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Scoop on Tunisian Banking System Vulnerabilities and Monetary Policy Features after the Financial Crisis and Political Instability

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Abstract: ***This article describes and analyzes the evolution of the main economic and monetary aggregates of the Tunisian economy after the financial crisis and the political instability of January 2011. In addition, it interested to present the different risks suffered by the bank system during and after these two crises and to identify whether the monetary policy is optimal to mitigate these weaknesses. We suggest first to study the evolution of economic performance during and after these crises. Second, we analyze the impact of the economic recession on the Tunisian banks' overall strength and liquidity. Ultimately, we focus on the effectiveness of the monetary policy during these crises. The results suggest that Tunisian banks have been very touched by the revolution's disturbance particularly, at the level of risk-taking and liquidity mismatch. The analysis of monetary policy, showing that it has evolved from an accommodating policy, going from a neutral monetary policy to a restrictive one, by using the key interest rate as well as reserve rates as monetary policy instruments.***

Keywords: Macroeconomic Performance, Banking System Vulnerabilities, Monetary Policy Conduct

JEL codes: E 32, E 52, G 21

1. Introduction

Since the financial and political crisis of January 2011, the Tunisian economy has gone through difficulties years characterized by persisting pressure on macroeconomic performance, real GDP growth reached 1.1% in 2019 against -1.9% in 2011, which remains very low for the economy's target and to reduce the unemployment rate.

As far as for macroeconomic balances are affected, the financing spread between investment and savings broadened, reflecting savings' structural weakness, despite a small improvement in 2017. Equivalency, the current balance of payments was characterized by a deficit peaked at 10.2% of GDP: its highest percentageduring the two decades. As for the budget deficit, it achieved 6.1% of GDP, which required more external funds to be financed, leading the increase of the public debt to 70% of GDP. The worst is that these twin deficits affect not only the foreign exchange market and bank vulnerability but also put more pressure on credit viability.

Amidst this context, the banking sector suffers from several shortcomings, notably,a strong need for liquidity and a high level of non-performing loans reaching 13.9% in 2019 against 17.25% in 2017. However, it remains alarming, stronger than three times the international standards (13.9% against 4%)).

In this difficult context, the question is what role the monetary authority played, other than monitoring the keys interest rates variability. The Central Bank of Tunisian (henceforth CBT) uses the key interest rate as a main instrument to regulate bank liquidity and control the cost of financing economic activity.

Form 2006, the main mission of CBT was to preserve price stability.

Follows inflationary pressures, began the year of 2018 at 4.6% went crescendo, peaking at 7.8% in August, the Central Bank tightened its monetary policy many times, bringing it from 4.25% to 4.75% in April, to 5.75% in May than 6.75 in June. In addition, starting from July, the Central Bank embarked important reforms to limit its main refinancing operations in the form of weekly calls to 7 billion dinars, and widened, at the end of December, broaden the interest rates corridor by 150 basis points, raising its width to 200 basis points.

It has noted that the CBT' intervention in the money market with 8,558 MTD in 2017, did not allow covering all banks' average need for liquidity, which exceeded 9,223 MTD. Consequently, the resulting average deficit on the money market, which was of about 665 MTD on average during the whole year,was covered by a more intensive recourse of banks to 24-hour lending facilities, mainly starting from July.

The purpose of this article is, first, to describe the economic performance after the financial crisis (subprime crisis) and the political crisis (the revolution of January 2011). Second, we put the emphasis on the different risks suffered by the Tunisian bank during and after these two crises. In addition, we analyze the characterizing of the monetary policy adopted by the central bank of Tunisia, before and after these two crises.

The article is organized as follows. The next section analyses the Tunisian economic performance during and after the financial and political crisis. Section three put in evidence a scoop of the Tunisian banking system and the different risks who have to face mainly after these two

crises. Section four study the characteristic of the monetary policy adopted by the central bank and its impact internally and externally.
Finally, the conclusion is provided in section five.

2. A brief overview of economic performance after the financial and the political crisis

The financial crisis, whose starting points fall inside the chain of financial sector bankruptcy in a developed nation, steadily reached the emerging and undeveloped nation, especially Tunisia via various mechanisms and transmission channels. It is most important on the real activity dimension that this crisis has delivered negative spillover impacts.

The graph below shows the variation of real GDP growth in Tunisia before and after the Great Recession and political crisis. Economic growth reached 2.6% in 2018 against 1.95% a year before. This percentage, which remains weak, was primarily drawn by trends in market activities (3.3% against 0.8% in 2017), versus a reduction in non-market services' growth (0.4% against 2.5%), CBT report June 2018.

