Notes on the Central Bank Independence - Extended (CBIE) index and associated data $-2024~{\rm update} -$

Davide Romelli*

The Central Bank Independence - Extended (CBIE) index is an index of de jure central bank independence that incorporates and extends previous indices by including new information on central bank financial independence and disclosure for a sample of 155 countries. The index was initially introduced in Romelli (2022) and is obtained based on the codification of central bank statutes. This update is based on the statutes codified from 1923 (or the year in which the first legislation was available for a country) to 2023.

The dataset is available at https://dromelli.github.io/cbidata/index.html and will be periodically updated by the author.

When you use the index and its associated data, please acknowledge the following papers as the data sources:

- Romelli, D., 2022. The political economy of reforms in central bank design: evidence from a new dataset. *Economic Policy*, 37(112), pp. 641-688.
- Romelli, D., 2024. Trends in central bank independence: a de-jure perspective. BAFFI CAREFIN Centre Research Paper No. 217.

^{*}Department of Economics, Trinity College Dublin, Ireland. Email: romellid@tcd.ie.

¹All the central bank legislations used for the creation of the index are available at https://dromelli.github.io/cbidata/legislations.html.

1 The CBIE Index

The Central Bank Independence - Extended (CBIE) covers a wide range of central bank characteristics based on their charters. The construction of the index uses, as a starting point, the two most commonly employed CBI indices, namely the Grilli et al. (1991) (GMT) and Cukierman et al. (1992) (CWN).² The new index, called Central Bank Independence - Extended (CBIE) index, provides information on 42 criteria of central bank institutional design across six dimensions: 1) Governor and central bank board, 2) Monetary policy and conflict resolution, 3) Objectives, 4) Limitations on lending to the government, 5) Financial independence and 6) Reporting and disclosure.

This extended index incorporates and expands the characteristics of both by including new criteria that capture good practices in central bank financial independence and reporting and disclosure. The financial independence criterion concerns the conditions for capitalization and recapitalization of the central bank capital, the identification of the authority that determines and approves the budget of the central bank, as well as the requirements for profit allocation. These two features are particularly important during periods in which central banks' assets increase exponentially, such as following large asset purchase programs. In this context, the presence of conditions on the approval of the central bank budget and the distribution of profits may reduce central banks' capacity to implement monetary policy. Regarding profit allocation, in particular, Reis (2013) argues that governments under fiscal stress will be tempted to demand the central bank to generate more profits and transfer them to the Treasury.

Previous literature has also argued that central bank accountability nowadays goes in tandem with central bank independence (de Haan et al., 2005; Jacome and Vazquez, 2008). de Haan et al. (2005) outline three main features of central bank accountability: (i) explicit definition and ranking of objectives of monetary policy; (ii) final responsibility with respect to monetary policy, and (iii) disclosure of actual monetary policy. Elements of accountability captured in the first two categories are already incorporated in the Grilli et al. (1991) and Cukierman et al. (1992) indices.³ The CBIE index includes additional information related to disclosure, namely information on the legal provisions that require central banks to report, on a regular basis, the fulfilment of their policy targets. A question related to the publication of financial statements and whether these are certified by an independent auditor is also included in this dimension. The assumption is that higher disclosure and regular publication of certified financial statements correspond to greater central bank accountability and decrease the risk of being "captured" by the executive branch.

The codification strategy used for the creation of the index follows Cukierman et al. (1992) closely, and the points assigned to the answers to the 42 questions that construct the CBIE index range between 0 (no independence) and 1 (full independence). A score for each of the six dimensions of the index is obtained by assigning equal weights to each question in a given dimension. Then, the overall index is computed as the average of the scores across these six dimensions. This guarantees that all dimensions are given the same weight in determining the level of independence. The resulting index is normalized over the interval [0;1].⁴

²For a detailed explanation of these indices and a literature review, see Eijffinger and de Haan (1996); Arnone et al. (2006); Masciandaro and Romelli (2015); de Haan and Eijffinger (2019); Masciandaro and Romelli (2019); Peia and Romelli (2019).

³For example, several questions related to the responsibility of formulating monetary policy, the presence of government representatives in the central bank board, or the conditions for the dismissal of monetary policy committee members.

⁴There are, of course, different ways to aggregate the collected data. For example, Grilli et al. (1991)

Details on the guiding principle for the creation of the CBIE index are presented in subsection 1.1, while subsection 1.2 shows the coding rules.

