangas to the rupia so that the Portuguese India rupia would be equivalent to the Indian rupee and the tanga equivalent to the Indian anna, which was 1/16th of a rupee. The first Indo-Portuguese issues of paper currency were the 10 and 20 rupia notes issued by the Junta da Fazenda Pública in 1882. In 1883, the *Governo Geral* or General Government introduced 5, 10, 20, 50, 100 and 500 rupia bank notes, all of which incorporated the portrait of the King of Portugal. The Banco Nacional Ultramarino, a Portuguese bank that operated in the former Portuguese overseas provinces and is now based in Macau, was entrusted with the responsibility of issue of paper money in India for the Portuguese held territories in 1906.[16] The early notes issued by the bank carried the seal of the bank and were in the denominations of 5, 10, 20 and 50 rupias. New denominations of four tangas, eight tangas, one rupia and two and a half rupias were introduced in 1917, and 100 and 500 rupia notes reintroduced in 1924. Each of the three territories of Goa, Daman and Diu issued their own coins until the mid-nineteenth century, until the Daman mint closed in 1854, the Diu mint closed in 1859 and the Goa mint closed in 1869. Coins began to be imported from Portugal beginning in 1871. Between 1958 and 1961, the currency of Portuguese India was the Portuguese Indian escudo (*Escudo da Índia Portuguesa*), which replaced the rupia at the rate of six escudos per rupia. Each escudo was divided into 100 centavos and traded on par with the Portuguese escudo. Bank notes were introduced in 1959 by Banco Nacional Ultramarino, in the denominations of 30, 60, 100, 300, 600 and 1000 escudos; coins were introduced in 1958 in the denominations of 10, 30 and 60 centavos, and 1, 3 and 6 escudos.

The French held several geographically separated enclaves in India, which collectively formed the French Establishments in India (officially the *Établissements français dans l'Inde*). The enclaves consisted of Pondichéry, Karikal and Yanaon on the east coast, Mahé on the west coast and Chandernagor in present day West Bengal. The currency of the French Establishments in India was the French Indian rupee or roupie, which was at par with the British Indian rupee. The roupie was only issued in the

form of coins until 1871, with each roupie being divided into 8 fanons, –24 doudous or 160 cashes. Banque de l'Indochine, a French bank headquartered in Paris that was established on January 21, 1875, that helped France manage its territories in southeast Asia before branching out to China and the French territories in the Pacific, introduced bank notes in 1871; these circulated alongside British Indian coins.

Other European powers to issue coins in Indian were the Dutch and the Danes. The United East India Company (*Vereenigde Oostindische Compagnie* or the VOC) was granted a monopoly to trade with India in 1602. The Dutch possessions in India comprised of the governorates of Dutch Ceylon (in the Indian Ocean) and Dutch Coromandel (on the east coast), the commandment of Dutch Malabar (on the west coast), and the directorates of Dutch Bengal (in eastern India) and Dutch Suratte (in western India). The Danes operated a mint for striking coins in Pulicat from 1615 to 1674, after which they opened a new mint in Nagapattinam, the headquarters of the colony from 1690. These coins were used for the purposes of trade, and circulated in both India and Ceylon.[17] The Dutch had to relinquish Dutch Malabar to the British due to the terms of the Anglo-Dutch Treaty of 1824, and ceded the possessions on the Coromandel Coast to the British in 1825. Danish India comprised of Tranquebar, which was the name for Tharangambadi in present-day Tamil Nadu; Frederiksnagore, which was the name for Serampore in present day West Bengal; and Frederiksøerne (Frederick's Islands), which was the name for the Nicobar Islands, which are currently part of the union territory of the Andaman and Nicobar Islands in the Bay of Bengal. The colonies went into economic decline during the Napoleonic Wars and were sold to the British; Serampore was sold in 1839, Tranquebar and several minor settlements in 1845, and the Nicobar Islands in 1868. The currency of Danish India was the Danish Indian rupee, which was divided into 8 fano, each of which was further divided into 80 kas (or cash).

8.2.3 Currencies of Princely States

As the authority of the Mughal Empire declined, political power devolved and several regions in India gained varying degrees of autonomy. Many of them issued their own coinage. Of these were a number of independent kingdoms that subsequently became a part of Burma, India or Pakistan; these were Arakan, Assam, Cooch Behar, Jaintiapur, Kachar, Manipur, Farrukhabad, Maratha, Jammu, Mysore, Rohilkhand, Sikh, and Sikkim.

As British dominance increased, many of the autonomous areas came under the British sphere of influence; these were the Indian princely states (officially referred to as the native states), which were vassal states that were allied with the British. The relationship between these states and British India were modeled on the subsidiary alliance developed by Lord Wellesley, who was the British Governor General of India from 1798 to 1805. More than a thousand of these princely states sprang up. Though the British did not allow these states to issue paper currency, over 125 of them issued their own coins. Jodhpur and Kutch continued to strike coins until 1947, which was the year of Indian independence.[18] Indian princely states that issued their own currency included Alwar, Arcot, Bahawalpur, Bajranggarh, Banswara, Baroda, Bharatpur, Bhavnagar, Bhopal, Bikaner, Bindraban, Bharuch, Bundi, Cambay, Chhatarpur, Datia, Dewas Junior Branch, Dewas Senior Branch, Dhar, Dungarpur, Gwalior, Guna, Hyderabad, Indore, Jaipur, Jaisalmer, Janjira, Jaora, Jhabua, Jhalawar, Jodhpur, Junagadh, Kishangarh, Kolhapur, Kotah, Kuchawan, Kutch, Lunavada, Makrai, Maler Kotla, Mewar, Mysore, Narwar, Nwanagar (or Jamnagar), Orchha, Panna, Partabgarh, Patiala, Porbandar, Radhanpur, Rampur, Ratlam, Rewa, Sailana, Sitamau, Tonk and Travancore.[19] Thirty-six of the states also issued emergency cash coupons in lieu of coins during the Second World War due to the shortage of metals; these included Balvan, Bikaner, Bundi, Gondal, Indergadh, Junagadh, Jasdan, Kutch, Mengni, Muli, Morvi, Mangrol, Nawanagar, Nawalgarh, Palitana, Rajkot, Sailana, Sayla and Vithalgadh.

There were 565 officially recognized princely states at the time of Indian independence, covering almost half of its total land area. Almost all of these acceded to either India or Pakistan within a few years of independence, the big exception being the large and influential state of Hyderabad, which was annexed by India after Indian troops entered the territory in September 1948. Hyderabad was also the only Indian princely state that was permitted to issue its own bank notes by the British.[20] Despite its reluctance to allow the princely states to print bank notes, the British administration relented in the face of the silver shortage during the First World War and Hyderabad's contribution to the Allied cause; the Hyderabad Currency Act designated the currency Osmania sicca, and the first bank notes were printed in 1918. These notes were printed at the India Security Press in Nashik in the present-day state of Maharashtra once it began its operations in 1928. Hyderabad was also permitted, for a period, to continue issuing its own bank notes even after it joined the Dominion of India. The thirteenth, fourteenth and fifteenth issues all

occurred between 1948 and 1953. The Hyderabadi rupee circulated alongside the Indian rupee from 1950 until 1959, when it ceased to become legal tender. The exchange rate between the two was seven Hyderabad rupees to six Indian rupees.

8.2.4 The Currency System in Post-Independence India

British Indian coins continued to circulate in independent India until January 26, 1950, when India became a republic and struck its first issue of coins. The country currently has four India Government Mints or IGMs, which are located in Mumbai, in the western state of Maharashtra; Hyderabad, in the southern state of Telangana; Kolkata, in the eastern state of West Bengal; and Noida, in the northern state of Uttar Pradesh. Decimalization of the monetary system occurred on April 1, 1957, as a result of the Indian Coinage (Amendment) Act of 1955 coming into effect. The old rupee, anna, and pie system was discontinued; the *naye paise* (new paise) was introduced, and was declared to be worth 1/100th of a rupee. The denominations minted were 1, 2, 5, 10, 20, and 50 naye paise. The word “naye” was dropped and the coins began to be simply called paise from 1968 onward, as they had been in circulation for over a decade and were no longer new. Eventually one, two and five rupee bank notes were also replaced by coins due to the significant cost of replacing them (Table 8.1).

Table 8.1 Conversion table between pre and post decimalization of the Indian monetary system

Rupee	*Anna*	*Paisa*	*Pie*	*New paisa*
$^1/_{256}$	$^1/_{16}$	$^1/_4$	$^3/_4$	$^{25}/_{64}$
$^1/_{192}$	$^1/_{12}$	$^1/_3$	1	$^{25}/_{48}$
$^1/_{128}$	$^1/_8$	$^1/_2$	$1^1/_2$	$^{25}/_{32}$
$^1/_{64}$	$^1/_4$	1	3	$1\ ^9/_{16}$
$^1/_{32}$	$^1/_2$	2	6	$3^1/_8$
$^1/_{16}$	1	4	12	$6^1/_4$
$^1/_8$	2	8	24	$12^1/_2$
$^1/_4$	4	16	48	25
$^1/_2$	8	32	96	50
1	16	64	192	100

Source: Compiled by the author

The coins are received by the Reserve Bank of India from the mints and injected into circulation through its regional Issue Offices and sub-offices and an extensive countrywide network of currency chests and small coin depots maintained by banks and Government Treasuries. The Issue Offices and sub-offices of the Reserve Bank are located in Ahmedabad, Bangalore, Belapur (Navi Mumbai), Bhopal, Bhubaneshwar, Chandigarh, Chennai, Guwahati, Hyderabad, Jammu, Jaipur, Kanpur, Kolkata, Lucknow, Mumbai, Nagpur, New Delhi, Patna, and Thiruvananthapuram. These offices directly provide coins to the public through their counters, and also send coin remittances to the currency chests and small coin depots. There are currently 4075 currency chest branches and 3746 small coin depots spread throughout India. Of the 4075 currency chests, 2722 or 67 percent are held in branches of the State Bank of India and its associate banks. Other nationalized banks hold 1173 currency chests; hence public sector banks hold around –95 percent of the currency chests. Private sector banks hold 160, regional rural banks hold 5, co-operative banks hold 3, and foreign banks hold 4. The latter institutions hence do not play a significant role in stocking currency on behalf of the Reserve Bank of India.[21] The currency chests and small coin depots distribute coins to the public, customers and other bank branches within their jurisdiction.

According to section 22(1) of the Reserve Bank of India Act of 1934, the Reserve Bank has the sole authority to issue bank notes in post-independence India[22]:

> The Bank shall have the sole right to issue bank notes in India, and may, for a period which shall be fixed by the Central Government on the recommendation of the Central Board, issue currency notes of the Government of India supplied to it by the Central Government, and the provisions of this Act applicable to bank notes shall, unless a contrary intention appears, apply to all currency notes of the Government of India issued either by the Central Government or by the Bank in like manner as if such currency notes were bank notes, and references in this Act to bank notes shall be construed accordingly.

The Reserve Bank of India is exempt from the payment of any stamp duty levied under the Indian Stamp Act of 1899 on bank notes issued by it by virtue of section 29 of the act. While much of the currency system carried over from British India to newly independent India in 1947, section 26A of the act (inserted by Act 62 of 1956) specified that no bank

note of the denominational value of 500 rupees, 1000 rupees, or 10,000 rupees that was issued before January 13, 1946, would continue to be legal tender in payment.

Section 24(1) of the act specifies the permitted bank note denominational values; these are 2 rupees, 5 rupees, 10 rupees, 20 rupees, 50 rupees, 100 rupees, 500 rupees, 1000 rupees, 5000 rupees, and 10,000 rupees. Other denominational values not exceeding 10,000 rupees, as specified by the central government based on the recommendation of the Central Board, are also permitted under the act. After the discontinuance of the 500 and 1000 rupee bank notes, a new denomination of 2000 rupees bank notes has been introduced. Similarly, acting on the advice of the Central Board, the central government can, by a notification in the Gazette of India, declare any series of bank notes of any denomination to cease to be legal tender except at specified offices or agencies of the Reserve Bank. The design, form, and material of bank notes are approved by the central government based on the consideration of recommendations made by the Central Board.

While this is no longer the case, the Indian rupee was also used as the official currency in several British territories in the Middle East and East Africa. In East Africa, the Indian rupee was replaced by the rupee of the Government of the East African Protectorate in 1905; this was subsequently replaced by the florin and then the shilling of the East African Currency Board. However, even after India's independence, several countries around the Persian Gulf continued to use the Indian rupee. Because this arrangement led to the use of the rupee being smuggled out of India to buy gold in the Persian Gulf countries which was then smuggled back into India, this put pressure on India's foreign exchange reserves. The Indian parliament passed the Reserve Bank of India (Amendment) Act in 1959, which permitted the issue of special notes of the Reserve Bank of India and the Government of India (for one rupee notes), which were intended for circulation in designated territories outside India. The Reserve Bank of India introduced the Gulf rupee for use in these countries between 1959 and 1970. A six week period from May 11, 1959 to June 21, 1959 was given to exchange the old Indian rupees for the new Gulf rupees. The Gulf rupee bank notes were identical in design and value to the Indian rupee bank notes, but were printed in a different color and contained the prefix "Z" in their serial number. The denominations printed were 1, 5, 10 and 100 rupees; these notes were red, orange, red and green respectively. Countries that used the Gulf rupee were Bahrain,

Kuwait, Oman, Qatar and the Trucial States that would subsequently form the United Arab Emirates in the years before their oil boom. The last country to continue using the Gulf rupee was Oman, which replaced it with its own currency, the rial, on May 7, 1970.

Another variant of the India rupee specifically introduced by the Reserve Bank of India for use outside the country was the Haj note, which were meant to be used by used by Haj pilgrims traveling to Mecca in Saudi Arabia. Two denominations were issued on May 3, 1959; the 10 rupee note was blue instead of the usual violet, and the 100 rupee note was red instead of the usual purple. The serial numbers for both began with the "HA" prefix. From May 6, 1959, Haj pilgrims were only allowed to carry Haj notes and could no longer carry regular Indian rupees to Saudi Arabia. The notes were handed out at the Mohamed Haji Saboo Siddick Musafirkhana in Bombay, where the pilgrims waited to board ships sailing to Saudi Arabia. The amount of money that a pilgrim was permitted to carry depended on their mode of travel. In 1959, Haj pilgrims travelling by boat were permitted to carry 1200 rupees if they were travelling "deck class" and 1800 rupees if they were travelling "first class"; those travelling by air could take 1700 rupees with them.[23] Once the Gulf rupee was introduced, however, the need for separate Haj notes disappeared and Indians were permitted to travel with Indian rupees to Saudi Arabia.

8.3 The Administrative Structure and Functions of the Reserve Bank of India

8.3.1 Administrative Structure of the Reserve Bank of India

The current activities and future scope of the bank are supervised by the Central Board of directors, who are appointed for a period of four years. The official directors are the Governor and no more than four Deputy Governors, while the non-official directors include ten directors from various fields who are appointed by the government, two government officials and one director each from the four local boards of the Reserve Bank. The central government has the authority to remove from office any director and the central board the authority to remove any member of a local board if they become subject to any of the disqualifications specified in section 10 of the Reserve Bank of India Act of 1934. The current Governor is Dr. Urjit Patel; the three current Deputy Governors are Dr. Viral Acharya,

B. P. Kanungo and N. S. Vishwanathan. The capital of the Reserve Bank is currently ₹50 million, divided into shares worth ₹100 each.

The powers of the central government supersede those of the central board. If, in the opinion of the central government, the Reserve Bank of India fails to carry out any of the obligations imposed on it under the Reserve Bank of India Act, then the central government can, by notification in the Gazette of India, declare the Reserve Bank's Central Board to be superseded. The central government can, under such circumstances, entrust the general superintendence and direction of the affairs of the Reserve Bank to an agency of its own choosing.

The country is divided into four Reserve Bank of India regions or zones, which are Chennai, Kolkata, Mumbai and New Delhi. The Western Area consists of the states of Chhattisgarh, Goa, Gujarat, Madhya Pradesh, and Maharashtra and the union territories of Dadra and Nagar Haveli and Daman and Diu; the Eastern Area consists of the states of Arunachal Pradesh, Assam, Bihar, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tripura, and West Bengal and the union territories of Andaman and Nicobar Islands; the Northern Area consists of the states of Jammu & Kashmir, Punjab, Haryana, Himachal Pradesh, Rajasthan, Uttar Pradesh, and Uttaranchal and the union territories of Chandigarh and Delhi; and the Southern Area consists of the states of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, and Telangana and the union territories of Pondicherry and Lakshadweep. Each region is represented by a local board with five members on it; each member is appointed by the central government, serves a four-year term, and is eligible for reappointment. Members of the Central Board and the local boards receive a sitting fee per meeting (currently ₹20,000) as well as a per diem halting allowance (currently ₹1200). The bank also covers the travel and accommodation expenses associated with the meetings. The local boards advise the Central Board on matters pertaining to their region, represent the interests of co-operative and indigenous banks from their region, and perform other tasks that are periodically delegated to them by the Central Board. The regions are divided into smaller jurisdictions that are overseen by their respective regional offices and sub-offices (Table 8.2).

The Reserve Bank is divided into 34 departments; these are the Consumer Education and Protection Department, the Corporate Strategy and Budget Department, the Department of Banking Regulation, the Department of Banking Supervision, the Department of Communication, the Department of Cooperative Bank Regulation, the Department of

Table 8.2 Reserve Bank of India Offices and their Jurisdictions

Office	*Jurisdiction*
Ahmedabad	Dadra & Nagar Haveli; Daman & Diu; Gujarat
Bangalore	Karnataka
Bhopal	Chhattisgarh; Madhya Pradesh
Bhubaneswar	Orissa
Chandigarh	Chandigarh; Haryana; Himachal Pradesh; Punjab
Chennai	Puducherry; Tamil Nadu
Delhi	Delhi National Capital Region
Guwahati	Arunachal Pradesh; Assam; Manipur; Meghalaya; Mizoram; Nagaland; Tripura
Hyderabad	Andhra Pradesh; Telangana
Jaipur	Rajasthan
Jammu	Jammu & Kashmir
Kanpur	Uttar Pradesh
Kochi	Kerala
Kolkata	Andaman & Nicobar Islands; West Bengal; Sikkim
Lucknow	Uttar Pradesh; Uttaranchal
Mumbai	Goa; Maharashtra
Nagpur	Maharashtra (Vidarbha & Marathwada regions only)
Patna	Bihar; Jharkhand
Dehra Dun	Uttaranchal
Thiruvananthapuram	Kerala; Lakshadweep

Source: Compiled by the author with data from Reserve Bank of India

Cooperative Bank Supervision, the Department of Corporate Services, the Department of Currency Management, the Department of Economic and Policy Research, the Department of External Investments and Operations, the Department of Government and Bank Accounts, the Department of Information Technology, the Department of Non-Banking Regulation, the Department of Non-Banking Supervision, the Department of Payment and Settlement Systems, the Department of Statistics and Information Management, the Enforcement Department, the Financial Inclusion and Development Department, the Financial Markets Operation Department, the Financial Markets Regulation Department, the Financial Stability Unit, the Foreign Exchange Department, the Human Resource Management Department, the Inspection Department, the Internal Debt Management Department, the International Department, the Legal Department, the Monetary Policy Department, the Premises Department,

the Rajbhasha Department, the Risk Monitoring Department, the Secretary's Department, and the Central Vigilance Cell.[24]

Some of these departments are of particular significance. The Department of Government and Bank Accounts has the twin tasks of acting as the banker to the central government as well as to commercial banks operating in India. In its capacity as the banker to the central government, the department:[25]

- maintains principal deposit accounts of Central and State Governments at Central Accounts Section of the Reserve Bank of India, Nagpur
- grants ways and means advances to Central and State Governments
- Carries out day to day operations by agency bank branches (authorised for this purpose) and Banking Departments at Regional Offices.
- frames the accounting policy of the Reserve Bank
- finalises the weekly statement of accounts of the Issue and Banking Departments and the annual balance sheet of the Reserve Bank
- attends to matters relating to government business, such as appointment of agency banks, paying them commission and overseeing their conducting of government business. Much of this is done in consultation with the government

In its capacity as the banker to commercial banks, the department[26]:

- opens current accounts of banks with itself, enabling them to maintain statutorily prescribed cash reserves as well as to carry out interbank transactions
- effects interbank clearing settlements through these current accounts

The principal objective of the Monetary Policy Department, according to the Reserve Bank of India Act of 1934, is "to regulate the issue of Bank notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage; to have a modern monetary policy framework to meet the challenge of an increasingly complex economy, to maintain price stability while keeping in mind the objective of growth." In that capacity, the department[27]:

- Acts as a secretariat for the Monetary Policy Committee (MPC).
- Assists the MPC in formulating the monetary policy.
- Provides technical inputs to the MPC such as short-term and medium-term growth and inflation projections.
- Plays a key role in implementing monetary policy by assessing and forecasting liquidity conditions.
- Participates in Financial Markets Committee (FMC) which meets daily to guide financial markets operations including liquidity management.
- Monitors and assesses transmission of monetary policy on a regular basis.
- Prepares Monetary Policy Report (MPR).
- Compiles sector-wise and industry-wise bank credit data.
- Monitors compliance with CRR/SLR maintained banks.
- Acts as a nodal department for the Bank to act as a lender of the last resort.
- Authorises and allocates food credit to state governments.

A relatively new department that was only carved out in 2014, the Financial Markets Operation Department carries out the market operations in the money market, the government securities market, and the foreign exchange market that are required for implementing the Reserve Bank's monetary policy objectives. Specific duties include[28]:

- Domestic forex market operations (Spot, Forwards and Swaps)
- Liquidity Adjustment Facility (LAF) operations (Repo, Reverse repo, Marginal Standing Facility) including Open Market Operations (Outright sale/purchase of gilts) under liquidity management framework revised in August 2014
- Special Market Operations (SMO) for specific purposes
- Computation and dissemination of the Reserve Bank's Rupee Reference Rate
- Computation of Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER)
- Issuance and buyback of dated securities under Market Stabilisation Scheme (MSS)
- Analysis of market developments
- Carrying out market oriented research and analysis
- Estimation of liquidity requirement in the banking system

- Providing secretarial assistance to the Financial Markets Committee (FMC) of the Reserve Bank
- Coordinating meetings of Early Warning Group (EWG) comprising financial sector regulators and Ministry of Finance

The Financial Markets Operation Department works in conjunction with the Financial Markets Regulation Department, also established in 2014, with the aim of regulating, developing and overseeing financial markets. Future plans for the department include the setting up of a Market Intelligence Cell, and its current responsibilities include[29]:

- Regulation and development of the money, government securities, foreign exchange markets and related derivative markets;
- Regulation and supervision of financial benchmarks for interest rates and foreign exchange markets;
- Development work related to financial market infrastructure for the money, government securities, foreign exchange markets and related derivative markets, including trade repository for over-the-counter (OTC) derivative transactions;
- Oversight/surveillance of the money, government securities, foreign exchange markets and related derivative markets; and
- Secretarial support to the Technical Advisory Committee on Money, Government Securities and Foreign Exchange Markets and RBI-SEBI Technical Committee on Interest Rate and Currency Futures.

In the aftermath of the financial crisis that roiled much of the world from 2007 to 2009, the Reserve Bank of India decided to set up a separate Financial Stability Unit in July 2009 with the aim of strengthening macro-prudential oversight of both the Indian financial sector as well as the international financial architecture as it pertains to India. The principal duties of the unit are[30]:

- Conduct of macro-prudential surveillance of the financial system on an ongoing basis
- Preparation of financial stability reports
- Development of a database of key variables which could impact financial stability, in co-ordination with the supervisory wings of the Reserve Bank
- Development of a time series of a core set of financial indicators

- Conduct of systemic stress tests to assess resilience and
- Development of models for assessing financial stability

The Department of Banking Regulation oversees the commercial banks, Local Area Banks (LABs), and Regional Rural Banks (RRBs) based on the provisions contained in the Banking Regulation Act of 1949, the Reserve Bank of India Act of 1934, the Regional Rural Banks Act of 1975, and other related statutes. Its responsibilities include[31]:

- licensing, branch expansion and maintenance of statutory reserves, management and methods of operations, amalgamation, reconstruction and liquidation of banking companies.
- regulatory oversight of select All India Financial institutions, such as, Exim Bank, Industrial Investment Bank of India (IIBI), National Bank for Agriculture and Rural Development (NABARD), National Housing Bank (NHB) and Small Industries Development Bank of India (SIDBI) and administration of the Credit Information (Regulation) Act, 2005 and regulation of credit information companies.
- approval for setting up of subsidiaries and undertaking of new activities by commercial banks as also the regulatory functions relating to financial institutions (FIs).
- promoting and fostering a sound, multi-faceted and competitive financial system by laying down norms for prudential regulation of commercial banks/FIs.
- creating pro-active environment for development of new products
- keeping itself abreast of developments domestically and globally and formulating policy responses by suggesting amendments to the existing laws/enactment of new legislation, regulation, etc.
- striving to bring the regulatory standards of commercial banks/FIs on par with the international best practices.

Co-operative banks play an especially important role in the Indian financial sector, and have been under the regulatory supervision of the Reserve Bank of India since 1966. Two departments of the Reserve Bank are entrusted with their oversight. The State Co-operative Banks (StCBs), District Central Co-operative Banks (DCCBs) and Primary Cooperative Banks, popularly known as Urban Cooperative Banks (UCBs), are overseen by the Department of Co-operative Banking Regulation. The StCBs

and DCCBs, both of which provide short-term co-operative credit, are registered under the provisions of the State Cooperative Societies Act of the state where they are located. The UCBs are registered as cooperative societies under the provisions of either the State Cooperative Societies Act of the state where they are located or the Multi State Cooperative Societies Act of 2002. The Registrar of Cooperative Societies, which operate in a single state, and the Central Registrar of Cooperative Societies, which operate in multiple states, look after the incorporation, registration, management, recovery, audit, supersession of Board of Directors, and liquidation of co-operative banks; the Reserve Bank regulates the banking functions of StCBs, DCCBs, and UCBs under the provisions of sections 22 and 23 of the Banking Regulation Act of 1949. The Reserve Bank has entered into memoranda of understanding with the central government and various state governments for in order to harmonize regulations and for supervisory purposes. The scope of the department is as follows[32]:

- To issue licence to UCBs/StCBs/DCCBs to carry on banking business
- To grant approval to UCBs/StCBs for inclusion in the Second Schedule of Reserve Bank Act, 1934
- To authorise UCBs/StCBs to open branches. In terms of section 23 1(b) of Banking Regulation Act, 1949 (AACS), DCCBs are exempted from the requirement of obtaining licence from the Reserve Bank for opening branches/places of business
- To grant permission for extension of area of operations of UCBs
- To prescribe prudential norms for sound functioning of UCBs/StCBs/DCCBs
- To issue directions and operational instructions to StCBs/DCCBs/UCBs, wherever necessary to streamline their functioning and to protect the interests of the depositors4
- To impose penalty under section 47 of the Banking Regulation Act, 1949 (AACS)
- To prescribe various periodical returns to be submitted by StCBs/DCCBs/UCBs
- To cancel the licence of an StCB/DCCB/UCB, if it does not fulfil any of the conditions of licence
- To impart training to the officials of UCBs/StCBs/DCCBs to upscale their knowledge, skill and expertise as part of developmental functions

The Department of Co-operative Bank Supervision exclusively focuses on the UCBs, supervising them based on the stipulations of the Banking Regulation Act of 1949 and the Reserve Bank of India Act of 1934, and the guidelines provided by the Reserve Bank of India. The Reserve Bank of India is responsible for laying down prudential norms for capital adequacy, income recognition, asset classification and provisioning, loans and advances, investments, liquidity requirements, and developing and sharing the guidelines for single or group exposure norms as well as sectoral exposures. The department carries out both on-site and off-site supervision through its regional offices to ensure compliance with the Reserve Bank guidelines. Other duties of the department include processing applications received from UCBs for the extension of various services such as conducting foreign exchange transactions, mobile banking, internet banking, and the opening of currency chests.

The Reserve Bank of India is legislatively mandated to be attentive to the financial needs of the rural sector and Micro, Small and Medium Enterprises (MSMEs). This is entrusted to the Financial Inclusion and Development Department, whose current focus is promoting financial education and financial literacy with the aim of promoting financial inclusion. The department is also responsible for developing policies related to various segments of financial markets, the fixation of Intra-Day Limits for operation of Real Time Gross Settlement Accounts, and attending to matters brought to its attention by other departments of the Reserve Bank, other regulatory organizations, and international bodies. Its specific tasks include[33]:

- To formulate macro policy to strengthen credit flow to the priority sectors
- To ensure that priority sector lending becomes a tool for banks to capture untapped business opportunities among financially excluded sections of the society
- To help expand Prime Minister's Jan Dhan Yojana (PMJDY) and to make it a sustainable and scalable financial inclusion initiative through financial literacy
- To step up credit flow to MSME sector and to rehabilitate sick units through timely credit support
- To strengthen institutional arrangement, such as, state level bankers committee and Lead Bank Scheme to facilitate these objectives

Facilitating international trade and payments and developing the Indian foreign exchange market is the task of the Foreign Exchange Department. The original Foreign Exchange Regulation Act of 1973 (commonly known as FERA) was repealed and replaced by a new legislation named the Foreign Exchange Management Act of 1999 (commonly known as FEMA). FEMA came into effect on June 1, 2000, and largely drives the direction of the Foreign Exchange Department. The role of the department with regard to interfacing with individual citizens to facilitate foreign exchange transactions has been limited since the passage of FEMA; it only processes the applications that require its prior approval under Foreign Exchange Management Current Account Transactions Rules and Capital Account Transactions Regulations, while other applicants can simply go to one of the Authorized Persons. The department also has the power to compound the contraventions of all sections of FEMA, with the exception of section 3(a) of the act. The contravener is allowed to voluntarily admit to the contravention, plead guilty, and seek redressal if they so desire. This process ensures that individuals and corporations who may have inadvertently contravened FEMA aren't unduly penalized, while those engaged in intentionally fraudulent transactions are prosecuted. The Reserve Bank of India is a member of both the Asian Clearing Union, a clearinghouse headquartered in Tehran, Iran, established in 1974 at the initiative of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), and the Alliance for Financial Inclusion, established in 2008 as a project funded by the Bill & Melinda Gates Foundation, the largest private foundation in the United States.

The Department of External Investments and Operations is responsible for managing the foreign exchange and gold reserves of the country, as well as oversee India's membership responsibilities arising out of its participation in regional and global economic institutions[34]:

- Investment and management of the foreign currency and gold assets of the Reserve Bank of India,
- Handling external transactions on behalf of Government of India (GOI) including transactions relating to International Monetary Fund (IMF)
- All policy matters incidental to India's membership of the Asian Clearing Union, and
- Other matters relating to gold policy, membership of the Bank for International Settlements (BIS) and bilateral banking arrangements

between India and other countries like Russia, bilateral and South Asian Association for Regional Cooperation (SAARC) currency swap arrangements

Another department that was created during the 2014 restructuring was the International Department. It plays an important role in the Reserve Bank's interactions with the global financial system by fostering international financial diplomacy; facilitating India's participation in the formulation of global regulatory standards; and overseeing the Reserve Bank's external services and relations, and on matters of technical cooperation with the central banks of other countries. Specific duties include[35]:

- The Reserve Bank's relations with international institutions/country groupings, such as, International Monetary Fund (IMF), Bank for International Settlements (BIS), Financial Stability Board (FSB), G20, Brazil, Russia, India, China and South Africa (BRICS), South Asian Association for Regional Cooperation Finance (SAARCFINANCE), Committee on Payments and Market Infrastructures (CPMI), Committee on the Global Financial System (CGFS), World Bank, World Trade Organization (WTO), Asian Development Bank (ADB), etc.
- Framing the Reserve Bank's views on issues of policy relevance in international economic cooperation, including those on regulatory issues and central bank currency swaps, etc.
- The Reserve Bank's initiatives at capacity building for officials of other central banks and managing exposure visits for delegates of foreign institutions/market participants/universities, etc.
- Preparing research notes on current issues in international economic cooperation.

Conducting research on the economy and providing management information system services for the Reserve Bank is entrusted to the Department of Economic and Policy Research. The research focuses on macroeconomic challenges facing the Indian economy; the topics include monetary policy, economic growth, inflation, banking and other financial markets, financial stability, the forecasting of macroeconomic variables, and external sector management. The department publishes the statutory reports of the Reserve Bank, which are the Annual Report and the Report on Trend and Progress of Banking in India. Additionally, it also publishes

State Finances: A Study of Budgets, the Reserve Bank of India Bulletin, the Handbook of Statistics on Indian States, the Reserve Bank of India Occasional Papers, and the History of the Reserve Bank. The Reserve Bank oversees the Reserve Bank Staff College in Chennai, in the southern Indian state of Tamil Nadu. The Department of Economic and Policy Research supports academic research not just at the Reserve Bank but throughout the country through endowing Reserve Bank of India Professorial Chairs, research fellowships, and sponsoring other research projects and studies. It invites leading scholars and policy makers from around the globe to speak at seminars and hold interactive sessions with Reserve Bank researchers, the media, and private sector analysts. It also organizes four regular lectures series; two of these are held in the memory of former Governors of the Reserve Bank, C. D. Deshmukh and L. K. Jha, while the other two are held in the memory of eminent monetary scholars, Professor P. R. Brahmananda and Professor Suresh Tendulkar.

The Department of Economic and Policy Research works in conjunction with the Department of Statistics and Information Management, whose tasks are[36]:

- Collection, processing and analysis of data on banking, corporate and external sectors.
- Planning, designing and organising quick sample surveys regularly for area of interest to the Reserve Bank.
- Maintaining the Reserve Bank's Data Warehouse and disseminating data/information.
- Modelling and forecasting of important macro-economic indicators.
- Development of methodology for the measurement and estimation of variables and improvement of the database of various sectors of the economy through participation in committees, working groups, etc.
- Providing technical support to other departments of the Reserve Bank in statistical analysis in specific areas and undertaking studies in the areas of interest to the Reserve Bank.

8.3.2 Functions of the Reserve Bank of India

The preamble of the Reserve Bank of India states that its task is to "to regulate the issue of Bank notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency

and credit system of the country to its advantage; to have a modern monetary policy framework to meet the challenge of an increasingly complex economy, to maintain price stability while keeping in mind the objective of growth." Hence the preamble stipulates that the primary mandate of the Reserve Bank is to provide monetary stability and to preserve the purchasing power of the country's currency. These in turn imply low and stable inflationary expectations, regardless of whether the inflation occurs due to demand-pull or cost-push factors. Among the secondary objectives of the Reserve Bank, the two most important ones are ensuring inclusive growth and development and ensuring financial stability. Inclusive growth is especially important for a country that has significant poverty. Access to finance is critical for both poverty alleviation and the reduction of income inequality. The Reserve Bank of India is also tasked with broadening and deepening the Indian financial market, increasing its liquidity, and making it more resilient to national and global shocks.

The turning point came with the financial crisis of 1991, when foreign exchange reserves dwindled to less than two weeks' worth of imports; the Indian rupee was devalued and subsequently allowed to float. Since then, the role of the bank has shifted to being the issuer of currency, maintaining the accounts of the scheduled commercial banks, regulating the country's financial system and managing the foreign exchange market. Its policy tools include setting the interest rate (called the repo rate) and setting the cash reserve ratio and the statutory liquidity ratio.

The 21-member Board of Directors of the bank is headed by a governor and the members are nominated by the central government for a four-year term. The country is divided into the jurisdiction of 19 regional offices representing the needs of the local banks, agriculture and industry. It is less autonomous than the central banks of most industrialized countries, with several government representatives from the Finance Ministry sitting on the board. Following independence, the Reserve Bank of India's primary role was to provide loans to fulfill the goals set by India's Soviet-style Five Year Plans. This was aided by Prime Minister Indira Gandhi's government nationalizing the fourteen largest commercial banks in the country in 1969.

At present, there are 21 public sector banks in India. Foremost among them is the State Bank of India, which is the largest bank in the country. The State Bank of India traces its origins to the Bank of Calcutta, which was founded in 1806. It continued as the Imperial Bank of India, a private bank until 1955, when the Reserve Bank of India acquired a 60 percent

stake in it. The government of India took over this stake in 2008 to avoid any conflict of interest, as the Reserve Bank of India is the regulatory authority for the banks operating in the country. The State Bank of India has more than 24,000 branches within the country, in addition to around 200 foreign offices. Over the years, the State Bank has taken over smaller local banks that it has had to bail out. The first of these was the Bank of Bihar, which it acquired in 1969; others include the National Bank of Lahore in 1970, the Krishnaram Baldeo Bank in 1975, and the Bank of Cochin in 1985. The State Bank was given control of seven banks based in former princely states in 1960; these were the State Bank of Bikaner and Jaipur, the State Bank of Hyderabad, the State Bank of Indore, the State Bank of Mysore, the State Bank of Patiala, the State Bank of Saurashtra, and the State Bank of Travancore. Of these former associate banks, the State Bank of Saurashtra was merged with the State Bank of India in 2008 and the State Bank of Indore in 2009. On April 1, 2017, the State Bank of India's remaining five former subsidiaries were merged with it. The Bharatiya Mahila Bank (the Indian Women's Bank), established in 2013, was also absorbed into the State Bank of India at the same time. The State Bank of India also has seven non-banking subsidiaries, which are SBI Capital Markets Limited, SBI Funds Management Private Limited, SBI Factors & Commercial Services Private Limited, SBI Cards & Payments Services Private Limited (SBICPSL), SBI DFHI Limited, SBI Life Insurance Company Limited, and SBI General Insurance.

The 19 other Indian public sector banks are Allahabad Bank, Andhra Bank, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, Indian Bank, Indian Overseas Bank, Oriental Bank of Commerce, Punjab & Sind Bank, Punjab National Bank, Syndicate Bank, UCO Bank, Union Bank of India, United Bank of India, and Vijaya Bank. In addition, the Industrial Development Bank of India (IDBI), established in 1964, is considered an "other public sector bank." The IDBI has played a large role in Indian industrial development by helping to set up the Securities and Exchange Board of India, the National Stock Exchange of India, the National Securities Depository Limited, the Stock Holding Corporation of India Limited, the Credit Analysis & Research Limited, the Exim Bank of India, the Small Industries Development Bank of India, and the Entrepreneurship Development Institute of India.

As the central bank of the country, the Reserve Bank of India conducts open market operations by buying and selling government securities. This

impacts the reserves of the commercial banks, influences the yield on government securities, and helps the bank rate reach its target. The bank rate or the discount rate is the interest rate that is charged by the Reserve Bank of India on loans extended to banks; these banks include commercial banks, co-operative banks, Industrial Development Bank of India (or the IDBI), the Export-Import Bank of India (or the EXIM Bank), as well as other approved financial institutions. The credit can either be extended directly or through the purchase of money market instruments, and no collateral is required. The bank rate is currently at 6.25 percent. Open market purchases lower the bank rate, while open market sales raise it. The Reserve Bank also provides short-term loans to banks on the basis of keeping collateral; the interest rate on these loans is called the repo rate, which is changed reactively based on the performance of the economy. The reverse repo rate is a quarter percentage point less than the repo rate. The Reserve Bank of India has the authority to impose credit ceilings, whereby commercial banks receive advance notification that the loans given would be subject to an upper limit. The Credit Authorization Scheme provides guidelines for banks to grant more loans to specific sectors of the economy. Finally, moral suasion allows the Reserve Bank to request commercial banks to not grant loans for non-productive purposes, especially when that adds to the inflationary pressures of the economy.

