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Central Bank Independence: The Case of North African Central Banks

Abstract: The independence of Central Banks is still considered to be a credibility factor in ensuring price stability. Thus, many central banks in transition countries have undergone a change in their statutes in order to achieve greater independence from governments. In this vein, within a decade, North African Central Banks have put in place a new institutional framework for their monetary policy. In this article, we will attempt to assess and measure the legal (de jure) and real (de facto) independence of these Central Banks (Morocco, Algeria, Libya, Tunisia, Egypt).

Keywords: Central Bank Independence, monetary policy, North Africa.

JEL classification: E42, E58.

Introduction

Recent events that have increased the level of uncertainty (the 2007 financial crisis, the COVID-19 crisis and the Ukraine-Russia war) have turned all attention to central banks to intervene immediately or implement unconventional measures to salvage what can be salvaged to bring things back to normal, be it to stimulate growth or control inflation.

In this respect, for a central bank to be more effective and credible in the conduct of its monetary policy, in the midst of all the changes taking place in the economy, it needs to enjoy full independence. Thus, independence has become one of the pillars of modern monetary policy, which nobody disputes (Fabris, 2018).

The monetary system in North African countries has undergone a remarkable evolution recently due to the political transformations and radical revolutions in the region, especially after the events of the "Arab Spring", which has led to a reconsideration of the political economy concept of monetary policy by revising, in a nutshell, most of the laws of the Central Banks and thus making them more independent from the political pressure on them.

In Tunisia most recently, it can be said that Central Bank independence was the result of a purely political struggle between certain parties and the "Ennahdha Movement", and that it occurred in a context of rivalries and mutual accusations of wanting to control the Central Bank and to keep it always under the dependence and authority of the government. It is worth noting that Tunisia, since the creation of the Central Bank, did not modify its law until 2016 in order to give the bank economic and political independence.

Morocco is relatively different from its North African counterparts due to its constitutional specificities. Indeed, its political system is characterised by a parliamentary monarchy, which means that the relationship between the Central Bank and the political system is different in terms of analysis and evaluation. Since the second millennium, Morocco has achieved good rates of inflation control thanks to a sound financial and monetary system. With the recasting of its new law in 2019, the Central Bank of Morocco has gained more independence in various aspects.

As for the Libyan Bank, shortly after the revolution, the Central Bank of Libya enacted its law in 2012, which emphasises the independence of most of its texts. It differs from other North African countries in that Parliament has always had the right to make decisions such as the appointment of the governor or the board of directors under the legislative powers granted by the people. In this context, however, the Central Bank remains a victim of more than a decade of internal political tensions, which have divided it into two seats (Tripoli and Libya), preventing the proper conduct of monetary policy and justifying its inefficiency.

The Bank of Algeria remains flaccid in the face of the political system, especially since the Governor of the Bank was changed 4 times a year in 2019, following the revolt that was ignited at the time. Indeed, the monetary, fiscal and foreign exchange system is still quite weak and controlled by government institutions as the privatisation of the financial sector is almost not. The Central Bank and the government authorities are closely linked.

As for the Central Bank of Egypt, it is the most updated of its laws in the region, the most recent of which is the 2020 statute, and this in cooperation and agreement with the International Monetary Fund (IMF) since 2016, in order to breathe new life into the concept of independence, especially after the floating of the Egyptian pound that handicapped the entire economy.

In this respect, monetary policy issues need to be taken out of the hands of political actors such as members of the government as well as legislators who often operate according to the logic of their partners in power. Politicians will therefore not deviate from this framework and will be consistent with their political and electoral interests, notably by putting the Bank under political pressure to pursue an expansionary monetary policy before the elections.

In order to assess the legal and real independence of North African central banks, in the first section, we will review the theoretical aspect and the new challenges of central bank independence. In the second section, we will attempt to list all measures of central bank independence (de jure and de facto measures) on the basis of the previous empirical studies. In section 3, we will assess the independence of all North African banks through their new statutes. Finally, in section 4, we will attempt to measure the extent of legal (de jure) and real (de facto) independence in North Africa.

1. Central bank independence : theoretical foundations and new challenges

Recent literature, whether informed by theoretical evidence or more formal empirical studies, tends to regard the central bank as the ultimate guardian of price stability. However, almost all of this scientific research on monetary policy has validated the fact that one of the essential conditions for achieving this objective remains "central bank independence".

In this respect, to capture this theoretical interdependence, central bank independence ensures that monetary policy is conducted with a longer time horizon. As a result, the potential for time inconsistency will be minimal as inflationary expectations will be adjusted (Kydland and Prescott, 1977; Barro and Gordon, 1983). Thus, for the sake of continuity in the face of this problem, the finding that the task of ensuring price stability should be delegated to a relatively more conservative central banker (Rogoff, 1985). Furthermore, conservatism in the sense of Rogoff (1985) implies that the central bank must be totally independent in order to gain credibility.

