

Central Banks and Monetary Policies

A Comparative Study Within the G-20

By

Felix I. Lessambo

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G-20**

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List of acronyms

Banxico:	Banco de México (Central Bank)
BCRA:	Central Bank of the Republic of Argentina
BI:	Bank Indonesia
CBI:	Central Bank Independence
CBIE:	Central Bank Independence Index
CNBV:	Comisión Nacional Bancaria y de Valores (National Banking and Securities)
CRR:	Cash Reserve Ratio
DeFi:	Decentralized finance
FIMA:	Foreign and International Monetary Authorities
FPC:	Financial Policy Committee
LAF:	Liquidity Adjustment Facility
MLF:	Medium-term lending facility
MSELF:	Main Street Expanded Loan Facility
MPC:	Monetary Policy Committee
MSF:	Marginal Standing Facility
MSNLF:	Main Street New Loan Facility
NOELF:	Nonprofit Organization Expanded Loan Facility
NONLF:	Nonprofit Organization New Loan Facility
OMOs:	Open Market Operations
OMT:	Outright Monetary Transactions
PPLF:	Paycheck Protection Program Liquidity
PRC:	Prudential Regulation Committee
PSL:	Pledged supplementary lending
QE:	Quantitative Easing
SARB:	South Africa Reserve Bank
SLF:	Standing lending facility
SLR:	Statutory liquidity ratio

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Chapter 1

Central Banks: History and Evolution

Abstract: The precursors of modern Central Banks were not born of the need for monetary services or a lender of last resort. Rather, their primary motivation was to improve governments' abilities to issue debt in wartime. With societal changes, governments (sovereigns) chartered Central Banks to lend to the state and to issue banknotes convertible into specie, as a way to restore government creditworthiness and monetary stability. Central Banks were typically given a monopoly of note issue, and received the sole depository of government funds and were not required to pay interest on these balances.

1.1 General

The story of Central Banking goes back at least to the seventeenth century, to the founding of the first institution recognized as a Central Bank, the Swedish Riksbank, after the collapse of Stockholm's Banco Established in 1668 as a joint stock bank, it was chartered to lend the government funds and to act as a clearing house for commerce.¹ Immediately following its inception, one of the Riksbank's tasks was to maintain price stability.² A few decades later (1694), the Bank of England, was founded also as a joint stock company to purchase government debt. The Bank of England was founded as a private bank in 1694 to act as banker to the Government.³ Today it serves the UK's Central Bank.⁴ The Bank of England was incorporated by act of Parliament in 1694 with the immediate purpose of raising funds to

¹ Michael D. Bordo (2007): "A Brief History of Central Banks" Federal Reserve Bank of Cleveland, Economic Commentary, Federal Reserve Bank of Cleveland, pp. 1-4, <https://www.clevelandfed.org/publications/economic-commentary/2007/ec-20071201-a-brief-history-of-central-banks>.

² <https://www.riksbank.se/en-gb/about-the-riksbank/history/>.

³ Wood, John H., *A History of Central Banking in Great Britain and the United States* (Cambridge)

⁴ <https://www.bankofengland.co.uk/about/history>.

allow the English government to wage war against France in the Low Countries.⁵ A year later, Bank of Scotland came into existence with the Scottish Parliament Act of 1695. This bank was primarily established to trade with England and other countries. Later it was given by the Scottish Parliament to issue money in the country and other rights. Decades later, other Central Banks were set up later in Europe for similar purposes, though some were established to deal with monetary disarray. In the year 1792, King Carlos III established Banco do Espana as the national Central Bank of Spain. The Banque de France was established by Napoleon in 1800 to stabilize the currency after the hyperinflation of paper money during the French Revolution, as well as to aid in government finance. Napoleon Bonaparte decided to give local bankers a monopoly over the French financial system, so he gave them control of the Bank of France. In the Far East, Japan, for instance, established its Central Bank- Bank of Japan under the Bank of Japan Act and began operating on October 10, 1882, as the nation's Central Bank.