Administering monetary policy includes extending loans to Scheduled Banks. Banks operating in India that satisfy the criteria outlined in section 42 of the Reserve Bank of India Act of 1934 are known as Scheduled Banks as they are included in The Second Schedule of the act. The Scheduled Banks include both public and private sector commercial banks as well as co-operative banks. These banks enjoy two main facilities. They are eligible for obtaining loans at the bank rate from the Reserve Bank of India, and they also automatically become members of the clearing house. There are currently around 300 banks on the Second Schedule. While the majority of them are Indian banks, the schedule also includes several foreign banks that operate in India; for instance, Abu Dhabi Commercial Bank, American Express Banking Corporation, Antwerp Diamond Bank, Bank Internasional Indonesia, Bank of America, Bank of Bahrain and Kuwait, Bank of Ceylon, Bank of Nova Scotia, Barclays, BNP Paribas, Citibank, Deutsche Bank, The Hong Kong and Shanghai Banking Corporation, and Mizuho Corporate Bank are all on the list.[37] Banks in the country that do not fulfill the criteria set out in section 42 are referred

to as Non-Scheduled Banks, and these do not have access to loans from the Reserve Bank of India.

As part of its macroprudential regulations, the Reserve Bank is responsible for regulating commercial banks operating in the country. This authority is derived from the Banking Regulation Act of 1949. The central government of India, after consultation with the Reserve Bank, is responsible for crafting rules for the purpose of giving effect to the provisions of the act; these rules are then published in the Official Gazette. The act lays out the forms of business that banks may legally engage in when operating in India. It mentions that banks may not, either directly or indirectly, deal in the buying, selling or bartering of goods, except in connection with the realization of security given to or held by it; they may also not hold any immovable property regardless of how it is acquired, except when it is required for its own use, for any period exceeding seven years from either the acquisition or the commencement of the act, whichever is later. The act forbids any company other than a banking company from using as part of its name, or in connection with its business, the words “bank,” “banker” or “banking.” The Reserve Bank may have regard, among other matters, to the following aspects of commercial banks[38]:

1. the financial condition and history of the banking company, its size and area of operation, its resources, the volume of its business, and the trend of its earning capacity;
2. the number of its branches or offices;
3. the qualifications, age and experience of the person concerned;
4. the remuneration paid to other persons employed by the banking company or to any person occupying a similar position in any other banking company similarly situated; and
5. the interests of its depositors.

The reach of the Reserve Bank is pretty broad in its capacity as the latter. If it is of opinion that the composition of the board of directors of a banking company is such that it does not fulfill the requirements laid out in subsection (2) of the act, it can order the bank to reconstitute its board; if the banks fails to do so, then the Reserve Bank itself can step in and reconstitute the board. The Reserve Bank also reserves the same powers with respect to the appointment of the chairperson of the board if the candidate is not deemed suitable, or can appoint a chairperson if the position is vacant. If a shareholder, either individually or in concert with their relative

or associate enterprise or a person working with them, acquires five percent or more of the voting shares of the banking company, then they will need the permission of the Reserve Bank.

The cash reserve ratio or CRR is set by the Reserve Bank of India, and it can vary between 3 and 15 percent; it is currently set at 4 percent. Banks have to maintain cash reserves of an amount at least equivalent to this, as a fraction of its total demand and time liabilities in India as on the last Friday of the second preceding fortnight, either with itself, or as the balance in a current account with the Reserve Bank of India, or as the net balance in current accounts, or as some combination thereof. If the cash reserves fall short of the requirement, then the bank is liable to pay the Reserve Bank penal interest at a rate of three percent above the bank rate on the amount by which such balance falls short of the specified minimum for the day. If the shortfall continues, then the penal interest is increased to a rate of five percent above the bank rate in respect of each subsequent day during which the default continues. The statutory liquidity ratio or SLR refers to the liquid assets that banks keep with themselves at any point of time, as a fraction of their total time and demand deposit liabilities; the assets have to be held in the form of cash, gold reserves, or government approved securities. This ratio has come down significantly over the years, and currently stands at 19.5 percent.

The central government, in conjunction with the Reserve Bank of India, may exempt certain banks from some or all of the provisions of the Banking Regulation Act, either generally or for a specified period. The act provides detailed guidelines regarding the Reserve Bank of India's supervisory responsibilities regarding co-operative banks. Other minor responsibilities of the Reserve Bank of India under the act include approving name changes for banks as well as alterations to the memorandum of a bank.

The Reserve Bank of India has the authority to impose substantial penalties on banks that are in violation of The Banking Regulation Act of 1949; the amount is typically the higher of ten million rupees, which is around US $153,000, or twice the amount involved in the contravention. The act specifies that no complaint can be filed against any bank in any court of law with regard to any contravention for which any penalty has already been imposed by the Reserve Bank of India. The penalty imposed by the Reserve Bank has to be paid within a period of 14 days from the date on which the notice issued by the Reserve Bank was served on the bank. If the bank fails to pay the sum within the stipulated period, then the

penalty may be levied by the principal civil court having jurisdiction in the area where the registered office of the bank is located. If the bank is incorporated outside India, then the relevant court would be the one where the bank's principal place of business within India is located. Section 54 of the act protects the Reserve Bank of India as well as the central government from retaliation against action stemming from this act that is undertaken in good faith.

8.3.3 Autonomy of the Reserve Bank of India

The Reserve Bank of India has stood out from the general global trend toward the granting of greater legal independence to central banks. Successive Reserve Bank governors and prominent economists have held very different views on the issue. While some believe that there is little legal independence and it is political pressure that has resulted in the central bank delivering on low inflation, others have expressed the view that the government of India respects the autonomy of the central bank though it is not always obligated to do so. Yet others believe that the central bank is subject to an unacceptable level of subservience to the central government. Regardless of where people stand on this issue and the monetary policy outcome, it is undeniable that there is considerable influence by the legislative branch on the affairs of the Indian central bank, and a movement toward greater autonomy is not on the agenda of any of the major political parties in the country. Chandavarkar (2005), an economist formerly affiliated with Bombay University and the Reserve Bank of India, writes[39]:

> The Reserve Bank of India alone has remained inexplicably immune to reform and the global trend of legal independence and modernisation of central banks. It has dwindled to a quasi-fiscal agency with a consequent loss of status and influence. India has political and fiscal federalism, but lacks monetary federalism. The case for an independent RBI derives from the doctrine of separation of powers both to close India's democratic deficit and to insulate monetary policy from politics. Independence implies accountability, transparency and the creation of an executive (not advisory) monetary policy committee; revamping its inflated and overly hierarchical organisation; and divestiture of supervisory and quasi-fiscal functions. The agenda calls for an early creation of a high-powered commission to help legislate a constitutionally independent federal RBI.

The Reserve Bank of India gained a degree of autonomy in the post-liberalization period; however, this was at least partly due to the chemistry between successive finance ministers and Reserve Bank governors. Chakravarthi Rangarajan, the governor of the Reserve Bank from 1992 to 1997, ended the automatic monetization of fiscal deficits. This was buttressed by the Fiscal Responsibility and Budget Management Act of 2003, which granted the central bank more operational independence by improving the fiscal side through narrowing the budget deficit and strengthening prudential fiscal norms.[40] However, this momentum has gradually reversed itself in India in the aftermath of the 2008 financial crisis, when central banks were blamed for being unable to avoid the crisis despite having the latitude that came from operational independence. Part of the justification is the greater severity of the downturn in the United States and Europe, which had more independent central banks, compared to Brazil, China and India, where the central banks were much less independent.[41]

Nachane et al. (2002) focus on a different aspect of central bank independence, the federalism of the monetary authority, in their examination of whether monetary policy has similar effects across major states in India. They find that the impact of monetary policy shocks differ greatly among the states based on differences in the mix of industries, as the interest rate elasticities of credit demand vary widely; the distribution of large and small firms, as information and transaction costs require small firms to primarily deal with financial intermediaries for their credit needs whereas large firms often have access to more varied external sources of funds; and variations in financial deepening, as the mix of large versus small banks results in differential responses to monetary policy.[42] This dovetails with Kashyap and Stein's (1997) finding that monetary policy is likely to have a larger impact on economies that have comparatively bank-dependent firms and a relatively large percentage of small banks and a smaller effect in economies that have a relatively low percentage of small banks and relatively few bank-dependent firms.[43] Their empirical findings also agree with Dornbusch et al.'s (1998) finding that the credit channel is likely to be more important in Europe, with the exception of the United Kingdom, as commercial banks provide the bulk of the external financing needs of firms in the region. In the United States and the United Kingdom, on the other hand, external financing is less dependent on the commercial banks as capital markets play a much larger role.[44]

This also strengthens the need for a more independent Reserve Bank of India that is federally structured. States that are major manufacturing hubs

and are more financially developed are more sensitive to monetary policy compared to states with fewer manufacturing industries and less financial development. Nachane et al. (2002) find that the states that are the most significantly affected by monetary policy shocks are Andhra Pradesh, Gujarat, Karnataka, Maharashtra, and Rajasthan, while those that are less affected by monetary policy shocks are Bihar, Haryana, Kerala, Madhya Pradesh, Orissa, Punjab, Tamil Nadu, and West Bengal.[45]

8.4 Subsidiaries of the Reserve Bank of India

8.4.1 The Deposit Insurance and Credit Guarantee Corporation of India

The Reserve Bank of India has three fully owned subsidiaries: the Deposit Insurance and Credit Guarantee Corporation of India (DICGC), the Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL) and the National Housing Bank (NHB).

West Bengal had a banking crisis in 1948, the year after India's independence, which first raised the issue of insuring bank deposits. However, the issue was put on the backburner until the Palai Central Bank and the Laxmi Bank collapsed in 1960. The Deposit Insurance Corporation Bill was introduced in the Indian Parliament on August 21, 1961; after its passage, the Deposit Insurance Act received presidential assent on December 7, 1961, and the Deposit Insurance Corporation (DIC) came into effect on January 1, 1962. The DIC is headquartered in Mumbai and has an authorized capital of ₹500 million (approximately US $7.81 million) which is issued by the Reserve Bank of India. Its activities are supervised by a Board of Directors, whose Chairman is one of the Deputy Governors of the Reserve Bank of India. The daily operations are overseen by the Executive Director. The corporation is divided into four departments: Accounts, Deposit Insurance, Credit Guarantee and Administration. Apart from the headquarters in Mumbai, the corporation initially had four branches in Kolkata, Chennai, Nagpur and New Delhi; the Kolkata, Chennai and Nagpur branches were closed on November 30, 2000 as most banks had by then decided to not be a part of the Credit Guarantee Scheme.

At first, only commercial banks were covered by the Deposit Insurance Scheme; this included the State Bank of India, subsidiaries of the State Bank, other commercial banks and foreign bank branches in India. The Deposit Insurance Corporation (Amendment) Act of 1968 extended the

scheme to central, state and primary co-operative banks located in states that had appropriately amended their Co-operative Societies Act. This includes all the Indian states and union territories except the two union territories of Lakshadweep and Dadra and Nagar Haveli, which do not have any co-operative banks. The Reserve Bank of India created the Credit Guarantee Corporation of India Ltd. (CGCI), a public limited company, on January 14, 1971 to encourage lending to sectors that were traditionally overlooked by the financial sector. The two organizations, DIC and CGCI, were merged on July 15, 1978, to form the Deposit Insurance and Credit Guarantee Corporation (DICGC); the name "Deposit Insurance Act, 1961" was also modified to "The Deposit Insurance and Credit Guarantee Corporation Act, 1961" at the same time. The Indian government terminated its credit guarantee scheme for small scale industries, following which the Deposit Insurance Corporation expanded its credit guarantee scheme to include the sector starting April 1, 1981. The guarantee scheme was further expanded to cover the entire priority sector (as determined by the Reserve Bank of India) on April 1, 1989.[46]

Section 16(1) of The Deposit Insurance and Credit Guarantee Corporation Act originally capped the amount to be insured at ₹1500 per depositor for all of their deposits collectively held at all the branches of a particular bank. This limit was successively raised to ₹5000 on January 1, 1968; ₹10,000 on April 1, 1970; ₹20,000 on January 1, 1976; ₹30,000 on July 1, 1980; and ₹100,000 on May 1, 1993. The insurance premium was initially fixed at 0.05 percent per year; this was lowered to 0.04 percent per year on October 1, 1971; raised to 0.05 percent on July 1, 1993; raised to 0.08 percent on April 1, 2004; and raised again to 0.10 percent on April 1, 2005. The act stipulates that the Deposit Insurance Fund (DIF) be continually monitored to ensure that it has sufficient funds to safeguard the banking system, and the DICGC can change the premium accordingly. The premium needs to be paid by the last days of May and November; otherwise the bank pays an interest of eight percent on the premium or the unpaid portion thereof. All types of bank deposits (current or checking account, savings account, fixed deposit and recurring deposit) are covered by the program, with the exception of deposits by foreign governments; deposits by the Indian central government; deposits by the state governments; inter-bank deposits; deposits of the state Land Development Banks with the state co-operative banks; any amount due on account of and deposit received outside India; and any amount which has

been specifically exempted by the corporation with the previous approval of the Reserve Bank of India.

Section 15A of The Deposit Insurance and Credit Guarantee Corporation Act gives the DICGC permission to cancel the registration of a bank if it fails to pay the insurance premium for three consecutive six-month periods. The deposits at the bank are insured until the date of cancellation. Section 35 of The Deposit Insurance and Credit Guarantee Corporation Act gives the DICGC unfettered access to the records of insured banks; the Reserve Bank of India investigates member banks based on the DICGC's recommendation.

If an insured bank is liquidated, then every depositor at the bank is entitled to the payment of an amount equal to the total deposits held by him "in the same right and in the same capacity" at all the branches of that bank put together on the date of cancellation of the bank's registration. Section 17(1) of the DICGC Act stipulates that the liquidator of an insured bank which has been marked for liquidation has to submit to the DICGC a list showing separately the amount of the deposit in respect of each depositor and the amount set aside, in such a manner as may be specified by the DICGC and certified to be correct by the liquidator, within three months from the date of them assuming charge of the office. Section 18(1) of the DICGC Act stipulates that for banks for which either amalgamation or reconstruction have been sanctioned, the list has to be submitted by the chief executive officer of the concerned transferee bank within three months from the date on which the amalgamation or reconstruction comes into effect. The DICGC has to pay the depositors within two months of receiving the list.[47]

The DICGC maintains three types of funds: the Deposit Insurance Fund, the Credit Guarantee Fund, and the General Fund. The Deposit Insurance Fund and the Credit Guarantee Fund are funded by the insurance premium paid and the guarantee fees received, and are utilized to settle claims. The General Fund is used to cover the regular operating expenses of the Corporation. The surplus balance in all three of these funds, as prescribed by the act, is only invested in central government securities. The act allows for the transfer of funds between the funds; if one of the funds has a shortfall, then money can be transferred from either of the other two funds to make that up. The DICGC accounts are closed on March 31 every year. These accounts are audited by an Auditor appointed by the Board of Directors, with the prior approval of the Reserve Bank of India. The audited accounts, together with the Auditor's

report as well as a report on the working of the DICGC, are required to be submitted to the Reserve Bank of India within three months of the closing of the accounts. Copies of these documents are also submitted to the central government and tabled before both houses of the Indian parliament every year.

8.4.2 The Bharatiya Reserve Bank Note Mudran Private Limited

The first bank notes to be physically printed in India were by the India Security Press at Nashik in the western state of Maharashtra in 1928; this followed the printing of postal stationery and postage stamps at the facility since 1925. Other products were added from 1929 onwards. Section 23(1) of the Reserve Bank of India Act of 1934 states that[48]:

> The issue of bank notes shall be conducted by the Bank in an Issue Department which shall be separated and kept wholly distinct from the Banking Department, and the assets of the Issue Department shall not be subject to any liability other than the liabilities of the Issue Department as hereinafter defined in section 34.

Section 34 further states that the liabilities of the Issue Department shall equal the total of the amount of the currency notes of the Government of India and the bank notes in circulation for the time being; this became equal to just the amount of bank notes in circulation as the Government of India ceased printing currency notes. The issuance of bank notes has, therefore, been under the purview of a separate agency since the passage of the act.

The Currency Note Press at Nashik is currently a part of the Security Printing and Minting Corporation of India Limited (SPMCIL). SPMCIL was formed in 1956 by combining and corporatizing four mints, four presses and one paper mill, all of which were previously overseen by the Ministry of Finance. SPMCIL is wholly owned by the Government of India, and is headquartered in New Delhi. It manufactures security paper, minting of coins, printing of currency and bank notes, non-judicial stamp papers, postage stamps and travel documents. Various security features such as chemically reactive elements, different Guilloche patterns, micro lettering, designs with UV inks, bi-fluorescent inks, optical variable inks, micro perforation, adhesives, embossing, die-cutting and personalization

are incorporated into these products. The vision of SPMCIL is to excel in the development and production of cost effective high quality security products that meet international standards; its mission includes fully meeting the requirement of the central and state governments for security products and currency and coin indents of the Reserve Bank of India, achieving cost effectiveness and moving toward the creation of profit centers, improving the quality of its products, and the indigenization of inputs, specially security paper and ink.

The second bank note printing facility to be established by the Government of India was in Dewas in the central Indian state of Madhya Pradesh in 1974. The printing of higher denomination bank notes using Intaglio Printing Technology and Guillotine Machines shifted to the Dewas location.[49] The Currency Note Press in Nashik and Bank Note Press in Dewas produce bank notes for India; they also produce bank notes for Bhutan, Iraq, Myanmar, Nepal, Sri Lanka, and several countries in eastern Africa. More than 40 percent of the bank notes currently circulating in India come from these presses. Both the bank note printing facilities are ISO 9001:2000 & ISO 14001:2004 certified, with stringent security systems, modern eco-friendly treatment facilities, and a service department to ensure maximum in-transit security involving the usage of captive railway Treasury carriages for transporting the Treasury consignments. The security printing presses supply a number of things. The India Security Press in Nashik produces judicial as well as non-judicial stamp papers; various types of postal and non-postal stamps and stationery; passports, visa and other travel documents; MICR (magnetic ink character recognition) and non-MICR checks in continuous stationery form; identity cards; railway warrants; income tax return order forms; saving instruments; and commemorative stamps. These products are supplied to various state governments; the federally administered union territories; many of the central government departments, including the Postal Department, the Ministry of Finance, and the Ministry of External Affairs; and the Reserve Bank of India. The Nashik press is also responsible for various other tasks such as e-passports, permanent account number (PAN) cards, printing octroi receipts, printing tickets for entry to various national monuments administered by the Archaeological Survey of India, and printing tickets for the 2010 Commonwealth Games.[50,51]

The BRBNMPL was established by the Reserve Bank of India as its wholly owned subsidiary on February 3, 1995. The goal of the BRBNMPL is to print bank notes in order to bring the supply of bank notes in line

with demand. The vision of BRBNMPL is "To emerge as a Global Leader in pursuit of excellence providing the best in Design, printing, services and supply of banknotes and other security documents," while its mission is the following[52]:

> BRBNMPL will operate in Indian and global market catering to security document needs of Central banks and monetary authorities of the world by designing, printing and supplying banknotes and other security documents, using state-of-the-art technology, adopting world-class practises in people and process management and deploying highly reliable systems for product security and confidentiality, in order to maximise economy, efficiency, effectiveness to the satisfaction of all stake-holders, and with a deep sense of caring for the society and a proactive concern for environment as a responsible Corporate Citizen.

The Corporate Office of the BRBNMPL is in Bengaluru (formerly Bangalore). A Board of Directors oversees the affairs of the BRBNMPL. The Board is nominally headed by the Executive Chairman, who is an individual nominated by the Reserve Bank of India. The person responsible for making most of the decisions is the Managing Director, who is a full-time employee who is also the Chief Executive of the company as well as a member of the Board; the Managing Director is assisted in the discharge of their duties by a team of senior officers. The remaining members of the Board of Directors are eminent professionals drawn from various fields.

The company currently manages two printing presses, one at Mysore in the southern state of Karnataka and the other at Salboni in the eastern state of West Bengal. As this was a project of considerable magnitude, BRBNMPL decided to implement this in two phases. Phase I saw the establishment of a mini press with a single production line at each site that was used as a testing ground for the new work methods and to train the personnel for the efficient running of the Phase II machines. Phase I was implemented in Mysore in June 1996 and in Salboni in December 1996. Phase II involved the establishment of the main presses with seven lines of production in Mysore and eight lines of production in Salboni. The mini presses ran without problems, and Phase II was inaugurated in Mysore on May 12, 1999, and in Salboni on February 12, 2000. Currently the capacity for each of the presses is 16 billion bank notes per year. Both presses use state of the art bank note printing technology. The machinery at the

Mysore location was supplied by M/s. De La Rue Giori, a Switzerland based joint venture between the British company De La Rue based in Basingstoke in Hampshire, United Kingdom and Koenig & Bauer AG or KBA Giori of Würzburg of Bavaria, Germany that was formed in 1965.[53] The machinery at the Salboni location was provided by M/s. Komori Corporation (*Kabushiki-gaisha Komori kōporēshon*), which is one of the world's largest printing press manufacturers and is headquartered in Tokyo, Japan. Both locations are equipped with advanced security surveillance systems, and the company produces bank notes that conform to international standards. These bank notes are then made available to the Reserve Bank of India at a competitive rate.

8.4.3 The National Housing Bank

The Housing and Urban Development Finance Corporation Private Limited (HUDCO) was established on April 25, 1970, as a private limited company under the Companies Act of 1956 to finance various housing and urban infrastructure initiatives. The name was changed to Housing and Urban Development Corporation Limited on July 9, 1974.[54] HUDCO was the first dedicated housing finance institution in India. Its principal tasks are to provide long-term finance for construction of houses for residential purposes or finance or undertake housing and urban development programs in the country; to finance or undertake, wholly or partly, the setting up of new or satellite towns; to subscribe to the debentures and bonds to be issued by the State Housing and/or Urban Development Boards, Improvement Trusts, Development Authorities, and so on, specifically for the purpose of financing housing and urban development programs; and to finance or undertake the setting up of industrial enterprises of building material.[55] As part of its mission, HUDCO continues to explore opportunities in related sectors for sustainable profits, which in turn helps it with further supporting its social objectives; the institution is particularly attentive to the needs of the economically weaker segments of the population.

Following the passage of the National Housing Bank Act of 1987 following the recommendation of the Sub-Group on Housing Finance for the Seventh Five Year Plan (1985–1990), the National Housing Bank (NHB) was established on July 9, 1988. The bank, which is the third wholly owned subsidiary of the Reserve Bank of India, is based in New Delhi and has offices in Ahmedabad, Bangalore, Chennai, Hyderabad,

Kolkata, Lucknow and Mumbai. The NHB is the apex institution for housing finance in India, and its objective is to promote housing finance institutions as well as the availability of long-term financing to individual households in the country. The preamble to the National Housing Bank Act of 1987 describes the basic functions of the NHB as "to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support to such institutions and for matters connected therewith or incidental thereto." Its vision is "promoting inclusive expansion with stability in housing finance market," and its mission is "to harness and promote the market potentials to serve the housing needs of all segments of the population with the focus on low and moderate income housing." The specific objectives of the institution are[56]:

- To promote a sound, healthy, viable and cost effective housing finance system to cater to all segments of the population and to integrate the housing finance system with the overall financial system.
- To promote a network of dedicated housing finance institutions to adequately serve various regions and different income groups.
- To augment resources for the sector and channelise them for housing.
- To make housing credit more affordable.
- To regulate the activities of housing finance companies based on regulatory and supervisory authority derived under the Act.
- To encourage augmentation of supply of buildable land and also building materials for housing and to upgrade the housing stock in the country.
- To encourage public agencies to emerge as facilitators and suppliers of serviced land, for housing.

The specific departments of NHB are the Department of Regulation and Supervision; the Refinance Operations Department; the Project Finance and Technology Promotion Department; the Resource Mobilization and Management Department; the Risk Management Department; the Business Planning and Promotion Department; the Market Research, Consultancy and Policy Department; the Credit Guarantee Fund Trust Cell; the Information Technology Department; the Legal Department; the Administration, HR and Premises Department; the Accounts Department; the All Audits Department; and the Board and

CMD Secretariat. In addition, the NHB RESIDEX Cell handles residential index activities; this is the first official residential housing price index in India.[57]

As part of its objectives, NHB supervises the housing finance companies, of which there are currently –71.[58] The first private sector housing finance company to open its doors in the country was the Housing Development Finance Corporation (HDFC) in 1977; other large housing finance companies include State Bank of India Home Finance, LIC Housing Finance Limited, ICICI Home Finance Company Limited, IDBI Homefinance Limited, PNB Housing Finance Limited, Dewan Housing Finance Corporation Limited, GIC Housing Finance Limited, and Can Fin Homes Limited. In addition to the supervision of the housing finance companies, NHB keeps a general tab on the housing sector. It has also developed services around the needs of traditionally underserved communities. Examples are reverse mortgage loans for senior citizens; Productive Housing in Rural Areas (or PHIRA), which is a scheme for composite loans (housing and production) to rural families; refinancing for top-up loans for Indira Awas Yojana beneficiaries; equity participation in new rural housing finance companies; and the launching of the Occasional Papers & Discussion Papers Series.

8.5 The Demonetization Experiment

Prime Minister Narendra Modi's government decided to demonetize all the 500 and 1000 rupee bank notes belonging to the Mahatma Gandhi series, so-called due to the portrait of Mahatma Gandhi on the obverse of the notes, on November 8, 2016.[59] These two denominations accounted for 86 percent of the total currency in circulation in India (approximately US $220 billion out of US $270 billion) at the time. Modi made the announcement on live television at 8 p.m. Indian Standard Time, and declared that the bank notes would become invalid after midnight and should be exchanged for newly issued 500 and 2000 rupee bank notes during a 50-day window ending on December 30, 2016, once the new notes had been introduced later in that week. While the decision had been made about six months earlier, the demonetization move was announced suddenly and without any prior warning as the government wanted to minimize the opportunity for advance planning by those in possession of these denominations through improper means. The stated goal was to contain the underground economy, which is about a fifth of the Indian

economy, where cash transactions were sometimes funding illegal activities and were also robbing the government of India of tax revenues, as well as to detect counterfeit currency. According to the former finance minister of the country, only 2.89 percent of Indians pay income tax. The measure came approximately a month after the government raised approximately US $10 billion through a tax amnesty initiative that encouraged Indians to report their undeclared income and assets.

The effects of the demonetization exercise were immediate and severe. India's two premier stock indices, the BSE Sensex and the NIFTY 50, fell by 1688.69 points, or 6.12 percent, and 541.30 points, or 6.33 percent, respectively.[60] Most retailers immediately stopped accepting the larger denomination bank notes. All banks and cash machines were ordered to close on Wednesday in preparation for the turnaround, and this prompted a late-night rush by customers to withdraw smaller notes from ATMs. While people were allowed to exchange their old bank notes for new ones, or deposit them into their accounts, they faced the prospect of heightened scrutiny by tax authorities if they were unable to satisfactorily explain the sudden increase in their balance.[61] There were prolonged cash shortages as banks and ATMs ran out of the new bank notes. People panicked and many, including the elderly, often waited in line for hours to deposit their holdings of 500 and 1000 rupee bank notes. Cash withdrawals from bank accounts were limited to ₹10,000 per day and ₹20,000 per week per account from November 10 to November 13. This was raised to ₹24,000 per week from November 14. Similarly, cash withdrawals from ATMs were also limited to ₹2000 per day until November 14, and to ₹2500 per day thereafter. According to Al-Jazeera, "Approximately 80 people are thought to have died as a result of demonetisation—either while waiting in queues or because they were refused medical treatment as they didn't have the necessary cash to pay for it."[62] The disruption in an economy that relies heavily on cash was significant. Daily wage laborers were particularly affected, but even those with regular salaries sometimes went without getting paid for two or three months in many instances as their employers ran out of cash. Farming and real estate, where large cash payments are common, took big hits, and weddings were downsized or postponed. Realizing the extent of the problem, the government extended the period for permitted use of the old 500 and 1000 rupee bank notes for the purposes of paying household utility bills, fuel, taxes, fees, government hospitals, crematoriums, railway and airline booking counters, and for purchases made from co-operative stores until November 14.[63]

Arun Jaitley, the Finance Minister, wrote on Facebook a year after the demonetization that India's dependence on cash had fallen by approximately 3.89 trillion rupees over the year, and the country's cash-to-GDP ratio had decreased from 12 percent to 9 percent over the same period. In addition, the tax base had grown to include around 5.6 million new individuals. The administration also wanted to steer people away from cash transactions and toward electronic payments; the numbers show some success in that aspect.[64] Both the Immediate Mobile Payments System (IMPS) and the United Payments Interface (UPI) have grown significantly over the period, though the growth of digital transactions has since slowed as cash has returned to the economy.

However, the move has also been widely cited as the reason for a substantial slowdown in India's GDP growth and the growth in industrial production. The growth rate for the fiscal year was 7.1 percent in comparison to the previous year's 8 percent.[65] A Mumbai-based think tank, The Center for Monitoring Indian Economy, estimates that the economy lost around 1.5 million jobs over the January 2017 to April 2017 period as a result of demonetization.[66] In a country where a large percentage of transactions are cash and less than half the residents own bank accounts, eliminating the two highest denominations of bank notes was extremely disruptive. The 500 and 1000 rupee banknotes were the ones that functioned as the most common store of value for those who were outside the purview of the organized banking system, and not all of them were able to get their notes changed in time or able to provide the necessary documentation. The opposition Indian National Congress party has held a series of protests in many major cities and towns to draw attention to these issues. Most analysts also suggest that the experiment failed to remove black money from the Indian economy, which was the ostensible goal of demonetization. US $242 billion of the money had been deposited into the Indian banking system within June 30, 2017, less than a year later. This amount represented 99 percent of the banned amount. No significant amount of counterfeit bank notes had been detected either.[67]

8.6 The Indian Rupee Outside India

8.6.1 Nepal

The small countries of Nepal and Bhutan, sandwiched between India and China up in the Himalayas, both use the Indian rupee in addition to their own currencies. The currency of Nepal is the Nepalese rupee, which is

pegged at ₹0.625 to one Nepalese rupee; the currency of Bhutan is the Bhutanese ngultrum, which is pegged at par with the Indian rupee. The Reserve Bank of India provides six billion Indian rupees to the Nepal Rastra Bank each fiscal year, which the Nepali central bank in turn provides to both Nepali users and Indian users in Nepal.[68] Apart from officially exchanged Indian rupees, there also exists a black market trade in the Indian rupee (Fig. 8.1).

Nepal was hit especially hard by the demonetization experiment. It is in India's interest to stabilize trade flows in the region. While India has a trade deficit overall, it has a large trade surplus with the other member nations of the South Asian Association for Regional Cooperation (SAARC): Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka. While India's total trade with SAARC nations stood at US $21.6 billion in the fiscal year 2015–2016, its trade surplus with them was US $15.6 billion.[69] Trade volumes dropped due to the cash shortage resulting from the demonetization, though the effect is likely to be temporary.

For Nepal, the demonetization came a year after the central bank of the country, Nepal Rastra Bank, increased the maximum amount of Indian rupee private corporations, government offices and certain individuals were allowed to purchase. Private corporations and government offices and private corporations were allowed to exchange up to ₹25,000 at a time starting November 27, 2015, while individuals traveling to India for

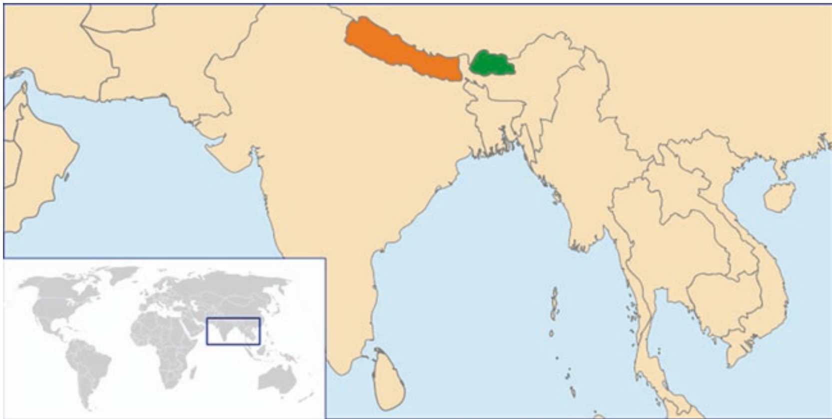

Fig. 8.1 Nepal and Bhutan (Source: Commons)

medical treatment were allowed to exchange up to ₹50,000. Nepali citizens traveling to India due to other emergencies were allowed a limit of ₹25,000.[70] When Prime Minister Narendra Modi's government withdrew 500 and 1000 rupee bank notes from circulation, all these Nepali corporations and individuals were left saddled with billions of Indian rupees that were now worthless. In addition, there are large numbers of Nepali citizens who are migrant workers in India or regularly cross the border to trade, and many of them were not able to deposit their bank notes in time. Nepal reacted to the demonetization announcement by banning all transactions in the Indian currency. However, there are large numbers of households in Nepal who are dependent on pensions paid by India or on remittances that come from India or purchased Indian rupees for a family member to study in India, and many more households hoarded Indian rupees after a 2015 blockade led to a scarcity of essential commodities.[71] In 2016, remittances from India added up to $640 million, which is 2.6 percent of Nepal's GDP. In addition, Indian households and businesses being also squeezed for cash, a lot of Nepali migrant workers are coming back home.[72]

A meeting between Indian and Nepali officials in April 2017 ended inconclusively when Reserve Bank of India officials wanted to cap the amount that could be exchanged at ₹4500 per person (approximately $70), whereas Nepal Rastra Bank officials wanted to set the limit at ₹25,000 (approximately $390), which was the official one-time Indian rupee issuance limit for many of those affected. An intermediate decision was then made to let Nepali citizens exchange up to ₹4500, while the Nepali Finance Minister Krishna Bahadur Mahara concurrently pursued the goal of raising the limit with India. According to sources involved with the negotiations, the sticking point has been an insistence by India that Nepal provide an estimate of the quantity of currency that needs to be exchanged; while that is easy to do for the bank notes that are with financial institutions, coming up with an accurate estimate of how much bank notes are in private hands is next to impossible. The Indian government is also worried about counterfeit high denomination bank notes making their way into India from Nepal. Lack of information and official guidance have resulted in many Nepalis, especially in the southern portion of the country close to the border with India, exchanging notes in the black market at unfavorable rates. Needless to say, all of this is likely to hurt the Indian rupee's status as the unofficial regional reserve currency, especially

at a time when it has depreciated considerably against most of the world's major currencies, and boost holdings of other currencies and gold.

According to Reuters, a year after demonetization, "Chinta Mani Shivakoti, deputy governor of Nepal's central bank, Nepal Rastra Bank, said they were still waiting for Indian authorities' response to exchange nearly 55 million Indian currency notes held by its citizens. Business associations estimate the value of the notes at 10 billion rupees." Of these, 33.6 million rupees were held by financial institutions and the Nepal Rastra Bank, while the rest were privately held. He further added that this would diminish the confidence of the Nepali people in the Indian rupee, and that the "Indian silence over the exchange of old notes is an injustice to Nepali people."[73]

8.6.2 Bhutan

The Royal Monetary Authority of Bhutan (RMA), which is the Bhutanese central bank, was established by the Royal Monetary Authority of Bhutan Act of 1982 by consolidating the central bank-related functions of three government agencies: the Ministry of Finance, State Trading Corporation of Bhutan and Bank of Bhutan. The Ministry of Finance issued ngultrum, the Bhutanese currency, and acted as the custodian of foreign exchange received as foreign aid. The State Trading Corporation of Bhutan handles exports to all countries other than India, and also maintains its own foreign exchange holdings. The Bank of Bhutan is responsible for commercial banking activities in Bhutan, and in the past also extended lines of credit to the Bhutanese government and its agencies and injected ngultrum notes and coins into circulation. In Bhutan, the Indian rupee is legal tender along with the Bhutanese ngultrum.

The first Chairperson of the RMA was Her Royal Highness Ashi Sonam Chhoden Wangchuck, Representative of His Majesty in the Ministry of Finance; the first Managing Director of the RMA was Lyonpo Yeshey Zimba, the then Minister of Work and Housing.[74] The RMA, which started operations on November 1, 1983, wants to maintain enough Indian rupees in its foreign exchange reserves to have free convertibility between the Bhutanese ngultrum and the Indian rupee. After a shortage of Indian rupees in 2011–2012 almost brought its economy to a standstill, Bhutan has been very intentional about the level of its reserves. About 30 percent of its foreign exchange reserves are held in Indian rupees.

Bhutan was also hit by the Indian demonetization. According to Dasho Daw Tenzin, the central bank governor, 95 percent of trade-related payments in Bhutan are made via checks or bank drafts and thus were mostly unaffected; tourism-related spending, Bhutanese pilgrims traveling to Buddhist sites in India and border trade, however, have been hit by the cash shortage. Cardamom, orange and potato exports from Bhutan have been hit as farmers have had a harder time finding buyers, with cardamom prices dropping by a fifth since the demonetization. The border town of Phuentsholing was especially hard hit as it is the principal border trading post. Bhutanese traders are only allowed to withdraw ₹2500 per day from ATMs, which is insufficient as most of the transactions involve cash. Of the Royal Monetary Authority's ₹30 billion in Indian rupee reserves, only a small fraction was held as cash; as a result, they ran out of ₹100 bank notes. Trade between Bhutan and Bangladesh has also been impaired as these goods must transit through India and hence require payments in Indian currency to intermediaries for transportation and insurance.[75]

The day after India's announcement, the Royal Monetary Authority opened a short window for depositing a theoretically unlimited amount of the decommissioned bank notes in its banks, closing it on November 30, 2016. They also sent officials to the State Bank of India's branch on the border with India to obtain lower denomination bank notes. Part-way through this deposit window, the Royal Monetary Authority stopped the depositors from taking out an equivalent amount in ngultrums. The central bank had originally thought that the depositors could take out the equivalent amount of money in ngultrums by the end of January 2017, but the withdrawal restrictions were only relaxed in May 2017. A lottery system was introduced to select the lucky individuals who could get ₹5000 in new notes at one go; the number was initially 50 a day, but was later raised to 200.[76] Over-the-counter cash withdrawals were limited to ₹10,000 per person per month to ensure that the country did not run out of the smaller denomination Indian bank notes. The demonetization has also resulted in a thriving unofficial foreign exchange market. The value of the Bhutanese ngultrum had appreciated by about twenty percent since the demonetization, and some Indian travelers are buying these ngultrums and later converting them back into Indian rupees. Given that the Indian rupee is legal tender in Bhutan and Indians are allowed to bring ₹25,000 with them when they travel to Bhutan, the volume of Indian rupees held in Bhutan is significant.[77] Understandably wary, Bhutan has restricted the use of the new high denomination bank notes (₹500 and ₹2000) issued by India; the Royal Monetary Authority issued a public notification to that effect in August 2017.[78]

8.6.3 Other Countries with the Indian Rupee As Legal Tender

While the Indian rupee is officially not used in Sri Lanka, the island nation to the south of India, many members of its minority Tamil community that dominates the northern and eastern provinces of the island hold significant numbers of Indian rupee banknotes. It is difficult to exchange these bank notes at face value in Sri Lanka, and these families likely lost some of their savings when the Indian government outlawed the larger denominations of bank notes. The effect of demonetization on the Sri Lankan economy, however, was limited. Bangladesh also felt the reverberations of demonetization when thousands of trucks were stranded at the Indo-Bangladesh border due to the paucity of cash; like border trade with Bhutan, a significant portion of India's border trade with Bangladesh is cash-based.[79]

Zimbabwe struggled with hyperinflation in the first decade of the twenty-first century. The official inflation rate hit 231.2 million percent in July 2008, after which the Zimbabwean government stopped publishing official inflation statistics. However, estimates indicate that inflation peaked at 79.6 billion percent in November 2008. This led to the printing of some remarkable denominations of money; the Reserve Bank of Zimbabwe printed Z$100 trillion (about US $30) banknotes for use by the public, now a prized collectors' item, along with Z$10, Z$20 and Z$50 trillion notes.[80] The inflation was reinforced by the government's lack of fiscal discipline and the central bank's lack of autonomy in making price stability its primary target. The currency of Zimbabwe at the time was the Zimbabwean dollar, which was introduced in 1980 to replace the Rhodesian dollar (and prior to that, the Rhodesian pound) when Zimbabwe gained independence from the United Kingdom.

