The Effectiveness of the Monetary Policy in Achieving Monetary Stability in Algeria for the Period of (2000-2019)

Phd. Madjida MEHERHERA

University of Ali Lounici Blida2, Laboratory of economic and human development in Algeria

m.meherhera@univ-blida2.dz

Pr. Mustapha BOUCHAMA

University of Ali Lounici Blida2, Algeria.

boumut75@yahoo.fr

Received: 01/12/2020

Accepted: 03/04/2021

Abstract :

This study aims to find out the effectiveness of monetary policy in achieving monetary stability in Algeria during the period of (2000-2019), in this study we used the analytical and descriptive approach, on the form that enable us to knowing the effectiveness of the monetary policy tools in achieving monetary stability and absorbing surplus liquidity, analyzing the development of the money supply in Algeria and analyzing the effect of the monetary policy followed in Algeria on the variables of monetary stability represented in the monetary stability coefficient and inflation rate.

***Key Words*:** Inflation, Monetary Policy, Monetary Stability, Monetary stability coefficient, Money supply.

JEL Classification: E52, E51.

* Corresponding author: Madjida Meherhera (m.meherhera@univ-blida2.dz)

Introduction:

Monetary stability is defined as the adjustment of money supply to the level of economic activity, and is a goal that countries strive to achieve in order to avoid monetary and economic crises, and monetary policy is the most important method adopted by the monetary authority represented in the central bank in order to achieve monetary stability.

Algeria, like all countries, seeks to preserve its monetary stability in order to avoid monetary and economic crises, and the Bank of Algeria acts as the sole monetary authority to manage monetary policy in Algeria, by choosing the type of monetary policy followed as well as the tools used in order to reach the goal of monetary stability in Algeria.

Research problem: to what extent the monetary policy is effective in achieving monetary stability in Algeria?

The hypothesis: The monetary policy followed in Algeria is not effective enough in achieving monetary stability.

Research objectives: This research aims to study the development of monetary policy tools during the study period, to know the extent of the ability of monetary policy to control the money supply as well as the reflection of the latter on the

coefficient of monetary stability and the rate of inflation and to conclude whether the monetary policy followed in Algeria is effective in achieving monetary stability.

Research Methodology: To achieve the objectives of the study by responding to questions, analyzing, and confirming the hypothesis, we have adopted a descriptive approach and analytical methods.

I. The theoretical framework of the study:

Monetary stability is the main goal that central banks seek to achieve, in order to reach the country's economic stability, in recent years a growing consensus has emerged that price stability _a low and stable inflation rate_ provides substantial benefits to the economy, these benefits of price stability suggest that low and stable inflation can increase the level of resources productively employed in the economy, and might even help increase the rate of economic growth (Mishkin, 2007, p. 38).

Many studies have proven that achieving monetary stability depends mainly on the monetary policy pursued by central banks. We will present the most important of these studies in the following:

A better understanding of how a central bank can use monetary policy to contribute to long-term sustainable economic growth has led many countries over the past four decades to include monetary stability or price stability as mandates for their central banks. The terms monetary stability and price stability are used interchangeably. It is worth noting that the Bank of England has monetary stability (defined as "stable prices and confidence in the currency") as one of its core purposes (stable prices are defined by its inflation target), The U.S. Federal Reserve Act has also set stable prices as an objective for the Federal Reserve to achieve since the late 1970s, with the term *stable prices* often being expressed as the price stability objective. The European Central Bank (ECB) and the Bank of Japan also have price stability as one of their objectives (Moenjak, 2014, p. 60).

For monetary policy, under flexible inflation targeting, there are two goals, price stability and real stability; more precisely, to stabilize inflation around the inflation target, and resource utilization around its estimated long-run sustainable rate, in normal times, the instruments of monetary policy are the policy rate and the communication. The latter includes publishing forecasts of the target variables, such as inflation and unemployment, and possible forward guidance, such as publishing a policy-rate path, that is, a forecast for the policy rate (Aguire, Brunnermeier , & Saravia, 2019, p. 285) .

1. Monetary Policy:

Monetary policy is considered one of the most important economic policies adopted in countries, and the central bank is responsible for managing this policy, and below we will present the definition of monetary policy and its most important tools.

1.1. Definition of the Monetary Policy:

There are several definitions of monetary policy, the most important of which are presented below:

Monetary policy is defined as the set of procedures and measures undertaken by the state in order to work to manage the amount of cash and credit and to regulate economic activity in society (Hasen Khalaf, 2018, p. 431).