It is widely recognised that central bankers should be independent of government to protect themselves from political pressures in order to remain focused on the objective of maintaining price stability. Thus, the delegation of monetary policy to an independent central bank ensures the pursuit of price stability, thereby addressing inflationary bias and enhancing the credibility of the central bank (Cukierman, 1994; Oatley, 1999; Alesina & Summers, 1993; Issing, 2006; Hayo & Voigt, 2008; Alesina & Stella, 2011; Maslowska, 2011; Aguir, 2018; Kokoszczyński and MackiewiczŁyziak, 2020; Guler, 2020).

So far, there is no universal and unified definition that gives us a precise interpretation of the meaning of central bank independence (CBI). However, in the broadest sense, CBI implies "the freedom of a central bank to define its objectives and the instruments to implement them, without the influence of the government or another institution or individual" (Fabris, 2006). Thus, it can be said that there is "independence" in the sense that all political and governmental organisations are not allowed to interfere in the decisions of the central bank, nor can they put pressure on it to serve their interests.

From this perspective, Independence has faced several challenges in recent years (Ivanović, 2014). In this regard, de Haan, Bodea, Hicks & Eijffinger (2018) and Orphanides (2018) come to confirm that beyond the financial crisis of 2007, the reorientation of monetary policy through the implementation of unconventional instruments has posed a major challenge to central bank independence. Several studies demonstrate the positive relationship between independence and financial stability (Čihák, 2007; Cukierman, 2008; Klomp & de Haan, 2009; Berger & Kißmer, 2013; Doumpos, Gaganis & Pasioras, 2015). Others argue that placing the objective of financial stability and macroprudential supervision in the statutes of central banks can be an obstacle to focusing on price stability and that the importance of CBI is diminished as the use of unconventional measures reduces the latter (Khan, 2017; Jordan 2017; Goodhart & Lastra, 2018).

In the same vein, twelve years after the great financial crisis and ten years after the euro area crisis, the COVID-19 pandemic again plunged central banks into a major crisis (Hartley & Rebucci, 2020; Mosser, 2020; Vallet, 2021; Kozińska, 2022). The COVID-19 crisis, which was a supply and demand crisis on the economic side, was a turning point in determining the effective independence of central banks. Elgin, Yalaman, Yasar & Basbug (2021) argue that in countries where central banks are more independent, reductions in the policy interest rate and the reserve requirement rate have been more limited.

2. Measuring central bank independence

On another front, measuring independence is an imprecise and approximate exercise. First, because qualitative indices are very laborious to calculate without error. Secondly, because central banks differ from one country to another (developed or emerging countries, others), from one political regime to another (republics, monarchies, military governments, others). We will follow most scientific research and define two indices, the first is called "legal", and its measurement is based on status (de jure). The second is called 'real' and shows the extent of change and the rotation of the bank governor (de facto).

The first attempts to give an indication of the so-called "legal" independence date back to the 1980s, the protagonists being Bade & Parkin (1982), but they focused only on the political aspect that defines independence (designation, execution, appointment...). Years later, Alesina (1988) added the indicator "Treasury financing", thus forming the first tranche of economic independence. Often the classification of legal independence is on the political and economic side. The first aspect concerns the absence of interference by the political power on the decisions taken by the central bank, but also the absence of influence of the political power on the institutional organisation of the central bank, whereas economic independence reflects both the free choice of the objectives set (quantified or not) and the instruments used by the central bank, but also the impossibility of financing the budget deficit of governments. There are those who propose to classify independence by instrument independence and objective independence (Debelle and Fischer, 1994; Fischer, 1995).

Subsequently, in the early 1990s, the GMT index proposed by Grilli, Masciandaro and Tabellini (1991) (GMT) appeared, consisting of 15 indicators that combine political and economic independence. They applied this index to a sample of 18 developed countries over the period 1950-1989. Next is the most widely used index (CWN) for measuring legal independence invented by Cukierman, Webb, and Neyapti (1992). These authors point out that the criterion used to assess legal independence depends on the precision of the statutes. Thus, Cukierman et al. (1992) point out that legal independence is assessed in relation to various legal elements contained in the laws governing the operation of the Central Bank, each of which is weighted according to its importance. Examples of such elements are: the functioning of the board or governors (i.e. the length of the governor's term of office, the mode of remuneration, etc.); the way monetary policy is decided; the limits and conditions of lending to the government. The GMT index places more importance than the CWN on the independence of the leadership, while the CWN is more interested than the GMT in the explicit existence of a single or overriding nominal stability objective in the central bank's statutes (Bezhoska, 2017; Fouad, Fayed & Emam, 2019). Most of the empirical studies that concerned this area and applied to transition countries relied on the CWN or GMT indicators, or on their their derivations (Neyapti, 2002; Cukierman, Miller & Neyapti, 2002; Gutiérrez, 2003; Jácome & Vazquez, 2005, 2008; Ćorić, & Cvrlje, 2009; Dumiter, 2011; Bezhoska, 2017; Radović, Radonjić & Đurašković, 2018).

Jácome (2001) presents an extension of the traditional criteria of the legal index by applying it to Latin American countries in the 1990s. It incorporates, inter alia, political and economic criteria, transparency, accountability. In sum, it incorporates 10 criteria and assigns them a weighting coefficient that reflects the importance of each criterion in its contribution to the CBI process and, therefore, its role in reducing inflation.