The economy collapsed, a humanitarian crisis unfolded and the unemployment rate rose to more than eighty percent as a result of the hyperinflation. Large numbers of Zimbabweans left the country to look for work in neighboring South Africa and Botswana, often leaving behind families dependent on the remittances. The government declared inflation illegal in 2007. Those increasing prices or wages between March 1 and June 30, 2007 were subject to arrest and several individuals were prosecuted, but prices continued to increase. In early 2009,

> A 40-year-old Zimbabwean primary school teacher from the capital Harare, told the BBC news website earlier this week it cost nearly US$2 a day to travel to work, but inflation had reduced the average teacher's wage to the equivalent of US$1 a month. He said he now made a living reselling maize to families in high density areas, as it made more money than teaching.[81]

In an effort to stabilize prices, the acting Finance Minister Patrick Chinamasa announced in January 2009 that ordinary Zimbabweans could use foreign currency in transactions. Only licensed businesses were permitted to accept foreign currency until then, though even before the announcement, many establishments and even street vendors were refusing to accept payments in the local currency. Its value having been decimated by inflation, Zimbabwe decided to stop using the Zimbabwean dollar on April 12, 2009. A proposal to join the Common Monetary Area, comprised of Lesotho, Namibia, South Africa and Swaziland that use the South African rand, was considered and rejected. The Reserve Bank of Zimbabwe (RBZ) decommissioned the Zimbabwean dollar completely in 2015; the RBZ governor John Mangudya said in his monetary policy statement that the official decommissioning was meant to shore up the faith of consumers and businesses in the multi-currency system that the country was transitioning to. A decision was made to use several major as well as regional currencies to keep price appreciation in check. The country's Deposit Protection Commission was instructed to complete repayment to all account-holders of closed banks by April 30, 2016.[82] The South African rand, the Botswana pula, the British pound, the euro, the US dollar, the Australian dollar, the Japanese yen, the Chinese yuan and the Indian rupee all currently circulate in Zimbabwe and are accepted in transactions. In practice, however, Zimbabwe is heavily dependent on the US dollar. The dollar accounts for more than 90 percent of the transactions, with the rand accounting for another 5 percent or so. There is a shortage of dollars, and the government is trying to address that by encouraging the use of debit and credit cards and promoting other currencies, especially the rand.[83]

8.6.4 *Taking Indian Rupees Out of the Country*

In 2013, the Reserve Bank of India issued a directive mentioning that from then on, every non-resident Indian or foreigner leaving India would have to compulsorily exchange the Indian rupees they had in their possession into a foreign currency before they board their flight. Many non-resident Indians carry some amount of Indian rupees back with them

while leaving, primarily for the convenience of having some local currency when they land in India on their next trip. The Reserve Bank now allows foreign exchange dealers to open kiosks beyond the immigration desks at international airports in India to facilitate non-resident Indians and foreigners who need to change their rupees for other currencies before they board their aircraft. The central bank has also directed airport authorities to put up displays at international airports that notify passengers of the last point for non-residents to possess Indian rupees; the Indian customs officials can act against those who are found to have Indian currency in their possession before boarding the flight.[84]

In a separate directive, travelers in possession of the demonetized 500 and 1000 rupee bank notes were given until April 1, 2017 to exchange or deposit them. Not only did the old notes become worthless after this date, but it also became a criminal offence to hold them.

Notes

1. Early branches of the Bank of Bengal included those at Rangoon (present day Yangon) established in 1861, and at Patna, Mirzapur and Benares, all of which were established in 1862.
2. The Imperial Bank of India was nationalized in 1955 when the Reserve Bank of India acquired a controlling stake in it. It was renamed the State Bank of India on April 30, 1955, and continues to be the largest bank in India.
3. Reserve Bank of India: Functions & Working. (2018). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RWF15012018_FCD40172EE58946BAA647A765DC942BD5.PDF (accessed January 26, 2018).
4. Balachandren, G. (1994). Towards a 'Hindoo Marriage'. Anglo-Indian Monetary Relations in Interwar India, 1917–35. *Modern Asian Studies*, 28(3), 615–647.
5. The Reserve Bank of India continued to be the currency issuing authority of Burma until 1942. It also continued to act as banker to the Government of Burma until 1947. The origins of the central bank in Myanmar go back to 1948, when the Union Bank of Burma was established on April 3rd following the passage of the Act of Union Bank of Burma in 1947. The Union Bank of Burma essentially took over the operations of the Yangon (formerly Rangoon) branch of the Reserve Bank of India. In its current iteration, the central bank of Myanmar is known as the Central Bank of Myanmar. Its scope was clarified by the Central Bank of Myanmar Law passed by the Myanmar Parliament in 2013. It is headquartered in the new capital city of Naypyidaw, with branches in Yangon and Mandalay.

6. When India and Pakistan were partitioned, the British government also divided the resources of the Reserve Bank of India between India and Pakistan; India got seventy percent, while Pakistan got thirty percent. Like the Reserve Bank of India, the State Bank of Pakistan was initially a privately held bank. It was nationalized and given additional responsibilities on January 1, 1974. The operations of the State Bank are guided by The State Bank of Pakistan Act 1956. It is headquartered in Karachi, which is the financial capital of Pakistan, and has branch offices in fifteen cities, including the administrative capital of Islamabad.
7. The central bank of Bangladesh, the Bangladesh Bank, was established on December 16, 1971. The Dhaka branch of the State Bank of Pakistan was essentially recognized and reorganized as the central bank of Bangladesh after the Bangladesh Liberation War. It is headquartered in Dhaka and has ten additional offices at Motijheel, Sadarghat, Chittagong, Khulna, Bogra, Rajshahi, Sylhet, Barisal, Rangpur, and Mymensingh.
8. Reserve Bank of India. British India Coinage. https://www.rbi.org.in/commonman/English/Currency/Scripts/BritishIndia.aspx (accessed January 12, 2018).
9. Currency Note Press, Nashik. History. http://cnpnashik.spmcil.com/Interface/History.aspx (accessed January 8, 2018).
10. Reserve Bank of India. Bank Notes. https://www.rbi.org.in/scripts/ic_retrospectcurrency.aspx (accessed January 8, 2018).
11. Reserve Bank of India: Functions & Working. (2018). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RWF15012018_FCD40172EE58946BAA647A765DC942BD5.PDF (accessed January 26, 2018).
12. Sir Wilson was a businessman and a politician from the Liberal Party from a Quaker family in The Scottish Borders. Among his varied legacy is the founding of The Economist magazine and the establishment of the Chartered Bank of India, Australia and China, which eventually became the Standard Chartered Bank following its 1969 merger with the Standard Bank, a British bank that operated mostly in Africa and played a significant role in the development of the Kimberley diamond mines and the gold mines at Witwatersrand.
13. Thomas De La Rue's postage stamps included some for the Confederate States of America; it also produced the famous triangular Cape of Good Hope postage stamps in 1853. De La Rue, as the company is now known, continues to produce bank notes and also produces a range of other secure documents, including bank checks, driving licenses, passports, tax stamps, travelers' checks and vouchers. They got out of the playing card business in 1969 when that was spun off and sold to Waddingtons, the card and board games company headquartered in Leeds and London and the manufacturer of Clue, Monopoly and Risk, that was later acquired by Hasbro.

14. Reserve Bank of India: Functions & Working. (2018). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RWF15012018_FCD40172EE58946BAA647A765DC942BD5.PDF (accessed January 26, 2018).
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16. Banco Nacional Ultramarino still issues the Macanese pataca, which is the legal tender of Macau.
17. Ceylon remained a governorate of the Dutch East India Company from 1640 to 1796.
18. Hyderabad continued to strike coins until it was subsumed into India in 1948. Its currency was the Hyderabadi rupee, which was divided into 16 annas, each of which was divided into 12 pai.
19. List of Coins Issuing Princely States and Independent Kingdoms. (2013, August 29). www.worldofcoins.eu. http://www.worldofcoins.eu/forum/index.php/topic,23065.0.html (accessed January 19, 2018).
20. Maharaja Rambir Singh of Kashmir, of the Dogra dynasty, also introduced paper currency on watermarked paper in 1877. These notes were only on circulation for a very brief period of time. Additionally, due to the shortage of metals during World War One, the princely states of Morvi and Dhrangadhra issued currency notes of limited liability known as Harvala.
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22. Reserve Bank of India Act, 1934. (2009). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RBIAM_230609.pdf (accessed January 24, 2018).
23. Symes, P. (2003). Gulf Rupees – A History. http://www.islamicbanknotes.com/gulfrupees(article).htm (accessed January 20, 2018).
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25. Ibid.
26. Ibid.
27. Ibid.
28. Ibid.
29. Ibid.
30. Ibid.
31. Ibid.
32. Ibid.
33. Ibid.
34. Ibid.

35. Ibid.
36. Ibid.
37. Reserve Bank of India Act, 1934. (2009). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RBIAM_230609.pdf (accessed January 24, 2018).
38. The Banking Regulation Act, 1949. (2017). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/BANKI15122014.pdf (accessed January 26, 2018).
39. Chandavarkar, A. (2005). Towards an independent federal Reserve Bank of India: A political economy agenda for reconstitution. *Economic and Political Weekly*, 40(35), 3837–3845.
40. The (unsuccessful) goal of the Fiscal Responsibility and Budget Management Act was to eliminate the revenue deficit and decrease the fiscal deficit to three percent of the GDP by 2008.
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47. Deposit Insurance and Credit Guarantee Corporation. Profile. https://www.dicgc.org.in/AU_Profile.html (accessed January 19, 2018).
48. Reserve Bank of India Act, 1934. (2009). Reserve Bank of India. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RBIAM_230609.pdf (accessed January 24, 2018).
49. Security Printing & Minting Corporation of India Limited. History. http://www.spmcil.com/Interface/History.aspx (accessed January 19, 2018).
50. Security Printing & Minting Corporation of India Limited. Profile. http://www.spmcil.com/Interface/AboutUs.aspx (accessed January 19, 2018).

51. The Security Printing Press in Hyderabad, in the southern Indian state of Telangana, was established in the year 1982 to cater to the needs of the central government as well as various state governments by printing and supplying security documents such as Postal Stationery items, Central Excise Stamps, Non-Judicial Stamps, Court Fee Stamps, and Indian Postal Orders and Saving Instruments. The press is equipped with modern pre-press plate-making systems and post-printing techniques, and has processing facilities for perforation, numbering, UV printing technology, online envelope making, inland letters, aerograms, and postal stationery.
52. Bharatiya Reserve Bank Note Mudran Private Limited. Vision & Mission. https://www.brbnmpl.co.in/english/VisionAndMission (accessed January 20, 2018).
53. De La Rue plc History. www.fundinguniverse.com. http://www.fundinguniverse.com/company-histories/de-la-rue-plc-history/ (accessed January 29, 2018).
54. HUDCO became a public financial institution under Section 4A of the Companies Act, 1956 on December 9, 1996, by decree of the Department of Company Affairs, part of the Ministry of Finance of the government of India.
55. The Housing and Urban Development Finance Corporation Private Limited. History & Certain Corporate Matters. https://www.hudco.org//Site/FormTemplete/frmTempl PLargeTC1C.aspx?MnId=19&ParentID=6 (accessed January 20, 2018).
56. National Housing Bank. Genesis. https://nhb.org.in/about-us/#Genesis (accessed January 20, 2018).
57. Ibid.
58. National Housing Bank. List of housing finance companies registered under Section 29A of the National Housing Bank Act, 1987. https://test.nhb.org.in/List-of-HFCs-Registered-with-NHB-19-02-2016.pdf (accessed January 20, 2018).
59. It should be noted that this is not the first time that bank notes of specific denominations have been demonetized in India. The High Denomination Bank Notes (Demonetisation) Act of 1978 withdrew the three highest denominations of ₹1000, ₹5000 and ₹10,000 bank notes from circulation. The Janata Party administration of Prime Minister Morarji Desai argued that the high denomination notes were frequently used in illegal transactions and were therefore detrimental to the Indian economy. Further back, the High Denomination Bank Notes (Demonetisation) Ordinance of 1946 was passed by the Governor General of India at the time, Field Marshal Archibald Percival Wavell; the ordinance declared ₹500, ₹1000, and ₹10,000 as no longer being legal tender. The goal was to penalize Indian businesses that were concealing the money they made from supplying the Allies during the Second World War.

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63. Demonetisation: Chaos grows, queues get longer at banks, ATMs on weekend. (2016, November 17). *The Indian Express*. http://indianexpress.com/article/india/india-news-india/demonetisation-chaos-grows-queues-get-longer-at-banks-atms-on-weekend-4371373/ (accessed February 2, 2018).
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66. The Center for Monitoring Indian Economy.
67. India rupee: Illegal cash crackdown failed – bank report. (2017, August 30). www.bbc.com. http://www.bbc.com/news/world-asia-india-41100613 (accessed January 31, 2018).
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69. Impact of demonetisation reaches beyond India's borders. (2016, November 29). *The Economist*. http://www.eiu.com/industry/article/1134865497/impact-of-demonetisation-reaches-beyond-indias-borders/2016-11-29 (accessed January 30, 2018).
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CHAPTER 9

China

9.1 Chinese Banking Before the People's Republic of China

9.1.1 *Banking in China Before a De Facto or De Jure Central Bank*

Prior to the establishment of the People's Republic of China and having a designated central bank, China had a handful of large banks with a presence in multiple provinces in the early twentieth century. Seven of these played an especially significant role in the financial affairs of the country. The Four Northern Banks, which were the four banks with the largest capital in the 1920s located north of the Yangtze River, referred to the Yien Yieh Commercial Bank (established in Beijing in 1915), the Kincheng Banking Corporation (established in Tianjin in 1917), the Continental Bank (also established in Tianjin in 1919 and moved to Shanghai in 1942) and the China & South Sea Bank (established in Shanghai in 1921, though as an overseas Chinese bank it had branches in many cities in southern China). The Three Southern Banks, which were the three banks with the largest capital in the 1920s located south of the Yangtze River, referred to the National Commercial Bank (established in Hangzhou in 1907 and moved to Shanghai in 1915 and to Beijing in 1980), the Chekiang Industrial Bank (also established in Hangzhou in 1907 and moved to

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Shanghai in 1923) and the Shanghai Commercial and Savings Bank (established in Shanghai in 1915, and after a shutdown that lasted from 1950 to 1965, currently based in Taipei, Taiwan).

The Four Northern Banks were better capitalized than the Three Southern Banks. Their combined paid-in capital was 26 million yuan in 1927, compared to 6.8 million yuan for the Three Southern Banks. There were 24 other private banks in China at the time, and their combined paid-in capital was 25.6 million yuan. The Four Northern Banks derived their considerable capital from wealthy former Qing officials, warlords, and Chinese living abroad. All seven banks had an experienced team of managers. Wu Dingchang, Zhou Zuomin, and Tan Lisun, the general managers of the Yien Yieh Commerical Bank, the Kincheng Banking Corporation, and the Continental Bank respectively, all studied business, banking and finance in Japan. Given their shared interests, the Four Northern Banks formed a financial syndicate in 1922 and started the Joint Savings Society of the Four Banks in Shanghai in 1923.[1] However, the banks did vary considerably in their areas of focus. The Yien Yieh Commercial Bank focused on government bond and foreign bond purchases, the Continental Bank focused on real estate, and the Kincheng Bank and the China & South Sea Bank focused on extending loans to industries. Of the four, the Kincheng Bank modeled itself after the Japanese *zaibatsu* by developing a conglomerate that included mills, transportation interests, and trade centers.[2]

Shanghai was a financial center of global repute at the time. Of the remaining private banks in China, the ones that were headquartered in Shanghai and had a paid-in capital of more than two million yuan (in silver dollars) were the Xinhua Trust and Savings Bank (established in 1914), the Zhongfu Bank (established in 1916), the Donglai Bank (established in 1918), the Dazhong Bank (established in 1919), and the Guohua Bank and the Zhonghui Bank (both established in 1929). The Shanghai Women Commercial and Saving Bank, which was the earliest women's bank in China, was also founded in Shanghai in 1910, though it had limited capital.[3]

9.1.2 Bank of China

Bank of China served as the central bank of China for the first decade and a half following the establishment of the Republic of China. The origins of the Bank of China can be traced back to the founding of the Daqing Hubu Bank in Beijing on September 27, 1905, under the Qing dynasty.

Hùbù referred to the Ministry of Revenue (also known as the Ministry of Finance), which was one of the six ministries under the Department of State Affairs in imperial China, dating back more than two millennia to the Han dynasty. The bank opened a branch in Jinan in 1907. The Daqing Hubu Bank was renamed the Daqing Bank (or the Ta Ch'ing Bank, which translates as the "Great Qing Bank") in 1908.

The Republic of China was established on January 1, 1912, when the Xinhai (or Hsin-Hai) Revolution (also known as the Revolution of 1911) resulted in the abdication of Puyi, the last emperor of China and the twelfth ruler of the Qing Dynasty. Dr. Sun-Yat Sen's administration renamed the Daqing Bank as the Bank of China in February 1912, when it officially became the central bank of the Republic of China. Though the government was based in Nanjing, the bank was headquartered in Shanghai. It issued bank notes for the new republic from 1912 until 1942, and was one of several banks that issued bank notes during the period.[4] Among the others, the China & South Sea Bank's notes were commonly used in transactions in Shanghai and Hong Kong; the Central Bank of China, The Farmer's Bank of China, and the Bank of Communications also issued bank notes. Bank of China opened its first branch in Hong Kong in 1917. It became a private bank in 1923 when the government, short on funds, sold most of its shares to raise cash. However, it continued to function as the central bank of China until 1928, when these responsibilities were taken over by the Central Bank of China. While continuing as a purely commercial bank, Bank of China was once again taken over by the state following the Shanghai financial crisis of 1935. Kung Hsiang-hsi (also known as Dr. H. H. Kung), who was the Finance Minister at the time and would go on to briefly become the Premier of the Republic of China starting January 1, 1938, instructed the bank to issue new shares that would grant majority ownership of Bank of China to the Chinese government.[5]

The Chinese Civil War fought between the Kuomintang and the Communist Party of China ended in 1949, with the Bank of China splitting into two entities. The principal successor was the state-owned Bank of China in mainland China, which has grown to become one of the largest commercial banks in the world. Given its history as the state-designated bank specializing in foreign exchange and trade, Bank of China became responsible for managing China's foreign exchange operations after 1949. It helped in developing China's foreign trade and economic infrastructure with its international trade settlement, overseas fund transfer and other

non-trade foreign exchange services; this role assumed even greater importance during China's economic reforms and opening up to the rest of the world. The bank was reorganized as a wholly state-owned commercial bank in 1994, and Bank of China Limited was incorporated in 2004. Bank of China was listed on the Hong Kong Stock Exchange in June 2006 and on the Shanghai Stock Exchange in July 2006; it is also the first Chinese commercial bank to launch an A-Share and H-Share initial public offering and achieve a dual listing in both markets. For every year from 2011 to 2016, Bank of China was designated as a Global Systemically Important Bank; this earned it the distinction of becoming the only financial institution from emerging economies to earn the designation for six consecutive years.[6]

The core business operation of Bank of China is commercial banking, catering to both households and corporations. Other operations have been spun off into wholly owned subsidiaries. These include BOC International Holdings Limited, which focuses on investment banking; Bank of China Group Insurance Company Limited and Bank of China Insurance Company Limited, both of which focus on the insurance business; and Bank of China Group Investment Limited, which is in charge of the direct investment and investment management business of the bank. In addition, it has two controlled subsidiaries. Bank of China Investment Management Company Limited, is in charge of the fund management business of the bank, and BOC Aviation Limited is charged with the aircraft leasing business of the bank.

The smaller successor moved to the Republic of China (Taiwan) when the Kuomintang government relocated to the island. It started out as a financial institution owned by the government of the Republic of China (Taiwan), but was privatized in 1971. Following privatization, it became the International Commercial Bank of China (ICBC). After merging with the Chiao Tung Bank in 2002, it became the Mega International Commercial Bank, which is one of the largest banks in Taiwan. Part of the reason behind the renaming was to prevent confusing the bank with the Industrial and Commercial Bank of China (also ICBC), which is headquartered in Beijing and is both the largest bank in the world in terms of total assets and the largest public company in the world.[7]

9.1.3 Central Bank of China

The Central Bank of China was established in 1924 in the city of Guangzhou (formerly Romanized as Canton), the capital of the southern province of Guangdong. After the National Revolutionary Army (NRA),

the military wing of the Kuomintang, was successful in its military campaign against the Beiyang government (*běiyáng zhèngfǔ* in pinyin), the internationally recognized government of China at the time, Chiang Kai-Shek met with renowned Shanghainese banker and financier and a 1909 graduate of the University of Pennsylvania K. P. Chen (*Chén Guāngfǔ* in pinyin) on August 3, 1928, to discuss the possibility of establishing a central bank for the country. The Central Bank of China hence came to assume this responsibility, and its headquarters was moved to Shanghai.

In January 1949, the Central Bank of China transferred 572,899 ounces and 192,516.6 ounces of gold to Taiwan from the Chinese gold reserves through Xiamen and Guangzhou respectively; a month later, on February 20, it transferred the remainder of the gold reserves from Shanghai to Taiwan.[8] The bank itself moved to the Republic of China (Taiwan) in December 1949. Its facilities in China were confiscated by the People's Bank of China, which also hired its former employees. For the subsequent history of the Central Bank of China, please refer to the section on central banking in the Republic of China (Taiwan).

9.2 The People's Bank of China

9.2.1 The History of the People's Bank of China

The banks held by private merchants under the Kuomintang were nationalized by the new administration, reshaping the banking landscape. The four Big Four banks in China had also changed by then. In 1949, these were the Bank of China (established in Beijing), the Bank of Communications (also established in Beijing), the Central Bank of China (established in Guangzhou and then based in Shanghai) and the Farmers Bank of China (established in Hankou by consolidating the agricultural banks of Anhui, Henan, Hubei and Jiangxi provinces).

The People's Bank of China was established on December 1, 1948, after the consolidation of the Huabei Bank, the Beihai Bank and the Xibei Farmer Bank. The initial headquarters of the bank was at Shijiazhuang, the capital of Hebei province in northeastern China; this was moved to Beijing in 1949. For over two decades after its inception, the People's Bank of China was the only financial institution in the country and worked as both the central bank and a commercial bank. Its branches were hence scattered throughout the country. Each branch followed the directives issued by the head office, accepting deposits and making loans for China's centrally planned economy, handing in all the income to the superior

branch, and receiving funds for disbursement from it.[9] The State Council decided to have the People's Bank of China function exclusively as the central bank beginning in September 1983; this decision was legally confirmed on March 18, 1995, by the Law of the People's Republic of China on the People's Bank of China adopted by the Third Plenum of the Eighth National People's Congress. The bank was significantly restructured in October 1998, when all of its 31 branches located in the various Chinese provinces, national central cities and autonomous regions were abolished and 9 new regional branches established; the jurisdictional boundaries of these branches did not coincide with administrative boundaries.

9.2.2 Administrative Structure of the People's Bank of China

The Law of the People's Republic of China on the People's Bank of China was adopted at the Third Session of the Eighth National People's Congress on March 18, 1995, and subsequently revised based on the Decision on Amending the Law of the People's Republic of China on the People's Bank of China, which was adopted by the Standing Committee of the Tenth National People's Congress at its Sixth Meeting on December 27, 2003. Article 10 of the law states that the People's Bank of China shall have, at its apex, a Governor and a number of Deputy Governors. The candidate for the Governor of the People's Bank of China is nominated by the Premier of the State Council and decided upon by the National People's Congress. When the National People's Congress is not in session, the candidate for Governor is decided upon by the Standing Committee of the National People's Congress. The Governor is appointed or removed by the President of the People's Republic of China, whereas the Deputy Governors of the People's Bank of China are appointed or removed by the Premier of the State Council. Article 11 confers the overall responsibility for the institution to the Governor, who is assisted in their work by the Deputy Governors.[10]

The People's Bank of China currently has 9 regional branches in Tianjin, Shenyang, Shanghai, Nanjing, Jinan, Wuhan, Guangzhou, Chengdu and Xian, 2 operations offices in Beijing and Chongqing, 20 provincial capital sub-branches, 303 municipal sub-branches and 1809 county-level sub-branches.[11] The branches and offices undertake measures to preserve financial stability and conduct relevant business operations in their respective jurisdictions. The bank also has several overseas representative offices: the PBC Representative Office for America, the PBC

Representative Office for Europe in London, the PBC Tokyo Representative Office, the PBC Frankfurt Representative Office, the PBC Representative Office for Africa and a Liaison Office of the PBC at the Caribbean Development Bank.

The bank is organizationally divided into the Legal Affairs Department; the Technology Department; the Internal Auditing Department; the Payment System Department; the Anti-Money Laundering Bureau (Security Bureau); the Financial Survey and Statistics Department; the General Administration Department; the Personnel Department; the Accounting and Treasury Department; the Credit Information System Bureau; the Monetary Policy Department; the State Treasury Bureau; the Research Bureau; the Financial Market Department; the Financial Stability Bureau; the International Department; the Currency, Gold and Silver Bureau (Coordination Office of the State Council's Joint Conference on Combating Currency Counterfeit); and the Education Department of the Communist Party of China (CPC) People's Bank of China Committee. In addition, the People's Bank of China maintains Overseas Representative Offices and several enterprises and institutions directly under it.[12]

Of these, a few of the departments are especially important. The Monetary Policy Department is responsible for the following[13]:

setting the intermediate target of monetary policy and coordinating efforts to achieve the target;
proposing various options of monetary policy instruments and organizing their implementation;
formulating interest rate policy and administrative rules for RMB and foreign currencies and RMB exchange rate policy;
proposing and implementing interest rate adjustment plans and exchange rate reform programs;
formulating and implementing policy and operational rules for the open market operations; providing secretariat service to the Monetary Policy Committee of the PBC.

The Monetary Policy Department works in conjunction with the Financial Market Department, which is tasked with[14]:

formulating administrative rules on the inter-bank lending market, inter-bank bond market, inter-bank foreign exchange market and gold market;

reviewing and approving financial institutions' application to access and exit these markets;
assessing the implication of market instruments for monetary policy and financial stability, and providing relevant policy advice;
monitoring and analyzing financial market developments and preventing cross-market risks;
formulating and implementing overall credit policy in accordance with the State's economic and social development policy and industrial policies.

The Financial Stability Bureau's functions include[15]:

studying the issues concerning coordination of development of banking, securities and insurance industries, and in cooperation with relevant authorities, drawing up reform and development plans of the financial industry;
assessing systemic risks in the financial sector, and proposing and implementing policy measures to prevent and resolve systemic financial risks;
coordinating the adoption of fiscal and monetary policy measures in risk resolution; conducting re-examination on institutions that receive lender-of-last-resort support from the central bank, and participating in the liquidation or restructuring of relevant institutions;
monitoring financial holding companies and cross-sector financial instruments;
examining and approving the restructuring plans for the institutions receiving lender-of-last-resort support from the central bank;
managing PBC's assets that relate to financial risk resolution and financial restructuring.

The State Treasury Bureau has the following responsibilities[16]:

managing the State Treasury, establishing and enforcing the administrative rules for management of the state Treasury;
maintaining single Treasury account for the fiscal departments;
conducting statistical analysis on revenues and expenditures of the Treasury fund;
reporting on a regular basis of revenues and expenditures and the cash balance of the single Treasury account to the fiscal department at the same level, and verifying with it the balance of the single Treasury account;

supervising the collection, allocation and reimbursement of the budget fund and maintaining the safety and integrity of the state Treasury;
and acting as fiscal agent to issue and redeem Treasury bonds and other government securities to financial institutions.

Lastly, the duties of the International Department are[17]:

official contacts and business cooperation between the PBC and the international financial organizations, foreign central banks, and financial authorities in Hong Kong and Macao SARs and Taiwan province;
coordinating opening of the domestic financial industry in accordance with the commitments made by the Chinese government when joining the WTO;
undertaking foreign affairs of the PBC;
and supervising operations of the PBC foreign offices.

Other enterprises and institutions that are directly under the People's Bank of China include the China Anti-Money Laundering Monitoring and Analysis Center, the People's Bank of China Graduate School, the China Financial Publishing House, the Financial News, the China National Clearing Center, the China Banknote Printing and Minting Corporation, the China Gold Coin Incorporation, the China Financial Computerization Corporation, and the China Foreign Exchange Trade System.

9.2.3 Functions of the People's Bank of China

The Sixth Meeting of the Standing Committee of the Tenth National People's Congress amended the law on December 27, 2003, stipulating that the People's Bank of China perform the following 14 major functions[18]:

1. Drafting and enforcing relevant laws, rules and regulations that are related to fulfilling its functions;
2. Formulating and implementing monetary policy in accordance with law;
3. Issuing the Renminbi and administering its circulation;
4. Regulating financial markets, including the inter-bank lending market, the inter-bank bond market, foreign exchange market and gold market;

5. Preventing and mitigating systemic financial risks to safeguard financial stability;
6. Maintaining the Renminbi exchange rate at adaptive and equilibrium level; Holding and managing the state foreign exchange and gold reserves;
7. Managing the State Treasury as fiscal agent;
8. Making payment and settlement rules in collaboration with relevant departments and ensuring normal operation of the payment and settlement systems;
9. Providing guidance to anti-money laundering work in the financial sector and monitoring money-laundering related suspicious fund movement;
10. Developing statistics system for the financial industry and responsible for the consolidation of financial statistics as well as the conduct of economic analysis and forecast
11. Administering credit reporting industry in China and promoting the building up of credit information system;
12. Participating in international financial activities at the capacity of the central bank;
13. Engaging in financial business operations in line with relevant rules;
14. Performing other functions prescribed by the State Council.

Article 12 of the Law of the People's Republic of China on The People's Bank of China directed the People's Bank to establish a Monetary Policy Committee, whose responsibilities, composition and working procedure are determined by the State Council.[19] Monetary policy formulation and adjustment as well as overall macroeconomic management falls under the purview of the Monetary Policy Committee, which is composed of the Governor and two Deputy Governors of the People's Bank of China, a Deputy Secretary General of the State Council, a Vice Minister of the State Development and Reform Commission, a Vice Finance Minister, the Administrator of the State Administration of Foreign Exchange, the Chairman of China Banking Regulatory Commission, the Chairman of China Securities Regulatory Commission, the Chairman of China Insurance Regulatory Commission, the Commissioner of National Bureau of Statistics, the President of the China Association of Banks, and an expert from the academia.[20] The Monetary Policy Committee meets every quarter for its regular meetings; ad hoc meetings may be held if they are

proposed by the Chairman or endorsed by more than one-third of the members of the committee.

The objective of the People's Bank of China's monetary policy is to maintain the stability of the value of the currency and thereby promote economic growth. The monetary policy instruments at the People's Banks's disposal are described in Article 23[21]:

1. requiring banking financial institutions to place deposit reserves at a prescribed ratio;
2. deciding on the benchmark interest rates of the central bank;
3. providing discount services to banking financial institutions that have opened accounts in the People's Bank of China;
4. providing loans to commercial banks;
5. purchasing and selling central government bonds and other government securities, financial bonds, and foreign exchange on the open market; and
6. other monetary policy instruments decided by the State Council.

Specific conditions and procedures for implementing monetary policy using the instruments are determined by the central bank. For instance, it can, as required for the implementation of monetary policy, determine the amount, maturity, interest rate, and the specific form of the loan to commercial banks. However, the maturity of these loans can't exceed one year. An interesting fact about Chinese interest rates is that until 2010, lending rates were denominated in basis points that were multiples of 9 instead of the standard –25: a combination of the 360-day Chinese financial calendar and the ease of calculations when using an abacus. The fiscal year of the People's Bank of China begins on the first day of January and ends on the last day of December.

The People's Bank of China is tasked with managing the state Treasury of China. It oversees the issuance and redemption of central government bonds and other government bonds to financial institutions on behalf of the State Council. It is not allowed to let the government overdraw from its account at the central bank by Article 29; nor is it allowed to directly underwrite central government securities.[22] Article 30 prohibits it from providing loans to local governments, government departments at any level, non-banking financial institutions, and social organizations or individuals, with the exception of loans made to specific non-banking financial institutions when directed by the State Council.

The People's Bank has a regulatory role that is in some ways wider than that of most other central banks given the socialist market economic system of the country; for instance, it includes building up the credit reporting industry and performing miscellaneous tasks assigned to it by the State Council. There is an entire division, the Credit Information System Bureau, devoted to it. The bureau is responsible for managing the credit information system, developing plans and administrative rules for credit information collection and relevant risk evaluation standards, and this being a new concept in China, promoting public awareness of financial risks and knowledge.

China maintains a relatively fixed exchange rate relative to the US dollar and other major currencies. The central bank has let the currency appreciate somewhat in recent years as the country transitions from an export-led growth strategy to a greater reliance on domestic consumption, but the currency is still estimated to be considerably undervalued.

Standing at US $3.14 trillion at the end of 2017, the People's Bank of China's cash reserves are the highest in the world. Japan is a distant second US $1.26 trillion.[23] The year 2017 marked the first year of increase in reserves since 2014, when it had peaked at around US $4 trillion. The fall was due to Chinese individuals and companies trying to move money out of the country, the depreciation of the renminbi, and the Chinese stock market crash. The subsequent rise was due to a combination of capital controls designed to limit the capital outflow from China and the weakening US dollar, as the exchange rate has changed from 6.97 yuan to the dollar to 6.49 yuan to the dollar in just a year, increasing the incentive for corporations and individuals to keep money within the economy. The former is reflected in a number of new regulations, one of the most prominent being the December 2017 State Administration of Foreign Exchange announcement that individuals are allowed to withdraw a maximum of 100,000 yuan (approximately US $15,400) per year from their Chinese bank accounts while abroad, spread over all the separate bank accounts or ATM cards the individual might have. Previously they had been allowed to withdraw a maximum of 100,000 yuan per card per year. Similarly, the National Development and Reform Commission (formerly the State Development Planning Commission), the agency tasked with formulating and implementing strategies of national economic and social development, annual plans, medium and long-term development plans, has ramped up its scrutiny of out-of-country acquisitions by private Chinese companies and has brought their overseas subsidiaries under its oversight.[24]

The year 2017 was relatively sluggish for the Chinese economy. The annual growth rate had fallen below seven percent, and investment growth was moderate. However, in many ways, the economy was on the right track. The cooldown of runaway growth had resulted in the consumer price index-based inflation rate falling to 1.6 percent per year. Domestic consumer demand was strong. Outstanding loans in domestic and foreign currencies from all financial institutions increased by 12.5 percent. The Nineteenth National Congress of the Communist Party of China reported that socialism with Chinese characteristics had entered a new era, with the economy having moved from a rapid growth stage to a stage of high quality development. It felt that the country was at a pivotal moment, where the principal contradiction facing Chinese society had evolved into one between unbalanced and inadequate development and the Chinese people's ever-growing needs for a better life. Hence the Chinese growth model needed to be modified new drivers of economic growth fostered. The Executive Summary of the China Monetary Policy Report, Quarter Three 2017 hence states[25]:

> The People's Bank of China (PBC) has continued to implement a sound and neutral monetary policy. It has endeavored to create favorable monetary and financial environments by closely monitoring changes in the liquidity situation and market expectations, strengthening the use of preemptive adjustments, fine-tunings, and communications with the market, which has helped to stabilize growth, adjust the structure, promote reform, improve social welfare, reduce the leverage ratio, contain bubbles, and prevent risks. A mix of monetary-policy instruments, such as the repo and the Medium-term Lending Facility (MLF), were employed to keep liquidity basically stable. Implementation of the targeted required reserve ratio cut on inclusive financing was announced. Instruments such as central-bank lending for the agro-linked sector, small businesses, and poverty alleviation and Pledged Supplementary Lending were employed to guide the credit structure, support structural adjustments, transformation, and upgrading, and allocate more financial resources to priority areas and weak links in the economy. The macro-prudential policy framework was further improved, making it clear that the term for inter-bank certificates of deposit shall not exceed one year. Preparations were made for the inclusion of inter-bank certificates of deposit in the compilation of the inter-bank liability ratio in the macro-prudential assessment (MPA), and efforts were made to explore ways to include green financing in the MPA system. The macro-prudential management policy on cross-border capital flows was adjusted, reducing the risk

reserve requirement on forward foreign-exchange sales to zero. Looking-through provisions on the deposit of reserves in the onshore agent banks by overseas financial institutions were discontinued.

In general, the sound and neutral monetary policy has produced fairly good results. Liquidity in the banking system remained neutral and appropriate; money, credit, and all-system financing aggregates witnessed steady growth; interest rates were at appropriate levels; the flexibility of the RMB exchange rate against the USD was further enhanced, with more notable two-way fluctuations, and expectations for the RMB exchange rate were basically stable.

9.2.4 Autonomy of the People's Bank of China

The People's Bank of China has limited political and operational independence. Article 5 of the Law of the People's Republic of China on The People's Bank of China states that the People's Bank of China shall submit to the State Council for approval all of its decisions regarding the annual money supply, interest rates, exchange rates, and other important matters as specified by the State Council, and implement these decisions. It is also required to file these decisions with the State Council for recordkeeping purposes. The People's Bank of China is expected to promptly implement its decisions on matters concerning monetary policy other than those specified in the preceding sentence, and similarly file them with the State Council for recordkeeping purposes.[26]

In a similar vein, article 33 allows the People's Bank of China to recommend that the banking regulatory authority under the State Council inspect specific banking institutions for purposes of implementing monetary policy or maintaining financial stability. The State Council has to respond to the People's Bank within 30 days from the date it receives the recommendation. However, the central bank doesn't have the authority to carry out the inspections on its own. It does have the power to demand that a banking financial institution submit its balance sheet, income statement, other financial statements, statistical reports, and information. It can also inspect and supervise banking financial institutions that incur difficulties in making payments that might trigger financial risk down the line as per article 34, albeit with the prior approval of the State Council.

Article 38 states that the People's Bank of China will maintain an independent budget management system, but its control over expenditure is limited in practice. This budget of the People's Bank is incorporated into

the central budget after it has been examined and verified by the fiscal department under the State Council. The implementation of the budget is also subject to supervision of the aforementioned fiscal department. As per article 39, the People's Bank turns over to the state Treasury its total net profit, which is derived by deducting its expenditures in a fiscal year from its income during the same period and withdrawing general reserve at a percentage that is determined by the fiscal department. Losses incurred by the People's Bank of China are financed by appropriations from the state.