It is also defined as the intervention of the monetary authorities for the purpose of influencing the money supply and directing credit by using certain monetary means, and the aim of that is to reach the economic goals (Krayah Kazaar Al-Shaibani, 2018, p. 167).

In general, monetary policy can be defined as the set of measures that the monetary authority undertakes by using special mechanisms and tools in order to achieve economic goals.

1.2. The Monetary Policy Tools:

a. Quantitative tools: They are represented in the tools and means that enable monetary authorities to monitor monetary conditions, and these tools aim to have an effect on the amount or volume of credit and on the total cash reserves available to the banking system, as well as the impact on the amount of loans that banks provide to their clients, which include the discount rate, The legal cash reserve ratio and open market operations.

a.1. Reserve requirement: the reserve requirement ratios that determine the level of reserves banks must hold against their deposit liabilities (Walsh, 2017, p. 562), all depository institutions are required by law to hold a minimum fixed percentage of deposits as reserves. The Reserve Ratio (RR) is defined as the ratio of reserves to deposits (Langdana, 2016, p. 274).

a.2. Open market operations: Open market operations (OMOs) are financial transactions with monetary policy purposes conducted by the central bank at its own initiative and discretion. Originally, the expression meant that the central bank operates in the interbank market (the 'open market') as a normal, possibly anonymous participant, for instance by buying Treasury paper in the secondary market (Bindseil, 2014, p. 84).

a.3. Discount rate: is the interest rate imposed on loans granted by the Central Bank to commercial banks, and in general this tool affects the cost of maintaining reserves, in addition to the banks 'ability and willingness to grant loans (Sawli, Boumearef, & Abdelrahmani, 2018, p. 359).

b. Qualitative tools: They aim to achieve direct control of credit to affect certain sectors of the national economy without affecting the rest of the sectors, and it includes a set of measures that the monetary authorities take for the purpose of encouraging certain types of spending or investments, and among the most important tools used are credit rationalization, moral persuasion Liquidity ratio (Hasen Khalaf, 2018, p. 431).

2. Monetary stability:

Monetary stability is defined in general as stability in the general level of prices, stability of exchange rates, and the availability of favorable interest rates for the economy. In order to measure the degree of monetary stability in a particular country, the monetary stability coefficient is calculated.

2.1. Definition of monetary stability coefficient:

It is a measure to measure the dimensions of the inflationary process in an economy, and this is based on some analyzes of the quantitative theory of money, which states that if the increase in the quantity of money is not proportional to the increase in real GDP, then this causes inflation (Mousaoui, 2015, p. 315).

2.2. Method of calculating the monetary stability coefficient:

The monetary stability coefficient is calculated by the following relationship:

$$\textit{The coefficient of monetary stability} = \frac{\frac{\Delta M2}{M2}}{\frac{\Delta GDP}{GDP}}$$

As for the monetary stability coefficient, according to Friedman, if the rate is equal to one, then there is complete monetary stability, and if it is greater than one, the economy knows a state of slight or severe inflation according to the proximity or distance to the one, and it is in a state of contraction if the coefficient achieves a value less than one (Ben Aamra, 2020, p. 310).

3. The legislative framework for monetary policy in Algeria:

Monetary policy in Algeria underwent a radical change in the year 1990 within the Law No. 90/10 related to money and loans, as the latter gave great importance to monetary policy.

3.1. Ordinance 03/11 of 2003: This order came to amend and complete the law related to money and loans issued in 1990, in the area of monetary policy this legislative text included controlling the task of the central bank in line with the prevailing economic condition at that time, which is the implementation of economic recovery programs, starting in 2001 (Rouchou, 2020, p. 37), As stated in the Bank of Algeria report for the year 2003: "The ultimate goal of monetary policy is to maintain monetary stability through price stability, which is defined as a limited increase in the consumer price index." This situation went beyond setting a target inflation rate, as the latter was estimated at less than 3% in 2003 and the Bank of Algeria continued to maintain the same target rate until the year 2006, and then declared at the beginning of 2007 a range for the target inflation rate between 3% and 4% and continued until the end of 2008, and since 2009 it has targeted a rate of 4% (Chelghoum, 2017, p. 37).