1.2 Central Banks and monetary system

The monetary system is the cornerstone of an economy, its very foundation. A monetary system technically consists of (i) a unit of account, (ii) a means of payment (“settlement medium”) and (iii) mechanisms to transfer the means of payment and settle transactions (execute payments).⁶ The interest of a unit of account is that it provides the simplest and most compelling way of measuring relative prices, as it greatly reduces the number of relative prices that need to be known. The Central Banks’ elastic supply of the means of payment is essential to ensure that (i) transactions are settled in the interbank market and (ii) the interest rate is controlled.⁷

⁵ <https://www.britannica.com/topic/Bank-of-England>.

⁶ Claudio Borio (2019): On money, debt, trust and Central Banking, BIS Working Papers No 763, pp. 1-31, <https://www.bis.org/publ/work763.pdf>.

⁷ Idem.

1.2.1 Central Banks monopoly over issue

Early Central Banks secured the necessary regulation and control of the expansion of bank credits in the aggregate and for keeping available and adequate amount of reserve money and of credit power.⁸ Because they held the deposits of other banks, they came to serve as banks for bankers, facilitating transactions between banks or providing other banking services. They became the repository for most banks in the banking system because of their large reserves and extensive networks of correspondent banks.⁹ These factors allowed them to become the lender of last resort in the face of a financial crisis. In other words, they became willing to provide emergency cash to their correspondents in times of financial distress.¹⁰

1.2.2 Central Bank and Financial Stability Mandate

In the nineteenth century, in Great Britain, France and Italy as in most other European countries, there was no institution formally or informally endowed with a financial stability mandate (FSM). The government directly regulated and inspected the monopolistic or dominant banks of issue primarily because of their role in the payments system; but with the exception of savings banks, other credit institutions were not perceived by legislators as different from any other commercial company or having a potential to destabilize the financial system.¹¹ Thus, Central Banks have been considered as a

⁸ Charles A. Conant, Victor A. Morawetz, and Senator W. A. Peffer (1910): *A Central Bank of Issue*, *North American Review*, pp. 1-28.

⁹ Michael D. Bordo (2007): *A Brief History of Central Banks* Federal Reserve Bank of Cleveland, *Economic Commentary*, Federal Reserve Bank of Cleveland, pp. 1-4, <https://www.clevelandfed.org/publications/economic-commentary/2007/ec-20071201-a-brief-history-of-central-banks>.

¹⁰ Michael D. Bordo (2007): *A Brief History of Central Banks* Federal Reserve Bank of Cleveland, *Economic Commentary*, Federal Reserve Bank of Cleveland, pp. 1-4, <https://www.clevelandfed.org/publications/economic-commentary/2007/ec-20071201-a-brief-history-of-central-banks>.

¹¹ Gianni Toniolo, Eugene N. White (2015): *The Evolution of the Financial Stability mandate: From its Origins to the Present Day*, National Bureau of Economic Research, Working Paper 20844, pp. 1-53, <http://www.nber.org/papers/w20844>.

rational manifestation of a joint-production agreement between the sovereign and private actors, bilaterally undertaken to collectively produce public goods, such as financial stability, banking supervision, banking services, and more predictable long-term forms of government financing.¹² The FSM, as understood in the 18th and 19th centuries, meant that a Central Bank must serve as a lender of last resort to the banking system and the payments system.¹³ The Federal Reserve System belongs to a later wave of Central Banks, which emerged at the turn of the twentieth century.

The BoE's monopoly over London's note issuance business compelled other banks to treat its notes, and its deposit liabilities, as cash reserves. As such, private banks were compelled to rely on BoE notes to meet increased currency demand, leading Bank notes to unintendedly occupy a privileged position in banks' portfolios.¹⁴ Central Banks of this era acted as lenders of last resort in times of financial stress—when events like bad harvests, defaults by railroads, or wars precipitated a scramble for liquidity (in which depositors ran to their banks and tried to convert their deposits into cash).

¹² Pablo Paniagua Prieto (2022): The institutional evolution of Central Banks, *Journal of Evolutionary Economics* volume 32, pages 1049–1070.