In an interview, the Governor of the People's Bank of China, Zhou Xiaochuan, said that he was okay with the lack of political independence. The close ties between the Communist Party of China, the People's Bank of China, and other government departments make it easier to co-ordinate policies and push economic reforms further and faster. According to economic historian Barry Eichengreen, "Leaving politics aside, a century of history and oodles of empirical work show clearly that a central bank that is independent but still accountable is better able to make the credible commitments and hard decisions that we expect of monetary policy makers and then stick to them." While this is definitely true of developed countries, this may not be as true for China. For instance, Yi Gang, one of the Deputy Governors, is part of the group that advises the seven-member Politburo Standing Committee on matters of economic policy. As a result of these overlapping jurisdictions, representatives of the People's Bank of China get to have a say on almost every economic decision. China is by no means the only developing country with this set-up; the central banks of India and South Africa both report to their respective finance ministers, and the Brazilian central bank chooses an inflation target jointly with the Brazilian government.[27]

Tinggui (2001) points out that under the current set-up, it is not operationally necessary for the People's Bank of China to be separated from the government as all the decisions regarding the economy are made by the leadership of the State Council. The key is for the People's Bank to be independent of the Treasury, the national planning commission, other departments that regulate the economy, and the local governments. That is indeed the case in China. The People's Bank of China can be viewed as a department of the State Council, and it hence directly falls under the central government and has equal status with the Treasury.[28]

9.2.5 The Currency of the People's Republic of China

Chapter 3 of the Law of the People's Republic of China on The People's Bank of China deals with the renminbi, which translates as "people's currency." Article 16 decrees that the legal tender of the People's Republic of China is renminbi (RMB). The ISO 4217 code for the currency is CNY, and the currency symbol is 元. The renminbi can be used to repay all public or private debts within the country, and no organization or individual has the right to refuse it. The unit of the renminbi is the yuan and the units of the fractional currency of the renminbi are the jiao and the fen; one yuan is worth ten jiao, and each jiao is in turn worth ten fen. Article 18 states that the note and coins of renminbi shall be printed, minted and issued by the People's Bank of China, who will publicly announce the date of issue, face value, design, pattern and specifications of new editions of renminbi notes and coins.[29] Bank notes are issued in the denominations of 1, 2 and 5 jiao (¥0.1, ¥0.2 and ¥0.5 respectively) and 1, 2, 5, 10, 20, 50 and 100 yuan; other denominations of bank notes previously issued but currently discontinued are 200, 500, 1000, 5000, 10,000 and 50,000 yuans. Coins are issued in the denominations of one, two and five fen; one and five jiao; and one yuan. The renminbi is not legal tender in Hong Kong and Macau, but are widely used in both regions. The currency became the first from developing countries to be included in the International Monetary Fund's special drawing rights (SDR) on October 1, 2016.

The new currency was first introduced by the People's Bank of China on December 1, 1948. It was referred to by a variety of names, including new currency and People's Bank of China notes. The term renminbi was used for the first time in June 1949. China was in the midst of civil war at the time, where the region under the control of the Nationalist government had its own currency. Hence the new currency was initially only used in the areas held by the Communist Party of China. It began to be used nationwide after the Nationalist government moved to Taiwan. Inflation in China was extremely high at the time due to the political turmoil and resulting shortages, and in order to bring it under control, the People's Bank introduced a second series of the renminbi that replaced the first series at the rate of 1 new renminbi to 10,000 old renminbi.

The renminbi was officially pegged to the US dollar until 2005. It was also significantly overvalued, with the exchange rate fixed at 2.46 RMB to the US dollar from 1951 to 1971, which was subsequently revised to 1.68 RMB to the US dollar by 1978 and 1.5 RMB to the US dollar by 1981.

China followed an import substitution strategy at the time with its Five Year Plans focused on the development of heavy industries, or the commanding heights of the economy. The artificial overvaluation of the renminbi enabled it to import industrial machinery at more affordable rates. However, the State Council introduced an internal settlement rate of 2.8 RMB to the US dollar in 1981. This rate applied to all trade transactions that were conducted via the swap centers that were sanctioned by the government, where exporting firms were allowed to sell their retained foreign earnings. This internal rate operated alongside an official exchange rate of RMB1.5 to the US dollar, which still applied to all non-trade transactions such as foreign direct investment. Foreign exchange certificates (*waihuiquan* in pinyin), which were in effect a separate currency, existed alongside the renminbi for use by foreigners within China. The exchange rate regime gradually moved away from this dual exchange rate regime by the middle of the nineties. Many of the restrictions on current account transactions were relaxed, though capital account restrictions remained, especially on outflows.[30]

After successive devaluations, China officially merged the internal and official exchange rates and introduced further current account liberalization measures on January 1, 1994. Full current account convertibility followed about three years later in December 1996. The renminbi slowly appreciated over the next decade, except during the East Asian financial crisis of 1997–1998. China officially ended the fixed peg between the renminbi and the US dollar and switched to a managed float regime on July 21, 2005, partly as a result of pressure from the George W. Bush administration; the RMB was allowed to float within a narrow band with respect to a basket of currencies that included the US dollar, the euro, the South Korean won and the Japanese yen. The valuation of the currency almost immediately changed from 8.3 RMB to the US dollar to 8.1 RMB to the US dollar, and it continued to gradually rise. China decided to suspend the managed float regime and go back to a fixed peg with the US dollar when the global financial crisis roiled the markets in 2008. It reverted to the managed float regime in June 2010 and widened the acceptable trading band from a half percent to a one percent daily range. While market forces now play some role in the valuation of the RMB and it has steadily appreciated to the current level of 6.33 RMB to the US dollar, the People's Bank of China typically heavily intervenes in the foreign exchange market in order to maintain the desired exchange rate. The central bank sells bills in the Chinese domestic market and increases the

required reserve ratio of commercial banks to absorb much of the massive quantities of foreign exchange that the country earns from its exports. It is also reflected in the size of the foreign exchange reserves of the People's Bank of China, which is the largest in the world by a wide margin.[31]

9.2.6 The Historical Currencies of Tibet and Xinjiang

Of the Chinese provinces and autonomous regions, Tibet was the last jurisdiction to use its own currency. Bartering was the standard payment system in Tibet well into the seventeenth century. Standard barter items were horses from the northeastern Tibetan region of Amdo (*Ānduō* in pinyin), salt, gold dust and horseshoe-shaped silver ingots from China known locally as *rta rmig ma*. Various consumer goods, especially compressed tea bricks known locally as *ja sbag*, were used to make smaller trades. The first coins to circulate in Tibet were silver coins from Nepal, along with some coinage from China, India and Xinjiang as a result of trade or donations to monasteries. Limited quantities of silver coins modeled after the Nepali coins were struck in Tibet in 1763–1764 and in 1785. The first mass-produced coins date back to 1792; these were also made of alloy silver and were known as *Kong-par tangkas* since they were first produced in Kongpo province in southeastern Tibet before the production facilities moved to Lhasa. The first pure silver coins, known as *dngul tam* or simply *tangkas*, were mass-produced in Lhasa in 1793. China opened a mint in Lhasa in 1792. Both of the aforementioned types of coins were struck with Chinese help, and carried inscriptions in both Tibetan and Chinese. The tangka was subdivided into 15 skar or 1.5 sho, and these circulated parallely with the Kong-par tangkas, which continued to be produced until 1891. Plans to introduce copper coins in Tibet in 1791 were abandoned due to the high cost of transporting the copper from China to Tibet, and did not commence until 1909.

The Chinese influence over Tibet eventually weakened, and the last Sino-Tibetan coins were struck in 1836. From 1840 onwards Tibetan coins only had Tibetan inscriptions and designs on them. An additional currency unit called the *dngul srang* or simply srang was introduced in 1909; each srang was worth 10 sho or 100 skar, which made a srang equivalent to 6 and 2/3rd of a tangka. While all of the early coins were struck at the mint in Lhasa located below the Potala Palace, which was the residence of the Dalai Lama, four mints handled the production of coins in the twentieth century. These were located in Dodpal, Dode, Ser-Khang

and Tapchi. Tibet continued to produce coins made from copper (a half srang piece) until 1953 and silver (a five srang piece) until 1954. The denominations of thee coins ranged from half skar to ten srang. It also produced gold 20 srang coins from 1918 to 1921. The Sichuan rupee, half-rupee and quarter rupee, modeled after the British Indian rupee but struck by the Chinese between 1912 and 1942 in the cities of Chengdu and Kangding in Sichuan, also circulated in Tibet. Tibet started issuing bank notes in January 1913; the denominations were 5, 10, 15, 25, and 50 tam. One hundred tam bank notes were introduced in 1937. A tam was equivalent to a tangka. The Seventeen Point Agreement that was negotiated in 1950 between the People's Republic of China and the administration of the 14th Dalai Lama affirmed Chinese suzerainty over Tibet, and the renminbi completely replaced the Tibetan currency in 1959.

Another autonomous region, Xinjiang (officially the Xinjiang Uygur Autonomous Region), historically also issued its own coins. Xinjiang was initially a vassal state and subsequently a province of the Qing dynasty; then went through a turbulent phase initially as the self-proclaimed First East Turkistan Republic, followed by the Soviet-backed Second East Turkestan Republic; and finally became a part of the People's Republic of China in 1949. The oldest coins from the region carry inscriptions in Kharoshthi (a script used in the northwest regions of ancient India) and/or Chinese. This was replaced by Arabic after the advent of Islam. The Qing dynasty started striking copper coins for the region starting in 1760. These coins carried inscriptions in Chinese, Manchu and Turki, and stood out by virtue of their red color as the coins elsewhere in the Qing Empire were made of brass. Nicknamed "red cash," the last of these copper coins were struck in 1909 and carried the name of Puyi, China's last emperor.

9.3 The Special Administrative Regions: Hong Kong and Macau

9.3.1 Hong Kong S.A.R.

Hong Kong is a special administrative region or autonomous territory on the Pearl River estuary, next to the southern Chinese province of Guangdong. The British formally took possession of the island of Hong Kong on January 26, 1841, under the Convention of Chuenpi. The Kowloon peninsula, which is part of the mainland, came into British

possession in 1860; the New Territories followed in 1898. Following the terms of the Sino-British Joint Declaration, which was signed in Beijing by the Chinese Premier Zhao Ziyang and the British Prime Minister Margaret Thatcher on December 19, 1984, the colony was handed back by the United Kingdom to China on July 1, 1997.

The de facto central bank of Hong Kong is the Hong Kong Monetary Authority. The authority was founded on April 1, 1993, with the merger of the Office of the Exchange Fund and the Office of the Commissioner of Banking. The Hong Kong Monetary Authority is responsible for maintaining monetary and banking stability, and its specific functions are[32]:

- maintaining currency stability within the framework of the Linked Exchange Rate system
- promoting the stability and integrity of the financial system, including the banking system
- helping to maintain Hong Kong's status as an international financial centre, including the maintenance and development of Hong Kong's financial infrastructure
- managing the Exchange Fund.

The currency of Hong Kong is the Hong Kong dollar (HKD), which also circulates in neighboring Macau. It is divided into 100 cents. After an initial period when there was no local currency and Chinese cash coins, Indian rupees and Spanish and Mexican eight reales all circulated in the territory, the British started minting coins for use in Hong Kong in 1863. These were the first Hong Kong dollars, and were meant to supplement the foreign coins that were already being used by the locals. The coins were initially supplied from the Royal Mint in London. A mint was opened in Hong Kong in 1866, but closed down two years later after posting significant losses, and coins eventually began to be supplied from the mints in Calcutta and Bombay in British India. The earliest bank notes to circulate in Hong Kong, denominated in dollars, were issued by the Hong Kong and Shanghai Banking Corporation and the Chartered Bank of India, Australia and China in the 1860s.[33]

Three commercial banks, The Hongkong and Shanghai Banking Corporation, Bank of China and Standard Chartered, currently design and issue bank notes for general circulation in Hong Kong under the terms of the license granted to them by the Hong Kong Monetary

Authority. The denominations issued by them are HK $20, HK $50, HK $100, HK $500 and HK $1000. The ten Hong Kong dollar bank note, on the other hand, and all the denominations of coins are issued by the Government of Hong Kong. The monetary policy objective of Hong Kong is currency stability, which the authority defines as a stable external exchange value of the currency of Hong Kong, in terms of its exchange rate in the foreign exchange market against the US dollar, at around HK $7.80 to US $1. The structure of the monetary system is characterized by a currency board arrangement. This requires the Hong Kong dollar Monetary Base to be at least 100 percent backed by, and changes in it to be 100 percent matched by corresponding changes in, US dollar reserves held in the Exchange Fund at the fixed exchange rate of HK $7.80 to US $1. Hong Kong's Exchange Fund is one of the largest in the world, and its primary objective, as laid down in the Exchange Fund Ordinance, is to affect, either directly or indirectly, the exchange value of the currency of Hong Kong. Its secondary objective is to maintain the stability and integrity of Hong Kong's monetary and financial systems to help maintain Hong Kong as an international financial center.[34]

The Hong Kong Monetary Authority also plays the supervisory role in promoting financial stability by ensuring that banks are resilient to shocks, are able to recover their position in response to crisis, and avoid failure. The authority is hence responsible for the prudential regulation and supervision of banking and deposit-taking businesses in Hong Kong. It is also responsible for the authorization of licensed banks, restricted license banks and deposit-taking companies in Hong Kong, which are collectively known as (the three types of) authorized institutions. Licensed banks are the only institutions permitted to carry on banking business in Hong Kong. This term is often used interchangeably with bank. A restricted license bank may take time, call or notice deposits from members of the public in amounts of HK $500,000 and above without restriction on maturity. Restricted license banks generally engage in activities such as merchant banking and capital market operations. Deposit-taking companies are restricted to taking deposits of HK $100,000 or more with an original term to maturity of at least three months. These companies are mostly owned by, or otherwise associated with, banks. They engage in a range of specialized activities, including consumer finance, trade finance and securities business (Fig. 9.1).[35]

Fig. 9.1 Hong Kong and Macau special administrative regions. Source: Commons

9.3.2 Macau S.A.R.

Macau is a special administrative region that was leased to Portugal by the Chinese in 1557 in return for an annual rent of 500 taels, a couple of decades after Portuguese traders first obtained trading rights and the right to anchor their anchor ships in the Macau harbor in 1535. The Portuguese returned Macau to China on December 20, 1999 as per the terms of the Joint Declaration on the Question of Macau or Sino-Portuguese Joint Declaration that was signed by the Chinese Premier Zhao Ziyang and the Portuguese President Aníbal António Cavaco Silva on April 13, 1987. At the time of the handover, Macau was the last remaining European territory in Asia, with the exception of the British Indian Ocean Territory.

The Monetary Authority of Macao (*Autoridade Monetária de Macau* or AMCM in Portuguese) is responsible for carrying out the duties of the central bank in Macau. Its origins can be traced back to the creation of the Issuing Institute of Macau (*Instituto Emissor de Macau* or IEM in Portuguese) in 1980, which regulated the Macanese financial sector, issued the pataca, which is the local currency, and managed the exchange reserves of Macau. This evolved into the Monetary and Foreign Exchange Authority of Macao (AMCM), which was created on July 1, 1989, after the government realized the need for defining the authority, responsibilities and supervisory practices of the institute more clearly, as well as granting it greater administrative, financial and patrimonial autonomy.[36]

The AMCM currently supervises monetary and financial operations based on the relevant regulatory statutes. It also advises the government of Macau on policies that facilitate the sustainability of the long-term growth of the financial sector, which in turn ensure long-term financial stability and development of the territory. The AMCM is also charged with streamlining the legal framework as well as adopting international best practices for the development of Macau as a financial services center, along the lines of Hong Kong. The specific responsibilities of the AMCM are[37]:

a. To advise and assist the Chief Executive in formulating and applying monetary, financial, exchange rate and insurance policies;
b. To guide, co-ordinate and oversee the monetary, financial, foreign exchange and insurance markets, ensure their smooth operation and supervise the actions of those operating within them according to the terms established in the regulatory statutes governing each respective area;
c. To monitor internal monetary stability and the external solvency of the local currency, ensuring its full convertibility;
d. To exercise the functions of a central monetary depository and manage the territory's currency reserves and other foreign assets;
e. To monitor the stability of the financial system.

The currency of Macau is the Macanese pataca (MOP), which is divided into 100 avos. The pataca was initially introduced not as a separate currency but as a unit of account in Macau and Portuguese-administered Timor in 1894. Like Hong Kong, a number of foreign currencies circulated in Macau at the time. Once the decision was made to introduce a

dedicated Macanese currency, the Lisbon-based bank Banco Nacional Ultramarino was granted the exclusive right to issue bank notes in various denominations of the pataca by the Macanese government in 1905. The first batch of pataca bank notes entered into circulation in Macao on January 27, 1906. The Macanese government transferred the exclusive right to issue patacas from the Banco Nacional Ultramarino to the IEM in 1980. The Banco Nacional Ultramarino continued to physically issue the pataca bank notes; however, its status was altered and it now became the agent bank of the IEM. When the Macanese government renewed its note issuance agreement with the Banco Nacional Ultramarino on October 13, 1995, the Bank of China (Macao Branch) additionally became the second note-issuing bank. Like Hong Kong, Macau also follows a currency board arrangement.

The Macanese pataca is 100 percent backed by foreign exchange reserves, which for the case of Macau is the Hong Kong dollar. The note-issuing banks of Macau are required to pay the AMCM an equivalent amount of Hong Kong dollars at a fixed rate of HK $1 to MOP $1.03 for non-interest bearing Certificate of Indebtedness as legal backing for the bank note issues. The AMCM is hence statutorily obligated to convert the Macanese pataca, on demand, into the Hong Kong dollar at this fixed exchange rate. As the Hong Kong dollar is linked to the US dollar under its own arrangement, this implies that the pataca is indirectly pegged to the US dollar at an exchange rate of approximately US $1 to MOP $8.[38]

9.4 The Republic of China (Taiwan)

9.4.1 Central Banking in the Republic of China (Taiwan)

The People's Republic of China and the Republic of China (Taiwan) have a shared monetary history in the Central Bank of the Republic of China (Taiwan). The bank was established as the Central Bank of China in Guangzhou in 1924. Its first governor was Soong Tzu-wen (also known as T. V. Soong), the brother to the three Soong sisters and the brothers-in-law of Dr. Sun Yat-sen, President Chiang Kai-shek and financier H. H. Kung. The Central Bank of China moved to Taiwan in December 1949 along with the Kuomintang government. However, it was effectively shuttered for more than a decade; the Bank of Taiwan served as the de facto central bank of Taiwan from 1949 to 1961. The Bank of Taiwan was

established in Taihoku (present day Taipei) as the central bank of Taiwan by the Japanese in 1899 following the passage of the Bank Act of Taiwan, 1897. The Kuomintang took over the operations of the Bank of Taiwan after the Japanese left, and officially became the first government-owned bank on the island on May 20, 1946.[39] The bank was conferred the authority to issue currency, managed the financial affairs of the national Treasury and performed other traditional central banking tasks alongside its operations as a general commercial bank, hence continuing to perform a dual role that began under the Japanese.[40,41]

The Central Bank of the Republic of China (Taiwan) once again resumed its role as the central bank in 1961; Bank of Taiwan accordingly reconstituted itself solely as a commercial bank. According to the Central Bank of the Republic of China (Taiwan) Act, the Bank's operational objectives include promoting financial stability, guiding sound banking operations, maintaining the stability of the internal and external value of the currency and, within the scope of the above three objectives, fostering economic development.[42] The Central Bank of the Republic of China carries out eight operations in order to achieve its operational objectives: monetary management; foreign exchange management; financial inspection; payment and settlement systems; currency issuance; fiscal agency functions; participation in international activities; and statistics and research.

Taiwan promulgated a revised version of the Central Bank of the Republic of China Act on November 8, 1979, placing the bank under the supervision of the Executive Yuan (the Taiwanese cabinet).[43] The bank continues to independently set monetary policy for Taiwan. It uses a combination of various monetary policy instruments, including open market operations, discounts and temporary operations, required reserve ratios and re-deposits of financial institutions. It determines the bank rate for Taiwan, which is significantly lower than that of China's.

The Central Bank of the Republic of China (Taiwan), in its capacity as the central bank, acts as the fiscal agent of the Taiwanese government and accordingly performs certain tasks for the National Treasury Administration (NTA), an agency of the Ministry of Finance of Taiwan. It handles the Treasury deposit account; manages the deposit accounts of central government agencies; and issues, registers, redeems and makes interest payments on central government bonds as well as Treasury bills.

The Republic of China (Taiwan) has full membership status in the Asian Development Bank (ADB), the Central American Bank for

Economic Integration (CABEI) and the Conference of Governors of South East Asian Central Banks (SEACEN), and the Central Bank of the Republic of China (Taiwan) plays an active role in these associations.

9.4.2 *Autonomy of the Central Bank of the Republic of China (Taiwan)*

Most countries have moved in the direction of granting more independence to their central banks over the years. As a result, many central banks enjoy significantly higher levels of autonomy today than they did even a couple of decades ago. The Central Bank of the Republic of China (Taiwan) is an exception in this regard. The level of legal independence of the Central Bank of the Republic of China (Taiwan) has not changed since the Central Bank of the Republic of China Act was amended in 1979. The act was revised again in 1997 and in 2002, but the emendations were unrelated to the legal independence of the bank.[44] According to the Cukierman et al. (1992) central bank independence index, the Central Bank of the Republic of China (Taiwan) ranks 64 among the 72 countries in the sample.[45] The ranking is similarly low in Crowe and Meade (2007).[46]

However, Taiwan has been very successful at combating inflation despite its low central bank independence. According to Cover et al. (2002), Taiwanese monetary policy has been close to optimal in terms of inflation control.[47] Taiwan pegged the New Taiwan dollar to the US dollar for a while, which stabilized domestic prices and resulted in an inflation rate close to the US inflation rate during the eighties. However, the United States successfully pressured Taiwan to allow the New Taiwan dollar to appreciate, resulting in Taiwan having to give up this inflation control mechanism. In addition, the natural rate of unemployment has been going up in Taiwan over time, increasing the incentive to allow higher inflation and making a more independent central bank a greater necessity.[48] The political science literature offers another possible solution to this puzzle. In countries that are governed by long-entrenched conservative governments, the government can focus on long-term economic growth and does not have an incentive to create political business cycles to inflate the economy. The Taiwanese presidency was continuously held by the Kuomintang until Chen Shui-bian of the Democratic Progressive Party won it for the first time in March 2000.[49] Virtually guaranteed of re-election, the Kuomintang government was able to maintain low inflation despite having a central bank with limited independence. Taiwan has

moved to a two-party system since then, lowering the chances of the incumbent government getting re-elected. This, once again, underscores the need for a more autonomous central bank. A third explanation comes from Romer (1993), who said that open economies have a lower incentive to inflate as they could suffer more from the real depreciation that is caused by inflation.[50] Taiwan ranks near the top in terms of most measures of openness.

9.4.3 Currency of the Republic of China (Taiwan)

Under the Japanese, the currency of Taiwan from 1895 until 1946 was the Taiwanese yen, which was at par with the Japanese yen. One yen was divided into one hundred sen. The Japanese yen also circulated freely on the island during this period. Taiwan's initial currency after the departure of the Japanese was the Taiwan dollar (also referred to as the Old Taiwan dollar) issued by the Bank of Taiwan from 1946 to 1949. The Taiwan dollar replaced the Taiwanese yen at par. The notes were initially printed in Shanghai and later in Taipei; no coins were issued as there was no lower denomination for the currency. However, like the People's Republic of China, Taiwan also suffered from hyperinflation as a result of the civil war, which decimated the value of the Taiwan dollar. The decision was made to replace the Taiwan dollar by the New Taiwan dollar on June 15, 1949, at the rate of NT$1 for 40,000 Taiwan dollars. People were originally asked to exchange all currency by December 31, 1949; this date was later extended to January 14, 1950. Bank notes that hadn't been exchanged by this deadline was declared void. Taiwan also issued New Taiwan dollar notes exclusively for use in the outlying islands of Kinmen, Dachen and Matsu in 1952, 1953 and 1959 respectively.[51] Despite the New Taiwan dollar being the de facto currency of Taiwan, the silver yuan remained the official currency for decades. This finally ended in 2000, when the Central Bank of the Republic of China (Taiwan) took over the issuance of New Taiwan dollars from the Bank of Taiwan and the New Taiwan dollar became Taiwan's national currency. Older bank notes issued by the Bank of Taiwan were taken out of circulation at this time. Coins are currently issued in denominations of NT$1, NT$5, NT$10, NT$20 and NT$50; while bank notes are issued in denominations of NT$100, NT$200, NT$500, NT$1000 and NT$2000.

The Central Bank of the Republic of China (Taiwan) has been responsible for issuing the New Taiwan dollar since July 1961. The bank designs

and produces notes and coins, and removes damaged currency from circulation. The printing and minting of the New Taiwan dollar bills and coins are the responsibility of the Central Engraving and Printing Plant and the Central Mint respectively, both of which are overseen by the bank. The quantity of money issued depends on seasonal factors, institutional factors and the state of the economy. The greatest increase in currency issued typically happens around the Chinese Lunar New Year, when spending levels surge.[52] Damaged currency that is redeemable at full or partial value have to meet specific criteria. For replacement at full value, a bank note could be damaged, but the remainder makes up more than three-quarters of the original banknote; the note could be damaged, but all the fragments remain and fit each other; or the note could be soiled or damaged by smoke, but the signatures, serial numbers, printed texts, and images are still recognizable. A bank note whose remaining parts make up more than half but less than three-quarters of the original can be redeemed at half the face value. Coins may be redeemed at full face value if less than five percent of statutory weight has been lost through normal wear and tear, and if they are still identifiable by means of text or patterns.[53] The actual injection of currency is undertaken in conjunction with the Bank of Taiwan, which is a state-owned commercial bank; Bank of Taiwan is also responsible for the sorting of returned bank notes.

The bank follows a managed float regime for the New Taiwan dollar. The exchange rate is mostly determined by market forces, though the central bank occasionally steps in during times of excessive volatility caused by seasonal factors or spikes in short-term capital flows. There are no restrictions on financial flows not involving the New Taiwan dollar or on financial flows involving the New Taiwan dollar for goods and service trade or on approved direct and securities investments; however, there are certain restrictions on short-term remittances.[54]

Notes

1. The Joint Savings Society of the Four Banks saw its deposits soar. The official banking report of 1936 shows that the Joint Savings Society held 78,751,000 yuan out of the total of 504,503,000 yuan in national savings, which represented a 15.61 percent market share.
2. Ji, Z. (2003). *A History of Modern Shanghai Banking: The Rise and Decline of China's Finance Capitalism*. Armonk, New York & London, England: ME Sharpe.
3. Ibid.

4. While Bank of China ceased issuing bank notes in 1942, it continued to issue Foreign Exchange Certificates to foreigners until 1990. It also issued two special commemorative issues, the first to mark the fiftieth anniversary of the founding of the People's Republic of China and the second to mark the new millennium.
5. Dr. H. H. Kung served as the Minister of Industry and Commerce from 1928 to 1931 and as the Minister of Finance from 1933 to 1944. He was also the Governor of the Central Bank of China from 1933 to 1945.
6. Bank of China. Bank of China Overview. http://www.boc.cn/en/aboutboc/ab1/200809/t20080901_1601737.html (accessed June 28, 2017).
7. The World's Largest Public Companies. (2018). *Forbes*. https://www.forbes.com/global2000/list/ (accessed August 21, 2018).
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10. Law of the People's Republic of China on the People's Bank of China. (2007). National People's Congress of the People's Republic of China. www.npc.gov.cn/englishnpc/Law/2007-12/12/content_1383712.htm (accessed June 24, 2017).
11. Enterprises and Institutions directly under the PBC. (2009, June 15). The People's Bank of China. http://www.pbc.gov.cn/english/131364/2840385/index.html (accessed June 18, 2017).
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18. About PBC. (2018, August 21). The People's Bank of China. http://www.pbc.gov.cn/english/130712/index.html (accessed August 21, 2018).
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20. Monetary Policy Committee. (2018, August 21). The People's Bank of China. http://www.pbc.gov.cn/english/130727/130873/index.html (accessed August 21, 2018).
21. Law of the People's Republic of China on the People's Bank of China. (2007). National People's Congress of the People's Republic of China. www.npc.gov.cn/englishnpc/Law/2007-12/12/content_1383712.htm (accessed June 24, 2017).
22. It should be noted that simply because the Treasury is legally not allowed to overdraw the account doesn't mean that always translate into practice. For instance, the Treasury account was overdrawn to the tune of 180 billion renminbi at the end of 1994. This amounted to 12.2 percent of the total assets of the People's Bank of China at the time.
23. Switzerland, Saudi Arabia and Russia round out the top five.
24. Richter, W. (2018, January 8). China's foreign-exchange reserves rise for the first time in 3 years – but there's a catch. *Business Insider*. http://www.businessinsider.com/china-foreign-exchange-dollar-reserves-rise-most-in-3-years-2018-1 (accessed August 21, 2018).
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CHAPTER 10

Japan

10.1 The Japanese Financial System in the Days Before the Meiji Restoration

During the Tokugawa shogunate, also known as the Edo period as it was established in Edo (the former name of Tokyo) on March 24, 1603, Japan had a pretty sophisticated market economy. Osaka developed as the main commercial and financial center, Kyoto was the industrial center because of its technological advancements, and Edo, which is present-day Tokyo was the political and commercial center where the shōgun and the families of the feudal lords resided. Large tracts of land in Japan are mountainous and not arable, but agricultural production was quite widespread in the country. Taxes were imposed in the form of *koku*, which was a unit of rice; one *koku* represents a volume of 180 liters, or the equivalent of annual rice consumption per capita in Japan. Feudal lords shipped their rice to Osaka to sell it to merchants in exchange for money, which they used to finance their other purchases. However, as rice production was seasonal, many of the feudal lords were forced to depend on commercial credit provided by wealthy merchants during the lean months of the year. The tax collection became gradually monetized over time; during the eighteenth century only about a third of the taxes were collected in the form of cash, but this proportion went up significantly during the nineteenth century. As for non-agricultural goods, commodities from all over Japan were sent to Osaka and were then redistributed throughout the country, including Edo.[1]

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During the Edo era, each of the approximately 300 feudal areas or *han* of Japan issued their own paper currency prior to the Meiji Restoration.[2,3] This currency was in the form of scrips called *hansatsu* for usage within the fief, which was controlled by a *daimyo* or territorial lord. Each *han* was fairly autonomous, with their own military, taxes, transit duties and highway barriers. A scrip is a substitute for legal tender under certain circumstances and can be used as cash. The Tokugawa shogunate issued gold, silver and copper coins in units named *ryo*, *monme* and *mon* respectively, and the paper *hansatsu* supplemented them at the local level. They usually had a face value marked in silver coins, though some also had face values that were marked in copper and gold coins. The scrips traded at par when backed by commodities such as rice or other local products that were in demand in the bigger cities such as Edo, Kyoto and Osaka. Often, however, too many of them were issued and they would hence trade at a discount. Another downside of holding these scrips was forfeiture, as political turmoil meant that the *han* boundaries were always shifting and the new *daimyo* could choose to either honor the old scrips or not. In the absence of formal banks, moneychangers, who were often doubled as merchants engaged in other trades, carried out banking businesses; they extended loans, exchanged currency, accepted deposits, and established networks with each other. Those who obtained an official moneychangers' license from the authorities were known as *ryogaesho*.

The Meiji Restoration, which refers to the restoration of imperial rule in Japan, shook up Japan in 1868. The Japanese economy and its political system saw many changes during the Meiji era which corresponded to the reign of Emperor Meiji, beginning on October 23, 1868, and continuing until his death on July 30, 1912. The reforms were governed by the Oath in Five Articles or the Charter Oath (*Gokajō no Goseimon* in Japanese), primarily authored by the samurai and statesman Yuri Kimimasa along with a group of other samurai from southwestern Japan, proclaimed by Emperor Meiji in front of the *kami* or deities, and promulgated on April 7, 1868. The oath consisted of five promises[4]:

1. Deliberative assemblies shall be widely established and all matters decided by public discussion.
2. All classes, high and low, shall unite in vigorously carrying out the administration of affairs of state.
3. The common people, no less than the civil and military officials, shall each be allowed to pursue his own calling so that there may be no discontent.

4. Evil customs of the past shall be broken off and everything based upon the just laws of Nature.
5. Knowledge shall be sought throughout the world so as to strengthen the foundations of imperial rule.

The most important political effect of the Charter Oath was the establishment of the Imperial Diet, which was the pre-Second World War precursor to the National Diet, the parliament of Japan. The Diet was created on February 11, 1889, and it met for the first time on November 29, 1890. Currently the members of both houses of the Diet are directly elected, and the Diet is responsible for the selection of the prime minister.[5] The biggest economic impacts were the opening up of the country to international trade after its prolonged isolationism, developing physical and human capital to usher in industrial revolution in Japan, and the establishment initially of national banks and subsequently a central bank in the country.

10.2 The Establishment of the National Banks

Among the first economic initiatives undertaken by the Meiji government in 1868 were the ordering of a specie-minting machine from Great Britain and the printing of new government notes called *dajoukan-satsu* that was based on the unit of account in gold, the *ryo*, and abolished the use of silver currency, the *cho-gin* and the *mameita-gin*. However, too many of these *dajoukan-satsu* were issued due to the high levels of government spending as a result of the civil war, resulting in inflation and accompanying loss of value.[6] It also issued government bonds at six percent interest to try to raise revenue, but ran into difficulties as the Japanese were unfamiliar with bonds. The third pillar of economic reform was developing a modern banking sector. The Meiji administration established a precursor to modern commercial banks called *kawase-gaisha* in 1869 in the cities of Tokyo, Osaka, Kyoto, Yokohama, Kobe, Niigata, Otsu, and Tsuruga; these would have accepted deposits, made loans, aided in the transfer of funds, and issued bank notes. However, they ran into financial trouble and only the one in Yokohama managed to survive.[7]

Japan then debated about the pros and cons of establishing a network of American-style national banks versus establishing a European-style central bank for a while. The supporters of the national banking network won, as several high-ranking officials of the Japanese Ministry of Finance

had worked at a bank in New Hampshire and were hence familiar with the federally chartered national banks in the United States. Another Ministry of Finance employee, Prince Itō Hirobumi, who would go on to become Japan's first prime minister in 1885, also visited the United States to study its banking system in 1870. The other camp was led by yet another Ministry of Finance official, Kiyonari Yoshida, who had spent time in both the United States and Europe and envisioned a Japanese central bank modeled after the Bank of England. Itō Hirobumi argued that the Japanese economy was decentralized like that of the United States, and it hence made more sense to follow the American model. The National Bank Act was passed in 1872, and allowed for the establishment of nationally chartered private banks. However, only four were initially established due to especially high required reserve ratios.

Like the national banks in the United States, the Japanese national banks could also issue currency. These national banks collected deposits and owner capital in the form of both specie and paper currency, kept some on reserve and lent out the remainder, and issued bank notes that were legal tender and were backed by the reserves of the national bank. The total amount of bank notes issued by the national banks was capped at 100 million yen, which was a non-binding cap as the total amount of bank notes issued by the banks as well as the government was lower than this amount at the time. Bank notes were issued in denominations of 1, 2, 5, 10, 20, 50, 100 and 500 yen; the total amount issued in small, defined as less than 5 yen, could not exceed half of the total amount of bank notes issued. Japan had over 1600 different types of currency at the time. To bring uniformity to the monetary system, the government passed the New Currency Act of 1871, which led to the adoption of the gold standard and the introduction of a new decimal-based currency, the yen, which was divided into 100 sen. Mitsui, one of the largest *zaibatsu* at the time, started minting coins in various denominations of the new currency in the same year.[8] Gold coins were issued for general domestic use and silver coins were issued for use in international trade. The first government notes denominated in yen were issued in 1872.

The new National Bank Act of 1876 changed bank notes issued by national banks from convertible to inconvertible. The Japanese bond market was adequately developed by then, primarily as a result of the government ceasing stipend payments to former samurai in 1876 and compensating them with coupon bonds; hence the national banks could now issue bank notes backed by national bonds. 153 national banks were

established in the brief period between 1876 and 1879, many of them by moneychangers, merchants and former samurai. The Japanese government also granted a charter to Mitsui Bank in 1876. The Mitsui Bank became Japan's first private bank, called *shiritsu ginko*, that wasn't a national bank. These private banks were allowed to engage in all regular banking activities but were barred from issuing bank notes.[9] To bring the inflationary pressures resulting from the Satsuma Rebellion of 1877, also known as *Seinan Sensō* or the Southwestern War, under control, the government altered the National Bank Act again in 1878 to lower the national limit on allowable bank note issuance to 34 million yen and also introduced bank note issuance caps at the prefecture level.

10.3 The Bank of Japan

10.3.1 The History of the Bank of Japan

The Satsuma Rebellion also changed the thinking of the Japanese government on the issue of a central bank, as Ministry of Finance officials coalesced around the idea of a central bank being the sole issuer of convertible bank notes in the country. The rebellion was the biggest internal conflict that Japan had seen since the Meiji Restoration, and the government had to issue more government notes and borrow from the national banks to raise funds to defeat the armies of the former samurai. This resulted in inflation, and the two prevailing suggestions for dealing with it were to establish a central bank and implement a policy of fiscal austerity.

The precursor to the central bank were the clearinghouses that were established in Osaka in 1879 and in Tokyo in 1880 due to the ever-increasing amount of transactions that involved multiple banks. In 1881, Masayoshi Matsukata was inaugurated as the Minister of Finance, and he decided to solve the problem of declining value of paper money caused by the excessive issuance of inconvertible notes. Matsukata absorbed the inconvertible notes that were in circulation using the surplus achieved by fiscal austerity. In order to establish both a sustained convertible bank note system as well as a modern financial system, he also made preparations for the founding of a central bank.[10] The Bank of Japan was established as the central bank of Japan by the Bank of Japan Act, which was promulgated in June 1882. The bank began its operations on October 10, 1882 after having been granted an initial charter of 30 years. The headquarters of the Bank of Japan was in Tokyo, and until 1890, the bank only had one

other branch in Osaka. The total capital of the bank at the time of its establishment was ten million yen. This was raised from 10 million yen to 20 million yen in March 1887, from 20 million yen to 30 million yen in August 1895, and from 30 million yen to 60 million yen in February 1910. The initial 30-year charter was also renewed for another 30 years beginning from October 10, 1912, at the time of the February 1910 increase in bank capital.[11]

The national banks were stripped of their authority to issue bank notes, and that right was vested solely in the central bank. This transition from multiple bank note-issuing entities to a single one was completed in 1889, at which point the national banks became ordinary private banks along the lines of the Mitsui Bank.[12] The National Bank Act was hence amended again in 1883 with new articles indicating that the charters of all existing national banks would expire 20 years from their date of establishment, all national bank notes should be redeemed before the expiration of the charters, and the national banks would be either transformed into ordinary private banks or closed once the charter expired. The charters of all the national banks expired between 1896 and 1899. 122 of these were transformed into ordinary private banks, while the rest were closed. These monetary reforms were coupled with the adoption of an austere fiscal policy with budgetary considerations and price level stabilization in mind.