3.2. Ordinance 10/04 of 2010: The most important thing about it is that the stability of the general price level is the ultimate goal of monetary policy.

3.3. Law 17/10 of 2017: According to this law, Article 45 of Ordinance 11/3 was amended, so that the public treasury, according to this amendment, can borrow directly from the Bank of Algeria in order to cover the state's general budget deficit and finance the investment fund, and also cover the internal public debt, where a bank is required Algeria buys Treasury bonds in exchange for issuing the m2 monetary mass (M2), this measure has negative effects on the currency's value and monetary stability.

II. Analyzing the evolution of monetary policy in Algeria for the period (2000-2019):

To find out the effectiveness of monetary policy in achieving monetary stability in Algeria during the study period, we analyze the monetary policy strategy adopted by the Central Bank of Algeria, which consists in studying the development of monetary policy tools, the development of the monetary mass, and its reflection on the level of inflation and monetary stability in Algeria.

1. The evolution of monetary policy tools in Algeria during the period (2000-2019):

The Monetary and Loan Law No. 10-90 clarified the legal framework governing monetary policy in Algeria and its path of development. In order to achieve the goal of maintaining price stability and the level of inflation, the Central Bank of Algeria uses a set of direct and indirect tools, the most important of which are:

1.1 reserve requirement: the bank of Algeria uses the reserve requirement mechanism to manage banking liquidity, where the bank of Algeria has the right to impose a reserve requirement rate on banks, this rate is controlled according to economic conditions prevailing, and in the following, we will present the development of the reserve requirement rate in Algeria during the period (2000-2019).

Table1: « the evolution of the reserve requirement rate in Algeria during the period (2000-2019) »

Unit: %

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Reserve requirement	-	3	4.25	6.25	6.5	6.5	6.5	6.5	8	8
Years	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Reserve requirement	9	9	11	12	12	12	8	4	10	12

Source: By authors based on : (Bank of Algeria, December 2008, p. 17) , (Bank of Algeria, March 2016, p. 17) and (Bank of Algeria, December 2019, p. 17).

Through Table 1, we notice that the reserve requirement ratio witnessed an increase during the study period, as the reserve requirement rate was estimated at 3% in 2001, then it increased in 2002 to 4.25%, then to 6.25% in 2003 after which the reserve requirement rate stabilized during the four years 2004,2005, 2006 and 2007 at a rate of 6.5%, after which it moved to 8% in the years 2008 and 2009, increasing in the years 2010 and 2011 to 9%, while in 2012 it reached 11% and then increased to 12% in the years 2013, 2014 and 2015, then the Bank of Algeria reduced this rate in 2016 to 8% and then to 4% in 2017, after which the Bank of Algeria raised this percentage in 2018 to 10% and then to 12% in 2019, with the aim of absorbing the surplus liquidity, and we notice through the changes of the reserve requirements rate during this period that the Bank of Algeria always interferes in raising These rates are in line with excess liquidity.

1.2. Rediscount rate: it is the rate that the central bank applies to short-term bonds that commercial banks bring to it to re-discount them when they need liquidity (Ben Elaria & Belbali, 2017, p. 203), and below we will show the evolution of the rediscount rate in Algeria during the period (2000-2019).

Table2: « the evolution of the rediscount rate in Algeria during the period (2000-2019) »

Unit: %

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
rediscount rate	6	6	5.5	4.5	4	4	4	4	4	4
Years	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
rediscount rate	4	4	4	4	4	4	3.5	3.75	3.75	3.75

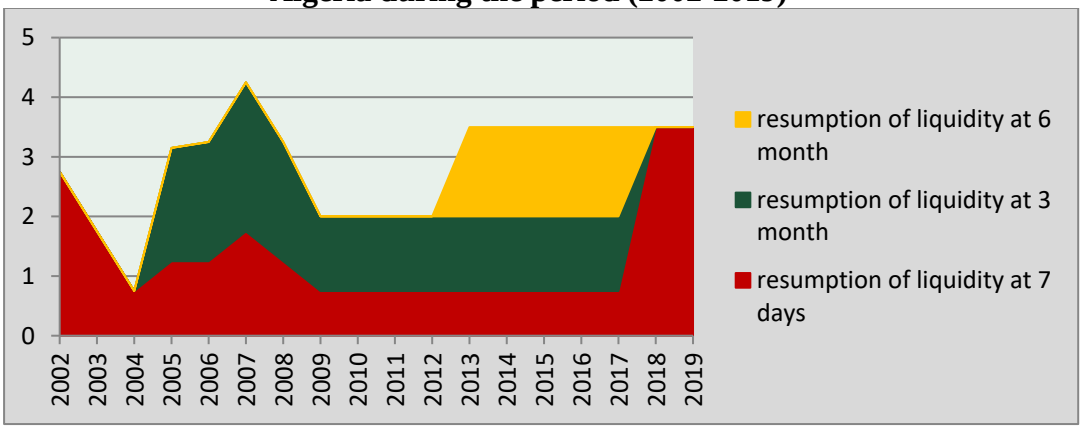
Source: By authors based on : (Bank of Algeria, December 2008, p. 17) , (Bank of Algeria, march 2017, p. 17) and (Bank of Algeria, December 2019, p. 17).