¹³ Pierre Siklos, Michael Bordo (2017): Central Banks: Evolution and Innovation in Historical Perspective, <https://cepr.org/voxeu/columns/central-banks-evolution-and-innovation-historical-perspective>.

¹⁴ *Idem*.

Figure 1.1: *Nations Central Banks' foundation*

<i>Nation</i>	<i>Bank</i>	<i>Date founded</i>
Sweden	Sverige Riksbank	1688
England	Bank of England	1694
France	Banque de France	1800
Finland	Bank of Finland	1811
Netherlands	Nederlandsche Bank	1814
Austria	Austrian National Bank	1816
Norway	Norges Bank	1816
Denmark	Danmarks Nationalbank	1818
Portugal	Banco de Portugal	1846
Belgium	Belgian National Bank	1850
Spain	Banco de España	1874
Germany	Reichsbank	1876
Japan	Bank of Japan	1882
Italy	Banca D'Italia	1893

The U.S. experience was most interesting. It had two Central Banks in the early nineteenth century, the Bank of the United States (1791–1811) and a second Bank of the United States (1816–1836). Both were set up on the model of the Bank of England, but unlike the British, Americans bore a deep-seated distrust of any concentration of financial power in general, and of Central Banks in particular, so that in each case, the charters were not renewed. While the system improved the efficiency of the payments system by providing a uniform currency based on national bank notes, it still provided no lender of last resort, and the era was rife with severe banking panics. The First Bank's initial legal privileges were also the source of its Central Banking powers. Its role as financier and fiscal agent to the government, its predominance in note issue, its monopoly on interstate branch banking, and its subsequent accumulation of reserves gave it the ability to influence the money supply.¹⁵ When war broke out with England in 1812, the federal government was forced to conduct its fiscal policies without the aid of a national bank.¹⁶ Three years later, the Bank of the United States were

¹⁵ J. Lawrence Broz (1998): *The Origins of Central Banking: Solutions to the Free-Rider Problem*, *International Organization* 52, 2, Spring 1998, pp. 231–268.

¹⁶ *Idem*.

instituted in 1816 to serve the US government's interests, and received de jure recognition as sole depository of the Treasury.¹⁷

1.3 Central Banks and digitalization

Central Banks can work with the private sector and with each other to ensure interoperability domestically and across borders.

1.3.1 Digitalization

Central Banks face the additional challenge of a rapidly changing financial landscape due to digital innovation. Digitalization is changing the structure of the financial and monetary system and demanding Central Banks to adapt. Big tech financial services activities thus need to be properly regulated, to safeguard financial stability and address any competitive distortions relative to banks.¹⁸ The rapid and transformational changes brought on by FinTech need to be monitored and evaluated so that regulators and society can keep up with the underlying technological and entrepreneurial flux. For a sustainable business ecosystem, FinTechs need to bridge the digital divide and promote equitable and broad-based customer participation. The financial system relies on trust – losing sight of risks to the stability and integrity of the financial system could jeopardize that trust. FinTech is generally described as an industry that uses technology to make financial systems and the delivery of financial services more efficient. It technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services.¹⁹ Through the new technologies, new players are offering digital banking products using open banking that allows third-party companies access to financial data, digital platform

¹⁷ Idem.

¹⁸ Agustín Carstens (2022): Challenges for Central Banks, BIS, Institute of International Finance (IIF) Board meeting, 17 January 2022.

¹⁹ EBI (2021): Fintech Regulation and the Licensing Principle, <https://ebi-europa.eu/events/fintech-regulation-and-the-licensing-principle/>.

financing.²⁰ Financial technology can influence financial stability by changing the market structure in financial services.²¹ Financial innovations could have potential to over time produce macro financial risks therefore endangering stability of the entire financial system. The extent to which financial innovation could have an impact and become a source of financial risk depends on the type of innovation and its potential to evolve over time. Macro-financial risks are unsustainable credit growth, pro-cyclicality, and incentives for great risk taking, contagion and systemic importance.²²