The Bank of Japan was reorganized on May 1, 1942 in conformity with the Bank of Japan Act of 1942, which was promulgated on February 24, 1942. The amount of bank capital was increased from 60 million yen to 100 million yen at the same time. Given its timing, the Bank of Japan Act of 1942 reflected the realities of the Second World War. Article 1 of the act, for instance, stated that the objectives of the Bank were "the regulation of the currency, control and facilitation of credit and finance, and the maintenance and fostering of the credit system, pursuant to national policy, in order that the general economic activities of the nation might adequately be enhanced." The Bank of Japan Act of 1942 was amended several times after the Second World War depending on the needs of the economy. The most important of these amendments was the establishment of the Policy Board as the top decision-making body of the bank in June 1949. The act was almost completely revised in June 1997 with the twin goals of "independence" and "transparency" in mind, and the revised act came into effect on April 1, 1998.[13]

10.3.2 The Administrative Structure of the Bank of Japan

Chapter III of the Bank of Japan Act lays out the number of officers and employees who are in the senior administrative ranks. According to article 21, the officers of the Bank of Japan shall consist of six members of the Policy Board, a Governor, two Deputy Governors, three or fewer auditors, six or fewer executive directors, and a small number of counselors. The Governor shall represent the Bank of Japan and exercise general control over the bank's business in accordance with decisions made by the Policy Board. The duties of the Deputy Governors are to represent the Bank of Japan based on the decisions made by the Governor, assist the Governor to carry out the business of the bank, act on behalf of the Governor if they are unable to exercise their duties for any reason, and perform the duties of the Governor if the governorship position is vacant. Article 23 lays out the procedure for appointment to these ranks. The Governor and the Deputy Governors are appointed by the cabinet, subject to the consent of the House of Representatives and the House of Councilors. The members of the Policy Board are also appointed by the cabinet, subject to the consent of the House of Representatives and the House of Councilors, from among people with relevant expert knowledge and experience on matters of the economy or finance. The auditors are appointed by the cabinet. Lastly, the executive directors and the counselors are appointed by the Minister of Finance based on the recommendation of the Policy Board. According to article 24, the terms of office are five years for the Governor, the Deputy Governors, and the members of the Policy Board, four years for the auditors and the executive directors, and two years for the counselors. However, if a vacancy arises in the office of the Governor, one of the Deputy Governors, or a member of the Policy Board, then the term of office of the substitute Governor, Deputy Governor, or member of the Policy Board is limited to the remaining term of their predecessor. The Governor, the Deputy Governors, the members of the Policy Board, the auditors, the executive directors, and the counselors are all eligible for reappointment.[14]

After an initial period of just having one branch office in Osaka in addition to the headquarters in Tokyo, Bank of Japan now has many prefectural and local offices to help it in effectively carrying out its mission. Currently there are –32 branches, located in Hakodate, Kushiro and Sapporo on Hokkaido; in Akita, Aomori, Fukushima, Hiroshima, Kanazawa, Kobe, Kofu, Kyoto, Maebashi, Matsue, Matsumoto, Nagoya,

Niigata, Okayama, Osaka, Sendai, Shimonoseki, Shizuoka and Yokohama on Honshu; in Kochi, Matsuyama and Takamatsu on Shikoku; in Fukuoka, Kagoshima, Kitakyushu, Kumamoto, Nagasaki and Oita on Kyushu; and in Naha on Okinawa Island. In addition, it has 14 local offices in Japan spread among the four main islands of Hokkaido, Honshu, Shikoku and Kyushu; these include the northernmost office in Asahikawa on Hokkaido. The Bank of Japan also has overseas offices in New York, Washington DC, London, Paris, Frankfurt, Hong Kong, and Beijing.

According to article 8, the amount of the Bank of Japan's stated capital shall be 100 million yen, which is to be contributed to by both the government and non-governmental persons. Of the total capital, the contribution of the government shall be no less than 55 million yen. The fiscal year at the bank runs from April 1 through March 31 of the following year. The Bank of Japan is a juridical person, as mentioned in article 6 of the Bank of Japan Act.

The bank is divided into the following departments: the Secretariat of the Policy Board, the Internal Auditors' Office, the Monetary Affairs Department, the Financial System and Bank Examination Department, the Payment and Settlement Systems Department, the Financial Markets Department, the Research and Statistics Department, the International Department, the Currency Issue Department, the Operations Department, the Information System Services Department, the Public Relations Department, the Personnel and Corporate Affairs Department, the Administration Department, and the Institute for Monetary and Economic Studies.

10.3.3 *The Functions of the Bank of Japan*

The Bank of Japan has developed and made public its five organizational principles, which are a set of fundamental values that the institution abides by in its role as the central bank of the country in order to ensure the appropriateness of its conduct and maintain the trust of the public.[15] The first core value is public interest; the bank shall promote the public interest by fulfilling the core purposes stipulated in the Bank of Japan Act. The second is transparency; the bank shall demonstrate proper accountability in its policies and business operations via its various external networks. The third is excellence; the bank shall pursue excellence in central banking services, responding sufficiently to changes in its environment. The fourth is integrity; the bank shall ensure integrity in execution of duties by each and every officer and employee, requiring that they uphold high standards

of morality. The last is effectiveness and efficiency; the bank shall make effective and efficient use of management resources in its conduct of business operations and organizational management.

Article 1 of the Bank of Japan Act states the purpose of the central bank of Japan as issuing bank notes and carrying out currency and monetary control. Additionally, it is also tasked with ensuring smooth settlement of funds among banks and other financial institutions, and hence contributing to the stability of the financial system. Article 2, "The Principle of Currency and Monetary Control" declares that goal of currency and monetary control undertaken by the Bank of Japan should be to achieve price stability, thereby contributing to the sound development of the national economy. Both households and firms have a harder time making appropriate consumption and investment decisions when prices are volatile, which prevents resources from being optimally allocated within the economy. Additionally, price fluctuations can also distort income distribution. The current price stability target is a two percent annual increase in the consumer price index, which the bank set in January 2013.[16] The other monetary policy goal is quantitative and qualitative monetary easing with yield curve control. In order to achieve the two percent inflation target within a time horizon of about two years, the Bank of Japan, in its own words, entered "a new phase of monetary easing both in terms of quantity and quality." It doubled the monetary base, which is the sum of currency in circulation and reserves, as well as the amounts outstanding of Japanese government bonds and exchange-traded funds over the same period. The monetary base hence increased at an annual rate of about 65 trillion yen, going from 138 trillion yen at the end of 2012 to 270 trillion yen at the end of 2014. The bank also more than doubled the average remaining maturity of Japanese government bond purchases.[17] Japan has been able to come out of its prolonged slump primarily due to the boost from declining real interest rates. Japan introduced its negative interest rate policy in January 2016, and its experience so far has indicated that the combination of negative interest rate on current account balances at the Bank of Japan and purchases of Japanese government bonds is effective for yield curve control.[18] The effect of this policy is to keep the yield on ten year government bonds at zero. The novelty here was to go beyond the conventional wisdom of just trying to control short term interest rates, and use quantitative easing to also influence long term interest rates. By increasing the difference between the yield on short term bonds, which is

negative in Japan, and those on long term bonds, the central bank is steepening the yield curve on the bonds.[19,20]

The specific policy tools available to the Bank of Japan to achieve the purpose outlined in article 1 are listed in article 33. These are[21]:

1. Discounting of commercial bills and other negotiable instruments;
2. Making loans against collateral in the form of negotiable instruments, national government securities and other securities, or electronically recorded claims;
3. Buying and selling of commercial bills and other negotiable instruments (including those drawn by the Bank of Japan in this item), national government securities and other bonds, or electronically recorded claims;
4. Lending and borrowing of national government securities and other bonds against cash collateral;
5. Taking deposits;
6. Conducting domestic funds transfers;
7. Taking safe custody of securities and other instruments pertaining to property rights, or certificates;
8. Buying and selling gold and silver bullion and carrying out business related to business set forth in the preceding items.

Another significant order of business for the central bank is to provide financial services to the national government. In this capacity, the Bank of Japan makes uncollateralized loans within the limit decided by the Diet as prescribed in the proviso of Article 5 of the Fiscal Act (Act No. 34 of 1947); makes uncollateralized loans for the national government's temporary borrowing permitted under the Fiscal Act or other acts concerning the national government's accounting; subscribes or underwrites national government securities within the limit decided by the Diet as prescribed in the proviso of Article 5 of the Fiscal Act; subscribes or underwrites financing bills and other financing securities; and takes safe custody of precious metals and other commodities. The details are outlined in article 34.

Buying and selling foreign exchange and conducting international financial business also fall within the purview of the central bank. According to article 40, the Bank of Japan can, when needed, buy and sell foreign exchange either on its own account or as an agent handling the interests of the national government. It can also buy and sell foreign exchange on behalf of foreign central banks or international institutions of which Japan

is a member, such as the Bank for International Settlements as their agent in order to co-operate with them in its role as the central bank of the country. Article 41 discusses the bank's responsibilities with regard to the conduct of international financial business[22]:

1. Taking deposits pertaining to deposit money denominated in Japanese currency (deposits prescribed in Article 33, paragraph 2);
2. Buying and selling national government securities in exchange for deposits received through the business set forth in the preceding item;
3. Taking safe custody of securities, precious metals, and other articles;
4. Carrying out intermediary, brokerage, or agency services for sales and purchases of national government securities conducted by the said foreign central banks, etc. or international institutions;
5. Other business specified by an ordinance of the Ministry of Finance as those deemed to contribute to the proper management of Japanese currency or assets denominated in Japanese currency held by the said foreign central banks, etc. or international institutions.

Article 42 states that additionally, the Bank of Japan may substitute loan claims against foreign central banks or similar agencies which are held by the Bank for International Settlements and provide credit to foreign central banks or similar agencies, or to international institutions. These can be undertaken either at the request of or upon the approval of the Minister of Finance.

Other responsibilities include extending temporary loans to financial institutions; maintaining the stability of the Japanese financial system by granting loans under special considerations based on a request from the Prime Minister and the Minister of Finance; ensuring the smooth settlement of funds; conducting on-site examinations regarding the business operations and the state of the property of the counterparty financial institutions by visiting their premises, with prior consent of the counterparty financial institutions; and issuing bank notes. The Bank of Japan bank notes are legal tender and can be used for transactions of any magnitude. The types of bank notes are specified by a cabinet order, while the Minister of Finance makes the decisions regarding the forms of the bank notes and publicly notifies them. The procedures for printing and canceling of the bank notes, however, are determined by the Bank of Japan; the bank submits these procedures to the Minister of Finance for their approval. Based on an ordinance of the Ministry of Finance, the bank exchanges, without

any fees, Bank of Japan bank notes that have been rendered unfit for circulation due to defacement, mutilation, or other reasons.

Chapter II of the Bank of Japan Act directs that a Policy Board be established within the Bank of Japan. As the bank's highest decision-making body, the board determines the guidelines for currency and monetary control, sets the basic principles for carrying out the operations of the bank, and oversees the fulfillment of the duties of the bank officials, other than the auditors and counselors to avoid any conflict of interest. The board analyzes the current economic situation and makes a decision regarding the bank's monetary policy operations for the immediate future at its Monetary Policy Meetings (MPM), and it announces its analysis of the economy and its monetary policy decision immediately afterwards. MPMs are held eight times a year; each meeting lasts two days. Additionally, regular Policy Board meetings are held twice a week. Article 16 states that the Policy Board should be comprised of nine members, of whom six are chosen to just serve on the Policy Board, the seventh is the Governor of the Bank of Japan, and the eighth and the ninth are the two Deputy Governors. The Governor and the Deputy Governors perform their board-related duties independently of each other, unlike in case of general bank functions where the Deputy Governors defer to the Governor. The Policy Board is headed by a chairperson, who is one of the board members and is elected by all the members of the board. According to article 18, the board may neither meet nor vote unless the chairperson as well as two-thirds or more of the total incumbent board members are present to constitute a quorum. Decisions are made by a simple majority of the votes cast by the board members who are present. The chairperson has the authority to make the final decision in the eventuality of the votes being equally split. The responsibilities of the Policy Board, as outlined in article 15, are threefold[23]:

1. The following matters concerning currency and monetary control shall be decided by the Board:
    a. Determining or altering the basic discount rate and other discount rates pertaining to the discounting of negotiable instruments […], as well as the types and conditions of negotiable instruments pertaining to the said discounting;
    b. Determining or altering the basic loan rate and other loan rates pertaining to the loans […], as well as the types, conditions, and value of collateral pertaining to the said loans;

c. Determining, altering, or abolishing reserve requirement ratios, the base date, and other matters prescribed in Article 4, paragraph 1 of the Act on Reserve Deposit Requirement System (Act No. 135 of 1957);
d. Determining or altering the guidelines for financial market control (currency and monetary control conducted through financial markets [including open market operations]) through such measures as the buying and selling of negotiable instruments, bonds, or electronically recorded claims; [...] as well as determining or altering the types, conditions, and other matters of negotiable instruments, bonds, or electronically recorded claims pertaining to the said financial market control;
e. Determining or altering other guidelines for currency and monetary control;
f. Determining or altering the Bank of Japan's view on currency and monetary control, including its basic view on economic and monetary conditions which provides the basis for matters listed in the preceding items.

2. In addition to matters to be subject to the Board resolution as prescribed in the preceding paragraph, the following matters shall also be decided by the Board:

   a. Making loans pursuant to Article 37, paragraph 1, and executing business pursuant to Article 38, paragraph 2;
   b. Applying for authorization pursuant to Article 39, paragraph 1, and determining important matters concerning the business pertaining to the said authorization;
   c. Conducting the buying and selling of foreign exchange to facilitate international financial business which the Minister of Finance specifies as constituting cooperation in the field of international finance as prescribed in Article 40, paragraph 3, initiating transactions with a foreign central bank, etc. (a foreign central bank, etc. prescribed in Article 41) pertaining to the business prescribed in the same Article, and executing transactions pursuant to Article 42;
   d. Applying for authorization pursuant to the proviso of Article 43, paragraph 1, and determining important matters concerning the business pertaining to the said authorization;

e. Determining the content of a contract concerning on-site examinations [...], as well as determining important matters concerning the implementation of on-site examinations for each business year;
f. Altering the articles of incorporation;
g. Preparing or altering a statement of operation procedures;
h. Establishing, relocating, or abolishing offices including branch offices and agencies;
i. Determining important matters concerning the Bank of Japan's organization and size of staff (excluding what is listed in the preceding item);
j. Establishing or altering the standards for paying remuneration prescribed in Article 31, paragraph 1, as well as rules on service prescribed in Article 32;
k. Acquiring or disposing of real estate and other important property;
l. Making or altering a budget for expenses [...], preparing an inventory, balance sheet, profit and loss statement, and statement of accounts, and determining important matters concerning accounting including the appropriation of any surplus;
m. Preparing a written report prescribed in Article 54, paragraph 1, as well as the outline of business operations prescribed in Article 55;
n. Establishing or altering the rules prescribed in Article 59;
o. Determining matters to be decided by the Board pursuant to this Act or to be carried out by the Board pursuant to this Act or other laws and regulations;
p. Determining matters which the Board finds particularly necessary, in addition to what is listed in the preceding items.

3. The Board shall supervise the execution of their duties by the officers (excluding Auditors and Counsellors in this paragraph) of the Bank of Japan.

Like most other central banks, article 53 of the Bank of Japan Act, which is titled the "Appropriation of Surplus," permits the Bank of Japan to set aside a reserve fund equal to five-hundredths of the surplus resulting from the settlement of profits and losses for each fiscal year. It can also set aside a larger amount of reserve funds when that is necessary with prior authorization from the Minister of Finance. These reserve funds may not

be disposed of, except to cover losses incurred by the Bank of Japan or be appropriated for dividends. Dividends can be paid by the Bank of Japan upon prior authorization from the Minister of Finance out of the surplus resulting from the settlement of profits and losses for the fiscal year; however, the rate of dividend payments against paid-up capital can't exceed five-hundredths per year. The remainder of the surplus, if any, is paid by the central bank to the national Treasury within two months of the end of the fiscal year.

The Bank of Japan used to develop its strategic priorities within a framework covering a three-year period, with updates made every year. Starting in fiscal year 2014, the bank has decided to move to a strategic priorities plan developed with a five-year framework, with one interim review while essentially keeping the contents of the plan unchanged over the entire period. The reasons are to clarify the objectives of the bank that are to be achieved over the medium term and to properly evaluate its performance. The three issues that all contemporary central banks are facing are those stemming from increasing globalization of the financial and economic environment, diversification and the increasing complexity of financial instruments and transactions, and continuing advancements in financial engineering and information processing technology. Transparency is the other crucial piece for the continued success of any central bank. With these points in mind, the Bank of Japan has come up with strategic objectives for business operations as well as for its organizational management. The strategic objectives for business operations are planning and formulating monetary policy measures that facilitate policy conduct, ensuring stability and improving the functioning of the financial system, enhancing payment and settlement services and reinforcing market infrastructure, conducting stable and efficient central banking operations, contributing to the response to globalization on the international financial front, contributing to the regional economic and financial environment, and strengthening external communication. The strategic objectives for organizational management relate to organizational management and to management resources. On the organizational management side, the foci are on ensuring the appropriate conduct of business operations given changes in the bank's environment, managing operational risks appropriately, and strengthening business continuity arrangements. On the management resources side, the foci are human resources, including hiring more employees and more women, and securing the necessary budget for meeting the needed expenses.[24]

10.3.4 Autonomy of the Bank of Japan

Article 3 of the Bank of Japan Act, "Respecting the Autonomy of the Bank of Japan and Ensuring Transparency," codifies the autonomy of the Bank of Japan. It states that while the bank shall endeavor to clarify to the Japanese citizens both the content of its decisions as well as its decision-making process regarding currency and monetary control, the autonomy of the Bank of Japan regarding both the issues of currency and monetary control shall be respected.

However, article 4, which is "Relationship with the Government," does tie the hands of the central bank to some degree. It says that since currency and monetary control is a component of the overarching economic policy of the country, the Bank of Japan should always maintain close contact with the government to ensure adequate exchange of views. In other words, the currency and monetary control of the Bank of Japan and the basic stance of the government's fiscal and other economic policies need to be mutually compatible.[25] Article 54, titled "Reporting to and Attendance at the Diet," directs the Bank of Japan to prepare a written report on the Policy Board resolutions approximately once every six months for submission to the Diet through the Minister of Finance. Additionally, the Governor of the Bank of Japan, or the chairperson of the Policy Board, or a representative designated by either of them, attends the sessions of the House of Representatives, the House of Councilors, or their Committees when requested so that the central bank can promptly provide the information that may be needed.

Article 51 of the act can, at least in theory, also place restrictions on the ability of the Bank of Japan to propose its own budget. The central bank makes a budget for its expenses for the fiscal year and submits it to the Minister of Finance before the start of the fiscal year. However, if the Minister of Finance finds it inappropriate to authorize the requested budget, then they can issue a notice to the central bank explaining the reason behind their decision. The Bank of Japan has an opportunity to respond to the Minister of Finance's argument should it choose to do so.

10.4 The Currency of Japan

10.4.1 The Pre-Yen Days

For a discussion of Japanese currency before the introduction of the yen, please refer to Sects. 10.1 and 10.2.

10.4.2 The New Currency Act of 1871 and the Yen

The currency of Japan is the yen (ISO 4217 code JPY), which is the most traded currency in the foreign exchange market after the US dollar and the euro. The yen was introduced soon after the Meiji Restoration by the New Currency Act of 1871. It replaced the complex system with over a thousand different types of currency with a single currency, and moved Japan to a bimetallic system or a dual gold and silver standard. A uniform national currency that followed the decimal system, which was the currency system in the United States and several countries in Europe at the time, was a key part of the economic reform agenda of the government.[26] The new currency was divided decimally, and 1 yen was equal to 100 sen or 1000 rin.[27] Japan started issuing gold, silver and copper coins.

In the second half of the 1890s, large quantities of silver entered Japan in the form of reparation payments from China after the end of the First Sino-Japanese War of 1894–1895. The Japanese Minister of Finance used this silver to purchase large quantities of gold; Japan had acquired so much gold through this method that in 1897 the Minister of Finance was able to switch the Japanese currency standard from silver to gold. New gold coins were minted as a result.[28] The amount of gold in a one yen coin was adjusted from one and a half gram to three-quarters of a gram in 1897 through the Currency Act, which also transitioned Japan to the gold standard. The convertible Bank of Japan notes, which until then had been exchangeable for silver coins, were revised to be exchangeable for gold coins. Japan discontinued the gold standard in December 1931, as part of the fallout of the stock market crash and Great Depression. There was a redenomination of the yen on March 3, 1946, after the end of the Second World War, when the country replaced the old yen with the new yen.[29] The sen and rin coins stopped being minted decades ago due to inflation and were taken out of circulation on December 31, 1953, by the Small Currency Disposition and Fractional Rounding in Payments Act; the coins currently in circulation in Japan are 1, 5, 10, 50, 100 and 500 yen.[30] The first commemorative coin to be struck in Japan was the Tokyo Olympic coin in 1964. Itō (1991) mentions that

> another yen redenomination was proposed in the 1970s because the yen and the lira were the only two currencies with three-digit exchange rates against the US dollar. Theoretically, making old 100-yen notes equivalent to a new one-yen would not change any real economic activity, aside from being a

temporary boon for the printing business. However, the fear of inflation and the memory of the asset freeze and the subsequent confiscation produced opposition to the measure among the public.[31]

Chapter V of the Bank of Japan Act deals with the Bank of Japan bank notes. Article 46 in the chapter specifies that the Bank of Japan is now in charge of issuing all bank notes, which will be legal tender and hence shall be used for payment without any limits. Article 47 states that the types of Bank of Japan bank notes shall be specified by a cabinet order, while the Minister of Finance shall decide about the forms of the bank notes.

10.4.3 The Japanese Military Yen

The Japanese military yen was the currency in which Japan paid the salaries of the members of the Japanese imperial army and the Japanese imperial navy. The Japanese government first issued the Japanese military yen during the Russo-Japanese War of 1904, and the currency continued to be used until the end of the Second World War in 1945. The military yen wasn't convertible into the regular yen or into gold and, though issued by the Ministry of the Army or the Ministry of War (*Rikugun-shō*) of Japan, wasn't issued from a specific location. However, it was a way for the imperial Japanese government to control the economies of its occupied territories. The Japanese military yen bank notes issued in the 1930s had the same design as regular yen bank notes, with the words "Bank of Japan" and the promise to pay the bearer in gold or silver canceled out with a red stamp. Later issues from the 1940s had their own unique design. Some of these bank notes have serial numbers, whereas those issued toward the beginning and toward the end did not as they were issued without regard to deliberate monetary policy or inflation control.

All of the areas occupied by Japan, such as Korea, Manchukuo and Taiwan, issued their own currency; the Japanese military yen was used as a supplement to these currencies of the occupied areas. A special case was Hong Kong, where the military yen was declared to be the sole official currency on December 26, 1941, the day after its occupation by the Japanese imperial army. Japan outlawed the use of the Hong Kong dollar in the territory, and gave the residents of Hong Kong a fixed deadline to exchange their currency into the Japanese military yen at the rate of two Hong Kong dollars for one Japanese military yen. The exchange rate was later changed to four Hong Kong dollars for one Japanese military yen.

The Japanese Ministry of Finance declared the Japanese military yen to be void on September 6, 1945, and the bank notes became worthless

overnight. The Ministry of Finance of Japan declared that these notes were not convertible into the ordinary Japanese yen. The British administration in Hong Kong also refused to accept the Japanese military yen as they were worried about large Japanese military yen cash flows from neighboring southern China. According to a document authored by British colonial officers in August 1945, "It is suggested that all occupation currency should be destroyed immediately and that a relief office by the Government be set up for the amelioration of hardship in deserving cases using only lawful currency or assistance in kind." But not all of the money was destroyed, and residents of Hong Kong have been fighting for the right to get these bank notes converted since the end of the war. The Reparation Association of Hong Kong has about 3500 families that are members, and these families collectively own about 540 million Japanese military yens. The hope of the members is that Hong Kong will be able to work out an agreement with Japan along the lines of one that was hammered out by Hong Kong; in 1994, the Japanese government agreed to pay the unpaid wages and frozen savings accounts of Taiwanese soldiers who had served in the Imperial Army at 120 times the wartime rate.[32]

10.4.4 The Currencies of the Japanese Puppet States and Occupied Territories

The territories held by Japan until or during the Second World War all had their own currencies. The Korean peninsula was under Japanese rule from 1910, when the brief Great Korean Empire ended with the abdication of Sunjong, until 1945, when Japan surrendered at the end of the Second World War. The currency of Korea at the time was the Korean yen, which was equivalent to the Japanese yen and divided into 100 sen. It replaced the Korean won at par in 1910, and was replaced by the North Korean won and the South Korean won at par in 1945. Similarly, Taiwan was under Japanese rule from 1895, when China under the Qing Dynasty lost the First Sino-Japanese War of 1894–1895 and had to relinquish Taiwan under the terms of the Treaty of Shimonoseki, until 1945. The currency of Taiwan at the time was the Taiwanese yen, which was at par with the Japanese yen and was divided into 100 sen. It was replaced at par by the old Taiwan dollar in 1946. Manchukuo was a Japanese puppet state in northeastern China from 1932, following the Mukden Incident or the Manchurian Incident, until 1945, when the Soviets undertook the Manchurian Strategic Offensive Operation to wrest the region from

the Japanese in the last campaign of the Second World War. The currency of Manchukuo was the Manchukuo yuan, which was initially on the silver standard and subsequently pegged to the Japanese yen. The currency was initially minted by the Bank of Japan. These operations were later transferred to the Central Bank of Manchou, formed by the amalgamation of the four note-issuing banks in Manchuria, the Bank of the Three Eastern Provinces, the Bank of Kirin, the Bank of Heilungkiang and the Frontier Bank, in the capital city of Changchun (known as Hsinking during the Manchukuo years). Manchukuo issued one and five fen coins made from red or brown fiber in 1944 and 1945; these are rare examples of non-metallic coins. Other Japanese puppet governments in China also printed their own currencies.

The Japanese invasion money, officially known as Southern Development Bank Notes, were different from the Japanese military yen. This referred to currency issued by the Japanese Military Authority to replace local currency following Japanese occupation of territories in Southeast Asia and the Pacific during the Second World War. The first jurisdiction where the local currency was confiscated and replaced by locally printed military issue notes was the Philippines. Other countries to go through the same experience were Brunei, Indonesia, Malaysia, Myanmar (formerly Burma), and Singapore in Asia and Papua New Guinea, Guam, Kiribati, Palau, the Solomon Islands, and Tuvalu in the Pacific. These bank notes were denominated in local currencies; the Philippine notes were in pesos, the Indonesian notes were in guldens, the Malaysian and Singaporean notes were in Straits dollars, the Burmese notes were in rupees, and the notes from the Pacific islands were in Oceanian pounds. Australia and the United States counterfeited these notes to destabilize the Japanese economy as well as provide to guerillas who were fighting the Japanese. As with the Japanese military yen, the Japanese invasion money became worthless after the war ended in 1945.

10.4.5 The Currency of the Ryukyu Kingdom

The Ryukyu Kingdom was an independent kingdom that ruled over most of the Ryukyu Islands, a chain of islands located between Japan to the north and Taiwan to the south. The islands were a key center of maritime trade despite their small size. The Japanese invaded the Ryukyu Islands in 1609, after which it became a Japanese vassal state, a status that continued until its formal annexation by Japan in 1879. From 1454 until 1879, the Ryukyu Islands had their own currency, the Ryukyuan mon. Many of the

earlier coins have been found on the islands of Java and Sumatra in Indonesia, a testament to the extensive regional trading networks. After initially minting their own coins, the striking of the mon was outsourced first to China and then to Japan.[33] These coins continued to circulate into the 1880s even after the islands had become a part of Japan.

Notes

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3. At the beginning of the Tokugawa shogunate, there were 295 *han* in addition to the Tokugawa han, which occupied about a quarter of Japan. By the end of the Tokugawa rule, the number of other *han* had decreased to 265.
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CHAPTER 11

Brazil

11.1 The Brazilian Monetary System During the Pre-Central Bank Era

Brazil was historically inhabited by hundreds of different Jiquabu tribes, referred to as "indios" by the Portuguese and the Spanish. The earliest, in the highlands of Minas Gerais, went back at least 10,000 years. The Portuguese military commander and explorer Pedro Álvares Cabral sailed to Brazil as part of his expedition to India in April of the year 1500, claiming the territory for the Portuguese ruler Dom Manuel I after realizing that the coastline they were exploring was probably part of a new continent. The country expanded south along the coast and west along the Amazon and other inland rivers. After a half-hearted attempt to control Brazil through a system of hereditary captaincies, Portuguese interest in Brazil was renewed in the second half of the sixteenth century with the spread of sugarcane plantations and refineries called engenhos.

The Dutch also occupied a portion of northeastern Brazil including the cities of Fortaleza (Fort Schoonenborch in Dutch), Natal (Nieuw Amsterdam in Dutch) and Recife (Mauritsstad in Dutch) from 1630 to 1654, referring to it as New Holland and operating the former Portuguese plantations. Both the Portuguese and the Dutch plantations operated with slave labor; the number of indigenous Brazilians working on the plantations was relatively low as they knew the terrain well, and running away

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into the expansive interior presented an attractive and easy alternative to the dangers of revolt. Escaped slaves intermarried with the indigenous peoples of Brazil and formed Maroon communities in the interior, residing in villages called quilombos. After King John IV of Portugal declared Portuguese independence from Spain in 1640, ending the Iberian Union of the House of Habsburg, and the decline of the Dutch West India Company in Brazil, the plantations reverted to Portugal.

The first monetary institution to be established in Brazil was the Casa da Moeda do Brasil (or the Brazilian Mint). Prior to this, the most common coinage in Brazil were the Spanish silver reales due to the large influx of these coins from Peru as a result of the trade along the Rio de la Plata.[1] However, the shortage of coins in Brazil became particularly acute during the last two decades of the seventeenth century, affecting the economy and causing a sharp drop in the revenues of the Portuguese Crown. Hence a decision was made to found a mint by the Portuguese King Pedro II, which opened its doors in Salvador on March 8, 1694.[2] All gold and silver coins circulating in the territory were ordered to be sent to the mint so that they could be melted down and changed into provincial coins. The following year, the first Brazilian coins were minted; 4000, 2000 and 1000 réis were struck in gold, and 640, 320, 160, 80, 40 and 20 réis were struck in silver.[3,4] The mint was transferred to Rio de Janeiro in 1699, to Pernambuco in 1700, and back to Rio de Janeiro in 1703. The debasement of gold and silver coins involving the illegal practice of shaving off the edges to remove some of the precious metal became a real issue in Portugal and its colonies, and King Pedro II implemented measures such as putting a string (a type of serration in the form of string), putting a mark (a crowned armillary sphere placed close to the rim) and minting of new edges in already minted coins to prevent further clipping.[5] The Portuguese réis also circulated in Brazil at the time, alongside coins brought by invaders and pirates. As the Brazilian mint did not manufacture any copper coins, some Angolan coins that were minted in the city of Porto and originally destined for shipment to Angola were given authorization to circulate in Brazil; the denominations were 10 and 20 réis. Other examples of commodity money included the state of Rio de Janeiro decreeing sugar as legal tender in 1614 and the state of Maranhão decreeing cocoa, clove, cotton, sugar and tobacco as legal tender in 1712. Enslaved Africans who came to Brazil often used the *zimbo*, which was the shell of a mollusk found

on the Brazilian coast and circulated as money in Angola and Congo, in transactions.

The discovery of gold in Brazil in the early eighteenth century greatly increased the production of gold coinage. The finding of gold was met with great enthusiasm by Portugal, whose economy was in disarray following years of wars against Spain and the Netherlands. A gold rush ensued, with people from other parts of the colony and Portugal flooding the region. The part of the country where most of the gold was extracted became known as the Minas Gerais (or the General Mines). Like the plantations, it was mostly slave labor that kept the mines working. During the Atlantic slave trade era, Brazil imported more African slaves than any other country. Almost five million slaves from Africa came to Brazil during the period from 1501 to 1866, which was 40 percent of the total number of slaves brought to the Americas. Most were forced to embark at West Central African ports, especially in Luanda in present-day Angola. Today, with the exception of Nigeria, the country with the largest population of people of African descent is Brazil.

11.2 Brazilian Central Banking Under Banco do Brasil

The Peninsular War saw Napoleon's army invade Lisbon on December 1, 1807. Escorted by the British, the Portuguese court of Queen Maria I fled to Brazil just days before, on November 29. The party, including Portugal's Prince-Regent João VI, who had governed the country on behalf of the queen since 1799, arrived in *Baía de Todos os Santos* (Bay of All Saints) in the present-day state of Bahia in colonial Brazil on January 22, 1808. The Kingdom of Portugal was based in Rio de Janeiro and ruled from Brazil from 1808 until 1821, when King João VI returned to Portugal on April 26 following the *Revolução Liberal* (Liberal Revolution) of 1820. King João VI realized the need for establishing a bank that would provide commercial and central banking services soon after arriving in Brazil, and the Banco do Brasil, or the Bank of Brazil, was founded the same year on October 12 as part of a series of economic measures that included opening up Brazilian ports to international trade, installing manufacturers in Brazil, and establishing royal institutions such as the Board of Trade or the Royal Exchequer.[6] This was decades before Portugal itself established a central bank, the Banco de Portugal, in 1846.

The new bank was assigned the tasks of guaranteeing improvements in the financing of the state ("facilitate in such a way with means and resources what my royal and public revenues need to meet the expenses of state"), monetary circulation ("put into action the sum not being used, in both commercial goods and minted specie") and productive investment ("promote national industry through the combination and circulation of isolated capital").[7] The bank's first initial public offering was in 1817. The Rio de Janeiro Stock Exchange was inaugurated on July 14, 1820 after being constructed with funds from the Banco do Brasil. The bank also provided funding for schools, hospitals and the Brazilian military. In addition to conducting trade, the bank was the de facto central bank of the colony. It served as the fiscal agent of the government, was also the first bank in Brazil to issue bank notes (though the notes began to lose credibility from 1817 onward and started being increasingly devalued), and held a monopoly on currency exchange transactions.

On September 7, 1822, the country declared its independence from Portugal and became Empire of Brazil. The young country struggled due to the drop in sugar prices as a result of competition from the Caribbean as well as separatist movements within the country. Banco do Brasil significantly expanded its currency issuance from 1825 to 1828 to finance the war in Banda Oriental (present-day Uruguay). The government also established the Amortization Office on November 15, 1827, to make payments on the capital and interest of public debt securities and to inspect transfers among the debt-holders. Interest payments were made on a biannual basis, and the redemption of the principal was made annually, subject to the limit of one percent of the capital.[8] The Banco do Brasil began issuing the first national currency in the country in 1863, but that ended in 1866 when the responsibility was transferred to the National Mint. The Banco do Brasil became the principal receiver of deposits and the supplier of loans in Brazil by providing loans guaranteed by mortgages. Brazil was the last country in the western hemisphere to abolish slavery, with the *Lei Áurea* (Golden Act) promulgated on May 13, 1888 by Isabel, the Princess Imperial of Brazil. A military coup in 1889 subsequently established the First Brazilian Republic. The new government created a number of institutions, one of them being a bank named the Banco da República dos Estados Unidos do Brasil, which merged with Banco do Brasil in 1893, creating the Banco da República

do Brasil. The name reverted to the Banco do Brasil in 1905. The Federal Union assumed shareholder and administrative control of the bank, and in 1906, its shares began trading on the stock exchange. The Banco do Brasil continued to act as the central bank of the republic throughout this period. The institution went bankrupt twice in its history; the first in 1821 was during Brazilian independence, when King João VI and his court returned to Portugal, redeeming all the bills that were in their possession for coins, metal and jewels and taking with them much of the precious metals of the bank, and the second was in 1898.

The bank opened a branch in 1908 in Manaus, in the middle of the Amazon rain forest, to stimulate rubber production. It created the Agricultural and Industrial Credit Division (CREAI) in 1937 with the goal of providing the country with a credit program to finance agricultural and industrial development. It received mandatory and voluntary deposits from commercial banks, acted on behalf of public enterprises and controlled funding for international trade. During the Second World War, in which Brazilian GIs fought in Italy, the bank was responsible for paying the soldiers, war reparations, and money transfers to the Brazilian Expeditionary Force. To facilitate the process, it opened three offices in Italy in 1944, in Rome, Naples and Piemonte.

The government of Juscelino Kubitschek inaugurated the new capital, Brasília, on April 21, 1960; the Banco do Brasil moved its headquarters to Brasília on the same day. With the establishment of the Banco Central do Brasil as the official central bank, currency-related duties were transferred from the Banco do Brasil to the new central bank. Its importance as the agent for financing government policy also declined. The Banco do Brasil was restructured as a purely commercial bank in 1992. It played a large role in the Real Plan that was implemented in 1994 to tackle inflation in Brazil by replacing all the money that was circulating in Brazil in a massive exchange operation. It is currently the second largest bank in the country by assets, in addition to being the oldest continuously operating bank in the country. The bank is now based in Brasília. The first international branch of the bank was established in Asuncion, Paraguay in 1941. The branch that marked its international foray in a big way was the one in New York, which opened in 1969. In addition to having branches throughout Brazil, the bank has operations in 23 other countries, including Argentina, Chile, France, Germany, Italy, Japan, Portugal, Spain, the United Kingdom and the United States.[9]

11.3 Brazilian Central Banking Under Banco Central do Brasil

11.3.1 The History of Banco Central do Brasil

After the end of the Second World War, the re-democratization of Brazil brought some changes to the banking sector in Brazil. During the administration of the Minister of Finance Arthur de Souza Costa, it was decided that gradually preparing the country for a central bank was better than the immediate introduction of a central bank. Decree No. 7293 of February 2, 1945 hence created the Superintendency for Currency and Credit (SUMOC) under the Ministry of Finance, establishing a monetary authority in the country, controlling inflation, and beginning the process of preparing the country for the introduction of a central bank.[10,11] The agency was based in Rio de Janeiro. The responsibilities of the SUMOC included requesting the issuance of paper money up to the maximum allowable limit from the National Treasury; setting reserve requirements for commercial banks; stipulating the discount rate and the rate for financial assistance in case of insufficient liquidity; determining interest rates for bank deposits; supervising the activities of commercial banks; authorizing the purchase and sale of gold or foreign exchange; and representing the country before international institutions.[12]

The Brazilian coup d'état of 1964 that resulted in the overthrow of President João Goulart by the Brazilian military had a significant effect on the Brazilian economy. The Banking Reform Law ended the SUMOC and established the Banco Central do Brasil as the Brazilian Central Bank and the National Monetary Council. The tenure of the Banco do Brasil as the controller of currency came to an end.[13] The Banco Central do Brasil was established on December 31, 1964 following the passage of Law No. 4595, and began its operations in March 1965, 90 days after the publication of the law. Initially the Board of Governors had four members as per Article 14, and Denio Chagas Nogueira was its inaugural governor.[14]

Duties were progressively transferred to the Banco Central do Brasil from both the Banco do Brazil and the Brazilian Treasury, until its responsibilities were similar to those of most other central banks. A reorganization of government finances during 1985–1986 reassigned the tasks of the Banco Central do Brasil, the Banco do Brasil and the National Treasury, abolished the Special Account, and eliminated automatic money transfers from the Banco Central do Brasil to the Banco do Brasil. Finally, under the

constitution of 1988, all the tasks that are typical of national monetary authorities were transferred to the Banco Central do Brasil, which was also given the exclusive right to issue currency. The central bank was prohibited from directly or indirectly providing loans to the National Treasury. Atypical tasks of the bank such as managing the public debt were transferred to the National Treasury.[15] The central bank was moved to Brasília in phases, beginning with its Legal Department. The first meeting of its Board of Governors to be held in Brasília was in September 1970.