Cukierman (1992) and Cukierman et al. (1992) were the first to propose calculating de facto independence using two indicators : the first is the governor turnover rate, which is based on the assumption that a rapid change of central bank governor is synonymous with a low level of CBI. Indeed, if political authorities have frequent opportunities to choose a new governor, they will take advantage of this opportunity to choose those who are willing to follow their policies. The second (de facto) indicator selected was based on a questionnaire. It was based on the responses to a survey of a sample of practitioners at some of the central banks. The questionnaire contained items similar to those for independence, in addition to other information such as the intermediate objective of monetary policy.

Cukierman & Webb (1995) add to the empirical literature on CBI an index called the Governor's Policy Vulnerability Index. The two authors argue that the governor's political vulnerability can be measured by the ratio of the number of each change in the executive authority followed by a change in the central bank governor in a period not exceeding 6 months. It follows that a high ratio refers to a significant influence of the government on the central bank. Thus, the political vulnerability index is an extension of the central bank governor turnover index. The difference arises from the fact that the turnover index takes into account all cases of governor change, whereas the political vulnerability index only considers changes in governors that follow, within 6 months, any change in the executive authority (Lohmann, 1998; Arnone, Laurens, Segalotto & Sommer, 2007; Banaian, 2008; Cukierman, 2009; Mersch, 2017).

Fouad et al. (2019) attempted to build on almost all studies on the measurement of de jure and de facto independence by creating a comprehensive indicator that includes all indicators that can give a measure of CBI.

De jure independence which depends on the legislative aspect does not give real results on the extent of CBI compared to de facto independence, as it is easy to cross by governments (Cargill, 2016). A number of authors support the hypothesis that turnover as a de facto indicator is more effective as a measure of CBI in less developed countries (Berger, de Haan & Eijffinger, 2001; Hayo & Hefeker, 2002; Feld and Voigt , 2003).

A growing literature shows a large gap between (de jure) and (de facto) central bank independence (de Haan, Bodea, Hicks & Eijffinger, 2018 ; Issing, 2018). The historical comparison of the different indices on the degree of CBI shows that the gap increased after the last global financial crisis in 2007. Looking at (de facto) independence necessarily leads to questions about the loss of CBI in relation to its status.

3. Central Bank Independence in North Africa

The independence of North African central banks has undergone a remarkable development after the Arab uprisings in the region, which led them to push for constitutional reforms including the five countries. This prompted these banks to modify their statutes to further strengthen their credibility and independence. However, Monami and Amand (2014) suggest that the aftermath of the uprisings apparently provided the impetus to ensure this independence in the future in the North African region.

What characterises North African central banks is that they are modern institutions created when the colonialists left in the mid-twentieth century, with the exception of the Central Bank of Egypt (CBE), which was created in 1898, so that it is considered the most likely to change its statutes, the latest statute on which we will base our analysis and this being the Law 194 adopted in 2020 (CBE, 2020).

The Central Bank of Libya (CBL) was established in 1956 and its independence is currently defined by Law No. 46 of 2012 (CBL, 2012). Given the difficult phase that the Bank of Libya has been going through for the last decade and the administrative division of the Central Bank of Libya into two parts (Tripoli and Benghazi) as a result of the tense political conditions, we believe that it is important to determine the degree of independence of this Bank through the aforementioned law.

As for the Central Bank of Tunisia (BCT), it waited almost 60 years after its creation in 1958 to promulgate its independence law in 2016 by law n° 2016-35, i.e. 4 years after the people's revolution (BCT, 2016).

The Central Bank of Morocco, known as "Bank-Al-Maghrib" (BAM), was created in 1959. It waited almost half a century until the publication of Law No. 76-03 (2006), known as the BAM independence law. However, if BAM had been very independent according to the 2006 law on its status, it would not have been reviewed by the new law n°40-17 adopted in 2019 (BAM, 2019). This is again due to the context in which the law appeared and the circumstances that unfolded.

The Central Bank of Algeria (BOA) was created in 1962 after the departure of the French coloniser and the handing over of the keys to the Algerian authority. We will analyse its independence on the basis of several texts: Ordinance No. 03-11 of 26 August 2003 (BOA, 2003) and Ordinance No. 10- 04 on money and credit (BOA, 2010). It is suggested that the BOA statute is very heterogeneous with many subdivisions, and that not all its chapters are found in one integral law, which made the study difficult.

One of the most important features of these banks is that most of them belong to the alliance of French civil law states because of the French colonial dependence, which still exists today in several areas.

In our study, we will now base our assessment of CBI on the latest statutes of each Bank. We can consider that the statute of these Banks are the basic nucleus for determining the extent of their CBI degree. In order to analyse the independence of North African Banks, we will rely on the approach adopted by several authors (Dvorsky, 2007; Smaghi, 2008; Pisha, 2011; Radović, Radonjić & Đurašković, 2018), namely the analysis of independence in 4 dimensions: *Financial, institutional, personal, functional*.