The international difficult conditions due to the subprime crisis and financial markets draw lead to a fall the Tunisian economic development with real GDP growth of 6.70% in 2007 to 3.04 % in 2008. Likewise, in 2009, despite the unfavorable impacts of the international financial crisis, Tunisia has particularly realized good performance thanks to the prudence measures taken by the authorities to restrain the effect of the crisis on the national economy. In fact, a various measures were taken by the authorities, for example, the declaration of Law N° 2008-79 on cyclical support for economic enterprises to proceed with their investments. Besides, resistance to external shocks has been made possible thanks to the diversification of the country's economy and its significant level of integration.

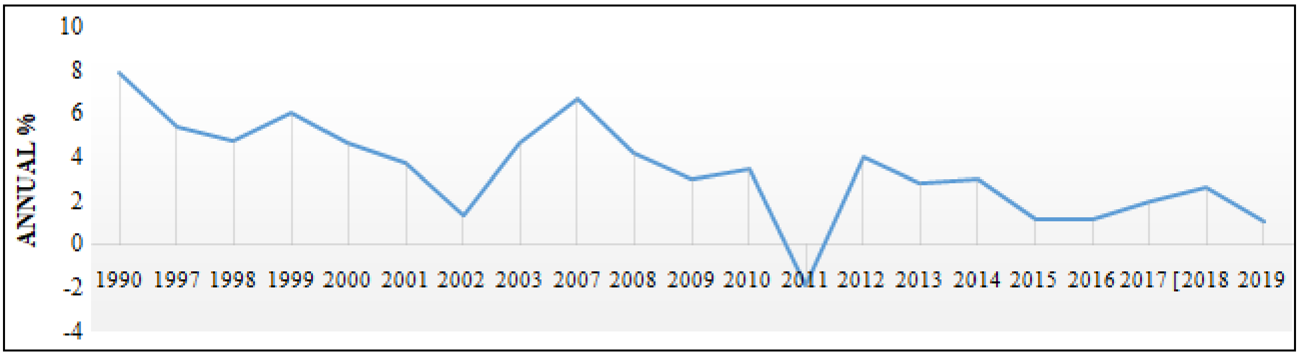

Figure 1: Real GDP Growth

Alongside the difficult international context characterized by gradual negative impacts from the financial crisis and progressing geopolitical problems, Tunisia should need to address the difficulty of the economic recession marked by a continuous dry spell, decreasing in investment project and reducing in tourism activity. Indeed, the country was faced with real difficulties and vulnerabilities originating from the political crisis, the terrorist attacks in 2015, and the decrease in the export and the events in the neighboring nation, in the context of large and legitimate social demands.

Although Tunisia figured well in global rankings on the private segment, it has turned out to be less attractive to investors since the upheaval. Tourism receipts decreased by 30 percent and FDI fell additionally by around 25 percent. The economic depression and the return of Tunisian specialists from Libya contributed to pushing the unemployment rate to 19 percent. Real GDP stood at -1,9 % in 2011. What's more because of the economic recession of Western economies, especially European ones (75 % Tunisian exports were there), which had gone into a technical recession, economic activity has decreased under the effect of the decline in foreign demand.

Tunisian economy has stabilized following the election of a new intern government, but vulnerabilities remain. The space provided by the country's fiscal and foreign reserve buffers was mainly used to pay high public wage and subsidies bills resulting from social demand and high oil prices. Therefore, fiscal and external umballances excerbed and inflation accelerated while external debt was on an increasing path.

Summary Table: Trend in key Tunisian economy variables

	2015	2016	2017	2018	2017 / 2016	2018 / 2017
Real GDP (in previous year prices)	1.2	1.0	1.9	2.4	0.9	0.5
Investment rate (in % of GDP)	19.9	19.3	18.7	18.7	-0.6	0.0
Tourism	2.7	8.3	5.4	6.1	-2.9	0.7
% of GDP	0.1	0.2	0.3	0.4	0.1	0.1
Consumers price index(base 2010)	126.6	131.4	138.8	-	5.3	
Δ unemployment rate in %	15.4	15.5	15.5	15.8	0.00	0.3
Current deficit[1]	7.552	7.935	9.87.	-	1.935	-
In % of GDP[2]	8.9	8.8	1.2		1.4	
Budget deficite in % of GDP	4.8	6.1	6.1	4.9	0.0	-1.2

[1]Variation in MTD.
[2] Variation in percentage point.