1.1 Main guidelines for constructing the CBIE Index

- Governor and central bank board. In many countries, the governor and other senior officials of the central bank are appointed through a governmental process. However, to assure some measures of balance, the appointment of the governor should be done by separate bodies. In an optimal institutional setting, the term of office of the governor and board members should be longer than the electoral cycle, while their reappointment should be limited to avoid the favouring of politicians who decide on reappointment. To foster continuity and renewal, the central bank legislation might also require a staggering of terms for senior central bankers. This requirement should reduce the short-term political influence on the central bank. Improper behaviour of the central bank's governor and other board members can potentially damage the credibility of the institution in the financial markets and harm its reputation among the public. For this reason, most central bank statutes specify the circumstances or conditions for the dismissal of the governor and other board members. However, their dismissal should only occur in cases of personal misconduct or whether the member loses his/her qualification requirements. Indeed, the removal of central bankers for policy reasons might open the door to unwarranted pressure from the government. Similarly, the involvement of the governor and other board members in other offices of the government might create a conflict of interest between the two positions and this might pose some problems for the overall credibility of the central bank. Finally, the introduction in the legislation of qualification requirements can help to filter out those who might otherwise be selected on the basis of their political connections or simply as notable persons, but lacking any particular qualifications for the function. Given all these elements, central banks in which: i) the executive branch has little or no legal authority in appointing the governor and other board members; ii) the term of office exceeds the electoral cycle; iii) reappointment is limited; iv) dismissal is based on objective grounds; and v) parallel activities of management bodies are limited, can be considered to be more independent from the government.
- Monetary policy and conflict resolution. Central banks need the right to determine and implement monetary policy to achieve their objectives. To this end, in an optimal institutional design, the government should not interfere in monetary policy. Similarly, the central bank should have the authority to determine interest rates on its own, while banking supervision might be delegated to an autonomous agency to avoid this activity conflicting with monetary policy. In line with previous studies, I also assume that the central bank's role in approving public sector budget and/or debt represents useful instruments to help enforce fiscal discipline and strengthen monetary policy. Finally, whether any conflict might emerge between the central bank and the government, the central bank legislation should specify the procedure to follow and resolve such conflicts. In particular, to avoid that the monetary policy decisions adopted by the central bank are overruled by the government, the central bank should

assign an equal weight to the 15 questions included in their index. Since more questions are included in the criterion for governance, the weighting scheme assigns the largest weight to this dimension. Cukierman et al. (1992), Jacome and Vazquez (2008), Dincer and Eichengreen (2014), among others, assign a set of a priori weights to each dimension. For instance, in the Cukierman (1992) index, 62.5% of the weight is assigned to the dimension on the limitations on lending to the government. Here, I take a conservative approach and assign equal weights to the six dimensions collected.

have the final authority over issues related to its objectives.

- Objectives. To strengthen the credibility of the monetary policy authority, its objectives need to be clearly defined. Given the social costs imposed by inflation in the long run, the objective of price stability is a natural long-run goal for any central bank. Price stability is now the primary objective of most monetary policy institutions. Yet, other goals such as aggregate output or employment might be taken into account. Moreover, especially since the onset of the 2008-09 financial crisis, there is a continuing debate about whether monetary policy frameworks focused on price stability should be amended to include financial stability. Smets (2014), for example, suggests that in order to avoid the time inconsistency problem and to ensure clear accountability, it is important that price stability remains the monetary authorities' primary objective. He considers that a lexicographic *ordering* with the price stability objective coming before the financial stability objective will avoid an inflationary bias that may arise from the central bank's involvement in financial stability while ensuring that financial stability concerns are still taken into account. Similar considerations hold if the central bank pursues multiple objectives. To a certain extent, the introduction of a more stringent price stability objective, i.e. the law prescribing what the central bank should do, might be considered as an element lowering the independence of a central bank. However, in our codification, I follow Cukierman et al. (1992) and de Haan and Eijffinger (2019) by assuming that this category captures both the degree of central bank independence and conservativeness embedded in the
- Limitations on lending to the government. Whenever the government can influence the quantity and conditions under which it borrows money from the central bank, it can also influence the creation of a monetary base and lessen the economic independence of the central bank (Grilli et al., 1991). Therefore, in an optimal institutional design, temporary advances to the government should be prohibited. However, if direct credits are allowed, these may be moderate. For example, monetary financing of the government might be allowed if: (i) loans are provided with strict limits; (ii) the terms of lending are controlled by the central bank; (iii) the beneficiary is only the government and not also local administrations or public enterprises; (iv) the maximum amount of advances is quantified; (v) their maturity is limited and clearly specified in the central bank legislation; and (vi) loans are at market-related interest rates. Finally, the central bank should be prohibited to underwrite government securities in the primary market. Consequently, central banks in which the legislation introduces tighter limits on their lending to the public sector are considered more independent.
- Financial Independence. Even if central banks are not generally concerned with liquidity, central bank financial strength appears to be positively associated with good policy performance.⁵ In extreme situations, financially weak central banks can generate losses that undermine macroeconomic stability and can put into question the credibility of the institution (Stella, 2010). Consequently, the central bank legislation should address the elements directly related to the financial position of the central bank, such as the conditions for capitalization and recapitalization, the determination of the central bank budget and the arrangements for profit distribution and loss coverage. To ensure financial independence, the central bank statute should describe