Functional independence means that the primary objective of the Central Bank is price stability. In the former statute of the Bank of Morocco of 2006, the legislator stipulated that : "In order to ensure price stability, the Bank shall adopt and implement monetary policy instruments. (Article 6). Admittedly, there is ambiguity in this matter as to the independence of the objectives, as it was not written (in the statute) in bold that the "objective of the Bank is price stability". In the new law of 2019, the legislator in Article 6 has written this time in bold and very clear characters that "the main objective of the Bank is to maintain price stability" (BAM, 2019). We conclude that there is no sign but a confirmation that the primary objective is price stability.

SImilar to the Bank of Morocco, the Bank of Tunisia (BCT), in the BCT law of 2016, Article 7 states in very bold and clear terms that: "the primary objective of the central bank is to maintain price stability" (BCT, 2016). The independence of the objectives is considered among the important economic developments that the BCT has benefited from, after being absent for 60 years. The BCT statute indicated that among the tasks also authorised is "financial stability" as one of the pillars of coordination between the general economic policies of the state.

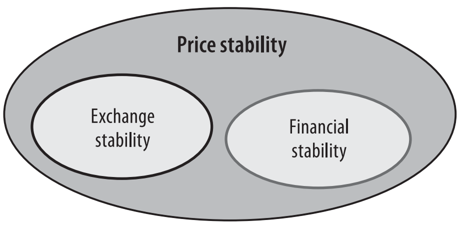
In proposing an amendment to the law, the Bank of Algeria (BOA) took the same model as Morocco and Tunisia, according to Article 35: "BOA's mission is to create and maintain in the areas of money, credit and foreign exchange, the most favourable conditions for the rapid development of the economy, while ensuring the internal and external stability of the currency" (BOA, 2003). However, the new regulatory provisions of August 2010 (BOA, 2010), relating to money and credit, provide clarification by considering price stability as an explicit objective of monetary policy.

As for the banks in Libya and Egypt, they have more than one objective. Thus, the fifth article of the CBL law refers to 8 objectives (CBL, 2012), including the stabilisation of the general price level, in addition to the regulation of credit policy and banking stability. Moreover, despite its topicality, the new CBE statute (CBE, 2020) includes several objectives other than price stability: "The Central Bank shall aim at the soundness of the monetary and banking system and price stability within the framework of the general economic policy of the State" (Article 6).

In addition, these banks have been given other expanded tasks, such as exchange rate stability and also financial stability. But the ultimate goal of price stability cannot be deviated from. The figure below illustrates what we mean in this respect.

Financial independence implies the impossibility of direct financing of the budget deficit. Governments are constantly looking for a monetary formula to finance their deficits. The higher the

Figure 1: The objective of Central Banks in North Africa



Source: Authors

level of CBI, the lower the level of debt monetisation. In Morocco, the 2006 law was designed to put a sober cap on state financing by limiting it to lightly conditioned cash facilities. The law abolished financial support to the treasury when it is in a normal situation. The general principle is to prohibit the bank from providing any form of financial support to the state. In addition, we note that Article 69 of the new Statute of 2019 (BAM, 2019) is somewhat similar to its counterpart (Article 27) in the old law: "The Bank may not grant financial assistance, in any form whatsoever, to any public enterprise or body, nor may it act as guarantor of commitments entered into by them". In short, we can state that there has been no direct monetary financing of the State since 2006.

The Bank of Algeria is similar to that of Morocco, but there is an exceptional case where the legislator has authorised financing of the treasury in case of emergency. Article 46 of the Law on Bank of Algeria (BOA, 2003) stipulates: "On a contractual basis, and up to a maximum of 10% of the ordinary revenue of the State recorded during the previous financial year, the Bank of Algeria may grant the Treasury current account overdrafts for a total period of no more than 240 days [...], the rate and terms of which shall be fixed in agreement with the minister responsible for finance. The Bank of Algeria is also authorised, exceptionally, to grant the Treasury an advance, intended exclusively for the active management of the external public debt. The terms and conditions for the implementation of this advance and its repayment, in particular the repayment schedule, are set out in an agreement between the Central Bank and the Treasury". It should be noted that there are no direct credits for the government except in emergency situations or through the intermediary of the Minister of Finance with limits. But the law has not specified here what the states of emergency are and has left the box open, especially since Algeria is still in a state of political instability. This still gives the Treasury the possibility to call on the Central Bank in all circumstances.

In the case of Tunisia, before the independence law, one of the most important tasks of the BCT was to provide interest-free loans to the state. It was customary for Tunisia to borrow $2 billion from the Central Bank at the beginning of each year to facilitate the annual finance law. However, the new statute prohibits any form of loans or facilities to the state, with or without interest, Article 25 of which (BCT, 2016) states : "The central bank may not grant the general treasury of the state facilities in the form of overdrafts or credits, nor directly acquire securities issued by the state". Even in the midst of a health crisis that has exhausted the Tunisian economy, the BCT Board of Directors, at their meeting on 27 October 2020, was clear on this issue, recalling the Bank's commitment to its main mission of ensuring price stability and fighting inflation. Thus, the BCT is considered the most financially independent bank compared to its counterparts in other North African countries.

As for the Central Bank of Egypt, it provides, as specified in its statute (CBE, 2020): "financing to the government at its request to cover the seasonal deficit of the general budget, provided that the value of such financing does not exceed (10%) of the average revenue of the general budget for the previous three years. The duration of this financing is three months, renewable for other similar periods, and it must be fully paid within a maximum period of twelve months from the date of its submission" (Article 47). It can also be said that the terms of this financing are determined by agreement between the Central Bank and the Ministry of Finance on the basis of money market prices.