The Tunisian economy is recuperated progressively in 2018; real growth was of 2.87 %. supported by a significant rebound in tourism with a growth value of 5.3% (0.3% of GDP)[3]. Nevertheless, their evolution stops after the devaluation of the exchange rate and the adapted of an aggressive monetary policy to become 1.1% in 2019, which remains very low for the economy's target and necessary level to decrease the unemployment rate.

This fragile situation generates a significant impact on the financial sector' performance.

3. Scoop on Tunisian banking system

The Tunisian banking sector is relatively young. Founded in the aftermath of independence in 1956, it is during the last 30 years that its major transformations took place. Today, the market has 43 resident banks, 7 non-residents banks and 12 institutions[4].

Tunisia's banking sector is somewhat specific as for its "atomicity" property (between public banks, universal private banks, specialized banks, investment banks...). A better concentration of the banking market would be, today, much more desirable for the sake of stability of the financial system. With a market capitalization of 8 billion dinar, the banking sector is the first force in the market, accounting for 41% of total capitalization and offering 86.2 % of GDP in the form of credit, IMF report 2017. Its health state is an essential barometer of stock market investment. Today, eight years after the political crisis, the time has come, and the beginning of a recovery seems to be emerging. This sector has three public banks, namely STB, BNA and BH[5]; they capture 40% of banking assets, as much as their future is essential to our economic system. However, the health state of these banks is less reassuring. In a context of a very aggressive competitive environment and a public governance showing signs of weaknesses, the public sector needs, jointly with its recapitalization, a complete overhaul of its mode of governance.

The Tunisian banking sector suffers from several shortcomings caused mainly by the previous regime damage and by the weakness of the national economy after the political crisis, which helps to paralyze its ability to raise funds for productive projects. Thereby, this sector, characterized by a misallocation of resources, contributes to the weak performance of the Tunisian economy.

3.1 Systematic root of credit risk

This sector was very affected by the political crisis of January 2011, which led to the accumulation of a large stock of non-performing loans. Indeed, concerned with their profitability, banks increase their interest margins; leading to a greater likelihood of counterparty default and limiting the ability of borrowers to repay debt service. Currently, the Tunisian banking sector suffers from a very high level of non-performing loans, mostly in public banks, reaching 13.9% in 2019 against 17.25% in 2017. However, it remains alarming, stronger than three times the international standards (13.9% against 4%)).The main causes of this alarming ratio are; the poor quality of portfolio and risk management in the Tunisian banking sector, especially the public banks, (ROA and ROE represent 1.2% and 13.9% in 2018[6]) and the strong competition in the market. The latter factors increase the catch of risk by banks, political instability and low growth rate, etc.

In order to struggle against these toxic assets, the monetary authority recapitalizes the three public banks. The amount of recapitalization costs more than 1.1 billion dinars, despite the deterioration of public finances. This amount reflects the budgetary cost borne by the government because of the persistent vulnerabilities of public banks. This cost would increase if the sources of these vulnerabilities were not ,seriously, considered. Lack of efforts to control the emergency of NPL led to the decrease of the solvency ratio of the banking sector from 12.2% in 2015 to 10% in 2017 (remains largely lower than that required by international standards).

The literature presents also important evidence on the feedback impact of NPLs to the real economy. For Tunisia, the retroactive impact of the credit risk and economic activity can be summarized in three main channels: interest rate, balance sheet and securitization channels (see figure 1 below). Indeed, a high level of non-performing loans pushes banks to increase the lending interest rate, 11.07% en 2018, which amplifies the credit spread. This amplification makes the credits very expensive. This is will raise the debt service and attract the risky borrowers, which increases again the weight of NPLs in the bank's balance sheet. The second channel (balance sheet channel) traces the amplifying impact of NPL on the credit supply and bank profitability. The increase of NPL increased the need of banks in liquidity, to reach 16.4 billion dinars in October 2018, after 15.8 billion at the beginning of the year. This is reduce the credit supply, especially, for the consumption, 10.2% in October 2018 against 13.3% in beginning of the same year (central bank of Tunisia), which negatively influences the bank profitability. The third channel emphasized by Fell et al. (2016). These others suppose that the information asymmetry characterizing the financial market increases the gap between the price of a loan portfolio offered by the bank and the price that investors are willing to pay. This imperfection forces the banks to support additional costs to convince the investors, which in turn cause the reduction of their profitability.