1.3.2 Decentralized finance (DeFi)

Interest in DeFi rose sharply in 2020 and, during its peak in 2021, reached a total value locked (TVL) of more than 150 billion USD.²³ DeFi builds on non-trivial technical primitives to offer financial services that cannot directly be mapped to those provided by traditional financial institutions.²⁴ However, a sound understanding of DeFi is still lacking in many circles, which calls for a specific framework for an improved working knowledge of the technology. Decentralized Finance is a competitive, contestable, compound and non-custodial financial ecosystem built on technology that does not require a central organization to operate and that has no safety net. It consists of financial protocols – implemented as “smart contracts” – running on a network of computers to automatically manage financial transactions.²⁵ A DeFi protocol and its underlying smart contracts are developed by a team of

²⁰ Felix I. Less ambo (2023): *Fintech Regulation and Supervision Challenges within the BANKING Industry: A comparative Study within the G-20*, Palgrave Macmillan.

²¹ Milena Vučinić (2020): *Fintech and Financial Stability Potential Influence of FinTech on Financial Stability, Risks and Benefits*, *Journal of Central Banking Theory and Practice*, 2020, 2, p. 49.

²² Milena Vučinić (2020): *Fintech and Financial Stability Potential Influence of FinTech on Financial Stability, Risks and Benefits*, *Journal of Central Banking Theory and Practice*, 2020, 2, pp. 43-66.

²³Raphael Auer, Bernhard Haslhofer, Stefan Kitzler, Pietro Saggese, Friedhelm Victor (2023): *The Technology of Decentralized Finance (DeFi)*, BIS, Working Papers No 1066, pp. 1-36, <https://www.bis.org/publ/work1066.pdf>.

²⁴ Idem.

²⁵ Idem.

developers as part of a specific project.²⁶ DeFi does not come with any safety net as it lacks protection from criminal conduct or investor fraud and erroneous transactions cannot be undone.²⁷ More, these financial services are not controlled and supervised by traditional financial institutions (i.e. Central Banks) or market authorities.²⁸ DeFi envisions the replacement of institutions with distributed ledger technology (DLT) with the aim of reclaiming data from big techs and "cutting out the middlemen" such as big banks. In the absence of proper regulation, they may lack full backing or test the definition of a safe asset. DeFi introduces enormous technological and economic complexity that makes the interpretation, evaluation, and risk assessment of DeFi financial products increasingly difficult.²⁹

²⁶ Idem.

²⁷ Idem.

²⁸ Idem.

²⁹ Raphael Auer, Bernhard Haslhofer, Stefan Kitzler, Pietro Saggese, Friedhelm Victor (2023): The Technology of Decentralized Finance (DeFi), BIS, Working Papers No 1066, pp. 1-36, <https://www.bis.org/publ/work1066.pdf>.

Chapter 2

Central Banks and Monetary Policy

Abstract: A key role of Central Banks is to conduct monetary policy to achieve price stability (low and stable inflation) and to help manage economic fluctuations. Monetary policy refers to a set of tools used by a nation's Central Bank to control the overall money supply and promote economic growth and employ strategies such as revising interest rates and changing bank reserve requirements. Central Banks play a crucial role in ensuring economic and financial stability.

2.1 General

- When policymakers seek to influence the economy, they have two main tools at their disposal—monetary policy and fiscal policy. Central Banks indirectly target activity by influencing the money supply through adjustments to interest rates, bank reserve requirements, and the purchase and sale of government securities and foreign exchange. Governments influence the economy by changing the level and types of taxes, the extent and composition of spending, and the degree and form of borrowing. Monetary policy is conducted by Central Banks. A Central Bank is a public institution that manages the currency of a country or group of countries and controls the money supply – literally, the amount of money in circulation. The main objective of many Central Banks is price stability. In some countries, such as the United States of America, Central Banks are also required by law to act in support of full employment.¹ Monetary policy is the macroeconomic policy laid down by the Central Bank. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a

¹ <https://www.ecb.europa.eu/ecb/educational/explainers/tell-me/html/what-is-a-central-bank.en.html>.