The Banco Central do Brasil made international headlines in 2005 when its branch in Fortaleza in the northeastern state of Ceará was subject to one of the largest bank heists ever perpetuated. About US $70 million was stolen from the bank when a group of burglars dug a tunnel 262 feet long under two downtown city blocks to break into its vault. They used a rented house near the bank as their base, where they set up a fake landscaping business to allay the neighbors' suspicions about truckloads of soil being hauled away. The bank notes were 50 real bills that were being sorted by the bank for either being recirculated or withdrawn from circulation. They were not insured as the risk was deemed too small; nor were the notes sequentially numbered, making tracing them almost impossible. The only bank robbery in recent years that involved a larger amount was when about one billion in US dollars and euros was stolen from the Central Bank of Iraq; the 1987 robbery of US $65 million from the Knightsbridge Safe Deposit Center in London comes a close third.[16,17]

11.3.2 The Administrative Structure of Banco Central do Brasil

After several modifications, Decree No. 91,961 dated November 19, 1985, modified the composition of the Board of Governors to include nine members, who were the Governor and eight Deputy Governors. The eight Deputy Governors are in charge of Administration (Accounting and Finance Department; Information Technology Department; Department of Infrastructure; Human Resources Department; Planning, Budget and Management Department; Security Department; Currency Management Department; the Central Bank Corporate University; the Regional Management Offices), Institutional Relations and Citizenship (Communication Department; Department of Citizen Affairs; Department for Financial Citizenship Promotion), International Affairs and Corporate Risk Management (International Affairs Department;

Corporate Risk and Benchmarks Department), Supervision (Conduct Supervision Department; Strategic Management, Integration and Support for Supervision Department; Financial System Monitoring Department; Credit Unions and Non-banking Financial Institutions Supervision Department; Banking Supervision Department), Licensing and Resolution (Department of Analysis and Control of Disciplinary Actions; Department of Resolution Regimes; Financial System Organization Department; Department of Regulation, Supervision and Control of Farm Credit Operations and Proagro), Economic Policy (Department of Economics; Research Department; Department of Statistics), Monetary Policy (Department of Banking Operations and Payments System; Open Market Operations Department; Department of Foreign Reserves), and Regulation (Financial System Regulation Department; Prudential and Foreign Exchange Regulation Department).

The bank is headquartered in Brasília, and its two biggest branches are in Rio de Janeiro and Sao Paulo. The country is divided into five regions for administrative purposes: *Região Norte* (North Region), *Região Nordeste* (Northeast Region), *Região Centro-Oeste* (Central-West Region), *Região Sudeste* (Southeast Region), and *Região Sul* (South Region) (Fig. 11.1).

11.3.3 The Functions of Banco Central do Brasil

Banco Central do Brasil reassessed its strategic guidelines for the 2016–2019 period in October 2015. The mission of the bank is "To ensure the stability of the currency's purchasing power and a solid and efficient financial system" and the vision, looking forward to 2019, is that "The Central Bank, for its autonomous performance and excellence, will be increasingly recognized as essential to the economic and financial stability." The strategic goals for the period 2016–2019 are[18]:

To ensure compliance with the inflation targets set by the National Monetary Council;

To maintain the soundness, efficiency, and proper functioning of the National Financial System and of the infrastructure of the financial market;

To foster the financial citizenship and strengthen the relationship with society and public powers;

To improve the legal framework for compliance with the institutional mission;

Fig. 11.1 Administrative regions of Brazil

To strengthen the relationship and the international insertion of the Central Bank of Brazil;

To improve governance, structure, management and internal communication of the Institution.

The *Conselho Monetário Nacional* (National Monetary Council) or CMN, established on December 31, 1964, by Law No. 4595, is in charge of formulating monetary and credit policies, with the goal of ensuring monetary stability and the promotion of economic and social development. It is also tasked with securing financing at favorable rates for soil recovery and fertilization, reforestation, rural electrification, mechanization and irrigation projects, combating epizootics and pests in rural activities, and the investment necessary for agricultural activities.[19] The CMN is composed of

the Minister of Finance; the Minister of Planning, Development and Management; and the Governor of the Central Bank of Brazil. The council meets once a month, and can meet more frequently under extraordinary circumstances. The decisions approved by it are published in the Official Gazette and on the website of the Banco Central do Brasil. Article 3 of the law defines the specific responsibilities of the CMN as[20]:

1. Adapt the volume of means of payment to the real needs of the national economy and its development process;
2. To regulate the internal value of the currency, both by preventing or correcting inflationary or deflationary outbreaks of internal or external origin, economic depressions and other imbalances arising from conjunctural phenomena;
3. Regulate the external value of the currency and the balance in the country's balance of payments, in view of the best use of resources in foreign currency;
4. To direct the application of the resources of the financial institutions, public and private; in order to promote, in the different regions of the country, favorable conditions for the harmonious development of the national economy;
5. To promote the improvement of institutions and financial instruments, with a view to greater efficiency of the payment system and the mobilization of resources;
6. To ensure the liquidity and solvency of financial institutions;
7. Coordinate monetary, credit, budgetary, fiscal and public debt policies, internal and external.

The *Comissão Técnica da Moeda e do Crédito* (Technical Commission for Currency and Credit) or COMOC operates as an advisory board to the CMN, and is tasked with evaluating matters before they are submitted to the deliberation of the CMN members. The COMOC is composed of the Governor of the Central Bank of Brazil; the Chairman of the Securities and Exchange Commission of Brazil; the Executive Secretary of the Ministry of Planning, Development and Management; the Executive Secretary of the Ministry of Finance; the Secretary of Economic Policy of the Ministry of Finance; the Secretary of the National Treasury of the Ministry of Finance; and the Deputy Governors of the Central Bank of Brazil.[21]

The conduct of monetary policy in the country is entrusted to the Comité de Politica Monetaria (Monetary Policy Committee) or COPOM. The COPOM was created on June 20, 1996. It is responsible for setting the monetary policy stance and determining the short term interest rate. The COPOM is modeled after similar committees at many other central banks, and is also designed to promote transparency regarding monetary policy. Under the current inflation-targeting regime in Brazil, the main objective of the monetary policy decisions of COPOM is achieving the inflation target set by the National Monetary Council (CMN). If actual inflation breaches the target that was set by the CMN, then the Governor of the Banco Central do Brasil is required to write a public letter to the Minister of Finance explaining the reasons the target was missed, outlining the measures needed to bring inflation back to the target, and specifying the time period over which these measures are likely to be effective.[22] Since 2006, the COPOM has held eight regular meetings every year. Each meeting lasts two days, beginning on a Tuesday and continuing into Wednesday. General economic conditions, including inflation, monetary indicators, output levels, fiscal accounts and balance of payments, are discussed on the first day, while the decision regarding the short term interest rate is made on the second day. The COPOM also publishes the Banco Central do Brasil's Inflation Report at the end of every quarter.

The Banco Central do Brasil's system of conducting open market operations is known as the *Sistema Especial de Liquidação e Custodia* or SELIC, which it manages in partnership with the *Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais* (ANBIMA), an entity representing various Brazilian capital market institutions including commercial banks, investment banks and asset management companies. The main policy instrument of the bank is the SELIC rate, which is the interest rate on overnight interbank loans that are collateralized by Treasury bonds registered with and traded on the SELIC. The interest rate target that is set by the COPOM is the target for the SELIC interest rate. The trades are executed by the *Departamento de Operações de Mercado Aberto do Banco Central* (Central Bank's Open Market Operations Department) or DEMAB. The SELIC was created on November 14, 1979. It is the central depository of government securities issued by the National Treasury. The SELIC is responsible for processing the issuance, redemption, interest payment and custody of these securities, and has an electronic system for

registering the securities and the financial settlement of transactions involving the securities. All the securities are issued exclusively in electronic form. The system also includes complementary modules such as Ofpub and Ofdealer through which the auctions are carried out, and Lastro, which is used to specify the securities object of the repo operations contracted between the central bank and the market. Its working hours are from 06:30 to 18:30.

The Brazilian mint, Casa da Moeda do Brasil, is in charge of printing Brazilian bank notes and striking coins. Its mission is “To provide security solutions in the segments of rolling stock and payment, identification, traceability, authenticity, tax and postal control in a sustainable way.”[23] It also produces security prints such as passports and postage stamps, as well as commemorative medals. The plant was modernized during the period 1964–1969 with the goal of achieving self-sufficiency in the production of currency; this goal was attained in 1969 with the release of five denominations of Brazilian bank notes. The need for a larger facility became evident as the Brazilian economy continued to grow, and the largest facility of its kind in the world was hence inaugurated in 1984. The current premises are located in the industrial district of Santa Cruz, which is a neighborhood in the West Zone of the city of Rio de Janeiro. The mint has also produced bank notes and coins for several other South American and African countries. It is owned by the Brazilian government and administratively falls under the Ministry of Finance.

In the macroprudential regulations arena, the National Monetary Council of the central bank is charged with regulating the activities, capacities and operational modalities of the federal public financial institutions. Public financial institutions are required to obtain approval for how they prioritize their resources and applications to ensure conformity with federal government credit policies. The main instrument for the implementation of the federal government’s investment policies is the National Bank for Economic Development. Non-federal public financial institutions are subject to the provisions that relate to private financial institutions. Private financial institutions, except for investment purposes, are only allowed to participate in the capital of a company with the prior authorization of the central bank. They are required to prepare general balance sheets on June 30 and December 31 of every year. Both public and private financial institutions have to notify the central bank of the appointment or election of directors and members of advisory, fiscal and similar bodies within 15 days

of their occurrence, following which the bank has 60 days to decide whether to accept or refuse the person elected.

As the central bank, the Banco Central do Brasil acts as the financial agent of the National Treasury. In this capacity, it receives the money derived from the collection of federal taxes; makes the payments and supplies necessary for the execution of the General Budget and its complementary laws, though it is not allowed to extend credit of any nature to the National Treasury; grants guarantees when it is legally authorized to do so; acquires and finances inventories of production designated for export; implements minimum prices for agropastoral products; acts as a paying agent and receiver outside the country; and executes the consolidated public debt service.[24] As the principal executor of banking services of interest to the federal government and its municipalities, it has the exclusive right to receive the deposits of all federal entities, including the offices of all civil and military ministries, social security institutions and other municipalities, commissions, departments, and other entities.

The Brazilian central bank worked on adopting the International Accounting Standards that were issued by the International Accounting Standards Board (IASB), which is a London-based non-profit that is working toward a uniform accounting procedure around the world. The transition was completed in 2006. Central banks as well as commercial banks in most countries currently follow the accounting practices of the country where they are located, which prevents accurate international comparisons. The adoption of international accounting standards by the Banco Central do Brasil made its books better understood by international institutions, boosting its credibility. The International Monetary Fund, the Bank for International Settlements and the World Bank assisted the central bank in this transition.

The Banco Central do Brasil is an active proponent of financial inclusion policies and is an influential member of the Alliance for Financial Inclusion (AFI), a network that seeks to promote and develop evidence-based policy solutions that improve the lives of the poor through the power of financial inclusion. The network is led its members and partners, central banks and other financial regulatory institutions from developing countries; currently there are principal members, associate members or specialist members from 95 countries.[25] The AFI was registered as a full-fledged international organization on January 27, 2016. The vision of the AFI is "making financial services more accessible to the world's unbanked" and its mission is "empowering policymakers to increase access to quality

financial services for the poorest populations."[26] The organization has adopted a cooperative approach and bottom-up development model that allows its members to set their own agenda and harness the power of peer learning and peer pressure to develop practical and tested policy reforms that enhance financial inclusion. The current policy initiatives of the AFI are a stronger focus on financial inclusion and gender, providing a platform for analyzing and sharing country-level financial inclusion data, greater exposure for policymakers to merging private sector technology and innovation, a focus on green finance (climate change), mitigating the impact of de-risking in emerging markets, building institutional capacity for members to strengthen risk management and cybersecurity, and systematic knowledge exchange between financial and telecommunications regulators.[27]

11.3.4 Inflation and Brazilian Currency Reforms

Brazil has one of the most unique currency and monetary policy histories of any country. Given its struggles with hyperinflation, its banking authorities have introduced several new currencies in their attempts to ward off stubbornly steady price increases over the decades. The original currency of Brazil, dating back to the colonial period, was the real. The Portuguese real circulated in the colony, though the first European power to actually introduce currency inscribed "real" was the Dutch, during their occupation of New Holland. While coins were initially imported from Portugal, with the establishment of the mint, Casa da Moeda, coin production started locally. The Brazilian real was equivalent to the Portuguese real and circulated alongside. Coins were struck in gold, silver and copper during the colonial period. The currency was retained after Brazilian independence in 1822. New coins were introduced for the lower denominations in bronze, cupro-nickel and aluminum-bronze after independence.

The earliest paper currency in the country date back to 1772, when the *Administração Geral dos Diamantes* (General Diamond Administration) in the region of Tejuco do Serro Frio (present-day Diamantina) printed them to pay its employees; these were redeemed upon the arrival of coin supplies from the Royal Treasury. Soon after the establishment of the Banco do Brasil, the bank began issuing bank notes starting in 1810; the initial denominations were 30, 40, 50, 60, 70, 80, 90, 100, 20, 300 and 400 mil réis. The Brazilian government first issued notes in 1833, and these subsequently circulated alongside bank notes issued by a number of

private banks such as the Banco do Brazil, the Banco do Maranhão and the Banco da República dos Estados Unidos do Brasil. Even the state governments of Alagoas, Amazonas, Maranhão, Pernambuco, Rio Grande do Norte and Sergipe issued paper currency between 1892 and 1897; issues by state governments again happened during the period from 1924 and 1942, when Minas Gerais, Rio Grande do Sul and São Paulo issued paper currency. However, the value of the real steadily declined due to inflation, with devaluations happening in 1926, 1933 and 1939. It was replaced by the cruzeiro in 1942, and the réis bank notes were completely withdrawn from circulation in 1955.

The official currency of Brazil from 1942 to 1967 was the cruzeiro, when inflation necessitated its replacement by the cruzeiro novo, which in turn was replaced by a new currency that confusingly had the same name as the second currency. This second cruzeiro circulated until 1986, when it was replaced by the cruzado, followed by the cruzado novo, followed by a third cruzeiro and then the cruzeiro real.

The present currency, which is the real, has been in circulation since the implementation of the Plano Real (or the Real Plan) in 1994 during the presidency of Itamar Franco. The plan was the brainchild of four people who met as graduate students at the Pontifical Catholic University of Rio de Janeiro, one of whom was the Minister of Finance Edmar Bacha. They determined that the main reasons behind inflation in Brazil were poor fiscal policy and inertial inflation. The situation was untenable, with stores having to change their prices every day. A store employee would walk the aisles to put new stickers on the items, while customers would try to run ahead of them to get the item at the previous day's price.[28] Previous administrations had tried freezing prices as well as freezing peoples' bank accounts; neither of the tactics worked. To slow down inflation, the plan created the real as being equal to one *unidade real de valor* (real value unit) or URV; this non-circulating unit was worth 2750 cruzeiros réis, which was the current exchange rate between the cruzeiro real and the US dollar, making the value of a real exactly the same as the value of a US dollar. While people continued to use the cruzeiro real, all prices and wages were now denominate in réis; these prices were constant, and the only thing that now changed was the worth of the URV in terms of cruzeiros réis. The goal was to get people to start thinking about prices in terms of URV and get used to the idea that unlike the prices denominated in cruzeiros réis, the URV-denominated prices were not increasing. The implementation of the plan continued under the subsequent Ministers of

Table 11.1 Currencies of Brazil

Currency	*Equivalency*	*Period of usage*
Portuguese real	–	Colonial period
Brazilian real (old)	–	Colonial period to 1942
Cruzeiro (first)	1000 réis	1942–1967
Cruzeiro novo	1000 cruzeiros	1967–1970
Cruzeiro (second)	1 cruzeiro novo	1970–1986
Cruzado	1000 cruzeiros novos	1986–1989
Cruzado novo	1000 cruzados	1989–1990
Cruzeiro (third)	1000 cruzados novos	1990–1993
Cruzeiro real	1000 cruzeiros	1993–1994
Real	2750 cruzeiros reais	1994–present

Source: Compiled by the author with data from Banco Central do Brasil

Finance Fernando Henrique Cardoso, who would go on to become Brazil's next president, and Rubens Ricupero. Once prices stabilized, the virtual currency was declared to be the official currency on July 1, 1994 (Table 11.1).

The increase in price level finally stabilized under the program, which created the fictitious Unit of Real Value to end the mentality of "inflation inertia" in the country. As a result of all the devaluations, one modern Brazilian real is equivalent to 2,750,000,000,000,000,000,000 times the old Brazilian real, that is, 2.75 sextillion réis. Inflation has now been brought under control; the inflation rate was 2.95 percent in 2017, well below its target rate of 4.5 percent with a 1.5 percent tolerance interval. The tolerance interval itself has been steadily lowered by the Banco Central do Brasil from 2.5 percent in 2005 to the current 1.5 percent.[29]

11.3.5 The Autonomy of Banco Central do Brasil

The degree of independence of the central bank has changed with Brazil's transition from military dictatorship to parliamentary democracy, which has made it easier for the institution to tackle inflation. However, the Banco Central do Brasil is less independent than many of its peer institutions. It is a part of the Brazilian Ministry of Finance, though it has special status within the ministry and has de facto autonomy. The Governor of the bank has the title of minister and directly reports to the president of Brazil. However, the bank does not have *de jure* autonomy. The term of the Governor of the central bank is not fixed, and they serve at the will of the president of the country. For instance, Gustavo Franco was pressured to

step down from the Governorship in 1999 due to differences with the Brazilian President Fernando Henrique Cardoso; Cardoso wanted to let the Brazilian real float, while Franco was against it as the fixed exchange rate has been a pillar in the fight against hyperinflation. Cardoso went ahead and the real became a floating currency on January 18, 1999; while economic performance has been mixed, Brazil has been able to weather crises like that in Argentina, and Brazilian bonds are now investment grade.[30]

A less independent central bank is usually not as successful in fighting against inflation. One reason for that is that a central bank that is under direct government control can simply print more money to inflate away government debt and other nominal liabilities. While this helps the government at the time, its effect on the economy is deleterious. Another reason is that governments are tempted to increase money supply before elections to increase short-term growth and hence boost their popularity.[31] The Banco Central do Brasil practices inflation targeting. While tightening the monetary policy would have some short term negative consequences, it will help the central bank reach its inflation target in the long term. While it is perfectly acceptable and common to let the inflation rate sit near the top of the allowable interval during times when a recession is likely, the inflation rate has been near the top of the interval in Brazil in most years during the past decade. Increased central bank independence needs to be reinforced with reforms geared toward increasing labor productivity, such as changes in the education system. According to Dincer and Eichengreen (2014), the Latin American country with the most independent central bank is Chile, which has a similar inflation targeting framework and has been able to consistently maintain lower inflation rates, lower interest rates and higher growth rates than Brazil.[32]

Central bank independence became an issue in the 2014 Brazilian general elections, with the winner Dilma Rousseff of the Workers' Party (PT) campaigning in favor of continuing this dependent relationship in order to ensure that the central bank focused on policies that benefited everyone in the country instead of just the financial industry.[33] The fear was that private financial intermediaries would have too much influence on an independent central bank, and interest rates would go up as the financial intermediaries preferred higher rates. Her campaign ran television advertisements showing food vanishing from dinner tables as bankers plotted to increase interest rates in a darkened room. Her opponent Marina Silva of the Brazilian Socialist Party (PSB), on the other hand, came out in favor of an independent Banco Central do Brasil, along the lines of central banks

in Europe, the United States and Canada. The inflation rate, which has since come down, was around 6.5 percent, and a lot of voters agreed with the message of providing the central bank with all the flexibility it could muster in the fight against inflation. The key part of Silva's proposal was giving the Monetary Policy Committee complete freedom to raise the SELIC rate as much as needed in order to slow down price increases. While the Monetary Policy Committee can do that to some extent, it is subject to a lot of political pressure not to raise rates too much. Silva was also against the Banco Central do Brasil's regular intervention in the foreign exchange market to prop up the value of the real as an indirect way to fight inflation, as a large devaluation of the real would likely ensue when the central bank finally stopped intervening.

Notes

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CHAPTER 12

South Africa

12.1 Banking in Pre-Independence and Early Post-Independence South Africa

The Dutch navigator Jan van Riebeeck established the Cape Colony (Dutch: *Kaapkolonie*) in 1652 as a Governate of the Dutch East India Company (Dutch: *Verenigde Oost-indische Compagnie*). While control of the colony alternated between the Dutch and the British after the company rule ended in 1795, the original *Fort de Goede Hoop* steadily grew into the city of Cape Town. Labor imported from India, Indonesia, Madagascar and Mozambique aided this growth, forming the kernels of the Cape Colored communities of the Western Cape. With growing population and commerce came the need for financing. The earliest bank to be established in South Africa was the Lombaard Bank in Cape Town, which opened its doors on April 23, 1793, when the city was still under the direct control of the company. This was a state bank that was entrusted with issuing government notes, bringing additional money into circulation, and helping those with inadequate access to money. Competition from private banks eventually forced it to close in 1883.

The oldest private bank in South Africa was the Cape of Good Hope Bank, which began its operations in 1837. As settlements and economic development expanded beyond the coastline, more private banks were established; around 30 of them opened between 1837 and 1882. Most of them issued their own currency. The Standard Bank of British South Africa Ltd., a large

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imperial bank, commenced operations in Cape Town in 1877. This was closely followed by two other imperial banks. These three well-financed banks established branches throughout the colony and by 1892, among them, took over all but one of the private banks operating at the time. The sole survivor among the dozens of private banks was the Stellenbosch District Bank, which was established in 1882 and is still in existence.[1]

When South Africa became nominally independent with the passage of the South Africa Act of 1909, most of its banks were British-owned and their headquarters and major stockholders based in London. Between the two of them, the Standard Bank and the Barclays Bank controlled much of the banking industry in the country. The currency of the Union of South Africa, from when it became a British Dominion in 1910 until it became a republic in 1961, was the South African pound.[2] Each pound was divided into 20 shillings, and each shilling further sub-divided into 12 pence. The Union of South Africa, like most other Commonwealth nations, maintained a fixed exchange rate with the pound sterling and kept most of its international reserves in the form of claims in London. When the United Kingdom suspended the convertibility between the pound sterling and gold, South Africa did the same and pegged its currency to the pound sterling. Additionally, the South African economy was heavily dependent on gold production at the time, as was the South African government for generating revenue. The largest gold mines were exclusively in British hands and raised most of their funds in the stock market in London. South Africa did not have a refinery and a mint of its own; as a result, South African mines would deliver their gold to the local banks, which would ship the unrefined gold to London every week.[3] N. M. Rothschilds and Sons and other British refiners refined the gold and sold it in the London gold market. Any unpurchased gold was acquired by the Bank of England at the fixed statutory rate of 77 shillings and 9 pence per ounce.[4]

12.2 Central Banking in Early Post-Independence South Africa

12.2.1 The Establishment of the South African Reserve Bank

Calls for establishing a central bank in South Africa go back to 1879, but went unheeded for almost four decades. Individual commercial banks issued bank notes in South Africa at the time. However, like the bank notes issued by US banks during the free banking era, these bank notes

weren't necessarily identical to each other. The sole requirement was that the note issuing banks were obligated to convert the bank notes into gold if members of the public tendered the bank notes in their branches.

South Africa was under the gold standard at the time, and so was the United Kingdom. However, by the end of the First World War, the gold standard had been suspended and the price of gold in the United Kingdom had become higher than the price of gold in South Africa. Hence an easy arbitrage opportunity arose whereby currency could be exchanged for gold in South Africa and that gold then sold in London for British pounds. This obligation to trade at a loss hurt the South African commercial banks, which turned to their government for a legislative fix. As a result, a Gold Conference was organized by the Jan Smuts government at the Union Buildings in Pretoria on October 22 and 23, 1919. The parties in attendance were the general managers of the four main banks in the country, the representatives of the different political parties, and spokesmen for the mining, manufacturing and agricultural sectors. Various proposals came out of it, including the establishment of a mint and refinery and the necessity to have uniform banking laws. Based on the conference suggestions, a Select Committee of Parliament comprising of ten members of the South African parliament was formed on March 31, 1920 to examine the issue. After the committee submitted its recommendations, the Currency and Banking Act was passed in December 1920 (Act No. 31 of 1920) and the South African Reserve Bank opened its doors on June 30, 1921.[5] The initial Governor of the bank was Mr. W. H. Clegg, who served from December 17, 1920 to December 31, 1931. He was followed by Dr. J. Postmus, who led the bank from January 1, 1932 to June 30, 1945. When the Reserve Bank was established, South Africa was only the fourth country outside Europe to have a central bank. Indonesia, Japan and the United States were the only other countries with central banks at the time.[6]

This also lowered the dependence of the South African economy on the British. The South African Reserve Bank assumed an increasing portion of what were hitherto the responsibilities of the Bank of England. South Africa had wanted its own mint during the First World War years, when it was worried about disruptions to its gold shipments to London. The United Kingdom did not agree at the time, fearing the cost to the London gold market. In 1923, South Africa finally established its own mint; this indeed made the nation more independent of the London gold market. In January 1925, South Africa and Australia took the decision to return to the gold standard, which had been suspended due to the First World War,

despite British objections that South Africa should wait till the United Kingdom was ready to get back on the gold standard as well.[7] The Anglo-American Corporation of South Africa, established in 1917, became the first prominent South African company with South Africans serving on its board of directors. Manufacturing began to grow and ultimately overcame mining as the largest sector of the economy, which further broke up the British stronghold.[8]

The South African Reserve Bank assumed the sole responsibility for issuing bank notes. The first notes denominated in the unified national currency were issued on April 19, 1922. The initial denominations of bank notes printed were 10 shillings, 1 pound, 5 pounds, 20 pounds and 100 pounds; the printing of 20 pound notes was subsequently stopped and that of 10 pound notes added to the list. The Reserve Bank also took over the gold reserves that were held by commercial banks at the time.

12.2.2 The End of the Gold Standard in South Africa

The United Kingdom once again decided to suspend the gold standard on September 21, 1931, when the effects of the Great Depression made it impossible to continue backing the pound sterling with gold. This time, South Africa decided against doing the same. Speculation against the South African pound, however, forced the South African Reserve Bank to reconsider its position; on December 28, 1932, the government of J. B. M. Hertzog permanently suspended the conversion between the South African pound and gold.

12.2.3 The Structure and Ownership of the South African Reserve Bank

At the time of the establishment of the South African Reserve Bank, most central banks had private shareholders; based on the norm of the period, so did the South African Reserve Bank. This started changing in the 1930s, when the ravages of the Great Depression forced a lot of countries to rethink the issue and nationalize both their central banks and some of their key industries. New Zealand nationalized its central bank, the Reserve Bank of New Zealand, in 1935; Denmark followed with the nationalization of its central bank, *Danmarks Nationalbank*, in 1936.

The structure of shareholding of the South African Reserve Bank, however, has never been altered. The share capital of the South African Reserve

Bank is two million rand, which is divided into two million shares of one rand each.[9] South Africa is one of eight countries, along with Belgium, Greece, Italy, Japan, Switzerland, Turkey and the United States, where shareholders other than the government own stakes in the central bank.

The shares of the South African Reserve Bank were delisted from the Johannesburg Stock Exchange, the oldest operating and largest stock exchange in Africa, on May 2, 2002, as a result of changes made to listing requirements. The shares of the central bank have been traded in an over-the-counter market since then. The bank currently has around 650 shareholders; there are no restrictions on the number of shares any of them can hold, except no individual shareholder and their associates can together hold more than 10,000 shares out of the total of 2 million shares issued. Shareholders holding more than 10,000 shares at the time of the passage of the act are grandfathered in, but are not allowed to acquire any further shares. Dividends payable on the shares are fixed at ten cents per share per year. Each shareholder is entitled to one vote for every 200 shares, of which they must have been the registered holder for no less than six months prior to the date of the shareholder meeting.[10] The bank holds an ordinary general meeting (OGM) of its shareholders every year, where it tables its Annual Report on its functioning and financial statements for shareholder approval and discusses monetary policy.[11] The South African Reserve Bank is a juristic person for legal purposes.

The bank is overseen by a Board of Directors, which is comprised of 15 members. The Governor and three Deputy Governors are appointed for five-year terms by the President of South Africa in consultation with the Minister of Finance. The term can be shorter than five years if any of them are reappointed, which otherwise involves the same process. As the executive directors, they are tasked with the daily oversight of the central bank. An additional four directors are appointed by the President, with advice from the Minister of Finance, for three-year terms. The seven remaining directors come from specific fields of expertise; one needs to be an expert in agriculture, one in labor, one in mining, two in industry, and two in commerce or finance. These seven directors are elected by the shareholders of the Reserve Bank at the ordinary general meeting and also serve three-year terms. It is the responsibility of the Board of Directors to ensure that the bank is adhering to the norms of good corporate governance at all times.

The bank is organized into several departments for administrative purposes; these are Bank Supervision, Business Systems and Technology, Corporate Services, Currency Management, Executive Management,

Financial Markets, Financial Services, Financial Surveillance, Human Resources, Internal Audit, Legal Services, National Payment System, Economic Research and Statistics, Risk Management and Compliance, and the SARB Academy. Of these, the Bank Supervision Department and the Financial Markets Department are especially important.

The Bank Supervision Department (BSD) is one of two key departments of the bank, overseeing the financial soundness of the commercial banking sector. The divisions within the BSD and their responsibilities are as follows[12]:

Research and Information: Research emerging issues in the local and international financial stability arena, and compile and present the findings in the biannual Financial Stability Review.

Consolidated Supervision: Supervision of banking groups on a consolidated basis with a view to appropriately supervising all material risks to which the banking group may be exposed.

Review Team: Conduct specific reviews on banks and/or the banking sector to assess compliance with the Banks Act, 1990, the Regulations relating to Banks and other relevant legislation such as the Financial Intelligence Centre Act, 2001.

Analysis: Analyse the financial and risk information of banks, ensure compliance with prudential requirements, and verify that banks adhere to regulatory capital requirements.

Risk and Quantitative Specialists: Assess the adequacy of risk management and compliance with the Banks Act, 1990, assess appropriateness of the level of capital held for Pillar 1 risks (i.e. minimum capital requirements in respect of credit risk, market risk and operational risk exposures) and process banks' applications to use more advanced models for calculating regulatory capital requirements.

Capital Management: Review banks' internal capital adequacy assessment processes (ICAAPs) and provide input on banks' applications for the issuance of capital.

Disclosure and Other Risks: Analyse and assess banks' adherence to minimum regulatory disclosure requirements.

Co-operative Banks: Register, de-register and supervise co-operative banks in terms of the Co-operative Banks Act, 2007 and the Regulations relating to Co-operative Banks.

Regulations Division: Provide legal administration services (e.g. processing applications of prospective banks), and appropriately respond to activities of unregistered persons and institutions (e.g. illegal deposit-taking).

Policy and Regulatory Specialists: Ensures that the legal framework for the regulation and supervision of banks and banking groups remains relevant and current and aligned with regulatory, supervisory and market developments at a domestic and international level.

The Financial Markets Department is the other primary department of the Reserve Bank. It is tasked with a range of duties related to the actual conduct of monetary policy by getting the market interest rate to equalize the repo rate determined by the Reserve Bank, overseeing the day-to-day administration of exchange control, and acting as the banker to the South African government. The Reserve Bank acts as an advisor to the Minister of Finance in its task of exchange control. The Minister of Finance, in their official capacity, can choose select banks to act as authorized dealers in foreign exchange transactions; this gives them the right to buy and sell foreign currency within the cap set by the Financial Surveillance Department. As the banker to central government, the Reserve Bank holds government deposits. The central government now holds cash balances at other banks as well, but the Reserve Bank is responsible for the movement of these funds to, between and from these other banks. The Reserve Bank does not provide banking services to provincial governments, local governments or state enterprises. The specific functions of the Financial Markets Department include[13]:

Implementing monetary policy decisions of the Monetary Policy Committee (MPC). This entails influencing short-term money market rates to be consistent with the repo rate set by the MPC. This is done by creating a liquidity shortage in the money market which the banks have to refinance from the Bank, at the repo rate, or other penalty rates as applicable, through standing facilities. Liquidity management also includes the usage of other open-market operations such as reverse repurchase transactions, SARB debentures, foreign exchange swaps, movement of public sector funds between the Bank and the market and facilities such as the averaging of cash reserves.

Participating in the spot and forward foreign exchange markets to service the foreign exchange needs of the Bank and its clients as well as for the management of money-market liquidity.

Acting as a funding agent of the Government by conducting bond and Treasury Bill auctions, participating in the formulation of debt management strategies and conducting surveillance over primary dealers in the government bond market.

Managing the investment portfolio of the Corporation for Public Deposits (CPD).

Promoting the effective functioning of the domestic financial markets and contributing to the Bank's financial stability mandate through effective market monitoring, gathering of market intelligence and ensuring the Bank's activities in the markets support financial stability.

Managing the country's official gold and foreign exchange reserves.

Managing relationships with domestic and foreign counterparties covering both trading and settlements.

Providing custody and settlement services to the Government and relevant counterparty banks.

Managing risks inherent in the management of gold and foreign exchange reserves, all market operations conducted by the Department, as well as all functions conducted on behalf of Government by the FMD.

Performing an accounting function for all transactions conducted by the Department in the domestic and foreign exchange markets as well as transactions related to its foreign reserves management functions in terms of the Reserve Bank Act and in alignment with the International Financial Reporting Standards (IFRS).

Providing market information and analyses to assist various Bank committees and the Governors' Executive Committee (GEC) in their decision-making processes.

Fostering relations with market participants and other stakeholders, in order to gather market intelligence for purposes of enhancing the Bank's understanding of market developments for effective decision making and to promote the image of the Bank and the country.

The Reserve Bank can't be placed in liquidation except by an act of the South African Parliament. In the event of liquidation, the reserve fund and surplus assets (if any) of the Bank shall, subject to certain provisions, be divided between the government and shareholders in the proportion of 60 percent and 40 percent respectively.

12.2.4 Subsidiaries of the South African Reserve Bank

Some of the activities of the South African Reserve Bank have been spun off into subsidiaries for reasons of operational efficiency. These subsidiaries are the Corporation for Public Deposits, the South African Banknote Company, and the South African Mint; all three are fully owned by the Reserve Bank.

The earliest subsidiary of the South African Reserve Bank was the National Finance Corporation (NFC), which was established on September 20, 1949, to deepen the domestic money market and promote more effective capital utilization. The NFC took its liabilities, which were deposits from the government and semi-governmental institutions, and invested them in Treasury bills and various other types of government securities. The Corporation for Public Deposits (CPD) was established in 1984 after the dissolution of the NFC and the passage of the Corporation for Public Deposits Act, 1984 (Act No. 46 of 1984). The liabilities of the CPD are call deposits from the public sector, with call deposits from other sectors permitted if sanctioned by the Minister of Finance. All these funds are payable on demand. These funds are then invested in short-term money market instruments and special Treasury bills. The Corporation is overseen by its Board of Directors, who are appointed by the Minister of Finance.

South Africa decided to start printing its bank notes at home instead of abroad in 1958. The British bank note printing company Bradbury Wilkinson established the South African Bank Note Company (Pty) Ltd. as a joint venture company to print bank notes for South Africa. Domestic production of bank notes began in 1961, the same year South Africa adopted a decimal system for its currency. The shares of Bradbury Wilkinson were subsequently taken over by the South African Reserve Bank, making the Company a wholly owned subsidiary. The Company has a separate management structure with its own board, whose members are appointed by the board of the Reserve Bank. It also prints banknotes for several neighboring countries.

South Africa has been minting coins since the establishment of a government mint in Pretoria in 1890, with actual production starting in 1892. When South Africa became a British Dominion in 1910, it used coins of both Great Britain and the Zuid-Afrikaansche Republic (which was an independent nation from 1852 to 1902 commonly known as Transvaal). The Zuid-Afrikaansche Republic coins remained legal tender until 1938, while the British coins remained legal tender until 1961. The South African Mint was established in 1923 as an outgrowth of the mint in Pretoria. It was owned by the Government of South Africa, until the government sold it to the South African Reserve Bank in 1988 and it became a wholly owned subsidiary titled the South African Mint Company (Pty) Ltd. Like the South African Bank Note Company, the South African Mint Company manufactures all South African coinage, as well as coins for some of the neighboring countries. Apart from regularly circulating coins,

the Mint also produces special coins like the Krugerrand, the Natura, and the Protea. Numismatic coins are also sold by the Mint. The Krugerrand is a gold coin that has been minted since 1967 as a way to market South African gold especially under the apartheid. The name comes from Paul Kruger, the President of the Zuid-Afrikaansche Republic from 1883 to 1900, compounded with rand, the South African currency. The traditional denomination contains one troy ounce of fine gold, and is 91.67 percent gold and 8.33 percent copper. Three additional denominations were introduced in September 1980; these contain half, quarter, and one-tenth troy ounce of pure gold. Due to the popularity of the Krugerrand, a second series of gold and silver coins, the Protea, was introduced in 1986. The name comes from the obverse having an image of King Protea, the national flower of South Africa; the reverse has a design that varies based on the theme for that year. The coins were initially 22 carat gold, but have been –24 carat gold since 1997. Protea coins include a one ounce (R25) and a one-tenth ounce (R5) pure gold coin, as well as a R1 sterling silver coin.[14] The gold Natura coins were introduced in 1994, with the initial design depicting the "Big Five" animals of South Africa: the lion, leopard, elephant, buffalo, and rhinoceros. After the first five years, several sizes of the same design have been released every year; these have been based on a number of themes. The Mint has its own board, with the members appointed by the board of the Reserve Bank.

12.2.5 The History of South African Coins and Bank Notes

The early inhabitants of South Africa had extensive trade links, but trade was mostly carried out through barter. Roman and Egyptian coins dating back more than two millennia have been found on the Pondoland coast, pointing to old trade links and some, though limited, use of money.[15] At the time of Jan van Riebeeck's founding of Cape Town in 1652, the basic coin used in the Netherlands was the Spanish eight real. To carry out its trade with South and East Asia, the Dutch East India Company (Dutch: *Verenigde Oost-Indische Compagnie* or VOC) struck eight reals that were similar but carried different designs with permission from Spain. The real was replaced by the rixdollar and the guilder was introduced as the currency of Cape Colony in 1681. The guilder and its multiples were supplemented by silver ducatoons and copper doits starting in 1726. In addition, trade by the British East India Company resulted in the widespread circulation of Indian gold pagodas, gold mohurs, and silver rupees. As is unsurprising of

major ports, tariff records of the colony reflect coins of many other jurisdictions, including Japanese gold kobans, English guineas (which used gold that mostly came from the west African region of Guinea), Portuguese reis and Russian roubles.

The British occupied Cape Colony in 1795 after the Battle of Muizenberg. This was during the British invasion of the Cape Colony, which was a part of the French Revolutionary Wars. There was a shortage of coins of small denominations by then, leading to the introduction of copper cartwheel pennies in 1800. A penny was equivalent to two stuivers. Following the Treaty of Amiens signed by Joseph Bonaparte, the would-be king of Naples, Sicily and Spain, and the 1st Marquess Cornwallis, British army colonel and colonial administrator of India, the Batavian Republic took over the colony and attempted to make the Dutch ducatoon, daalder, guilder and doit the only legal tenders. However, the popularity of the British copper pennies meant their continued usage in Cape Colony. Peace bought by the Treaty of Amiens lasted only a year, and soon the Cape was back in British control. This followed the Battle of Blaauwberg on January 8, 1806, which was fought by the British to wrestle control of the colony from the Batavian Republic, which was a French vassal state at the time; it was crucial to the British that Napoleon and the French did not gain control over such an important port and sea route. The British introduced the ship guilder coins the same year, along with additional shillings and pennies, and the new Spanish 16 dollar doubloons. The troops were paid in Spanish currency even under the British administration.