 $^{^5}$ Milton and Sinclair (2010) provide a comprehensive and historical analysis of the issues on central banks' capital and financial strength.

precisely the provisions relating to the payment and level of the initial authorized capital, as well as information on the obligation of the government to re-capitalize the bank and provide details on whereby recapitalizations are subject to approval by the executive power or the parliament. Moreover, financial independence should not depend on the government's budget. To strengthen this point, the central bank's legislation should have a requirement to uncouple the approval of the central bank budget from the government's one. Similarly, the adoption of the central bank balance sheet should belong to its decision-making bodies and financial accountability might be ensured by requiring that the internal and external review of the bank's account is not conducted by the government or a state-owned auditing agency. Finally, the legal arrangements surrounding the distribution of the central bank's profits and losses play a relevant role in guaranteeing long-term financial independence. Only realized net profits, after prudent provisioning by the central bank and appropriate allocation to general reserves, should be returned to the government. It follows that the central bank legislation should specify: a) how the allocation of net profits is conducted, b) how the allocation of a percentage the profits to the *general reserve* fund is handled by the central bank, c) that the government or the central bank's shareholders are prohibited from receiving partial payments before the end of the fiscal year, and d) that unrealized profits cannot be included in the calculation of distributable profits.

• Reporting and disclosure. Policy and financial reporting should be clearly established and, for this reason, the central bank should prepare formal statements on monetary policy performance at fixed time intervals, without prior approval of the government (Lybek, 1999). Jacome and Vazquez (2008) recognize financial accountability as an integral component of central bank independence. Indeed, holding central banks accountable strengthens institutional credibility and hence underpins monetary policy effectiveness. Following these guidelines, in an optimal institutional design, the central bank legislation might require that central banks report on a regular basis their policy targets and achievements, and publish financial statements that follow international accounting standards and are certified by an independent auditor.

1.2 Coding rules for the index

I. Governor and central bank board

I.1)	Who appoints the governor? Central bank board/shareholders (if different from the government) A council of the central bank board, executive branch, and legislative branch By legislative branch (congress, King) By executive branch collectively (e.g. council of ministers)	1.00 0.75 0.50 0.25
	By one or more members of the executive branch	0.00
I.2)	Term of office of the governor	
	More than 8 years	1.00
	6 to 8 years Equal to 5 years	0.75 0.50
	Equal to 4 years	0.25
	Less than 4 years or at the discretion of the appointer (no limits or not mentioned)	0.00
I.3)	Is there any reappointment option for the governor?	
	No	1.00
	Restricted to two consecutive terms Yes	0.50 0.00
Ι 4)	Provisions for dismissal of the governor	0.00
1.4)	No provision for dismissal	1.00
	Only for non-policy reasons (e.g., incapability, or violation of the law)	0.83
	At the discretion of the central bank board	0.67
	For policy reasons at the legislative branch's discretion	0.50
	At the legislative branch's discretion For policy reasons at the executive branch's discretion	0.33 0.17
	At the executive branch's discretion	0.00
I.5)	May the governor hold other offices in government?	
,	Prohibited by law	1.00
	Not allowed unless authorized by executive branch	0.50
	No prohibition for holding another office	0.00
I.6)	Is there any qualification requirement for the governor?	1.00
	Yes No	1.00 0.00
I 7)	Who appoints the rest of the board?	0.00
1.1)	Central bank board/shareholders (if different from the government)	1.00
	A council of the central bank board, executive branch, and legislative branch	0.75
	By legislative branch (congress, King)	0.50
	By executive branch collectively (e.g. council of ministers) By one or more members of the executive branch	$0.25 \\ 0.00$
T 0)	v	0.00
1.8)	Term of office of the rest of the board More than 8 years	1.00
	6 to 8 years	0.75
	Equal to 5 years	0.50
	Equal to 4 years	0.25
	Less than 4 years or at the discretion of the appointer (no limits or not mentioned)	0.00
I.9)	Is there any reappointment option for the rest of the board? No	1.00
	Restricted to two consecutive terms	0.50
	Yes	0.00
I.10)	Provisions for dismissal of the rest of the board	
,	No provision for dismissal	1.00
	Only for non-policy reasons (e.g., incapability, or violation of the law)	0.83
	At the discretion of the central bank board For policy reasons at the legislative branch's discretion	$0.67 \\ 0.50$
	At the legislative branch's discretion	0.33
	For policy reasons at the executive branch's discretion	0.17
	At the executive branch's discretion	0.00
I.11)	May the rest of the board hold other offices in government?	
	Prohibited by law Not allowed unless outhorized by executive branch	1.00
	Not allowed unless authorized by executive branch No prohibition for holding another office	$0.50 \\ 0.00$
I 19\	Is there any qualification requirement for the rest of the board?	0.00
1.14)	Yes	1.00
	No	0.00