Table 2 shows that the rediscount rates decreased during this period, from 6% in 2000 and 2001 to 5.5% in 2002 and then 4.5% in 2003, after which they reached a rate of 4% in 2004 and remained stable at this rate until 2015. Then it decreased to 3.5% in 2016, to reach a rate of 3.75% in the years 2017, 2018 and 2019, and this is evidence that due to the surplus in bank liquidity during this period, banks no longer resort to refinancing by the Bank of Algeria, and this is what made the rate tool rediscount is ineffective in absorbing this surplus during the study period.

1.3 Resumption of liquidity: as a result of the rapid growth of bank liquidity surplus, the Bank of Algeria introduced a new tool of monetary policy, represented in the technique of resumption liquidity. This mechanism is based on tendering, through the Bank of Algeria displaying the amounts to be withdrawn at an interest rate. The liquidity resumption tool is the most flexible tool because it can be modified formal Daily in contrast to the reserve requirement.

The following figure shows the evolution of the rates of liquidity recovery by the Bank of Algeria during the period (2002-2019).

Figure1: « the evolution of the rates of resumption liquidity by the Bank of Algeria during the period (2002-2019) »



Source: By authors based on: (Bank of Algeria, December 2008, p. 17), (Bank of Algeria, march 2013, p. 17) and (Bank of Algeria, December 2019, p. 17).

It can be said that the tool for resumption liquidity through calls for offers that has been used since 2002 is a more flexible method than reserve requirement, as it can be modified day after day, and moreover, participation in liquidity resumption operations is not compulsory, which provides an opportunity for each bank to manage its liquidity.

1.4. Deposit facility: the deposit facility was used as a tool for monetary policy, which was introduced in August 2005 by the Bank of Algeria, and which allows banks to complete 24-hour deposits with the Bank of Algeria. This method gives banks wide flexibility in the field of managing the treasury in the short term, and the Bank of Algeria has resorted to using these tool is due to the continued excess of liquidity with banks, and the following table shows the development of deposit facilities rates in Algeria for the period 2000-2019.

Table3: « the evolution of deposit facilities rates in Algeria for the period (2000-2019) »

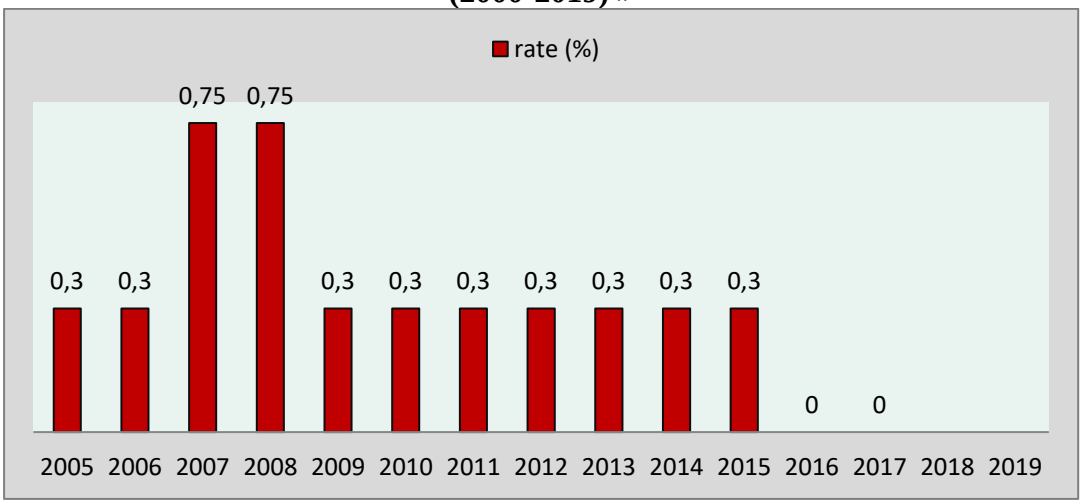
Unit: percent (%)