The law also allows the Central Bank of Libya to finance the government within strict limits. Therefore, as regards securitisation loans through the issuance of government bonds, the statute does not refer to this. As regards the purchase and sale of public securities on the financial market, they are allowed in accordance with the abovementioned law. Thus, the CBL has made relative progress in financing the state, after being under the thumb of a predatory political regime that controlled the Bank.

Personal independence is somewhat difficult to define when it comes to political systems with a monarchical structure. In Morocco, by virtue of his constitutional right (presiding over the council of ministers), the King has the full right to appoint the top officials of the major economic, judicial, political and military institutions, as the supreme authority of the constitution for which all Moroccans voted positively by more than a majority in 2011. Akaaboune (2017) already stipulated that one can speak of independence from the executive in the strict sense, embodied by the head of government, but not necessarily from the executive in the broad sense, 'represented by the royal power, which appoints the Governor [...] in any case, whatever the degree of independence, it remains limited. Given the low credibility of political parties in Morocco, and the illogicality of the composition of the government according to impartial principles (the left, the right and the Islamic current together form the government), we are sure that the King is the most appropriate and timely to appoint the Governor. Thus, in the BAM statute, the King appoints the Governor by Royal Decree (Dahir), and the latter receives his remuneration by Ministerial Decree (Article 40). He entrusts him with full responsibility for the decisions taken by the bank and submits to him an annual report on the economic situation. Furthermore, what is important in the 2019 law is that, in contrast to the previous law, the legislator has introduced a limit to the Governor's term of office, which is now limited to 6 years, renewable twice. From our point of view, knowing the term of office gives the Governor more comfort and more freedom of action to conduct monetary policy, as he does not know a priori that he will be dismissed or that he is under the threat of resignation at a later date if he does not follow the steps of the executive.

For its part, the Central Bank of Libya, with its 2012 law (CBL, 2012), is more democratic than its counterparts in terms of personal independence. Thus, Article 17 of the law stipulates that the appointment of the Governor and his deputy is made by decision of the legislative authority, which is the Libyan parliament, and the members of the Bank's board of directors are appointed by the same authority, provided that the Governor of the Bank is consulted, and Article 18 of the same law gives the Governor who represents the power to appoint senior managers and employees within the Bank, and Article 17 specifies that the term of office of the Governor and his deputy is five years, and that it may be extended for another five years upon approval by the legislative authority. With regard to dismissal, Article 22 of the same law specifies that the legislative authority represented by the Parliament is the competent authority to dismiss the Governor, his deputy and the members of the Board of Directors even before the expiry of the term of office in case of incapacity, default or illness.

Algeria also follows the same line, the President of the Republic is empowered to directly choose the members of the board of directors of the bank, including the governor, without having to resort to an opinion of the government. According to Ordinance No. 03-11 of 26 August 2003 (BOA, 2003), "The management of the Bank of Algeria is ensured by a governor assisted by three vice-governors, all appointed by decree of the President of the Republic" (Article 13). The President therefore has full power to choose and dismiss the Governor and anyone else within the Bank, so that the Bank enjoys no personal independence.

Concerning the CBE, Article 17 of the statute (CBE, 2020) stipulates that: "The Bank shall have a Governor with the rank of Deputy Prime Minister, whose appointment shall be made by a decision of the President of the Republic, after approval of the House of Representatives by a majority of its members, for a term of four years. The resignation of the Governor shall be accepted by decision of the President of the Republic". As for dismissal, the Governor and his two deputies are relieved of their duties, and the term of office of each non-executive member of the Board ends by decision of the President of the Republic taken on the recommendation of the Board of Directors.

It is worth noting that Article 216 of the 2014 Constitution of Egypt stipulates that the President of the Republic appoints the heads of the independent and supervisory bodies - including the Central Bank - after approval by the Council of Representatives by a majority of its members, for a term of four years, renewable once. But the requirement for approval by the House of Representatives is only valid if that House is elected in free and fair elections, where the executive and its forces have no role in the electoral process, thus ensuring that the House is truly in control of its decision, and expresses the popular will and not the wishes and whims of the executive. Although the constitutional amendments decided in the April 2019 referendum did not directly change the texts of the Central Bank, they increased the political control of CBE, and this was removed by extending the term of office of the President of the Republic from four to six years (as was the case in the 1971 constitution).

According to the provisions of Article 46 of the BCT statute, the Governor of the Bank is appointed in accordance with the constitution by the President of the Republic for six years, renewable only once. He shall be chosen among personalities recognised for their competence in the economic, monetary and financial fields. It should also be noted that the President of Tunisia has the full right to dismiss the Governor. The current President has become a source of concern for all constitutional institutions, especially with his new decisions that have affected even the judiciary, putting democracy in Tunisia to death.