	1.13)	Does the legislation require a staggering term of office for the appointment of board members? Yes No	1.00 0.00
	I.14)	No mandatory participation of government representatives in the board	
		Yes No, but without voting rights No	1.00 1.00 0.00
П	Mone	etary policy and conflicts resolution	0.00
11.			
	II.1)	Who formulates monetary policy? Central bank alone	1.00
		Central bank participates but has little influence	0.67
		Central bank only advises government	0.30
		Central bank has no say	0.00
	11.2)	Is the central bank responsible for setting the policy rates? Yes	1.00
		No	0.00
	II.3)	Is there no responsibility of the central bank for overseeing the banking sector? Banking supervision not entrusted to the central bank	1.00
		Banking supervision not entrusted to the central bank alone	0.50
		Banking supervision entrusted to the central bank alone	0.00
	II.4)	Central bank given an active role in the formulation of government's budget and/or debt	
		Approves government budget and/or debt	1.00
		Legally required to provide opinion on technical aspects No involvement at all	$0.50 \\ 0.00$
	11.5)	Who has the final word in the resolution of conflicts?	0.00
	11.5)	The central bank, on issues clearly defined in the law as its objectives	1.00
		Government, on policy issues not clearly defined as the central bank's goals	0.80
		A council of the central bank, executive branch, and legislative branch	0.60
		The legislature, on policy issues The executive branch on policy issues, subject to due process and possible protest by the bank	$0.40 \\ 0.20$
		The executive branch has unconditional priority	0.00
III.	Obje	ctives	
	III.1)	Price stability objective	
	III.1)	Price stability is the single or primary objective	1.00
	III.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority	1.00 0.75
	III.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority	
	III.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority	0.75 0.50 0.25
	III.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority	0.75
		Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority	0.75 0.50 0.25
	Limit	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances	0.75 0.50 0.25 0.00
	Limit	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited	0.75 0.50 0.25 0.00
	Limit	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances	0.75 0.50 0.25 0.00
	Limit	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue)	0.75 0.50 0.25 0.00 1.00 0.67
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.50
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the secondary market with limits or approved by the central bank board with a qualified majority	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.50
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the secondary market with lax or without limits In the primary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.50 0.25 0.00
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the secondary market with lax or without limits In the primary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions Specified by the bank charter	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.00 1.00 0.25 0.00
	Limit IV.1)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the primary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions Specified by the bank charter Agreed between the central bank and executive	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.50 0.25 0.00 1.00 0.75 0.30
	Limit IV.1) IV.2)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the secondary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions Specified by the bank charter Agreed between the central bank and executive Decided by the executive branch alone	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.00 1.00 0.25 0.00
	Limit IV.1) IV.2)	Price stability is the single or primary objective Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the primary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions Specified by the bank charter Agreed between the central bank and executive	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.50 0.25 0.00 1.00 0.75 0.30
	Limit IV.1) IV.2)	Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the secondary market with lix or without limits In the primary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions Specified by the bank charter Agreed between the central bank and executive Decided by the executive branch alone Potential borrowers from the central bank Only the government Government plus local governments	0.75 0.50 0.25 0.00 1.00 0.67 0.50 0.25 0.00 1.00 0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.67 0.33
	Limit IV.1) IV.2)	Price stability together with non-conflicting objectives but without priority Price stability plus other goals including financial stability of the financial system that may conflict with the former, without priority Price stability together with economic growth/development with no priority Objectives do not include price stability tations on lending to the government Limitations on advances Advances to government prohibited Advances permitted but with strict limits (e.g., up to 15 percent of government revenue) Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue) No legal limits on lending Lending to government Not allowed In the secondary market with restricted limits In the secondary market with lax or without limits In the primary market with limits or approved by the central bank board with a qualified majority In the primary market without limits Who decides financing conditions to the government (maturity, interest, amount)? Central bank defines terms and conditions Specified by the bank charter Agreed between the central bank and executive Decided by the executive branch alone Potential borrowers from the central bank Only the government	0.75 0.50 0.25 0.00 1.00 0.67 0.33 0.00 1.00 0.75 0.00 1.00 0.67 0.33 0.00