country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity.² Modern monetary policy began by the bank discounting the paper of other financial institutions, both government debt and commercial paper.³

2.2 Central Banks functions

A Central Bank generally performs the following functions:

- Monopoly of notes issuance

The function of issuing bank notes is almost universal with Central Banks. Central Bank has monopoly rights of issuing notes of all denominations. This is called currency authority function of Central Banks. All notes issued by the Central Bank acts as an unlimited legal tender in the country. However, the importance of the note issue function has varied greatly over time and among countries.⁴ The desirability of concentrating the note issue in the Central Bank came to be realized slowly, mostly during the nineteenth century. To date, it's a function widely admitted.

- Government's banker

As banker to the government, the Central Bank provides all those services and facilities to the government which the public gets from the ordinary banks. In its role as a banker to the government, it carries out all banking businesses of the government. As an agent to the government, it issues loans and advances to the government and does buying and selling of securities on behalf of government. The Federal

² <https://economictimes.indiatimes.com/definition/monetary-policy>.

³ Bordo, M.D. (2008). Monetary Policy, History of. In: The New Palgrave Dictionary of Economics. Palgrave Macmillan, London. https://doi.org/10.1057/978-1-349-95121-5_2743-1.

⁴ Federal Reserve Bank of St. Louis (1962): The Note Issue Function of Central Banks, pp. 1-4, https://fraser.stlouisfed.org/files/docs/publications/frbrichreview/pages/65387_1960-1964.pdf.

Reserve swap lines provide dollar funding to the broader market by lending dollars to foreign Central Banks. These foreign Central Banks, in turn, lend dollars from the swap line to domestic institutions on a collateralized basis.⁵

– Bankers' bank

Commercial banks keep a certain portion of the demand and time deposits with the Central Bank of the country- a current account- with the Central Bank and can borrow money in the very short term. Thus, the banks which have to supply banknotes for their customers (either over the counter or through automatic teller machines) obtain them from the Central Bank which has an issuing monopoly. The Central Bank debits their current accounts accordingly. Balances held on accounts with the Central Bank are also used to settle debts between banks. Finally, the Central Bank may require the maintenance of a minimum credit balance on the account: the monetary reserves.

– Clearinghouse

Since all commercial banks have their accounts with the Central Bank, the claims of banks against each other are settled by simple transfer i.e., by debit and credit entries in their accounts. Thus the inter-bank indebtedness can be easily settled without using cash. This is possible as banks keep cash reserves with the Central Bank. No other aspect of the Central Bank's responsibility requires more cooperation and coordination among the various Central Banking disciplines than the payment system does.⁶ Settlement refers to the actual transfer of value based on payment instructions, whether gross or net, on the books of private banking institutions, through the use of bank balances, or on the

⁵ Liao, Gordon and Tony Zhang (2020): The Hedging Channel of Exchange Rate Determination, The Federal Reserve Board- International Finance Discussion, Papers 1283, pp. 1-67, <https://doi.org/10.17016/IFDP.2020.1283>.

⁶ Bruce J. Summers (1991): Clearing and Payment Systems: The Central Bank's Role, Federal Reserve Bulletin (Washington), Vol. 77. pp. 81-91.

books of the Central Bank.⁷ Central Bank settlement can either be immediate, occurring directly upon the processing of a credit payment order, or on the same day, involving a delay until the end of the banking day.⁸

- Supervisor of the financial system

Financial sector development is an integral part of economic development, which is sought to be promoted by a Central Bank as a matter of deliberate policy.⁹ Before 1914, Central Banks did not attach great weight to the goal of maintaining the domestic economy's stability. This changed after World War I, when they began to be concerned about employment, real activity, and the price level. The shift reflected a change in the political economy of many countries—suffrage was expanding, labor movements were rising, and restrictions on migration were being set. In the 1920s, the Fed began focusing on both external stability (which meant keeping an eye on gold reserves, because the U.S. was still on the gold standard) and internal stability (which meant keeping an eye on prices, output, and employment). But as long as the gold standard prevailed, external goals dominated.