years	2005	2006	2007	2008	2009	2010	2011	2012
rate	0.3	0.3	0.75	0.75	0.3	0.3	0.3	0.3
years	2013	2014	2015	2016	2017	2018	2019	-
rate	0.3	0.3	0.3	0.0	0.0	-	-	-

Source: By authors based on: (Bank of Algeria, December 2008, p. 17), (Bank of Algeria, march 2013, p. 17) and (Bank of Algeria, December 2019, p. 17).

The data of the previous table are translated in the following figure:

Figure2: « the evolution of deposit facilities rates in Algeria for the period (2000-2019) »



Source: By authors based on table 3 data.

We note from Table 3 and Figure 2 that the deposit facility rate was estimated at 0.3% in 2005 and 2006, then it increased during 2007 and 2008, reaching 0.75%, and this is due to the increase in liquidity surplus, to return after that and stabilize at a rate of 0.3% during the years 2009 until After that, this rate decreased to reach 0% in 2016 and 2017, while the Bank of Algeria did not use this tool during the years 2018 and 2019.

Generally, it can be said that the Bank of Algeria used the aforementioned monetary policy tools for the purpose of absorbing excess liquidity. However, the degree of surplus absorption by these tools in Algeria during the study period is considered insufficient, and by comparing the instruments with each other, the liquidity resumption tool and the rate of deposit facilities are more effective compared to the reserve requirement, while the study showed that the rediscount rate is an ineffective tool.

2. The evolution of the money supply in Algeria during the period (2000-2019):

Controlling the money supply is one of the objectives of the monetary policy that the Bank of Algeria seeks to achieve. In the following we will present the development of the monetary supply in Algeria during the study period.

2.1. The evolution of the monetary mass (M2) in Algeria during the period (2000-2019): the money block M2 is made of currency in circulation and demand deposits plus time deposits in domestic currency, plus deposits denominated by foreign currencies, and the following table shows the development of the monetary mass in Algeria for the period 2000-2019.

Table4: « the evolution of the monetary mass in Algeria for the period (2000-2019) »

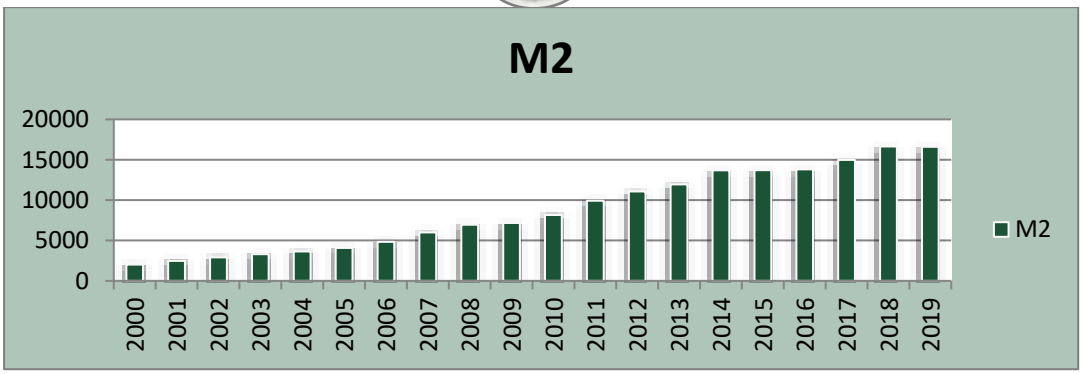
Unit: Billions of dinars

Years	M2	M2 growth (%)	Years	M2	M2 growth (%)
2000	1659.2	-	**2010**	8162.8	15.4
2001	2473.5	22.3	**2011**	9929.2	19.9
2002	2901.5	17.3	**2012**	11067.6	10.9
2003	3299.5	15.6	**2013**	11941.5	8.4
2004	3644.4	11.4	**2014**	13686.8	14.4
2005	4070.4	11.2	**2015**	13704.5	0.13
2006	4827.6	18.7	**2016**	13816.3	0.81
2007	5994.6	21.5	**2017**	14974.6	8.38
2008	6956.0	16.0	**2018**	16636.7	11.1
2009	7178.7	3.1	**2019**	16611.1	-0.15

Source: By authors based on: (Bank of Algeria, December 2008, p. 11), (Bank of Algeria, march 2013, p. 11) and (Bank of Algeria, December 2019, p. 11).