IV.5)	Limits on central bank lending defined As an absolute cash amount	1.00
	As a percentage of central bank capital or other liabilities	0.67
	As a percentage of government revenues	0.33
	As a percentage of government expenditure	0.00
IV.6)	Maturity of advances	1.00
	Within 6 months Within 1 year	$1.00 \\ 0.67$
	More than 1 year	0.33
	No mention of maturity in the law	0.00
IV.7)	Interest rates on advances	
	At market rates	1.00
	Interest rates not specified in law At below market rates	$0.50 \\ 0.00$
IV.8)	Central bank prohibited from buying or selling government securities in the primary market Yes	1.00
	No	0.00
V. Fina	ncial independence	
V 1)	Does the statute describe precisely the provisions relating to the payment of the initial capital?	
V.1)	Yes	1.00
	No	0.00
V.2)	The Statute quantify precisely the authorized capital of the central bank	
	Yes	1.00
	No	0.00
V.3)	Financial autonomy	1.00
	Government should maintain central capital integrity Government legally allowed to capitalize the central bank	$1.00 \\ 0.67$
	The law does not allow the government to capitalize the central bank	0.33
	The central bank conducts quasi-fiscal operations	0.00
V.4)	Are there legal arrangements allowing for an automatic capital contribution upon the request	
	by the central bank (automatic recapitalization)?	1.00
	Yes No	1.00 0.00
V.5)		0.00
	central bank?	
	The decision is based on technical criteria	1.00
	The transfer requires approval by the Treasury The transfer requires an act of the legislature	$0.50 \\ 0.00$
V 6)	· · · · · · · · · · · · · · · · · · ·	0.00
v.6)	The central bank has the exclusive right to determine and approve its annual budget Yes	1.00
	Ex-post approval by the government	0.50
	No	0.00
V.7)	The adoption of the annual balance sheet of the central bank belongs exclusively to its	
	decision-making bodies	1.00
	Yes No	1.00 0.00
V.8)		0.00
v .0)	No	1.00
	No, but the external audit agency is appointed by the government	0.50
	Yes	0.00
V.9)	Allocation of the net profits of the central bank	1.00
	Prescribed by the statute / central bank charter Left to the discretion of the central bank	$1.00 \\ 0.67$
	A kind of negotiation between the government and the central bank	0.33
	Left to the discretion of the government	0.00
V.10)	How is the allocation of profits to the general reserve fund handled by the central bank?	
	The decision is just on objective criteria established precisely by the statute	1.00
	The decision is left to the discretion of the central bank The decision is made by the central bank in consultation with the government	$0.67 \\ 0.33$
	Left to the discretion of the government	0.00
V.11)	Can the state or the shareholders receive partial payments before the end of the fiscal year,	
,	based on an estimate for that year?	
	No Yes	1.00
	1307	