- Executor of the monetary policy

A key role of Central Banks is to conduct monetary policy to achieve price stability (low and stable inflation) and to help manage economic fluctuations.¹⁰ After the GFC in 2008, the G-20 obtained the creation of the Financial Stability Board to coordinate the work of national financial authorities and international standard setting bodies in order to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. However, the G-20

⁷ Idem.

⁸ Idem.

⁹ Deena KhatKhate (1991): *The Central Bank's Role in Financial Sector Development*, International Monetary Fund, pp. 16-29,

<https://www.elibrary.imf.org/display/book/9781557751850/ch003.xml?tabs=abstract>.

¹⁰ IMF (2017): *Monetary Policy and Central Banking*, IMF Factsheet, pp. 1-2,

<http://www.imf.org/external/np/exr/facts/mtransp.htm>.

initiatives have resulted in a stalemate, and no significant progress has been achieved toward an international monetary policy coordination.¹¹ National monetary policy, an essential element of the economic policy of the State, is frequently conducted by a Central Bank or monetary authority which usually is independent from the government. Most Central Bank laws assign the Central Bank with the monetary policy function, listing its objectives and instruments, but do not provide a legal definition of the term.¹² Monetary policy to change the money supply or the interest rate may counteract recession or inflation. The idea that the government has the ability and the obligation to counteract the business cycle did not take root until after the 1936 publication of Keynes's *General Theory of Employment, Interest, and Money*

- Executor of the exchange rate policy and holder of international reserves

The rationale for holding reserves can be broadly categorized along precautionary insurance and standard operational lines. Precautionary reserves are held to defend the exchange rate against destabilizing capital outflows; to grant emergency foreign currency liquidity assistance to banks; and to lean against disorderly market conditions and/or valuation overshooting. The operational functions served by reserves may be complimentary, but still different. They include facilitating regular international debt and import-related payments made on behalf of the government, serving as collateral to relax external borrowing constraints, and assisting with monetary policy related liquidity operations.¹³ A country's monetary policy is closely linked to its exchange rate regime. A country's interest rates affect the value of its currency, so those with a fixed exchange rate will have less scope for an independent monetary policy than ones with a flexible exchange rate.

¹³ IMF (2011): *Global Economic Prospects and Policy Challenges*, pp. 1-203.

¹² Lucía Satragno (2010): *Domestic Obligations concerning Monetary Stability -The Special Role of Central Banks, Monetary Stability as a Common Concern in International Law*, pp. 124–150, DOI: https://doi.org/10.1163/9789004508736_007.

¹³Bradley A. Jones (2018): *Central Bank Reserve Management and International Financial Stability—Some Post-Crisis Reflections*, IMF WP/18/31, pp. 1-30.

A fully flexible exchange rate regime supports an effective inflation-targeting framework.

- Lender of last-resort

The Central Bank acts as a lender of last resort to commercial banks to prevent a bank crisis. Whenever any commercial bank faces liquidity problems, the Central Bank provides funds to overcome crisis. Put differently, Central Banks act as lender of last resort by providing liquidity assistance to a borrower (i.e., commercial bank) that is not fundamentally insolvent, with the purpose of avoiding either (i) the social costs that would follow from disorderly default or from distressed intermediaries withdrawing or heavily rationing services to the economy, or (ii) contagion to other intermediaries via direct or indirect channels that would be likely to lead to such social costs.¹⁴ The lender of last resort function of the Central Bank helps to control panic and infuses confidence among the banks as well as the public. Hence, during financial difficulties or crisis commercial banks can always depend on the Central Bank for the required assistance. That is, in a crisis banks may contract their lending and the money supply falls, which could push the economy into recession or worse. For the Central Bank to increase its lending to the banking system may then counteract this contraction.