[3] All values are extracted from the annual report of the central bank of Tunisia in 2017 and the report of IMF.

[4] These institutions are eight leasing institutions ,2 factoring institutions and eight merchants banks.

[5] STB, BNA and BH stand for "Société Tunisienne de Banque", Banque Nationale Agricole" and "Banque de l'Habitat", respectively.

[6] IMF report July 2018

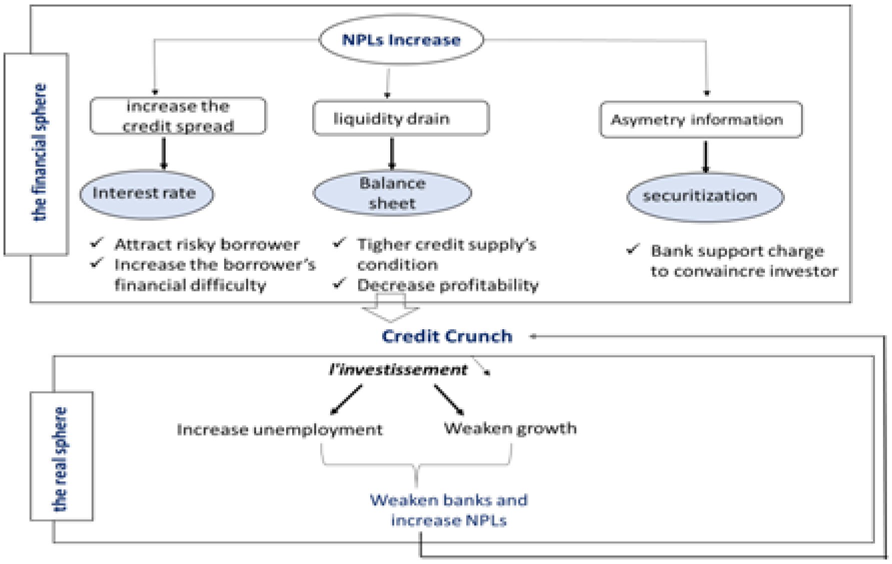

Figure 2: Credit Risk and Financial Frictions: Retroactive Effects

3.2 The mismatch liquidity in the Tunisian banking sector

Since the political crisis, the shortage of liquidity is pushing banks to continuously require Central Bank refinancing. Due to low economic activity and large current account deficit, banks are experiencing a vanishing of their liquidity, see figure 5. This could be assessed through a low level of deposits to loans or to GDP and a higher central Bank intervention on the money market. To provide refinancing facilities in the banking sector and to regulate market liquidity, the annual trends intervention of the CBTcontinues to grow, figure 3.

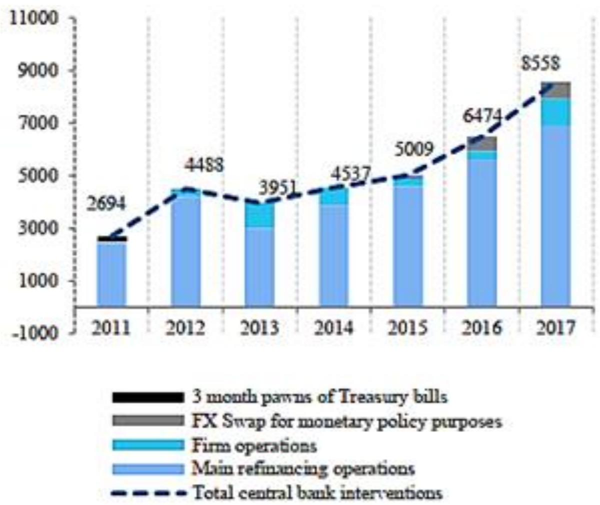

Figure 3: Annual trends in CBT interventions in the money market (In MTD)

CBT annual report, June 2018

Figure 1 shows that the need of liquidity recorded especially after the political crisis of 2011, increase the volume of central bank refinancing to 5 billion dinars in August 2013, and exceeding 4.5 billion dinars since June 2013, on average daily, against 962 million dinars in December 2010,(Charfi 2016). In 2017, the average volume of the Central Bank interventions on the money market amounts to 8,558 MTD, but, did not permit to cover all banks' average need for liquidity which exceeded 9,835 MTD in December 2017. Therefore, the average deficit on the money market, which was more than one MTD on average over the whole year, was financed by an intensive recourse of banks to "24-hour lending facilities", essentially beginning from July. Follows what precedes, lending facilities increase by 598 MTD, on average, compared to 2016, achieving 700 MTD in 2017, CBT report June 2018.