	V.12)	Are unrealized profits included in the calculation of distributable profits? No Yes	1.00 0.00
VI	Repo	orting and disclosure	
	VI.1)	Central Bank reporting Reports to the executive branch and informs at least annually to Congress. Reports to the executive once a year and submits an annual report to Congress Annual report to the executive. Informs the executive branch whenever fundamental disequilibria emerge, or reports through the media without specific periodicity Issues annual report at specific time Distributes an annual report without establishing a particular period of time	1.00 0.75 0.50 0.25 0.00
	VI.2)	Central bank financial statements Discloses detailed financial statements at least once a year with a certification of an independent auditor Discloses consolidated financial statements at least once a year with the seal of the Banking Superintendent or other public sector authority Discloses financial statements at least once a year, certified by an internal Publishes partial financial statements Does not publish financial statements or the law authorizes the central bank to deviate from international accounting standards	1.00 0.75 0.50 0.25

2 Codebook

✓ Central Bank Independence - Extended index (cbie_index)

The CBIE index is computed as the average of the scores across the six dimensions of the index: (1) Governor and central bank board, (2) Monetary policy and conflicts resolution, (3) Objectives, (4) Limitations on lending to the government, (5) Financial independence and (6) Reporting and disclosure.

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

- ✓ Reforms in Central Bank Independence Extended index (**cbie_index_ref**)

 Dummy variable that takes the value of 1 if at least one of the 42 components of the CBIE index has been reformed between year t-1 and t.
- ✓ Governor and central bank board dimension (cbie_board)

The Governor and central bank board dimension is computed as the average of the following 14 components: Who appoints the governor (cbie_board_q1), Term of office of the governor (cbie_board_q2), Reappointment option for the governor (cbie_board_q3), Dismissal of governor (cbie_board_q4), Governor allowed to hold another office in government (cbie_board_q5), Qualification requirements for governor (cbie_board_q6), Who appoints the rest of the board members (cbie_board_q7), Term of office of the rest of the board members (cbie_board_q8), Reappointment option for the rest of the board members (cbie_board_q9), Dismissal of the rest of the board members (cbie_board_q10), Rest of the board members allowed to hold another office in government (cbie_board_q11), Qualification requirements for the rest of the board members (cbie_board_q12), Staggering term of office for board members (cbie_board_q13), Government representatives in the board (cbie_board_q14).

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

- ✓ Reforms in Governor and central bank board dimension (**cbie_board_ref**)

 Dummy variable that takes the value of 1 if at least one of the 14 components of the Governor and central bank board dimension has been reformed between year t-1 and t.
- ✓ Monetary policy and conflicts resolution dimension (cbie_policy)

The Monetary policy and conflicts resolution dimension is computed as the average of the following 5 components: Who formulates monetary policy (cbie_policy_q1), Central bank responsible for setting key policy rates (cbie_policy_q2), Central bank responsible for the supervision of the banking sector (cbie_policy_q3), Central bank role in government's budget and/or debt (cbie_policy_q4), Final authority for the resolution of conflicts related to monetary policy (cbie_policy_q5).

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

✓ Reforms in Monetary policy and conflicts resolution dimension (**cbie_policy_ref**)

Dummy variable that takes the value of 1 if at least one of the 5 components of the Monetary policy and conflicts resolution dimension has been reformed between year t-1 and t.

✓ Objectives dimension (cbie_obj)

The Objectives dimension provides information on the central bank's statutory objectives.

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

✓ Reforms in Objectives dimension (cbie_obj_ref)

Dummy that takes the value of 1 if the Objectives component has been reformed between year t-1 and t.

✓ Limitations on lending to the government dimension (cbie_lending)

The Limitations on lending to the government dimension is computed as the average of the following 8 components: Direct credit: not automatic (cbie_lending_q1), Direct credit: market for lending (cbie_lending_q2), Who decides financing conditions to the government (cbie_lending_q3), Beneficiaries of central bank lending (cbie_lending_q4), Direct credit: type of limit (cbie_lending_q5), Direct credit: maturity of loans (cbie_lending_q6), Direct credit: interest rates (cbie_lending_q7), Prohibition from buying government securities in primary market (cbie_lending_q8).

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

✓ Reforms in Limitations on lending to the government dimension (**cbie_lending_ref**)

Dummy variable that takes the value of 1 if at least one of the 8 components of the Limitations on lending to the government dimension has been reformed between year t-1 and t.