Institutional independence means that the Bank should not take instructions from other bodies and organisations outside the Bank. No one has the right to interfere in any way with the Bank's decisions. In almost all of these central banks, the Governor may be invited in an advisory capacity to government meetings at which economic, financial or monetary matters are discussed. With regard to the structure of the Bank's Board, which is responsible for the conduct of monetary policy, we note that there are always government representatives on the boards of the North African banks.

In addition, in Morocco, in accordance with Article 38 of the former statutes (BAM, 2006), BAM's Board of Directors is made up of the Director of the Treasury, who represents the Ministry of Finance, but does not have the right to vote on Board decisions relating to monetary policy. It is also made up of 6 persons recognised for their economic, monetary or financial expertise, 3 of whom are appointed by the Prime Minister (the name of the "head of government" before the 2011 constitution), and the others are appointed by the Prime Minister, provided that they (the 6 members) do not hold any political or commercial office. There is nothing new about the composition of the Council in the 2019 Law compared with the previous 2006 Law. Article 26 (BAM, 2019) stipulates that the BAM Board shall be composed of: "The Governor of the Bank; The Director General of the Bank; The Director of the Treasury and External Finance at the Ministry of Finance, who shall not vote on monetary policy decisions; Six members appointed by the Head of Government, including three proposed by the Governor, among persons known for their integrity and competence in the monetary, financial or economic fields, and holding no electoral office and no position of responsibility in public or private enterprises or in public administration. The three others shall be proposed by the government finance authority and should meet the same conditions.". The tributaries of the government still control it, and if the Director of the Treasury does not have voting rights, he should not be part of the BAM board. We note here that there is still a quasi-dependence in this aspect.

Furthermore, the structure of the Board of Directors of the Bank of Algeria includes three officials of the highest rank designated by decree of the President of the Republic, which, according to Article 18 (BOA, 2003), states that 'the Board of Directors is composed of:- the Governor, President;- the three Vice-Governors;- the three officials of the highest rank'. We note that there is a representation of Algerian deep state entities on the Board of Directors of the Bank. As we have noted, the President of the Republic is the one who appoints these three officials.

Libya has the same orientation as the Algerian Bank in the absence of institutional independence, according to Article 14 of the statute, the CBL is managed by a Board of Directors, which consists of the Governor, the Vice-Governor, the Vice-Chairman and the Undersecretary of the Ministry of Finance as a member. In addition to six other members highly qualified in the fields of law, finance. The coexistence of the Minister of Finance, with voting rights in the Board, one of whose primary tasks is to choose the instruments of monetary policy, determine the means and formulate the procedures for their implementation, is in itself a lack of independence.

It should be noted here that coordination between monetary and fiscal policies does not necessarily require the presence of a representative of the Ministry of Finance or others on the Board of Directors of the Bank, otherwise it is also necessary to have a representative of the Central Bank at the management level of the Ministry of Finance. This seems to be the conclusion of the Statute of the Bank of Egypt (CBE, 2020), since the formation of the CBE board under Article 20 did not include a government representative, and the formation was limited to the Governor and his two deputies, the Head of the Financial Supervisory Authority and seven senior non-executive members. In general, coordination may take place through consultations of joint committees of representatives of the Bank and the Ministry of Finance, which may meet periodically or as necessary, in addition to coordination on substantive issues through the Coordination Council and the

Financial Stability Committee, and the committee which, according to Article 51, is established under the chairmanship of the Prime Minister and composed of the Governor, the Minister of Finance and representatives of the Bank and the Ministry of Finance, for the purpose of consultation and study of the interrelations between the Bank and the Ministry of Finance.

In the case of Tunisia, according to the provisions of Article 57, the board is composed of: the governor, president, the vice-governor, the president of the financial market council, the executive in charge of public debt management at the Ministry of Finance, the executive in charge of forecasts at the Ministry of Economic Development, two university professors specialised in the financial and economic fields, two members who have previously held positions in a commercial bank. We note that within the Board, several governmental bodies have a voting right in the decision-making process of the Central Bank, which does not have a certain institutional independence.

While legal texts alone are not sufficient to deduce the extent of CBI, this does not mean that examining them is unnecessary. Examining them and seeing how consistent they are with each other can help reveal the degree of independence.

4. Measuring the independence of Central Banks in North Africa

Measuring the independence of these Banks is not an easy task, as it requires a serious triangulation between the criteria that can be chosen and the measures that must also be used. We will first try to measure legal (de jure) independence, and then we will measure actual (de facto) independence.

In order to carry out an accurate analysis of the legal independence of North African Central Banks, we will use the index of Cukierman et al, (1992) since this index is the most overviewed in contemporary research applied to transition economies that have focused on CBI. We will try to put all the data related to the Cukierman et al, (1992) measure into a comprehensive and detailed table of 16 indicators (**see Appendix 1**) by assessing the de jure independence in the recent statutes of the 5 Banks. Before continuing the analysis, we recall here that the closer the result is to 1, we will clearly say that the Bank is independent.

What the results show is rather what we mentioned in the previous CBI analysis: Tunisia and Morocco have made a big leap in improving their status, which has given them a good result as indicated by the Cukierman index, 0.91 and 0.71 respectively. However, the BAM has managed to stick to new hazards such as crises (financial stability) and, also, to strategic decisions of the State such as the exchange rate (exchange rate stability), in order to maintain the desired objective (price stability) and to achieve credibility by ensuring confidence among all agents. Nevertheless, Tunisia is considered the most democratic and best performing law enforcement country in the region, and what is evident in its excellent score on the Cukierman index is that its law completely prohibits financing the state in any form, either directly or even through a loan, making it totally independent from a financial perspective.