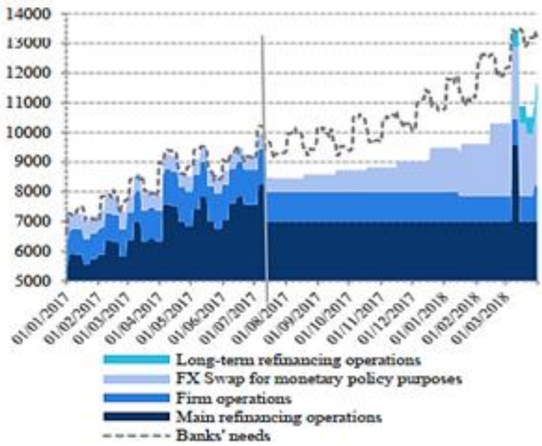

Figure 4: Trend in CBT interventions and banks' needs for liquidity (Daily data in MTD)

Prepared by the author

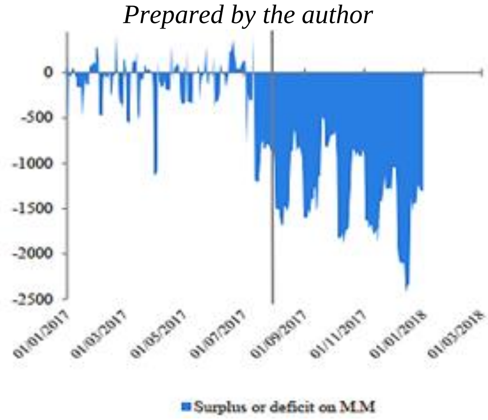

Figure 5: Liquidity surplus and deficits in the money market (Daily data in MTD)

Source : *CBT report, June 2018*

The economic growth fragility, the twin deficits' worsening and inflation rise are all indicators that highly affected the real economy over 2017 and 2018. Therefore, the bank liquidity needs and the rarity of resources for financing, notably the public one generated strong recourse to domestic and external indebtedness. Admit this fragile context, the total indebtedness rise at an accelerated rhythm, up from 13.8% in 2016 to 17% in 2017.

It should be noted that the reforms made by the central bank, include recapitalization of public banks and injection liquidity, remain the only solution for the bank to play the role of financial intermediation. The consolidation of the banking sector is necessary to ensure economic recovery first and then sustained growth.

In what follows, we will present the different other strategies put in place by the central bank of Tunisia, at the level of monetary policy, to mitigate the vulnerability of the banking sector and the real economy as a whole.

4. Characterization of Tunisian monetary policy

Under the macroeconomic adjustment and structural reforms program in 1990s, the Tunisian central bank adopt a discretionary monetary policy aiming at several objectives ; (i) control the inflation, (ii) make real interest rates positive, (iii) then lower them so as to stimulate the investment and to promote savings, (iv) maintain the viability of the external position. In order to reach these goals, Tunisian monetary authorities used multiple instruments.

Trade liberalization gets Tunisia's central bank to fix the objective of real exchange rate targeting, Fanizza et al. (2002). However, from 2001, the economy has operated monetary policy in the context of a "managed float" based on an undisclosed basket of currencies with no preannounced path for the exchange rate. The central bank was aiming to depreciate the Tunisian Dinar by around 3 percent yearly in the period between 2001 and 2005.

Form 2006, the Tunisian' monetary authority started to integrate price stability as the main objective of its monetary policy.It applied the prices administration policy to weaken the effect of international basic products 'prices, of energy and to keep inflation within acceptable levels[7]. At the operational level, the TCB use the key interest rate as a main instrument to regulate bank liquidity and control the cost of financing economic activity. However, since 2000,this rate was increased only once time by 25 basis points in 2006 (from 5% to 5.25%). The reason is that the central bank uses the reserve, as a tool, to avoid deterioration of the banks' loan portfolio.

From February 2009 (with the institution of permanent deposits and credit facilities), the money market interest rate (TMM) has become more flexible and beginning to be used as the main instrument of the monetary policy. Reserve requirement was increased from 2 percent in 2006 to 12.5 percent in 2010 in order to reduce the impact of excess liquidity with foreign direct investment.