✓ Financial independence dimension (cbie_finindep)

The Financial independence dimension is computed as the average of the following 12 components: Payment of the initial capital of the central bank (cbie_finindep_q1), Authorized capital of the central bank (cbie_finindep_q2), Central bank financial autonomy (cbie_finindep_q3), Arrangements for automatic recapitalization (cbie_finindep_q4), Transfers of money from the treasury (cbie_finindep_q5), Central bank approves its annual budget (cbie_finindep_q6), Central bank adopt its annual balance sheet (cbie_finindep_q7), Auditing of the central bank's accounts (cbie_finindep_q8), Allocation of net profits (cbie_finindep_q9), Allocation of profits to a general reserve fund (cbie_finindep_q10), Partial payments of dividends before the end of the fiscal year (cbie_finindep_q11), Unrealized profits included in the calculation of distributable profits (cbie_finindep_q12).

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

✓ Reforms in Financial independence dimension ($\mathbf{cbie_finindep_ref}$)

Dummy variable that takes the value of 1 if at least one of the 12 components of the Financial independence dimension has been reformed between year t-1 and t.

✓ Reporting and disclosure dimension (cbie_report)

The Reporting and disclosure dimension is computed as the average of the following 2 components: Central bank reporting (cbie_report_q1), Central bank financial statements (cbie_report_q2).

The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.

- ✓ Reforms in Reporting and disclosure dimension (**cbie_report_ref**)

 Dummy variable that takes the value of 1 if at least one of the 2 components of the Reporting and disclosure dimension has been reformed between year t-1 and t.
- ✓ Grilli et al. (1991) index of central bank independence (**cbie_gmt**)

 The Grilli et al. (1991) index of central bank independence provides information on the Grilli et al. (1991) index recomputed using the data collected for this project.

 The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.
- ✓ Cukierman et al. (1992) index of central bank independence (cbie_cwn_lvau)

 The Cukierman et al. (1992) index of central bank independence provides information on the Cukierman et al. (1992) unweighted index recomputed using the data collected for this project.
 - The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.
- ✓ Jacome and Vazquez (2008) index of central bank independence (cbie_cwne)

 The Jacome and Vazquez (2008) index of central bank independence provides information on the Jacome and Vazquez (2008) index recomputed using the data collected for this project.
 - The index ranges from 0 to 1 where 0 corresponds to the lowest level of independence and 1 to the highest level.
- ✓ Central bank independence in the constitution (**cbie_cbiconstitution**)

 Dummy that takes the value of 1 if the independence of the central bank is entrenched in the constitution.
- ✓ iso_a3 refers to the country ISO Alpha-3 code.
- ✓ imf_CountryCode refers to the IMF country code.

3 List of countries

		and year of first			
Afghanistan	2003	Ghana	1975	Oman	2000
Albania	1992	Greece	1959	Pakistan	1972
Algeria	1962	Grenada	1983	Panama	1941
Angola	1997	Guatemala	1959	Paraguay	1952
Anguilla	1987	Guinea-Bissau	1997	Peru	1962
Antigua and Barbuda	1983	Guinea	1994	Philippines	1948
Argentina	1935	Haiti	1979	Poland	1997
Australia	1959	Hungary	1991	Portugal	1962
Austria	1955	Iceland	1966	Qatar	1993
Azerbaijan	1996	India	1934	Republic of Congo	1972
Bahrain	1973	Indonesia	1953	Romania	1991
Bangladesh	2003	Iran	1972	Russia	1992
Belarus	1990	Iraq	1964	Rwanda	1997
Belgium	1948	Ireland	1942	Saint Kitts and Nevis	1983
Benin	1956	Italy	1948	Saint Lucia	1983
Bolivia	1945	Ivory Coast	1956	St. Vincent and the Grenadines	1983
Bosnia and Herzegovina	1997	Jamaica	1992	Saudi Arabia	1957
Botswana	1975	Japan	1957	Senegal	1956
Brazil	1964	Jordan	1971	Seychelles	1986
Brunei	1984	Kazakhstan	1993	Sierra Leone	1963
Bulgaria	1991	Kenya	1984	Singapore	1991
Burkina Faso	1956	Kuwait	1968	Slovakia	1992
Burundi	1965	Kyrgyzstan	1992	Slovenia	1991
Cambodia	1954	Laos	1995	Somalia	1960
Cameroon	1972	Latvia	1992	South Africa	1956
Canada	1954	Lebanon	1969	South Korea	1950
Central African Republic	1972	Liberia	1974	Spain	1962
Chad	1972	Libya	1996	Sri Lanka	1953
Chile	1953	Lithuania	1994	Sweden	1966
China	1995	Luxembourg	1983	Switzerland	1953
Colombia	1923	Macao S.A.R	2000	Taiwan	1979
Comoros	1987	Macedonia	1992	Thailand	1942
Costa Rica	1953	Malawi	1989	The Bahamas	1974
Croatia	1991	Malaysia	1982	Togo	1956
Cuba	1959	Maldives	1982	Trinidad and Tobago	1964
Cyprus	1963	Mali	1984	Tunisia	1958
Cyprus Czech Republic	1903 1991	Malta	1994	Turkey	1970
Democratic Rep. of the Congo	1991	Mauritania	1954 1956	Turkey Turkmenistan	1970
Denmark	1993 1942	Mauritius	1966	Uganda	1966
				_	
Dominica	1983	Mexico	1960	Ukraine	1991
Dominican Republic	1959	Moldova	1992	United Arab Emirates	1980
Ecuador	1957	Mongolia	1996	United Kingdom	1946
Egypt	1957	Montenegro	2005	United Republic of Tanzania	1966
Equatorial Guinea	1972	Morocco	1959	United States of America	1951
Estonia	1993	Myanmar	1952	Uruguay	1938
Ethiopia	1994	Namibia	1990	Uzbekistan	2000
Finland	1966	Nepal	1955	Venezuela	1939
France	1936	Netherlands	1948	Vietnam	1990
Gabon	1972	New Zealand	1933	Yemen	1971
Gambia	1971	Niger	1956	Zambia	1971
Georgia	1995	Nigeria	1969	Zimbabwe	1956
Germany	1957	Norway	1966		