The data of the previous table are translated in the following figure

Figure3: « the evolution of the monetary mass in Algeria for the period (2000-2019) »



Source: By authors based on the table 4.

Through Table 4 and Figure 3, we note the growth and rise of the monetary mass during this period, as it moved from 2022.5 billion dinars in 2000 to 16,611.1 billion dinars in 2019, meaning that it doubled about 8 times during this period

The increase in the monetary supply in the period 2000-2014 is due to the existence of an excess of liquidity in the money market, and with regard to the growth rates, which decreased during the period 2001-2005, which decreased from 22.3% in 2001 to 11.2% in 2005, and this is due to the attempt of the Bank of Algeria to control the surplus Liquidity through monetary policy tools.

Then it witnessed a rise in the period 2006-2008, as it reached a growth rate of 18.7% in 2006, 21.5% in 2007 and 16% in 2008, while it witnessed a significant decrease in 2009, reaching a growth rate of 3.1%, and this is a result of the repercussions of the global financial crisis and the decline in fuel prices and revenues reduced exchange reserves, after that, the growth rate of the monetary supply increased in the period 2010-2014 due to an excess of liquidity, and we note that this rate, despite its high, is sometimes known as a slowdown in the growth rate as a result of the Bank of Algeria's attempt to control and absorb excess liquidity through monetary policy.

As for the year 2015, the growth of the monetary supply decreased significantly, as it moved from a rate of 14.4% in 2014 to 0.13% in 2015 and this is due to the significant decrease in fuel revenues, after which the growth rate of the monetary supply began to gradually rise, reaching 0.8% in 2016 8.4% in 2017.

In 2018, the growth rate of the monetary supply increased to 11.1%, and this is due to the adoption of unconventional financing to fill the deficit, which was reflected in the form of a surplus in liquidity, while we notice the decline in the monetary mass in 2019 to 16,611.1 billion dinars to 16,636.7 billion dinars in 2018, as A negative growth rate was recorded at -0.15%.

2.2. Factors affecting money supply: to analyze the developement of the factors affecting money supply, we will present the following table.

Table5: « the evolution of the factors effecting money supply in Algeria during the period (2000-2019) »

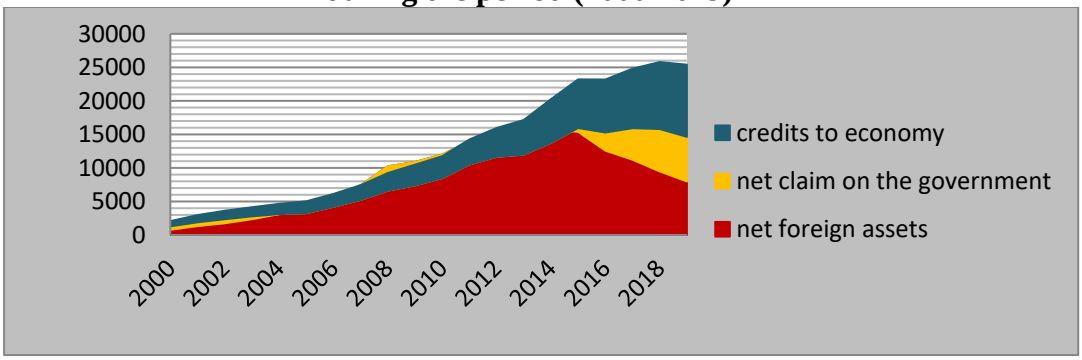
Unit: Billions of dinars

Years	Net foreign assets	Net claim on the government	Credits to economy
2000	775.9	506.6	776.2
2001	1310.7	569.7	1078.4
2002	1755.7	578.7	1266.8
2003	2342.7	423.4	1380.2
2004	3119.2	-20.6	1535.0
2005	4179.7	-933.2	1779.8
2006	5515.0	-1304.2	1905.4
2007	7415.5	-2193.1	2205.2
2008	10247.0	-3627.3	2615.5
2009	10886.0	-3488.9	3086.5
2010	11997.0	-3510.9	3268.1
2011	13922.4	-3406.6	3726.5
2012	14940.4	-3289.8	4297.5
2013	15225.2	-3235.4	5156.3
2014	15734.5	-1992.4	6504.6
2015	15375.4	567.5	7277.2
2016	12596.0	2682.2	7909.9
2017	11227.4	4691.9	8880.0
2018	9485.6	6325.7	9976.3
2019	7971.2	6660.0	10780.3