2.2.1 Central Banks Independence

The concept of Central Banks independence developed out of concern that governments pursuing short-term political goals could resort to forcing Central Banks to finance excessive government spending by issuing (“printing”) money.¹⁵ Under such a view, Central Banks are deemed independent authorities delegated specific responsibilities and

¹⁴ Paul Tucker (2019): Solvency as a Fundamental Constraint on LORLR for Independent Central Banks: Principles, History, Law, Federal Reserve at St Louis, pp. 1-40, <http://paultucker.me/wp-content/uploads/2019/04/Solvency-As-A-Fundamental-Constraint-On-Lolr-Policy.pdf>.

¹⁵ OECD (2009): Central Banks’ governance and operations, <https://www.oecd-ilibrary.org/sites/97bb0aad-en/index.html?itemId=/content/component/97bb0aad-en>.

formally insulated from day-to-day politics. They provide public goods and preserve common goods that can be enjoyed by all but eroded by the exploitative.¹⁶ Independence has long been a cornerstone of Central Banking. Central Bank independence matters for price stability—and price stability matters for consistent long-term growth.¹⁷ An independent Central Bank is one whose mandate—to achieve responsible control of monetary policy—is unaffected by anything the government might do.¹⁸ A Central Bank subject to short-term political influences would likely not be credible in pursuing its assigned goals and objectives.¹⁹ Undue political influence on monetary policy decisions can also impair the inflation-fighting credibility of the Central Bank, resulting in higher average inflation and, consequently, a less-productive economy.²⁰ A government that controls the Central Bank may face a strong temptation to abuse the Central Bank's money-printing powers to help finance its budget deficit.²¹ Independence enables Central Banks to take monetary policy decision with a sufficiently long term horizon in minds.²² Nonetheless, the 2007–09 crisis experience challenged the holy grail of Central Bank independence, where the US governments, for instance, became the primary decision-makers in crisis responses including the use of TARP funds rather than an “independent FED”. As the authors put it:

¹⁶ Paul Tucker (2020): Central Bank Independence- constitutionalist Central Banking in a world of inert politics, *Finance & Development*, pp. 44-47.

¹⁷ Kristalina Georgieva (2024): Strengthen Central Bank Independence to Protect the World Economy, <https://www.imf.org/en/Blogs/Articles/2024/03/21/strengthen-central-bank-independence-to-protect-the-world-economy>.

¹⁸ Mario Blejer and Paul Wachtel (2020): A fresh Look at Central Bank Independence, *Cato Journal*, Vol. 40, No. 1 (Winter 2020), pp. 1-27, <https://www.lse.ac.uk/iga/assets/documents/research-and-publications/Rockefeller-Project/Paul-Wachtel-Mario-Blejer-A-fresh-look-at-central-bank-independence.pdf>.

¹⁹ Ben S. Bernanke (2010): Central Bank Independence, Transparency, and Accountability, <https://www.federalreserve.gov/newsevents/speech/bernanke20100525a.htm>.

²⁰ *Idem*.

²¹ *Idem*.

²² Claudia Buch (2021): Central Bank independence - mandates, mechanisms, and modifications, BIS, pp. 1-14, <https://www.bis.org/review/r211021b.htm>.

“Crisis responses challenge Central Bank independence and bring the Central Bank closer to the government in two ways. First, a bailout can involve a fiscal decision that is the purview of the political structure. Second, bailouts, other crisis responses, and macroprudential policies designed to maintain stability all involve distributional implications.²³

²³ Op Cit, footnote 10.