In the first months of 2011, the Tunisian banking sector undergo the withdrawn of a large amount of cash because of disturbance of the productive sector. This bank run created a large liquidity gap in the banking sector. The decrease of the Real GDP and unbalances aggravated of budgetary and external led the BCT to lower its key rate by 100 basis points, from 4.5% to 3.5%. The aim was to reduce the financial burden on businesses, particularly those affected by the effects of the political crisis, and to increase the liquidity of financial intermediation.

Until 2014, the transition period, the TCB found unable to counter a fragile environmental context, 5.7% of inflation, 2.4% of GDP growth and therefore, its monetary policy was tightened progressively, the TMM reached 4.75%. In this framework, the TCB contained not only to inject liquidity into the banking system but also to decrease inflationary pressure. However, this strategy does not show significant effects given the uncertainty climate feature the economy and economic agents.
Although growth in 2017 was still moderate with a 2.87% rate, pressure on prices noticed over the third trimester of 2018 was exacerbated over 2017. In fact, global inflation, which started at 4.6% in 2017, went inflated to reach 7.1% in January 2019. Forecasting the recurrence of inflationary pressure, the Central Bank tightened its monetary policy many times, bringing it from 4.25% to 4.75% in April 2017, to 5% in May than to 5.75% in March 2018, IMF (2018). Starting from July, the Central Bank occupied on a quantitative tightening to fix the weekly calls to 7 billion dinars, and widened, at the end of December, broaden the interest rates corridor by 150 basis points, increasing its width to 200 basis points. Consequently, the 24-hour deposit facility rate, which constitutes the corridor's lower limit, was brought back to 6.75% while the marginal lending facility rate, the higher limit of the above-said corridor, posted 8.75%. The corridor's widening was nothing but the precursor sign of an imminent raising of the key interest rate that was, in fact, raised to 7.75% at July 2019, at a moment when inflation culminated to 6.8% in June 2019 and risks to pursue its upward trend.

These strategies affect both internal and external economic activity:

At interne level: Economic growth was driven thanks to the improvement of tourism activity, the performance of the exporting manufacturing industries, and with the little measure by a small reprise of the agricultural sector's activity. However, unemployment remains at a high level particularly, between the youth and women, and the purchasing power drops. The short-term credits have increased at a faster pace than medium and long-term loans, respectively 7.5% and 2.6%, reflecting the cash requirements of businesses to maintain their activity. As for consumer loans which increased by 7.7%. This may appear to be good without taking into account the persistent vulnerabilities experienced by extracting activities.

[7]See AhlemDahmen (2015) for more literature on the dynamics of inflation in the Tunisian economy before and after the political crisis.

At the external level: the current balance of payments deficit peaked at 10.2% of GDP: its highest level during the two decades. As for the budget deficit, it achieved 6.1% of GDP which required more external funds to be financed, leading the increase of the public debt to 70% of GDP. The worst is that these twin deficits affect not only the foreign exchange market and bank vulnerability but also put more pressure on credit viability.

At the same time, monetary policy transmission channels rest low. First, increasing the money circulation request rises the money multiplier from 8% of GDP at 2007 to 13% of GDP at the end of 2017. Second, the demand for credit has so far shown small elasticity to interest rate variation. Finally, the strong control of capital affects the transmission of the exchange rate channel.

5. Conclusion

In the post-financial and political crisis, the CBT faced several problems: inflation, the mismatch liquidity of the bank system, the under-capitalization of banks and the accumulation of non-performing loans. These weaknesses reflect the vulnerability of the banking sector, which is slow to be reformed, and the fragility of the transmission mechanisms of monetary policy.

The results suggest that Tunisian banks have been very touched by the revolution’s disturbance particularly, at the level of risk-taking and liquidity mismatch. It will be supported that the economic difficulties driving from political instability have magnified the Tunisian banks’ vulnerability.

The analysis of monetary policy, showing that it has evolved from an accommodating policy, going from a neutral monetary policy to a restrictive one, by using the key interest rate as well as reserve rates as monetary policy instruments. The restrictiveness of monetary policy is mainly due to a high level of inflationary pressure, which started in 2017 at 4.6% went to the crescendo, to 7.1% in January 2019.

The recuperation of political stability and efficient reforms are important for the Tunisian economy to recover to durable growth that improves the welfare of the population as a whole. Stability contributes to supporting investments, creating job and ensuring solid economic growth. The banking sector, in turn, can play an important role in funding resources to these investments and be a motor for growth.

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