Administrators in Griqualand, a part of central South Africa that is today a part of the Northern Cape Province and then inhabited mostly by the Griqua people, decided to introduce four new denominations of coins in 1815.[16] These were the silver ten and five pence and the bronze half penny and farthing. However, the new coins weren't successful and were subsequently withdrawn. Administrators in Cape Colony proposed introducing their own coins in 1823. However, the British disagreed with the proposal and introduced the pound sterling in the colony in 1826. There was a chronic shortage of British coins, and several other silver coins were used to pay the troops; these included Spanish dollars, Sicilian dollars, US dollars, French francs, and Indian rupees. At least one gold coin, the Sydney Mint sovereign, was also declared legal tender. The Colony of Natal had no official currency and mostly used British gold and silver coins. Copper coins were very limited in supply, and stores often handed out tokens and "good-fors" as a result. The administration tried importing

Indian rupees from Mauritius, but these were not very popular in the colony. Like Natal, Orange Free State widely used British gold and silver coins, but additionally used rixdollars for government payments. It also experienced widespread shortage of smaller denominations, and had to resort to tokens and "good-fors" until officially adopting the coinage of the South African Republic in 1900. The South African Republic, or Transvaal, initially used rixdollars, then concurrently used rixdollars and the sterling, and after 1868 only used the sterling. As with other regions, tokens and "good-fors" were commonly used due to currency shortages. The Strachan and Co. (S&Co) trade tokens were issued in denominations of three pence, six pence, one shilling, and two shillings; four sets were issued over a period of about 50 years. These were only withdrawn from circulation in 1932. The administration of President Thomas François Burgers, the fourth president of the South African Republic, introduced gold pondes (or pounds) that were on par with the British gold sovereign. Eight hundred and thirty-seven of these coins, called Burgerspond, were struck at Heaton's Mint (also known as Ralph Heaton & Sons) in Birmingham while the president was on a visit to England, and were introduced in 1874. The coins used alluvial gold from the Lydenburg district. Under the subsequent presidency of Paul Kruger, the *Zuid-Afrikaansche Republiek* decided to introduce its own coinage around 1890. Several series were considered, and the proofs for most of them still exist. The first series minted, in the year 1892, was a complete set of all the denominations of the British sterling series with an image of Paul Kruger on the reserve. The denominations struck were the penny, tickey (three pence), six pence, shilling, two shillings, half crown, crown, half pond (half pound), pond, blank pond (one pound minted in 1900), and veldpond (one pound minted in 1902).

During British rule as the Union of South Africa, formed by combining the four separate British territories (Cape Colony, Natal Colony, Transvaal Colony and Orange River Colony) as a result of the South Africa Act of 1909, coins were struck at the Royal Mint in Pretoria from 1923. This was the reign of King George V. The first series, struck between 1923 and 1932, included the quarter penny, half penny, penny, three pence, six pence, one shilling, two shilling, two and a half shilling, half sovereign, and one sovereign. The denominations for subsequent series were largely identical; most of the designs were by the English artist George Kruger Gray. Kruger Gray's design work included not just coinage from the United Kingdom and South Africa, but several denominations of coins

from Australia, Canada, Cyprus, Jersey, Mauritius, New Guinea, New Zealand, and Southern Rhodesia as well.[17]

The era of South African paper currency began when a shortage of coins from the Netherlands in the settlement forced the then Dutch Governor of the Cape of Good Hope, Joachim van Plettenberg, to introduce paper currency in 1782. This money was denominated in rixdollars, which was the currency of the Cape of Good Hope at the time. There were no printing presses in the colony at the time, and all the bank notes were handwritten until 1803; they did have a government fiscal hand stamp designating their value and the date of issue. Bank notes began to be printed after that, though the practice of fiscal hand stamping continued for a while.

Around 30 private banks operated in South Africa during the mid to late nineteenth century, and most of them issued their own paper currency. Some only issued a single denomination, while others issued bank notes of multiple denominations. In addition, three trading houses and a mining company issued their own bank notes between 1850 and 1860. Three large imperial banks with significant capital entered the South African market beginning in the 1870s, and all three issued bank notes. By the time South Africa became a British Dominion in 1910, these three imperial banks and a relatively new bank from Transvaal were the only four financial institutions in the Cape Province still issuing their own currency.[18]

While all government issued bank notes were printed locally, those issued by the imperial and private banks were all printed in England. Around the middle of the 1860s, several banks decided to get their currencies printed locally. Most of these bank notes were produced by Soul Solomon & Co., which was a Cape Town based printing company. However, the banks went back to importing bank notes after a few years; this only ended in 1961 with the establishment of the South African Bank Note Company (Pty) Ltd., a subsidiary of the Reserve Bank that produces all of South Africa's bank notes. This coincided with South Africa changing its currency from the pound sterling to rand and cents, with the South African Reserve Bank gradually withdrawing the pound sterling bank notes and replacing them with the rand bills. Of the paper currency denominations, the old R1, R2, and R5 bank notes are no longer issued, but all existing notes of these denominations remain legal tender.

The acceptable quality of bank notes in circulation are guided by Section 14 of the Bank's Act Number 90 of 1989, which stipulates that "Firstly, the used banknotes issued by the branches of the Bank must be

capable of being mechanically handled by cash receiving and/or dispensing machines. Secondly, the quality of used banknotes should be acceptable to members of the public when paid to them by the tellers of commercial banks."[19] Electronic bank note processing machines are used to process all the bank notes deposited at any branch of the Reserve Bank to weed out the ones that are of unacceptable quality. The South African Reserve Bank replaces mutilated bank notes at full face value if two-thirds or more of the original note remains; it replaces notes at half the face value if between two-fifths and two-thirds of the original note remains, and considers notes with less than two-fifths remaining as having no value.

The South African Reserve Bank injects new bank notes and coins into circulation on an ongoing basis. New bank notes are automatically issued by the branches of the Reserve Bank, while the demand for new coins is assessed and orders placed with the head office of the Reserve Bank by the national specie committee, whose members are appointed by the commercial banks.

Legal tender refers to bank notes or coins that can be legally offered in payment of an obligation and a creditor is obliged to accept. It is legal to use any quantity of bank notes to make a payment during transactions. There are, however, some restrictions on the quantity of coins that can be used in a single transaction. The amount paid in coins can't exceed 50 rand, where coin of the denomination of 1 rand or higher are so tendered; 5 rand, where coin of denominations of 10 cents up to and including 50 cents are so tendered; 50 cents, where coin of the denomination of 5 cents or less are so tendered; and the value of each coin so tendered shall be equal to the amount specified on that coin.[20]

12.3 The Bretton Woods System Years

The Bretton Woods agreement fixed the exchange rate between the US dollar and the pound sterling at \$4.03/£. South Africa was one of several countries that formed the Sterling Area, and it coordinated its exchange control regulations with the other countries. With the South African pound pegged to the pound sterling, its exchange rate was also fixed at US \$4.03 per South African pound. The United Kingdom, still reeling from the effects of the Second World War, decided to devalue the pound in 1949. The exchange rate between the US dollar and the pound sterling changed from \$4.03/£ to \$2.80/£, and so did the exchange rate between the US dollar and the South African pound.

Table 12.1 Equivalence table between pound and rand coins

Value in pounds	*Value in rand*
Pound/sovereign	2 rand
Half-pound/half sovereign	1 rand
Crown	50 cents
Half-crown	25 cents
Florin	20 cents
Shilling	10 cents
Sixpence	5 cents
Threepence	2 and 1/2 cents
Penny	10/12th of a cent
Half-penny	5/12th of a cent
Farthing	5/24th of a cent

Source: South African Reserve Bank

The South African government appointed the Decimal Coinage Commission in 1956 to look at the feasibility of implementing a decimal coinage system for South Africa. The rand replaced the South African pound on February 14, 1961 at the rate of two rand to one South African pound; one US dollar was equivalent to 0.714 rand. The government had to determine the equivalence with the old designations when decimal coinage was introduced, and decided on the following concordance table (Table 12.1):

The name “rand” derives from *Witwatersrand* (“white waters’ ridge”), which is a long escarpment as well as a continental divide on which Johannesburg is located. Most of the country’s gold also comes from the region, making it a fitting name for the new currency. The Bantustans, or black homelands that were demarcated for black residents of South Africa by the segregationist administration during the apartheid era, also used the rand. The four Bantustans that South Africa declared to be independent nations, but unrecognized by the international community, were Bophuthatswana, Ciskei, Transkei and Venda.[21] Other Bantustans received partial autonomy, but not full independence. Apart from two exceptions, these homelands were comprised of geographically disconnected areas that were impossible to administer in practice (Fig. 12.1).

Inflation increasingly became an issue by the middle of the 1960s. The South African Reserve Bank introduced measures to tackle inflation in July, August and December of 1966, bringing the rising prices under control

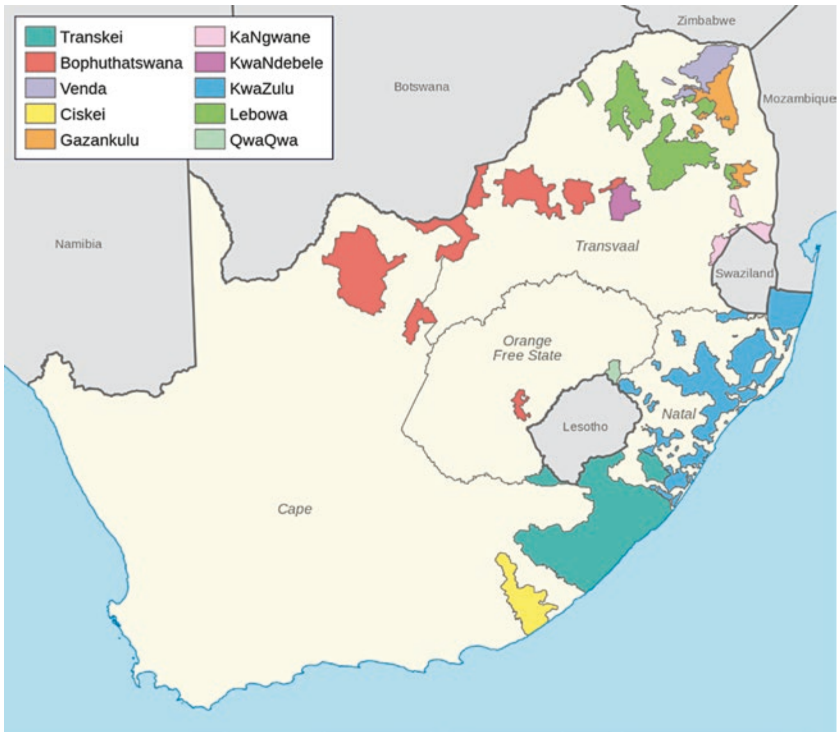

Fig. 12.1 Bantustans in South Africa

and resulting in the inflation rate decreasing to manageable levels by 1967. Following the sterling crisis in the summer of 1966, the effects of the Arab-Israeli Six Day War, the resulting rise in oil prices, and recurring current account deficits, the United Kingdom devalued the British pound by 14 percent from $2.80 to $2.40 in November 1967. This time, however, South Africa did not follow suit. Hence the rand appreciated against the pound sterling. The economic uncertainties of the time, especially a negative balance of payments and the massive increases in expenditure and public debt resulting from the Vietnam War, prompted President Nixon to announce an end to the convertibility between the US dollar and gold on August 15, 1971. This brought an end to the Bretton Woods system, and to South Africa's exchange rate policy at the time with it.

12.4 The Post-Bretton Woods Years

Following the collapse of the Bretton Woods system, the Group of Ten (or G-10) countries were engaged in a series of bilateral and multilateral negotiations throughout the fall of 1971. The group comprised of Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States. These were the participating countries in the General Agreement to Borrow (GAB), which was designed to provide more resources to the IMF. The negotiations culminated in the forging of the Smithsonian Agreement when the countries met at the Smithsonian Institution in Washington, DC, in December. The United States promised to peg the value of the dollar at $38 per ounce of gold, with a 2.25 percent trading band. Other countries pledged to let their currencies appreciate against the dollar. South Africa took this opportunity to devalue the rand by 12.28 percent, changing the exchange rate to 71.34 cents to the US dollar.

From 1972 until 1974, South Africa decided to peg the rand to the US dollar. This arrangement ended in June 1974, when South Africa decided to briefly decouple the rand from the dollar to pursue an independent managed floating system. It reverted to the previous arrangement in June 1975, and once again pegged the rand to the US dollar. However, the rand was devalued by 17.9 percent on September 22, 1975, to bolster South Africa's exports; the exchange rate was 86.96 cents to the US dollar at the time.[22] This was followed by a period where the rand was initially pegged to a basket of currencies, and then again to the dollar. The price of gold started going up around this time, and reached $850 per ounce on January 21, 1980. This led to a massive increase in South African export earnings and helped to reinforce the value of the rand. Since then however, gold prices started on a long decline, especially in real terms, over a period lasting more than two decades. Despite rising steadily since 2002, inflation-adjusted gold prices have still not reached the 1980 prices. This has had a depressing effect on the value of the rand since then, despite the strength of South Africa's other mineral exports.

The reasons behind the existence of exchange controls were as follows[23]:

198.1 to ensure the repatriation into the South African banking system of all foreign currency acquired by residents of South Africa whether of a current or of a capital nature;

198.2 to prevent the loss of such foreign currency resources through the transfer abroad of real or financial capital assets held in South Africa;

198.3 to effectively control the movement into and out of South Africa of financial and real assets (money and/or goods) while at the same time not interfering with the efficient operation of the commercial, industrial and financial systems of the country.

198.4 to avoid undue pressures on the country's gold and foreign exchange reserves, which in turn would result in serious domestic inflation, a weakening of the country's terms of trade with the rest of the world, the impoverishment of the domestic population, the retardation of the domestic economic growth rate and the distortion of the Rand equivalent of the South African foreign debt.

South Africa abolished exchange rate controls on February 7, 1983. However, the country could not sustain this. International sanctions, trade boycotts, disinvestment campaigns, and the withdrawal of loan funding to South Africa as a result of the apartheid resulted in a severe balance of payments crisis. South Africa had to reschedule its foreign debt on September 1, 1985, and it returned to a system with exchange controls over non-residents. The dual rand system was introduced to address this, with the Financial Rand used for capital account transactions. Any outgoing funds, apart from regular trade related monetary flows, were subject to prior approval by exchange control authorities. Liberalization of exchange controls would not occur until the first democratic election of 1994; the new administration abolished the Financial Rand in March 1995.[24] Dovetailing with this, from September 1985 to 1990, the principal objective of South African monetary policy was to maintain a current account surplus. The focus has shifted to price stability since then.

12.5 The Current Inflation Targeting Framework and Central Bank Autonomy

12.5.1 *The Implementation of the Inflation Targeting Framework*

Until around 1980, South Africa's inflation rate was around the same as that of the United Kingdom and the United States. However, they have diverged substantially since then, and the exchange rate of the rand has consequently come under downward pressure. After four decades of trying

exchange rate targeting, a discretionary monetary policy, monetary aggregate targeting, and an eclectic approach, South Africa announced its intention to adopt an inflation targeting framework in August 1999. It formally adopted the framework in February 2000. Under the inflation targeting framework, the South African Reserve Bank sets a specific target inflation rate and tailors its monetary policy to achieve that goal.

Inflation targeting is used in many countries; some use a point inflation target, others use a point inflation target with an associated range, and yet others use a target inflation range. The target adopted by South Africa is an inflation range varying between three and six percent; the inflation measure currently used is the CPI for all urban areas. With a few exceptions, it has largely been successful. The advantage of using inflation targeting is the clarity and transparency it brings to the conduct of monetary policy.

Decisions regarding monetary policy are taken by the Monetary Policy Committee (MPC), which is comprised of eight members. The Governor chairs the committee, which also includes the three Deputy Governors and four senior bank officials. The repo rate is set at the meetings of the committee, which typically occur six times a year on dates decided upon the year before. Multiple econometric models are used to forecast the inflation rate; these look at changes in administered prices; changes in wages, productivity, and unit labor cost; the components of domestic and external demand; exchange rate developments; money supply and credit extension; oil prices; and the expected output gap, which is the gap between actual and potential output. The committee does not have a desired level in mind for any of these variables.[25] However, the decision regarding the repo rate the committee ultimately arrives at is not just based on the inflation forecast. All decisions are made by consensus.

The decisions are then implemented by the Financial Markets Department, which uses a classical cash reserve system, achieving desired liquidity levels by imposing a cash reserve requirement on banks. The principal refinancing operation is conducting seven day repurchase auctions with commercial banks as the counterparties every week, at the repo rate decided by the MPC. The Reserve Bank also offers commercial banks several end-of-day options to settle their daily positions; these include access to their cash reserve balances held with the Reserve Bank, supplementary repos or reverse repos conducted at the repo rate, and an automated standing facility through which the end-of-day balances on the banks' settlement accounts are automatically settled at a rate of 100 basis points below or above the policy rate. The open market operations conducted to alter

the level of liquidity in the market include the issuance of South African Reserve Bank debentures, reverse repos, the movement of public sector funds between the market and the Reserve Bank, and the conducting of money market swaps in the foreign exchange market.[26] The transmission of monetary policy occurs through multiple channels, though they are characterized by long and sometimes unpredictable lags.

As the central bank, the South African Reserve Bank is responsible for carrying out foreign exchange transactions to accumulate foreign reserves and conducting foreign exchange transactions on behalf of clients. The Financial Markets Department is in charge of the gold and foreign exchange reserves of the bank, which it manages based on the criteria set out in the Reserve Bank's Investment Policy and Guidelines. The reserves guarantee that South Africa is able to cover its external operational needs; the country is able to service its foreign exchange liabilities; it is capable of covering any foreign currency net imbalances in the balance of payments; and maintain confidence in South Africa's monetary and exchange rate policies.[27] The strategic framework for the foreign reserves management process followed by the Financial Markets Department (FMD) and the Reserves Management Committee (RESMANCO) is provided by the South African Reserve Bank's (Bank) Official Gold and Foreign Exchange Reserves Management Investment Policy. This policy sets out the aggregate tolerance parameters of the Reserve Bank and the eligible asset classes; these are then implemented via Strategic Asset Allocation (SAA), factoring in the risk tolerance and liquidity constraints of the Reserve Bank. The SAA determines the tranche sizes, currency composition, and the appropriate asset classes, and calculates the expected risk and return over the relevant time horizon; these parameters are specified at tranche level, each of which have their own asset mix and investment objectives. The investment objectives, in descending order of priority, are capital preservation, liquidity, and returns[28]:

4.1.1. The objectives for the management of reserves are, in order of priority, as follows:

4.1.1.1. Capital preservation: Safety of the principal amount invested is the foremost investment objective. Investments shall be undertaken in a manner that seeks to preserve the capital value of the overall portfolio over the investment horizon, subject to the approved risk tolerances.

4.1.1.2. Liquidity: Investment management shall seek to ensure that adequate reserves are available to meet a defined range of objectives. In order to maintain sufficient liquidity, reserves shall be invested largely (see proposed investment guidelines) in securities with an active secondary market.

4.1.1.3. Returns: Subject to the capital preservation and liquidity constraints stated above, the reserves shall be invested with the objective of achieving a reasonable return which is consistent with the investment objectives and risk constraints.

As each of these investment objectives have specific liquidity requirements and investment horizons, the reserves are divided into tranches (or sub-portfolios) for investment management. The two tranches are the Liquidity Tranche and the Investment Tranche. The size of the Liquidity Tranche is dependent on the adequate level of reserves, with any additional amount going to the Investment Tranche. The Liquidity Tranche is invested in highly liquid securities, and is comprised of four sub-tranches: the Special Drawing Rights (SDR) Sub-tranche; the Gold Sub-tranche; the Working Capital Sub-tranche; and the Buffer Sub-tranche. The Special Drawing Rights Sub-tranche focuses on the needs of South Africa as a member of the International Monetary Fund (IMF); the Gold Sub-tranche deals with South Africa's holdings of gold as a special reserve asset; the Working Capital Sub-tranche is responsible for supplying liquidity for short-term liabilities and cash management needs; and the Buffer Sub-tranche covers unforeseen liquidity needs and replenishes the Working Capital Sub-tranche as and when required. The Working Capital Sub-tranche has a one month investment horizon, while the Buffer Sub-tranche has a one year investment horizon. The aim of the Investment Tranche is to ensure high returns on the investment portfolio; it is hence invested in higher yield securities, while still adhering to the capital preservation and liquidity needs. The Investment Tranche has a three year investment horizon.[29]

The eligible currencies are the Australian dollar (AUD), the British pound (GBP), the Canadian dollar (CAD), the Chinese renminbi (CNY), the Danish krone (DKK), the Euro (EUR), the Japanese yen (JPY) the New Zealand dollar (NZD), the Norwegian krone (NOK), the Swedish krona (SEK), the Swiss franc (CHF), the South Korean won (KRW), and the US dollar (USD). The list of eligible instruments are as follows[30]:

- Gold: The Bank is authorised to hold a portion of its reserves in gold. The gold will be stored at GEC-approved storage facilities, both within South Africa and abroad.
- Government securities: Marketable bonds and other obligations issued or unconditionally guaranteed by the sovereign government of a country (including inflation-linked bonds).
- Government agencies, states (provinces), multilateral organisation securities (supranational), marketable bonds and other obligations issued or unconditionally guaranteed by an agency of a sovereign government of a country or by multilateral organisations.
- Banks' and other financial institutions' short- and long-term securities.
- Derivatives with underlying instruments explicitly authorised in the investment guidelines for efficient portfolio management.
- Repurchase agreements (repos) and reverse repurchase agreements (reverse repos): The eligible securities comprise securities which the Bank is authorised to obtain.
- Foreign exchange: Currencies eligible for investment as authorised in the investment guidelines.
- Corporate, asset-backed and covered securities: Any marketable bond, note or other obligation or security (including securities that are asset-backed securities) issued or unconditionally guaranteed by a legal entity or trust.
- Mortgage-backed securities (MBS): Agency MBS.
- Money-market mutual funds.
- Other asset classes as may be expressly authorised by the GEC.

In terms of credit risk guidelines, only ratings issued by three securities rating agencies, Fitch, Moody's, and Standard and Poor's, are considered. Securities and issuers have to be rated by a minimum of two rating agencies. For securities that are only rated by two rating agencies, the lower of the two credit ratings apply. For securities rated by all three rating agencies, the lowest of the two highest ratings apply. Securities or issuers of securities rated below 'A' or 'A-1' are not permitted. The detailed credit risk guidelines are as follows[31]:

1. Obligations issued by the government of a country in the currency of such country should possess a minimum long-term foreign currency rating of 'A' (excluding 'A-').

2. Obligations issued by the government of a country in another currency unit other than its local currency unit should possess a minimum long-term foreign currency and local currency rating of 'A' (excluding 'A-').
3. Obligations issued or unconditionally guaranteed by the agency or state (province) of a government of a country or by a multilateral (supranational) organisation in any currency unit, provided that the obligation is rated at least 'A' (excluding 'A-') in both local and foreign currency.
4. Deposits with any commercial bank counterparty are permitted if the senior debt securities of the bank involved in the transaction are rated at least 'A' (long-term foreign currency rating) by at least two approved rating agencies. In addition, for deposits the FMD cash limit model will also apply. In exceptional circumstances (given that the term of deposits is typically so short making it impractical to obtain the approval of the Chair of Resmanco), the Head of FMD may approve temporary breaches of deposit limits, subject to the execution of any such discretion being reported to the Deputy Governor as soon as practicable.
5. Corporate bonds are permitted with a minimum rating of 'AA-'.
6. Covered bonds are permitted with a minimum rating of 'AA-'.
7. Asset-backed securities are permitted with a minimum rating of 'AAA'.
8. Money-market mutual funds are permitted given that the underlying instruments have a minimum rating of 'A' (excluding 'A-') or 'A-1'.

Investing its foreign exchange reserves and gold entails financial risks like credit risk, market risk, and liquidity risk. Credit risk is comprised of counterparty risk and concentration risk. Counterparty risk refers to the possibility that the counterparty may not be able to meet its contractual obligation in a transaction. The central bank assesses its credit risk both at the counterparty and aggregate levels on an ongoing basis. This risk is mitigated through exposure limits, collateral requirements, and netting-off arrangements with some of the counterparties using International Swaps and Derivatives Association (ISDA) agreements. Credit swap spread analysis is used to estimate the market perception of default risk with specific counterparties. Concentration risk refers to the possibility of large financial losses due to a single exposure or group of exposures. This risk is mitigated through diversification and setting caps on the exposures to individual institutions relative to the total value of the portfolio. Market risk arises when gold prices, interest rates, and foreign exchange rates move adversely.

The Central Bank holds significant quantities of gold, and a fall in gold prices adversely affects its reserves. Movements in interest rates also affects its portfolio of interest bearing assets. Interest rate risk is estimated using duration, convexity and VaR (Value-at-Risk). Changes in the value of foreign currencies affects the value of the Reserve Bank's foreign currency holdings; the Reserve Bank addresses this by limiting its list of approved currencies and by drawing on its Gold and Foreign Exchange Contingency Reserve Account (GFECRA).[32] Additionally, the Reserve Bank also faces operational risk arising from human errors, internal control failure, systems failure, and external events that negatively impact the Reserve Bank. It has an incident reporting tool in place to facilitate self-reporting, with mandatory follow-ups with the pertinent units. The managers of the Reserve Bank's externally managed investment funds all provide a Statement on Standards for Attestation Engagements (SSAE No. 16) for designing internal controls and determining their operating effectiveness.[33]

As a risk-averse institution, the South African Reserve Bank bases its risk management strategy on more than just risk and return; due to its constitutional and statutory responsibilities, it also factors in public interest. The risk associated with the Reserve Bank's activities are identified, quantified, reported, and evaluated on a daily basis. Its risk management with regard to reserves management operations is undertaken through the Investment Policy (IP), the Strategic Asset Allocation (SAA), the risk budget framework, and the investment guidelines; its risk management with regard to domestic markets operations is outlined in the Operations Notice. Comprehensive stress tests, scenario analysis and VaR calculations are some of the methods used to determine the level of risk associated with specific assets.[34] The Board Risk and Ethics Committee (BREC), the Governors' Executive Committee (GEC), the Risk Management Committee (RMC), and the Reserves Management Committee (RESMANCO) all provide independent risk control and compliance functions, ensuring that the central bank complies with applicable laws, regulations, the Code of Conduct and internal controls, and other relevant standards and policies for sound practice. Risk reports are prepared on a daily, monthly and quarterly basis for the management, and are reported monthly to RESMANCO, and quarterly to BREC, GEC, RESMANCO, and RMC.

The South African Reserve Bank has held and managed gold reserves since 1925. Historically the central bank used to purchase most of the locally produced gold; currently its practices around gold purchases and reserves are much like those of most other central banks. Since December 12, 1997, gold producers in the country have been allowed to sell up to

100 percent of their gold directly to approved counterparties. The role of the central bank in the South African gold market has been significantly reduced as a result of this change. However, the Reserve Bank continues to monitor the gold market very closely and holds around four million fine ounces of gold in its reserves. The Financial Markets Department sometimes places limited amounts of gold on deposits with approved counterparties if the interest earned is sufficiently high. The Reserve Bank, to help support the local jewelry manufacturing industry, lends gold to commercial banks at a market related interest rate, who in turn lend it to jewelry manufacturers. Commercial banks are able to access this gold loan only after depositing collateral exceeding the value of the gold loan in the form of government securities at the Johannesburg branch of the South African Reserve Bank. As a service to the general public, the central bank is still obligated by the South African Reserve Bank Act, 1989 (Act No. 90 of 1989) to exchange gold coins that are legal tender for South African rand at its branches at a market related price.[35]

Good governance is essential for the proper management of reserves, and the South African Reserve Bank has a three-tier structure for strategic management and actual portfolio management. The Governors' Executive Committee (GEC), the Reserves Management Committee (RESMANCO), and the Financial Markets Department (FMD) are the three agencies that work on reserve management.[36] The GEC is responsible for decisions regarding the overall risk tolerance of the organization, the investment policy, and the strategic asset allocation of reserves. The RESMANCO makes decisions regarding investment guidelines, the allocation of the active risk budget to individual portfolios, and the appointment of removal of external fund managers and custodians. The FMD's tasks include portfolio management, performance measurement, risk control and compliance, accounting, and settlement.

Communication is a critical component of successful monetary policy, and the Reserve Bank uses multiple channels to share its deliberations with the public. It issues an official statement at the end of every Monetary Policy Committee meeting. This is done at a press conference that is also broadcast live on national television, and the statement is posted on the Reserve Bank's website. The Reserve Bank publishes the biannual Monetary Policy Review, which analyzes the domestic as well as international forces that have gone into its monetary policy decisions and offers forecasts for future inflation rates. In addition, the central bank convenes Monetary Policy Forums at major centers across South Africa twice a year,

in April and October, where labor leaders, entrepreneurs, government officials and academics share their opinions and concerns; these inputs are then factored into monetary policy decisions. In 2017, Forums were held in Bloemfontein, Cape Town, Durban, East London, Kimberley, Mahikeng, Nelspruit, Polokwane, Port Elizabeth, Pretoria, Rustenburg, Soweto and Upington.[37]

12.5.2 Central Bank Independence in South Africa

The principal monetary policy goal of the South African Reserve Bank is hence to keep inflation under control; the central bank can use any monetary policy tools at its disposal in order to do so. Hence the central bank has instrument independence in terms of selecting the monetary policy tools, but it does not possess goal independence in terms of choosing the actual goal of South African monetary policy.

Currently sections 223, 224 and 225 of the Constitution of the Republic of South Africa, 1996; the South African Reserve Bank Act, 1991; and the regulations passed and implemented as a result of the Reserve Bank Act together provide the enabling framework for the central bank to operate in South Africa. The bank enjoys significant autonomy in the execution of its duties. Section 224 of the Constitution of 1996 states that "the Bank, in pursuit of its primary object, must perform its functions independently and without fear, favour or prejudice, but there must be regular consultation between the Bank and the Cabinet member responsible for national financial matters."[38] Hence the autonomy of the South African Reserve Bank is constitutionally protected.

The Governor of the South African Reserve Bank holds regular discussions with the Minister of Finance to ensure coordination of economic policies, and also regularly meets with the Parliamentary Portfolio and Select Committees on Finance. The central bank submits its Annual Report to the South African parliament and is hence accountable to the parliament for its actions.

12.6 The Multilateral Monetary Area

12.6.1 The Origins of the Multilateral Monetary Area

The Multilateral Monetary Area dates back to December 1974, when Botswana, Lesotho, South Africa and Swaziland formed a currency union

named the Rand Monetary Area (RMA). All four countries used the rand as legal tender at the time. However, this merely formalized the arrangement that already existed, as all these countries had been using the rand since their independence from Great Britain. Botswana left the RMA in 1976, replacing the rand with its own currency, the pula. It continued to maintain a strong link between pula and the rand through a currency basket comprised of the rand and the IMF's Special Drawing Rights (SDR). The RMA was renegotiated and morphed into the Common Monetary Area (CMA) in July 1986, its members being Lesotho, South Africa and Swaziland. The union was renamed the Multilateral Monetary Area (MMA) when Namibia joined on February 6, 1992. The South African rand is legal tender in Lesotho and Namibia; while it is not legal tender in Swaziland, the rand circulates freely in the country. However, each member nation has its own central bank, conducts its own independent monetary policy, and issues its own national currency. The Central Bank of Lesotho has issued the loti since 1980; Bank of Namibia has issued the Namibian dollar since 1993; and the Central Bank of Swaziland has issued the lilangeni since 1974.[39] None of these three currencies are legal tender in South Africa. All three trade at par with the rand, and the countries typically consult each other before making monetary policy decisions. As the rand is legal tender in these countries, South Africa compensates them for foregone seigniorage; the amount of compensation is based on a formula equal to the product of two-thirds on the annual yield of the most recently issued long-term South African government bond and the volume of rand estimated to be in circulation in the particular member country.[40] Since the rand has been a freely floating currency since 2000 and the loti, the Namibian dollar and the lilangeni are pegged to the rand, the three also have a floating exchange rate regime with respect to all other currencies. Usually there is unrestricted capital flow within the union; however, Lesotho, Namibia and Swaziland are allowed to limit outflows in the event of a capital flight to South Africa.

The Multilateral Monetary Area is overseen by the central banks of the member countries: the Central Bank of Lesotho, Bank of Namibia, the South African Reserve Bank and the Central Bank of Swaziland, with the South African Reserve Bank playing the principal role. The Monetary Policy Committee of the South African Reserve Bank was set up shortly before South Africa adopted the formal inflation-targeting framework in February 2000. The eight-member committee comprises of the Governor of the South African Reserve Bank, the three Deputy Governors and four

senior Reserve Bank officials, with the Reserve Bank Governor chairing the meetings. There isn't a formal requirement for uniform interest rates in the MMA region, but the central banks of the other countries usually base their rates on the South African repurchase rate, tying increases and decreases in their interest rates to changes in the repurchase rate.

The goal of the Multilateral Monetary Area, in conjunction with the Southern African Customs Union (SACU), which is the oldest operational customs union in the world, is to promote price stability and sustainable economic growth in the region in a manner that equitably benefits all the countries.[41,42] The financial sectors of the member nations have become more integrated due to the common currency, boosting cross-border investment, trade and growth. The SACU as a whole has a growing goods and non-factor services surplus. This is partly the result of the depreciation of the rand, resulting in the depreciation of the other regional currencies, and partly due to the growing demand for mining exports. At the national level, Botswana and South Africa have trade surpluses, whereas Lesotho, Namibia and Swaziland have trade deficits.[43] Transaction costs decrease as currency conversion commissions and the need to hedge against foreign exchange risk are eliminated; this can lower interest rates in the entire region. The elimination of individual national currencies also promotes labor mobility, which in turn helps to equalize wages. Of the countries in the region, wages in South Africa and Botswana are significantly higher than those of their neighbors. Both are upper middle income countries, whereas Namibia and Swaziland are lower middle income countries and Lesotho is considered a least developed country (LDC). Thin markets for the currencies other than the rand, high unemployment and excessive reliance on undiversified primary product exports make intra-regional currency convertibility challenging, but political stability in southern Africa, structural adjustments and concerted monetary policy efforts have proven successful. Inflation rates, for instance, are remarkably consistent among the MMA member nations, averaging around seven percent per year.[44]

The MMA member countries do share some economic similarities. Apart from South Africa, all of them depend on a limited number of agricultural products. Lesotho, Namibia and Swaziland have all become more food insecure in recent years, partly as a result of frequent droughts and floods. Mining and quarrying plays a large role in the economies of Namibia and South Africa, along with neighboring Botswana. Mineral taxation in these countries has supported the development of transportation systems and social service networks. By statute, any dispute has to be settled amica-

Fig. 12.2 The Multilateral Monetary Area: South Africa, Namibia, Lesotho and Swaziland

bly and in good faith; if that is unsuccessful, then the dispute is resolved by a tribunal that is jointly appointed by the members (Fig. 12.2).

12.6.2 Namibia

The central bank of Namibia, Bank of Namibia, was established in the capital city of Windhoek in 1990 by the Bank of Namibia Act of 1990 shortly after Namibia became independent earlier that year. The authorized capital of the bank is 40 million rand. The bank may, from time to time, increase its authorized capital by such amounts as recommended by its board and approved by the Minister of Finance. The government is the

sole holder of the capital of the bank. The powers, duties, and functions of the bank are vested in the Board of the Bank, which is comprised of six members: the Governor, the Deputy Governor, and four other members. The Governor and the Deputy Governor have to be persons with special knowledge of or recognized experience in financial matters. The Governor serves as the chief executive officer of the bank. Both the Governor and the Deputy Governor are appointed for a term of five years, and are eligible for reappointment. The members of the board are appointed by the President, in consultation with the Minister of Finance, from among persons of recognized standing and experience in business, professional or academic matters. The guidelines also state that an officer of the Department of Finance, designated by the Minister of Finance, shall be appointed as one such member; and at least two of the remaining three members appointed shall not be officers or employees who are in public service.

The board meets as often as the business of the bank requires, but no less frequently than once a quarter. Each member has one vote, except the Deputy Governor, who has no vote unless he or she is acting as the chairman at any meeting of the board held in the absence of the Governor. A quorum at any meeting of the board consists of three members who are entitled to vote at such meetings. A decision of a majority of the members present at any meeting of the board, and who are entitled to vote at these meetings, constitutes the decision of the board.

The vision of the Bank of Namibia is "to be a centre of excellence—a professional and credible institution—working in the public interest, and supporting the achievement of the national economic development goals."[45] The objectives of the bank are[46]:

(a) to promote and maintain internal and external monetary stability, an efficient payments mechanism, and the liquidity, solvency, and proper functioning of a soundly based monetary, credit, and financial system in Namibia;
(b) to foster monetary, credit, and financial conditions conducive to the orderly, balanced, and sustained economic development of Namibia; and
(c) to assist in the attainment of national economic goals.

The monetary policy framework of Namibia is underpinned by the fixed exchange rate between the rand and the Namibian dollar due to its

membership in the MMA. Monetary policy is guided by the fixed peg; maintaining this peg, which is the intermediate target, ensures price stability by importing stable inflation from South Africa, the anchor country, which is the ultimate objective of the bank. The peg is guaranteed by Namibia always having adequate foreign exchange reserves to back the Namibian dollar. The Monetary Policy Committee (MPC) of the Bank of Namibia, consisting of the Governor, Deputy Governor, Assistant Governor, and three senior staff members, are responsible for the formulation of monetary policy, which is largely influenced by South Africa. The MPC meets six times a year to decide on the appropriate course of monetary policy for the next two months; the Governor also has the power to convene additional meetings. At least four members need to be present at the meetings to constitute a quorum.

There is no formal operational target for monetary policy in Namibia. However, Namibia does have some discretion over its monetary policy due to capital controls and other prudential requirements. This discretion makes it possible for the Bank of Namibia to maintain a Repo rate different from the Repo rate of the South African Reserve Bank (SARB) when needed, and allows it to control the domestic money supply.[47] This, in turn, enables the bank to control domestically induced inflation, which is estimated to contribute about 35 percent to the overall inflation in the country.[48]

The benefits of MMA membership include ensuring price stability, restraining unfettered monetary expansion, providing a check on excessive government spending, and sending out credible signals about inflationary prospects in the country. The primary objectives of the Bank of Namibia are achieving price stability and a competitive real exchange rate, which have been prioritized along with increasing the level of independence of the bank. Inflation has, however, been increasing in Namibia since 1997; this signals a greater need for coordination between monetary and fiscal policies.

One of the downsides to the country's MMA membership is that South Africa bases its monetary policy on its own needs; hence Lesotho, Namibia, and Swaziland often have to adjust to shocks that are specific to South Africa. The reverse is also true, and shocks specific to Lesotho, Namibia, and Swaziland may not be factored into South Africa's monetary policy. Consultation among the four countries is hence critical. The MMA agreement does not explicitly lay out the need for South Africa to consult the others in formulating monetary policy, but informal consultations happen on a regular basis and provide critical and ongoing input.[49]

The central bank acts as the banker, financial adviser, and fiscal agent of the government. It is the official depository of government funds. The bank can grant advances to the government, subject to repayment within six months, at rates of interest related to the current Treasury bill rate. The total of all outstanding advances by the bank to the government and the bank's holdings of securities purchased or acquired under section 34 (2) (b) or section 46 of the Bank of Namibia Act, can at no time exceed 25 percent of the government's average annual ordinary revenue for the three immediately preceding financial years. The Minister of Finance can, in exceptional circumstances, call on the bank to allow the total advances to be increased to an amount not exceeding 35 percent of the average ordinary annual revenue. The bank has a General Reserve Account to which a sum not exceeding 25 percent of its net profits is transferred at the end of each financial year. The bank can establish and manage any other reserve account for any specified purpose subject to the approval of the Minister of Finance. The balance of the net profits of the bank are paid to the Government of Namibia. The Bank of Namibia renders advice and furnishes reports to the Minister of Finance on any matter which the Minister refers to the central bank for investigation. It is consulted by the Minister of Finance while preparing the government budget. The financial year of the bank begins on the first day of February and ends on the 31st day of January of the following year.