The situation of the Bank of Algeria and the Bank of Egypt is still similar, with scores of 0.64 and 0.65 respectively, despite the change in their statutes, it is their political regime, described as a military system, that weakens the CBI score (Monami and Amand, 2014). Finally, with regard to the Bank of Libya, despite its low performance, estimated at 0.52, this is a remarkable improvement from what it was before under the previous dictatorial regime that governed the Bank.

CBI indices based on legislation (status) are limited by the fact that, in some countries, there may be gaps between the degree of legal independence and the degree of independence actually observed (Arnone, Laurens, Segalotto & Sommer, 2007). Cukierman (1992) has indeed found that for developing countries legal independence translates into real independence with more difficulty, whereas the transition for industrial countries is more immediate. Real independence depends on the actual influence of the government on the Central Bank. Furthermore, Cukierman et al. (1992) also show that the legal index is not very relevant for identifying and measuring the degree of CBI. Thus, they offer to perfect this measure by taking into account the Governor's rotation as an ancillary index of independence: a too frequent rotation reflects a low degree of real independence. Turnover scores range from 0 points (highest level of real independence) to 1 point (lowest level of real independence).

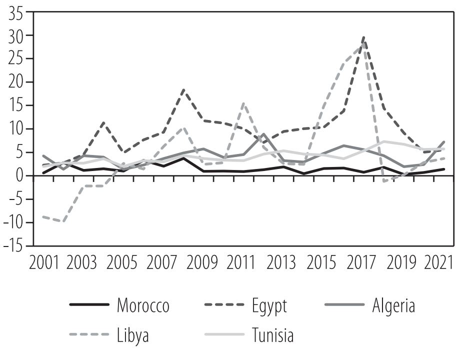
Table 1: Governor Turnover Rate (2001-2021)

Central Bank	Number of changes	Turnover rate
BAM (Morocco)	1	0.05
BOA (Algeria)	5	0.25
CBL (Libya)	7	0.35
BCT (Tunisia)	5	0.25
CBE (Egypt)	4	0.20

Source : Author’s calculations

It should be noted that during this period of 20 years, the duration of the mandate does not follow any rules and logic, and can be considered as a source of pressure, instability and submission of the Governor to the government. If we exclude the case of Morocco, we can see that the legal texts do not really reflect real independence. When the region experiences political movements or tensions, the politician automatically changes the Governor of the Bank. For example, in Algeria, in the space of one year from 2019 to 2020, the government changed the central bank governor 3 times following the increase in social protests and the COVID-19 wave. In Libya, in 2011, in parallel with the popular revolution and the fall of the regime, the governor was replaced 5 times in the space of one year. We note that Morocco recorded a record in this respect compared to its counterparts in North African countries. If we calculate the turnover rate, the figure we get is of 0.05, which clearly illustrates the real great independence of BAM.

Figure 2: Consumer price inflation in North Africa (annual %)



Source: World Bank data. available at: https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG

However, if we compare the inflation in these countries, as illustrated in Figure 1 for the last two decades, we can see that there is a gap between countries in the region. We also notice, in particular, that after 2012, most countries experienced a significant increase in prices, which is probably due to the protests that took place in the region. This is also due to the strategy of the central banks to defend themselves to the last breath in order to maintain price stability and compliance with what is stipulated by their statutes.

Conclusion

In this article we have tried, as far as possible, to take stock of the theoretical and empirical aspects of the CBI and the challenges it faces today in the face of changing international economic conditions.

Recently, North African Central Banks have updated their statutes to be more independent from governments that still aim to serve their political interests.

No matter how carefully the constitutional and legal texts that strengthen CBI in North Africa are drafted, the translation of legal (de jure) independence into effective (de facto) independence depends on the sovereignty of a genuine democratic climate in the country ; for in the absence of a genuine democracy, talk of such independence becomes empty rhetoric. The desired democracy here goes beyond form to substance, and legal texts do not merely give the appearance of democracy, but ensure its activation. A democratic state is in fact a state that respects the constitution and the law, it is committed to transparency and accountability, the separation of powers and respects all human rights, including the right to freedom and the integrity of electoral processes in order to achieve a parliament that expresses the will of the people and not the will of the ruler, and this is what most North African countries suffer from.

Ensuring the CBI in the sense discussed in our study requires concrete safeguards to be provided in the statute to defend this independence. One of the most important of these safeguards is that the term of office of the Governor and members of the board of directors of the central banks is relatively long, as their appointment cycles do not coincide with the electoral cycle of the President of the Republic, the Prime Minister or the Parliament. This is absent in Algeria, Libya and Egypt.