Figure 2.1: Central Banks' Constitutions & Laws

	Mandate	Responsibility	Appointed solely by executive branch	Dismissed solely by executive branch	Provisions for dismissal of governor	Governor's tenure	Accountable to
Australia	Price stability, maximum employment, economic prosperity and welfare	Monetary policy, prudential supervision	Yes	Yes	Yes	7 years	Government
Brazil	Price stability, financial stability	Monetary policy, prudential supervision	<u>No (Senate's approval is necessary)</u>	Yes	No	Not specified	National Monetary Council and Congress
Costa Rica	Price stability, currency stability, general economic stability, financial stability	Monetary policy, prudential supervision	No (Legislative Assembly's approval is necessary)	No	Yes	4 years	Legislative Assembly
Euro area	<u>Price stability***, support general economic policies</u>	<u>Monetary policy, prudential supervision</u>	<u>No</u>	No	Yes	<u>8 years</u>	<u>EU Parliament and EU Council</u>
India	Price stability, financial stability	Monetary policy, prudential supervision	Yes	Yes	Yes	5 years	Government
Mexico	<u>Price stability***, financial stability</u>	Monetary policy, prudential supervision	<u>No (Senate's approval is necessary)</u>	<u>No (Senate's approval is necessary)</u>	Yes	6 years	Congress
New Zealand	Price stability***, financial stability	Monetary policy, prudential supervision	Yes	No (Council's Order is necessary)	Yes	5 years	Government
Poland	Price stability, <u>currency stability</u> , financial stability, support economic policy	<u>Monetary policy, macro-prudential supervision</u>	<u>No</u>	No	Yes	<u>6 years</u>	<u>Parliament</u>
Sweden	Price stability, financial stability	<u>Monetary policy, macro-prudential supervision</u>	<u>No</u>	<u>No</u>	<u>Yes</u>	6 years	Parliament
Switzerland	Price stability***, development of economy	<u>Monetary policy</u>	Yes	Yes	Yes	6 years	<u>Confederation</u>
Turkey	Price stability***, currency stability, financial stability, maximum employment	Monetary policy, macro-prudential supervision	Yes	Yes	Yes	5 years	Government
United States	Price stability, maximum employment, long-term interest rate stability	Monetary policy, prudential supervision	No (Senate's approval is necessary)	Unclear	Partial	4 years	Congress

Note: The underlined items are enshrined in the constitutions or TFEU. The other items are laid down in central bank laws. Asterisked items represent the primary mandate.

Source: BIS (2009[12]); Dall'Orto Mas et al. (2020[15]); constitutions/TFEU, central bank laws and websites of the benchmark countries.

As a result, there has been a backlash against Central Banks. Concerns that Central Banks have become too powerful and unaccountable are reflected in the media and in politics in many countries.²⁴ Even among monetary economist, there seems to be no consensus. Some have argued that Central Bank independence is at best irrelevant and at worst damaging in economies where the key macro-economic challenge is raising inflation, not lowering it.²⁵ Others, argued that though Central Banks need to be much more powerful and have broader mandates, nonetheless, the traditional academic conception of full Central Bank independence as an unalloyed good is inadequate for this new world.²⁶

2.2.2 Measuring Central Bank Independence

Several metrics have been offered through decades to assess or measure Central Bank independence: policy authority and finances,²⁷ the eight political metrics,²⁸ the Cukierman, Webb, and Neyapti (CWN) index,²⁹

²⁴ Ed Balls, James Howat and Anna Stansbury (2016): Central Bank Independence Revisited: After the financial crisis, what should a model Central Bank look like? Harvard Kennedy School, pp. 1-114, https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/67_central.bank.v.2.pdf.

²⁵ Idem.

²⁶ Idem.

²⁷ Bade, R., M. Parkin (1988): Central Bank Laws and Monetary Policy. London: University of Western Ontario.

²⁸ Grilli, V., D. Masciandaro, G. Tabellini, et al. (1991): Political and Monetary Institutions and Public Financial Policies in the Industrial Countries," in: Economic Policy, vol. 6, No. 13, pp. 341-392. Oxford: Oxford University Press.

Their eight political metrics covered appointments (whether the governor is appointed by the bank board; whether the governor's term is greater than five years; whether all of the board is not appointed by the government; and whether the board members serve for more than five years); government involvement in decision-making (whether the government is legally entitled to participate in board decision-making through a representative or ex officio member; whether government approval of policy decisions is required); and the structural relationship of the bank to governmental decision-makers (whether there is a statutory requirement for the Central Bank to pursue monetary stability amongst its goals; whether there are statutory provisions that strengthen the Central Bank in conflicts with the government).

²⁹ Cukierman, A., S. B. Webb, B. Neyapti (1992): Measuring the Independence of Central Banks and Its Effect on