Legislation passed by the Parliament of Namibia gives Bank of Namibia the sole right to issue the Namibian dollar (NAD), which is the national currency.[50] It is subdivided into 100 cents. The Namibian dollar replaced the South African rand, which was the currency of Namibia until its independence in 1990.[51] Subject to the provisions of Section 23 of the Bank of Namibia Act, notes and coins issued by the bank are legal tender within Namibia and are valid, in the case of notes, for the payment of any amount; in the case of coins, they are valid for the payment of an amount not exceeding 50 times the face value of the coin concerned. The Bank of Namibia issued its first bank notes in September 1993 and its first coins in December 1993. The denominations of the coins in circulation are 5c, 10c, 50c, $1, $5, and $10, while the denominations of the bank notes are $10, $20, $50, $100, and $200. The South African rand remains legal tender, and can be exchanged at par with the Namibian dollar.

12.6.3 Lesotho

The Lesotho Monetary Authority Act of 1978 established the Lesotho Monetary Authority, which began its operations on January 2, 1980. Its name was changed to the Central Bank of Lesotho though a parliamentary act in 1982. The central bank is a statutory organization that is fully owned by the government of Lesotho, and is overseen by a Board of Directors. The Governor is also the chairman of the board, which also has two Deputy Directors; all three are appointed by the king on the advice of the Prime Minister. The Minister of Finance appoints the other board members.[52]

The Central Bank initially focused on money market development by increasing the frequency of Treasury bill auctions as well as the number of tenors in 2008. It currently offers four tenors of Treasury bills: 91, 182, 273, and 364 days. The Treasury bills market is divided into the competitive and the non-competitive sub-markets. The Treasury bills are sold at a predetermined price in the non-competitive market (5000–99,900), and the participants are the general public and small and medium sized companies. The tendered yield rate has to be specified and the Treasury bills sold to those with the lowest yield in the competitive market (100,000 or more). The participants in this market are primarily commercial banks, insurance companies, and large companies. Auctions are held twice a month on Wednesdays. Invitations for bids begin seven days before the auction date and continue until the day before the auction date. The results of the tender are announced at 2 p.m. on day of the auction in the form of written notification to all the applicants. The payment for the successful bids are received immediately after the auction results; if the bidder is unable to pay, then they are barred from participating in future auctions for a period of six months. The Central Bank of Lesotho introduced other types of Treasury bonds in 2010. The goal was twofold. First, acting as the fiscal agent of the government, the Central Bank needed to be able to finance the government's budgetary needs. Second, the bank wanted to develop the domestic debt market. The Treasury bonds have a maturity period of more than a year, and the Treasury disburses the coupon payments semi-annually. Currently there are four types of maturity on the Treasury bonds: 3, 5, 7, and 10 years. Auctions are held every three months, and the buyers include commercial banks, insurance companies, pension funds, corporations, and individual investors. The secondary market for Lesotho Treasury bonds is still small, as most investors tend to hold

the bonds until maturity.[53] The Central Bank is currently focusing on developing the corporate bond and equities market.

Section 6(f) of the Central Bank of Lesotho Act No.2 2000 states that the primary goal of the Central Bank of Lesotho is to achieve and maintain price stability. The Monetary and Exchange Policy Technical Committee (MEPTC), which had been in existence since 1998, was replaced by the Monetary Policy Committee (MPC) in 2004; the goal was to increase accountability and transparency of the Central Bank of Lesotho with respect to the formulation of monetary policy.[54] The committee consists of the Governors; two non-executive members of the Board of Directors, one of whom is either an economist or a person of recognized standing and experience in economics; the Principal Secretary of the Ministry of Finance and Development Planning; and a representative of the business community.

Given Lesotho's membership in the MMA, fixed exchange rates have been used an anchor of monetary policy, and price stability is achieved by implementing the peg between the rand and the loti. This peg is attained by ensuring that the net international reserves of Lesotho are high enough to guarantee every loti issued by a basket of equivalent foreign currency reserves. The open market operations of the bank seek to influence short-term interest rates with the goal of aligning them with those in the MMA within an allowable margin of deviation. This prevents capital outflows. The other monetary policy tool is the Central Bank of Lesotho Rate (or the CBL Rate), which is the benchmark interest rate in the country. This is also set in conjunction with the other MMA countries within an allowable margin of deviation. The central bank is responsible for supervising financial institutions, using the powers derived from the Financial Institutions Act of 1999 to conduct both onside investigations and offsite surveillance. It established the Financial Institutions Supervision Technical Committee (FISTC), which plays an important advisory role with regard to supervisory issues. The committee is comprised of the governor, who serves as the chairman of the committee; deputy governors; directors; and senior officials of Supervision and Research Departments. It meets once a week and is kept informed of all relevant supervisory activities. The bank also contracts and manages the domestic debt of the government through the issuance and redemption of Treasury securities. Other related objectives which are supportive to the mission of the central bank are[55]:

To foster the liquidity, solvency and proper functioning of a stable market-based financial system;
To formulate, adopt and execute the monetary policy of Lesotho;
To issue, manage and redeem the currency of Lesotho;
To formulate, adopt and execute the foreign exchange policy of Lesotho;
To license, register and supervise institutions pursuant to the Financial Institutions Act of 1999, the Money Lenders Order of 1989, and the Building Finance Institutions Act of 1976, and the Insurance Act of 1976;
To own, hold and manage its official international reserves;
To act as a banker and advisor to, and as fiscal agent of the Government of Lesotho;
To promote the efficient operations of the payments system;
To promote the safe and sound development of the financial system, and
To monitor and regulate the capital market.

The Central Bank of Lesotho is also responsible for overseeing the first stock exchange in the country. Maseru Securities Market (MSM) was established by the Capital Markets Regulations of 2014, and began its operations on January 22, 2016. MSM is a non-profit that is designed to facilitate centralized trading of financial securities in Lesotho, encourage a broader shareholder base for previously privately held companies, and facilitate the raising of medium-term and long-term capital for these companies.[56] Commercial banks were identified as settlement agencies for the MSM; the Central Bank acts as the clearing agent through the use of its Central Securities Depository (CSD), which is an electronic system designed to supplant the use of paper certificates. The exchange will also seek to address the problem with the illiquidity of securities issued by the government of Lesotho. The plan is for the central bank to continue to oversee the exchange until it is deemed that the private sector is ready to take over and operate the bourse as an independent entity.[57]

As previously mentioned, the central bank is mandated by Section 6(f) of the Central Bank of Lesotho Act No.2 2000 to own, hold, and manage its official international reserves. The twin goals of maintaining adequate reserves are being able to settle the international payment obligations of the country and to maintain the value of the loti. The loti (LSL) (plural maloti) is the official currency of Lesotho, and is subdivided into 100 lisente (singular sente). The central bank has the sole right to issue the national currency, and first loti bills and coins were introduced in 1980.

The denominations of the coins are 1, 2, 5, 10, 20, and 50 lisente; 1 loti; and 2 and 5 maloti. The denominations of the bank notes currently in circulation are 10, 20, 50, 100, and 200 maloti. The central bank is also responsible for sorting out and replacing damaged notes and checking for counterfeits.

12.6.4 Swaziland

The Monetary Authority of Swaziland Order was established by King Sobhuza II on March 22, 1974. The Monetary Authority of Swaziland (Swazi: *Umntsholi Wemaswati*) opened its doors on April 1, 1974 in the capital Mbabane, being tasked with monitoring, regulating and developing Swaziland's financial sector. The king appointed Mr. Ethan Mayisela, 'uZangashane', as the Authority's first Governor. The staff totaled eight individuals at the time. An amendment on July 18, 1979 replaced The Monetary Authority of Swaziland with The Central Bank of Swaziland. The central bank initially rented premises from Swaziland Development and Savings Bank, it got its own building, the "Umntsholi Wemaswati," with its inauguration on July 20, 1979.[58] The Monetary Authority Amendment Act of 1979, along with further amendments in 1982 and 1986, gave additional powers to the central bank. The Central Bank of Swaziland is responsible for issuing the Swazi national currency; redeeming damaged notes; managing Swaziland's foreign exchange reserves; providing central clearing facilities for commercial banks and operating the Swaziland Automated Electronic Clearing House; overseeing The Small Scale Enterprise Loan Guarantee and the Export Credit Guarantee Schemes, which serve small and medium-sized businesses and exporters in the country, and The Public Enterprise Loan Guarantee Fund, which provides guarantees to the commercial banks when granting finance to Category A public enterprises; administering the capital fund of the Swaziland government into which surpluses are deposited to fund future projects; collecting statistics on the economy; and advising the government on financial matters.[59]

The mandate of the Central Bank of Swaziland is as follows[60]:

To formulate and implement sound monetary policy to achieve financial stability.

To regulate and supervise the financial sector to the end of achieving a sound and efficient financial system.

To issue and redeem currency (notes & coins), which is legal tender in Swaziland.
To hold and manage foreign exchange reserves of the country.
To act as a banker, adviser and agent to the Swaziland Government on monetary and financial matters.
To facilitate the development and operation of an efficient national payment system.
To act as lender of last resort to financial institutions and facilitate the development of domestic financial markets.
To conduct research on monetary, financial and economic matters to support monetary policy formulation.
To strengthen stakeholder relationships.

The bank uses four monetary policy instruments: the discount rate, the reserve requirement, the liquidity requirement, and open market operations. The discount rate, which is the rate at which commercial banks borrow from the central bank, closely mirrors movements in the South African Reserve Bank's repo rate, though it is also influenced by domestic inflation, credit extension, and other domestic and international economic variables. The discount rate was lowered by 0.25 percent, from 7.25 percent to 7 percent, effective January 20, 2018 as domestic inflationary pressures subsided (dropping from 4.9 percent in November 2017 to 4.7 percent in December 2017); inflation forecasts have also been revised downwards. The cash reserve requirement (CRR) for commercial banks is currently six percent, which they have to deposit in their account at the South African Reserve Bank. These CRR accounts also aid in clearing inter-bank transactions. The Central Bank of Swaziland now reviews the CRR at least once a year. The liquidity requirement (LR) comprises of the CRR and other liquid assets like bonds and Treasury bills; currently this is set at –25 percent. The Central Bank of Swaziland also reviews the LR once a year.

The central bank buys and sells debt securities through open market operations to influence money supply.[61] Under the terms of the MMA, the intermediate goal of monetary policy in Swaziland is to maintain the fixed exchange rate with the South African rand. This implies that Swaziland's currency in circulation is backed by international reserves, which have to be greater than the conventional three months of import cover. Swaziland hence has little scope to undertake discretionary monetary policy in response to domestic developments and other prudential measures. This does not, however, imply a lame duck central bank. Among other things,

the central bank also has to decide whether to continue Swaziland's membership in the MMA. The entire monetary policy framework is reviewed at least once every three years.[62]

The Lilangeni (plural Emalangeni) became the national currency of Swaziland starting on September 6, 1974, which is the Swazi independence day; it was issued on par with the South African rand, which is also legal tender in Swaziland. The Central Bank of Swaziland has the sole right to issue notes and coins which are legal tender within the country. The bank issues five denominations of Emalangeni bank notes (E200, E100, E50, E20, and E10; L1, E2, and E5 notes have now been replaced by coins) and seven denominations of coins (5c, 10c, 20c, 50c, L1, E2, and E5; 1c and 2c coins are no longer issued). In February 2016, the central bank recalled all coins produced before 2014, demonetized them, and replaced them with a new series of coins. The reasons behind the withdrawal were that they were no longer economical, aesthetically pleasing, or secure against coins from neighboring countries (coin tourism), and were causing confusion in the market due to the different types of each denomination. The five key objectives the central bank follows in designing new coins are that currency should be issued economically; currency should be aesthetically pleasing; currency should be secure against that of neighboring countries; currency should be secure against counterfeiting; and currency should cater to the needs of every member of the public including those who are visually impaired.[63]

Among the other significant financial institutions in the country, the Building Societies Act of 1962 established the Swaziland Building Society, which is the main provider of long-term mortgage lending in the country. It gives loans for the purchase of vacant land, construction of housing, and purchase of already constructed housing. It also offers commercial mortgage loans to businesses seeking to develop commercial property. The Swaziland Royal Insurance Corporation, established by the Swaziland Royal Insurance Order of 1973, had a monopoly in the insurance market for many years and provides a range of short and long-term insurance products. The Swaziland National Provident Fund was established the following year; it is funded by equal contributions from the employer and the employee, and pay out benefits to retirees; those who reach 50 years of age, become incapacitated, or emigrate; and to survivors in the event of the contributor passing away. Of the commercial banks operating in Swaziland, the largest in terms of assets and bank capital is the Standard Bank of Swaziland, which is a part of the multinational Standard Bank

Group. The bank provides foreign exchange services, trade finance, project finance, leasing, investments, asset management, derivatives, risk hedging, and other financial services. It was also the first bank to introduce internationally usable debit cards in the country.

12.7 Zimbabwe and the South African Rand

Given Zimbabwe's struggles with hyperinflation, the Reserve Bank of Zimbabwe decommissioned the Zimbabwean dollar completely in 2015. Nine major or regional currencies are now used in the country; these are the South African rand, the Botswana pula, the British pound, the euro, the US dollar, the Australian dollar, the Japanese yen, the Chinese yuan and the Indian rupee. Of these, the rand stands out as both a regional currency and one that is used in multiple countries, not just as a reserve currency but formally in transactions. Many members of the Zimbabwean business community have since voiced the opinion that Zimbabwe formally adopt the South African rand as its currency and join the Multilateral Monetary Area. The country has close economic ties with South Africa, both in terms of trade volume and the number of Zimbabweans working in South Africa. 41.3 percent of Zimbabwean imports (worth US $2152 million in 2016) come from South Africa, while 79.5 percent of Zimbabwean exports (worth US $2250 million in 2016) go to South Africa.[64] Most estimates suggest that between two and three million Zimbabweans live in South Africa, and the money they send back constitutes around a third of the total remittances sent to Zimbabwe every year.[65] The use of the rand is especially widespread in the southern provinces, and ATMs in the country commonly dispense rand notes.[66]

The two arguments most often cited against adopting the rand are the current volatility of the rand and the complex economic, political and legal implications of joining the Multilateral Monetary Area. Each MMA member country has its own currency that it uses in conjunction with the rand. These currencies trade at par with the rand, hence there are no transaction costs related to conversion. The Governor of the Reserve Bank of Zimbabwe, Dr. John Mangudya, pointed out in a recent speech that conditions in Zimbabwe were not yet right for the reintroduction of the Zimbabwean dollar. This would set Zimbabwe apart from the other members of the MMA. Zimbabwe would also have to give up considerable economic freedom. The South African Reserve Bank would oversee much of the country's economic activities. Member nations of the MMA have to

always maintain foreign exchange reserves equal to or greater than the amount of local currency they issue. These reserves may be comprised of rand holdings of the central bank, the rand holdings of the central bank in a Special Rand Deposit Account at the South African Reserve Bank, South African government stock (up to the permitted fraction) and investments in the Corporation for Public Deposit in South Africa. This rand reserve requirement imposes restrictions on the member countries. Additionally, the customs revenue collections from the Southern African Customs Union (SACU) are deposited into South Africa's National Revenue Fund by all the member states of the MMA, and are then distributed back to the member states using a formula. Zimbabwe would have to do the same if it joined the MMA, thus giving up a degree of control over its own customs revenue; the SACU tariff structure is also quite complicated.

The principal currency in the multi-currency basket used by Zimbabwe is the US dollar. The budgets of the Zimbabwean national and local governments are denominated in dollars, and so are most balance sheets. Hence, according to many, it would make more sense to adopt the dollar rather than the rand. There is also the practical reality of Zimbabwe's massive current account deficit, which does not meet the pre-requisite for being allowed into the MMA. A sovereign debt crisis in Zimbabwe could cost the other MMA countries a considerable amount of resources to defend the rand, a situation akin to the Greek sovereign debt crisis and the European Union, and existing MMA members would want to avoid that at all costs.

Notes

1. South African Reserve Bank. History of South African banknotes 1782 to 1920. https://www.resbank.co.za/BanknotesandCoin/SouthAfricanCurrency/BankNotes/Pages/HistoryofSouthAfricanbanknotes1782To1920.aspx (accessed March 21, 2017).
2. Some South African states such as Cape of Good Hope and Transvaal had issued bank notes and coins before South Africa became independent.
3. Under Paul Kruger's government (1883–1900), the South African Republic (or Transvaal) had established a mint in 1893. This concession, which had been granted to the National Bank of the South African Republic, was later canceled by the Transvaal Crown Colony government of Sir Alfred Milner (1902–1905). The South African Republic consisted of the area now comprised of the provinces of Gauteng, Limpopo, Mpumalanga and North West, in the eastern part of the country.

4. Ally, R. (1991). *Currency, Banking and Politics: The Bank of England, Sterling and South Africa's Monetary System, 1914–1925* (African Studies Seminar Paper No. 304). Johannesburg: African Studies Institute, University of the Witwatersrand.
5. The initial act of 1920 was replaced in 1944 by the South African Reserve Bank Act No. 29, and subsequently by the South African Reserve Bank Act No. 90 of 1989.
6. Mboweni, T. T. (2001, November 29). *The Reserve Bank and the Rand: Some historic reflections* [Transcript]. https://www.resbank.co.za/Publications/Speeches/Detail-Item-View/Pages/default.aspx?sarbweb=3b6aa07d-92ab-441f-b7bf-bb7dfb1bedb4&sarblist=a01d874c-c3f6-4b93-a9dc-c984cf8652cf&sarbitem=200 (accessed March 16, 2017).
7. Tsokhas, K. (1994). The Australian role in Britain's return to the gold standard. *The Economic History Review*, 47(1), 129–146.
8. Ally, R. (1991). *Currency, Banking and Politics: The Bank of England, Sterling and South Africa's Monetary System, 1914–1925* (African Studies Seminar Paper No. 304). Johannesburg: African Studies Institute, University of the Witwatersrand.
9. The Reserve Bank may, from time to time, with the consent of the Board, increase its share capital by the issue of shares on terms approved by the Board of Directors.
10. No shareholder is allowed to either directly or indirectly exercise any vote as a shareholder in respect of the number of shares in the Reserve Bank held by him or her in excess of 10,000. Similarly, no group of companies with interlocking directorates are allowed to either directly or indirectly exercise any vote as shareholders in respect of the total number of shares in the Reserve Bank held by those companies in excess of 10,000. Shareholders who are not ordinarily resident in the Republic of South Africa are also not allowed to vote at shareholder meetings.
11. South African Reserve Bank. Ownership. https://www.resbank.co.za/AboutUs/History/Background/Pages/OwnershipOfTheSouthAfricanBank.aspx (accessed March 14, 2017).
12. South African Reserve Bank. Bank Supervision. https://www.resbank.co.za/AboutUs/Departments/Pages/BankSupervision.aspx (accessed March 14, 2917).
13. South African Reserve Bank. Financial Markets. https://www.resbank.co.za/AboutUs/Departments/Pages/FinancialMarkets.aspx (accessed March 14, 2017).
14. Sterling silver is comprised of 92.5 percent silver and 7.5 percent copper.
15. Pondoland is a geographical area in the Eastern Cape Province, on the shores of the Indian Ocean. It is also the traditional territory of the

Mpondo or the Pondo people, who share cultural similarities with the Xhosa.

16. The Griqua are a mixed population resulting from the union of Dutch colonists and the Khoikhoi, who were the original inhabitants of the land. Most of these people spoke Afrikaans and formed semi-nomadic tribes of horsemen. They established four short-lived states before they were subsumed by the British.
17. Kruger Gray also designed the flag of the Colony of Aden, the coat of arms for The University of Western Australia and several other institutions, a silver badge given to members of the Royal Naval Patrol Service who served with distinction, and several stained glass windows.
18. South African Reserve Bank. History of South African banknotes 1782 to 1920. https://www.resbank.co.za/BanknotesandCoin/SouthAfricanCurrency/BankNotes/Pages/HistoryofSouthAfricanbanknotes1782To1920.aspx (accessed March 21, 2017).
19. South African Reserve Bank. Currency Management. https://www.resbank.co.za/BanknotesandCoin/CurrencyManagement/Pages/Currencymanagement-Home.aspx (accessed March 14, 2017).
20. Ibid.
21. Other Bantustans like Kwazulu and QwaQwa in South Africa and Ovamboland and East Caprivi in Namibia were granted a certain degree of autonomy but not independence. Most of the Bantustans comprised of multiple disconnected territories, often completely surrounded by South Africa, and had almost non-existent infrastructure; hence it was impossible for them to be functionally independent.
22. Mboweni, T. T. (2001, November 29). *The Reserve Bank and the Rand: Some historic reflections* [Transcript]. https://www.resbank.co.za/Publications/Speeches/Detail-Item-View/Pages/default.aspx?sarbweb=3b6aa07d-92ab-441f-b7bf-bb7dfb1bedb4&sarblist=a01d874c-c3f6-4b93-a9dc-c984cf8652cf&sarbitem=200 (accessed March 16, 2017).
23. Qunta, C. (2002). Minority Report of the Commission of Inquiry Into the Rapid Depreciation of the Rand and Related Matters. The Department of Justice and Constitutional Development, Republic of South Africa. http://www.justice.gov.za/commissions/comm_rand/rand_final_minority_report/part_3a.pdf (accessed March 18, 2017).
24. Ibid.
25. South African Reserve Bank. Meetings. https://www.resbank.co.za/MonetaryPolicy/Monetary%20Policy%20Committee/Pages/Meetings.aspx (accessed March 17, 2017).
26. South African Reserve Bank. Monetary Policy Implementation. https://www.resbank.co.za/MonetaryPolicy/MonetaryPolicyOperations/Pages/MonetaryPolicyOperations-Home.aspx (accessed March 17, 2017).

27. South African Reserve Bank. Markets. https://www.resbank.co.za/Markets/Pages/default.aspx (accessed March 16, 2017).
28. Official Gold and Foreign Exchange Reserves Management Investment Policy (Investment Policy). (2016). South African Reserve Bank. https://www.resbank.co.za/Markets/ForeignReserves/Documents/Investment%20Policy.pdf (accessed April 1, 2017).
29. South African Reserve Bank. Foreign Reserves. https://www.resbank.co.za/Markets/ForeignReserves/Pages/default.aspx (accessed March 19, 2017).
30. Official Gold and Foreign Exchange Reserves Management Investment Policy (Investment Policy). (2016). South African Reserve Bank. https://www.resbank.co.za/Markets/ForeignReserves/Documents/Investment%20Policy.pdf (accessed April 1, 2017).
31. Ibid.
32. South African Reserve Bank. Financial risk. https://www.resbank.co.za/Markets/ForeignReserves/RiskManagement/Pages/Financial-risk.aspx (accessed March 19, 2017).
33. South African Reserve Bank. Compliance and operational risk. https://www.resbank.co.za/Markets/ForeignReserves/RiskManagement/Pages/Compliance-and-operational-risk.aspx (accessed March 19, 2017).
34. South African Reserve Bank. Risk management process. https://www.resbank.co.za/Markets/ForeignReserves/RiskManagement/Pages/Risk-management-process.aspx (accessed March 19, 2017).
35. South African Reserve Bank. Management of Gold Reserves. https://www.resbank.co.za/Markets/ForeignReserves/ManagementOfGoldReserves/Pages/default.aspx (accessed March 19, 2017).
36. South African Reserve Bank. Governance. https://www.resbank.co.za/Markets/ForeignReserves/Governance/Pages/default.aspx (accessed March 19, 2017).
37. South African Reserve Bank. Monetary Policy Forums. https://www.resbank.co.za/MonetaryPolicy/MonetaryPolicyCommunication/Pages/MonetaryPolicyForums-Home.aspx (accessed March 6, 2017).
38. South African Reserve Bank. Autonomy and Legal Framework. https://www.resbank.co.za/AboutUs/History/Background/Pages/AutonomyandLegalframework.aspx (accessed March 1, 2017).
39. Tavlas, G. S. (2009). The benefits and costs of monetary union in Southern Africa: A critical survey of the literature. *Journal of Economic Surveys*, 23(1), 1–43.
40. Seigniorage refers to the profit made by the government of a country from issuing currency. The profit accrues from the difference between the face value of the currency and its production and distribution costs.

41. Continued economic reforms would attract more foreign investment. (2003, April 25). *Trade Policy Review: Southern African Customs Union*. World Trade Organization. https://www.wto.org/English/tratop_e/tpr_e/tp213_e.htm (accessed February 27, 2017).
42. The Southern African Customs Union (SACU) comprises of Botswana, Lesotho, Namibia, South Africa and Swaziland, and is headquartered in Windhoek, the capital of Namibia. The union was established in 1910, when a customs agreement was signed between the then Union of South Africa and the High Commission Territories of Bechuanaland (present day Botswana), Basutoland (present day Lesotho) and Swaziland, all of which were British colonies and protectorates in Southern Africa. The agreement, in its current form, strengthens the democratic structure of the institutions; lays out a mechanism to settle disputes; requires the SACU member countries to have common policies on industrial development, agriculture, competition, and unfair trade practices; and overhauls the common revenue pool and sharing formula. The second oldest operational customs union after the SACU is between Switzerland and the Principality of Liechtenstein, which signed a customs union treaty in 1923 that allows Switzerland to formulate common trade policy for the Union. Source: https://www.wto.org/English/tratop_e/tpr_e/tp213_e.htm; https://www.wto.org/english/tratop_e/tpr_e/tp150_e.htm.
43. Continued economic reforms would attract more foreign investment. (2003, April 25). *Trade Policy Review: Southern African Customs Union*. World Trade Organization. https://www.wto.org/English/tratop_e/tpr_e/tp213_e.htm (accessed February 27, 2017).
44. Nokaneng, S. H. (2009). *The concept of economic integration with specific reference to financial integration in Southern Africa* (Doctoral dissertation). https://repository.up.ac.za/bitstream/handle/2263/23527/Complete.pdf?sequence=7 (accessed February 25, 2017).
45. Bank of Namibia. Our Vision and Mission. https://www.bon.com.na/About-Us/Our-Vision-and-Mission.aspx (accessed February 25, 2017).
46. Bank of Namibia Act, 1990. (1990). *Government Gazette of the Republic of Namibia*, No. 42. http://www.parliament.na/index.php?option=com_phocadownload&view=category&download=182:bank-of-namibia-act&id=78:acts-of-1990&Itemid=1269 (accessed February 24, 2017).
47. Namibia's Monetary Policy Framework. (2008). Bank of Namibia. https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/12/12253e03-31d8-4a91-882a-35833faec548.pdf (accessed February 25, 2017).
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49. Challenges of Monetary policy for Namibia within the Common Monetary Area (CMA) Arrangement: Bankers Conference. (2000). Windhoek: Bank of Namibia. https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/ad/ad32fd44-ca55-4e56-85e1-b2477746d1.pdf (accessed February 24, 2017).
50. The original name proposed for the new Namibian currency was the kalahar, after the Kalahari Desert, which covers the eastern part of the country. Some specimen bank notes were printed, but ultimately the country decided to not go ahead with the plan. Another name that was considered was the mark, and the Bank of Namibia minted a proof series that included both mark and dollar coins before it rejected the mark.
51. Namibia was ruled by South Africa from 1915 to 1990 under the name South West Africa (*Suidwes-Afrika* in Afrikaans). It was a German colony prior to that, and became a League of Nations Class C Mandate territory under the terms of the Treaty of Versailles.
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CHAPTER 13

Conclusion

13.1 The Relationship Between Central Bank Independence and Inflation

There is a considerable body of research that examines the relationship between central bank independence and economic performance. Most of the papers have focused on the relationship between independence levels and the inflation rate in the country. One of the earliest studies was by Bade and Parkin (1988), who look at the relationship between central banking laws and monetary policy in the 12 industrialized economies during the floating exchange rate years of 1972–1986.[1] Of these countries, the central banks of Australia, Belgium, France, Italy, the Netherlands, Sweden and the United Kingdom are dependent on their respective governments for the formulation and conduct of monetary policy; the central banks of Germany, Japan, Switzerland and the United States are independent, albeit to varying degrees; and the central bank of Canada, whose level of autonomy changed in 1967 as a result of a new law. The authors find that central banks that are more independent in terms of policy-making as well as in the appointment of directors are able to achieve lower inflation. However, there appears to be no effect on the variability of inflation. The authors also don't find any policy differences based on the financial relationship between the central bank of a country and its government.

In a couple of papers, Alesina (1988, 1989) explores the relationship between macroeconomics and politics.[2,3] In the 1988 paper, the author

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R. Ray Chaudhuri, *Central Bank Independence, Regulations, and Monetary Policy*,
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focuses on the empirical implementations of game theoretic models of monetary policy; one category of models considers different policymakers who are in office at different points in time and can be voted into and out of office, while the other category looks at two policymakers who control different policy instruments who are in office at the same time in the same country. The latter can be applied to the central bank, which controls monetary policy, and the executive branch, which controls fiscal policy. Politicians in the model have two objectives; they want to stay in office as long as possible, and they also want to cater to their various constituencies. Looking at the annual growth rate of M1 from 1949 to 1985, the study finds that monetary growth was higher before elections and lower after elections during the period from 1961 to 1976. It also finds evidence of a political budget cycle with respect to personal transfers. Both the effects were the strongest before Richard Nixon's re-election in 1972. Social security benefits were raised by around 20 percent and indexed to inflation a few weeks before the election, and money supply grew by more than 8 percent during 1972 in contrast to the 4 percent rate during the preceding and following three years. The 1989 study looks at the link between politics and business cycles in the industrial democracies of Australia, Austria, Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, the United Kingdom and the United States. Focusing on inflation, unemployment and economic growth, the author finds that conservative governments often start their terms in office with below-average economic growth, an increase in cyclical unemployment, and a reduction in inflation. No clear pattern emerges for liberal governments. Additionally, the differences in real macroeconomic variables tend to disappear later in the term, but inflation has a tendency to remain higher on average with liberal governments.

Grilli et al. (1991), in another of the pioneering papers, examine the role of the electoral process and political traditions on public deficits, debts and inflation.[4] They consider 18 OECD countries and find that rather than macroeconomic choices, it is politics that explains the variability among the OECD countries with respect to these indicators. On the fiscal side, countries that elect their governments for shorter terms are less likely to make difficult choices; this is the case in countries where there are a multitude of smaller political parties rather than just two or three large parties. On the monetary side, countries with more independent central banks are likely to have lower inflation rates. This result is robust to the type of political institution the country has. Furthermore, the lower inflation rates are achievable without any negative impact on real economic performance.

Alesina and Grilli (1992) show that the median voter in a country would like to appoint a central banker who is more hawkish about inflation than themselves.[5] The median voter, however, wants to recall the central banker who is being too conservative about inflation ex post. It is impossible to appoint a central banker who is more conservative than the median voter without the central bank being independent. However, the avoidance of political pressure on the central bank steers the bank toward a low inflation equilibrium and leads to the appointment of a central banker who is more averse to inflation than the median voter.

Cukierman et al. (2002) develop new measures of central bank independence for 26 former socialist countries and examine their link to inflation.[6] All of these countries had typically socialist Monobanks, which were broken up into a central bank and a network of private commercial banks. The sample period is from 1989 to 1998, during which all the former socialist countries either created brand new central banking laws or reformed their central banking laws at least once, granting the institution greater independence in the process. The findings indicate that central bank independence is unrelated to inflation during the initial stages of liberalization. It is difficult, even for a central bank that has been granted legal independence, to control inflation during the period of transition from a pricing system fixed by the state to prices that are determined by the market. Some of the countries in the sample even experienced hyperinflation for a time. Once a sufficient level of liberalization has been achieved, however, a significant negative relationship emerges between central bank independence and inflation.

In their study, Jácome and Vázquez (2008) examine the linkage between the legal independence of the central bank and the inflation rate.[7] They consider 24 countries form Latin America and the Caribbean during the 1990s and find a statistically robust negative relation between the two. These results are consistent across three different measures of *de jure* central bank independence, which are the Grilli et al. index, the Cukierman et al. index, and a modified Cukierman index that adds several dimensions of central banking reforms in Latin America as well as some additional factors that are recommended by the IMF when they advise central banks. The authors control for international inflation, banking crises, exchange regimes, and broader structural reforms beyond granting more autonomy to the central bank; the latter is included to minimize omitted variable bias. By using panel date, the study is able to capture changes in central bank independence over time, unlike previous cross-country studies. This temporal element is likely to be especially important for developing countries, many of

which undertake incremental central banking reforms. However, the authors are unable to find a causality between central bank independence and inflation. They also caution that while they focus on *de jure* independence, the level of de facto independence might be different. This difference primarily lie in the political independence of the central bank. For instance, the Banco Central do Brasil and most central banks in the Caribbean are more independent in practice than the law suggests, while the Banco Central de Venezuela and the Banco Central del Ecuador are less so.

Dincer and Eichengreen (2014) explore the effects of central bank transparency as well as independence on inflation variability, which they measure as the standard deviation of monthly inflation over the course of a calendar year.[8] Central bank transparency has a negative and significant effect on inflation variability. In addition, having a more open economy lowers inflation variability, whereas having a past history of inflation raises it. Central bank transparency has a similar effect on the level of inflation, though the significance levels are lower. Once again, having a more open economy lowers the level of inflation, whereas having a past history of inflation raises it. They repeat their analysis with the degree of independence of the central bank, and find that a more independent central bank lowers the variability of inflation. Openness and financial depth lowers inflation variability, albeit the level of significance is mixed; past inflation significantly raises it. An increase in independence also lowers the level of inflation. While the sign is consistent, the relationship is not statistically significant in three out of the six specifications. Openness and financial depth have statistically significant negative effects and past inflation has a significant positive effect. When both the transparency and the independence indices are included in the GMM estimation, transparency turns out to have a greater impact on inflation variability. The results are mixed for the level of inflation, varying based on the specification.

13.2 The Relationship Between Central Bank Independence and Real Macroeconomic Variables

The independence of central banks can affect the performance of real macroeconomic variables through several channels. First, an independent central bank leads to fewer business cycle oscillations. This implies a more stable economy and decreases the risk premium portion of the real interest rate. A more independent central bank can avoid political business cycles in two different ways. It can prevent expansionary monetary policy before

elections, as discussed by Nordhaus (1975), MacRae (1977) and Rogoff and Sibert (1988).[9,10,11] Nordhaus focuses on how government policy chooses between current welfare and future welfare with the help of a simple model of public intertemporal choice where decisions are made within a political framework. Of the countries in his sample, the coincidence between business cycles and political cycles is absent in Australia, Japan, Canada and the United Kingdom based on annual data from 1947 to 1972; it is modestly present in France and Sweden; and is strongly present in Germany, New Zealand and the United States. MacRae considers the United States during the four election periods from 1957 to 1972, and shows that under the assumption of a myopic electorate, vote loss-minimizing behavior under the constraints of a dynamic inflation-unemployment relationship by the incumbent political party leads to a stable electoral policy cycle. The assumption of a myopic electorate better explains the government policies of the second and the third election periods, whereas the assumption of a rational electorate better explains the policies during the first and the fourth election periods. Rogoff and Sibert show that the electoral cycles in taxes, government spending and money growth can be modeled as an equilibrium signaling process. These cycles are driven by temporary information asymmetries. The incumbent government cheats the least when its private information is either extremely favorable or extremely unfavorable.

A more autonomous central bank can also reduce partisan shocks to the economy after elections, as pointed out by Hibbs (1987), Alesina (1988, 1989), and Willett and Banaian (1988).[12,13,14,15] Hibbs, in his book on the political economy of the United States, discusses the costs of unemployment and inflation, public concern about them, and the macroeconomic performance and mass political support for the executive branch. Willett and Banaian address both the politics of monetary policy and political business cycles, and provide evidence in favor of the latter. In addition to dampening the magnitude of political business cycles, an independent central bank also improves central bank performance by avoiding the distortionary effects of high inflation, such as increasing the risk premium or rent seeking activities.

The potential downside of an independent central bank with regard to real macroeconomic variables is that it may choose to focus on inflation even at a cost to the real sectors of the economy. A theoretical framework for this is provided by Rogoff (1985), who develops a stochastic rational expectations IS-LM model which indicates that society can be better off with a

central banker who does not share the social objective function but instead places a greater weight on inflation stabilization rather than unemployment stabilization.[16] However, there is a tradeoff; while the time-consistent inflation rate is lower, the variability of employment in response to supply shocks are greater as the central bank lets these shocks pass through to employment. The author uses an envelope theorem to show that the ideal central banker will place a significant but finite weight on inflation. In this set-up, a central bank that has limited independence will bow to political pressure to keep unemployment and real interest rates low and the growth rate high. Another model is developed by Tabellini (1987), which seeks to capture the impact of the Bank of Italy being released from its obligation to buy unsold Italian public debt at Treasury auctions in 1981, which resulted in a sharp drop in debt monetization.[17] The author constructs a game theoretic framework where the two players are the monetary authorities and the fiscal authorities. The fiscal authorities have imperfect information regarding the preferences of the monetary authorities. An equilibrium exists in the model where monetary authorities do not monetize the debt in order to establish its credibility as an independent central bank. Debt monetization increases the fiscal deficit as well as public debt compared to the scenario where monetary authorities refuse to monetize debt.

While several authors have noted the negative relationship between central bank independence and inflation, Alesina and Summers (1993) explore the linkage between central bank independence and real variables economic growth, unemployment and real interest rates.[18] Their sample is comprised of Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, the Netherlands, Norway, New Zealand, Spain, Sweden, Switzerland, the United Kingdom and the United States, and the sample period is 1955–1988. Their results reinforce previous findings about the effect of central bank independence on inflation, but they find no relationship between independence and real economic performance. No clear pattern emerges when they explore the relationship between central bank independence and the level of economic growth as well as the volatility of the growth rate. For instance, the Swiss National Bank is very independent, but Switzerland's growth rate was both low and variable during the sample period; on the other hand, the Deutsche Bundesbank and the De Nederlandsche Bank are also relatively independent, and both countries witnessed strong and stable growth. Similarly, no relationship emerges between central bank independence and the level and variability of unemployment or the levels of ex ante and ex post real interest rates.

However, a clear negative relationship emerges between central bank independence and the variability of ex post interest rates. The authors also suggest that changes in central banking laws may be endogenous, as the governments of countries suffering from high inflation are more likely to reform the laws. They point to Germany as an example; the experience with hyperinflation made Germans vary of the central bank being co-opted for political purposes, resulting in the Deutsche Bundesbank being the first central bank to be granted statutory independence.

There are, however, several studies that do find linkages between central bank autonomy and the real sector. Among them is De Long and Summers (1992), who focus on the relationship between central bank independence and the growth rate of real GDP per worker over the period 1955–1990 while controlling for the level of real GDP per worker in 1955, thus eliminating the convergence effects of the standard neoclassical growth model.[19] They find that a one-point increase in their central bank independence index resulted in a 0.4 percent increase in the annual growth rate. Another study that yields similar results is Cukierman et al. (1993).[20] The authors consider 70 countries, which are a mix of developing and developed nations; the proxies for central bank independence are an aggregate index of legal independence based on 16 specific features of the charters of central banks, and the average turnover rate of the governors of central banks. While the authors do not find any evidence of a relationship between central bank independence and output growth in developed countries once they control for the initial level of GDP, the initial primary school enrollment rate, the initial secondary school enrollment rate, and changes in the terms of trade, they do find a positive relationship in developing countries. The findings indicate that the relationship between central bank independence and the real sector is only true for a certain range of central bank autonomy. Lastly, Pastor and Maxfield (1999) examine the linkage between central bank independence and private investment by using random effects regressions using data from 20 developing countries.[21] They find a positive relationship, suggesting that a more independent central bank can increase the level of private investment by signaling a greater commitment of the government to reforms. This effect is stronger in democracies, where central bank independence can act as a barrier to populist monetary policies that are detrimental to the long-term health of the economy. These studies collectively indicate that the level of autonomy of the central bank has a significant effect on inflation outcomes, and also affects the real macroeconomic variables, although to a lesser extent.

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