As for financial independence in the sample studied, this issue was evident in the Tunisian Bank in its new fundamental law, by which it prohibited in any way the financing or lending of the State, directly or indirectly. As for the rest of the Central Banks, they were content to lend to the state with interest, either by prior agreement between the two parties or as permitted by law. The governments of North African countries still rely on the monetary tool of "helicopter money" in times of crisis. Since the Arab revolts in 2011, the region has been in the midst of crisis, political tensions and economic stagnation, which always allows governments to target the central banks to overshadow deep-rooted problems in these countries, justifying the rise in inflation rates in the region over the last decade, at a time when most transition countries were achieving relatively low inflation.

APPENDIX 1

Table 2: Measurement of CBI in North Africa - Cukierman Index

	Index Construction (tuned weight)		Egypt CBE	Tunisia BCT	Algeria BOA	Libya CBL	Morocco BAM
1 - Chief Executive Officer (CEO) (Weight 0.20)	**a.Term of Office**						
	Over eight years	1.00					
	Six to eight years	0,75		■			■
	Five years	0,50				■	
	Four years	0,25	■				
	Under four years or at the discretion of appointer	0.00			■		
	b. Who appoints CEO?						
	Board of central bank	1.00					
	A council of the central bank board, executive branch, and legislative branch	0.75	■				
	Legislature (congress, king)	0,50		■		■	
	Executive collectively (e.g., council of ministers)	0.25					■
	One or two members of the executive branch	0.00			■		
	c. Dismissal						
	No provision for dismissal	1.00					■
	Only for reasons not related to policy (incapacity or violation of law)	0.83					
	At the discretion of central bank board	0,67					
	At legislature's discretion	0,50				■	
	Unconditional dismissal possible by legislature	0.33					
	At executive's discretion	0,17	■		■		
	Unconditional dismissal possible by executive or not mentioned	0.00		■			
	d. May CEO hold other offices in government?						
	No	1.00	■	■	■	■	■
	Only with permission of the executive branch	0,50					
	No rule against CEO holding another office	0.00					
2 - Policy Formulation (Weight 0.15)	**a. Who formulates monetary policy?**						
	Bank alone	1,00	■	■	■	■	■
	Bank participates, but has little influence	0.67					
	Bank only advises government	0.33					
	Bank has no say	0,00					
	b. Who has final word in resolution of conflict?						
	The bank, on issues clearly defined in the law as its objectives	1.00		■		■	■
	Government, on policy issues not clearly defined as the bank's goals or in case of conflict within bank	0.80			■		
	A council of the central bank, executive branch, and legislative branch gives final decision	0,60	■				
	The legislature has final authority on policy issues	0.40					
	The executive branch on policy issues, subject to due process and possible protest by CB	0.20					
	The executive branch has unconditional priority	0.00					
	c. Role in the government's budgetary process						
	Central bank active	1.00	■	■	■		■
	Central bank has no influence	0,00				■	

Table 2: Measurement of CBI in North Africa - Cukierman Index (continued)

3- Objectives (0.15)	Price stability mentioned as the major or only objective in the charter, and in case of conflict with government CB has final authority to pursue policies aimed at achieving this goal	1.00					
	Price stability is the only objective	0.80					
	Price stability is only one goal, with other compatible objectives, such as a stable banking system	0,60					
	Price stability is only one goal, with potentially conflicting objectives, such as a full employment	0,40					
	No objectives stated in the bank charter	0,20					
	Stated objectives do not include price stability	0,00					
4- Limitations on lending to the government	**a. Advances (limitation on non-securitized lending)**	0.15					
	No advances permitted	1,00					
	Advances permitted, but with strict limits (e.g., absolute cash amounts or up to 15 percent of government revenue)	0.67					
	Advances permitted, and the limits are loose (e.g., over 15 percent of government revenue)	0.33					
	No legal limits on lending	0,00					
	b. Securitized lending	0.10					
	Not permitted	1,00					
	Permitted, but with strict limits (e.g., up to 15 percent of government revenue)	0.67					
	Permitted, and the limits are loose (e.g., over 15 percent of government revenue)	0.33					
	No legal limits on lending	0,00					
	c. Terms of lending (maturity, interest, amount)	0.10					
	Controlled by the bank	1.00					
	Specified by the bank charter	0,67					
	Agreed between the central bank and the executive	0,33					
	Decided by the executive branch alone	0,00					
	d. Potential borrowers from the bank	0.05					
	Only the central government	1,00					
	All levels of government (state as well as central)	0,67					
	Those mentioned above and public enterprises	0,33					
	Public and private sector	0,00					
	e. Limits on central bank lending defined in:	0,025					
	Currency amounts	1,00					
	Shares of central bank demand liabilities or capital	0,67					
	Shares of government revenue	0,33					
	Shares of government expenditures	0,00					
	f. Maturity of loans	0,025					
	Within six months	1,00					
	Within one year	0,67					
	More than one year	0,33					
	No mention of maturity in the law	0.00					
	g. Interest rates on loans must be:	0,025					
	Above minimum rates	1,00					
	At market rates	0,75					
	Below maximum rates	0,50					
	Interest rate is not mentioned	0,25					
	No interest on government borrowing from the central bank	0,00					
	h. Central bank prohibited from buying or selling government securities in the primary market	0.025					
	Yes	1,00					
	No	0,00					
	Total index value		0.647	0.912	0.655	0.523	0.717

Source : Author's calculations

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