Note: The table reports information on the list of analysed countries and the first year of availability of the CBIE index and associated data.

References

- Arnone, M., B. J. Laurens, and J.-F. Segalotto (2006). The measurement of central bank autonomy: Survey of models, indicators, and empirical evidence. IMF Working Papers 06/227.
- Cukierman, A. (1992). Central Bank Strategy, Credibility, and Independence: Theory and Evidence. The MIT Press.
- Cukierman, A., S. B. Webb, and B. Neyapti (1992). Measuring the independence of central banks and its effect on policy outcomes. *The World Bank Economic Review* 6(3), 353–398.
- de Haan, J. and S. Eijffinger (2019). The politics of central bank independence. In *The Oxford Handbook of Public Choice*. Oxford University Press.
- de Haan, J., S. C. Eijffinger, and S. Waller (2005). The European Central Bank: Cantralization, Transparency, and Credibility. MIT Press.
- Dincer, N. N. and B. Eichengreen (2014). Central Bank Transparency and Independence: Updates and New Measures. *International Journal of Central Banking* 10(1), 189–259.
- Eijffinger, S. and J. de Haan (1996). The political economy of central-bank independence. *International Finance* 19(19), 1–92.
- Grilli, V., D. Masciandaro, and G. Tabellini (1991). Political and monetary institutions and public financial policies in the industrial countries. *Economic Policy* 6(13), 342–392.
- Jacome, L. and F. Vazquez (2008). Is there any link between legal central bank independence and inflation? evidence from latin america and the caribbean. *European Journal of Political Economy* 24(4), 788–801.
- Lybek, T. (1999). Central bank autonomy, and inflation and output performance in the baltic states, russia, and other countries of the former soviet union, 1995-1997. IMF Working Papers 99/4.
- Masciandaro, D. and D. Romelli (2015). Ups and downs. central bank independence from the great inflation to the great recession: Theory, institutions and empirics. *Financial History Review* 22(3), 259–289.
- Masciandaro, D. and D. Romelli (2019). Peaks and troughs: economics and political economy of central bank independence cycles. In *Handbook on The Economics of CentralBanking*, forthcoming. Oxford University Press.
- Milton, S. and P. Sinclair (2010). The capital needs of central banks. Routledge.
- Peia, O. and D. Romelli (2019). Central bank reforms and institutions. Technical report, ifo Institute.
- Reis, R. (2013). Central bank design. Journal of Economic Perspectives 27(4), 17–44.
- Romelli, D. (2022). The political economy of reforms in Central Bank design: Evidence from a new dataset. *Economic Policy* 37(112), 641–688.
- Smets, F. (2014). Financial stability and monetary policy: How closely interlinked? *International Journal of Central Banking* 10(2), 263–300.

Stella, P. (2010). Central bank financial strenght and macroeconomics policy performance. In *The capital needs of central banks*. Routledge.