Source: By authors based on: (Bank of Algeria, December 2008, p. 10), (Bank of Algeria, march 2013, p. 10) and (Bank of Algeria, December 2019, p. 10).

The data of the previous table are translated in the following figure:

Figure4: « the evolution of the factors effecting money supply in Algeria during the period (2000-2019) »



Source: By authors based on the table5.

Through Table5 and Figure4, we note that the components of the corresponding parts of the monetary mass are characterized by an increase in net

foreign assets from 2000 to 2014, and this is due to the increase in fuel prices in global markets, while in 2015 the fuel prices witnessed a significant decline, which caused a decline in net foreign assets during the period 2015 to 2019, as net foreign assets decreased by nearly half in 2019 compared to 2014.

In light of the decline in net foreign assets, net claim on the government increased, after they were negative in the years 2004 to 2014, an increase and moved from 567.5 billion dinars in 2015 to 6660.0 billion in September 2019, while the loans provided to the economy witnessed a gradual increase during the study period, moving from 776.2 One billion dinars in 2000 to 10,780.3 billion dinars in September 2019.

III. The effect of the monetary policy adopted in Algeria on the variables of monetary stability during the period 2000-2019:

By comparing the rates of inflation recorded with the rate targeted by the Bank of Algeria in its monetary policy, we find that the monetary policy tools do not effectively affect the rates of inflation.

1. The evolution of the coefficient of monetary stability in Algeria during the period (2000-2019):

Monetary stability is considered a final goal of monetary policy, and the effectiveness of monetary policy in achieving this goal can be known by measuring the degree of monetary stability by calculating the monetary stability coefficient, which is the ratio of the change in the monetary mass to the change in the gross domestic product.

The following table shows the changes in the monetary stability coefficient in Algeria during the study period.

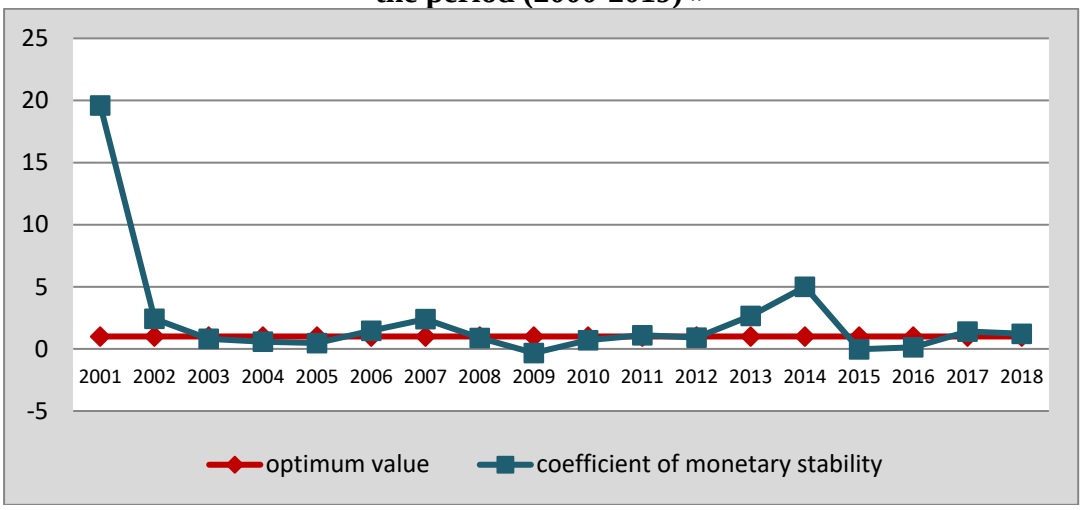
Table6: «the evolution of the coefficient monetary stability in Algeria during the period (2000-2019) »

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ΔM2/M2	-	0.49	0.17	0.13	0.10	0.11	0.19	0.24	0.16	0.03
ΔGDP/GDP	-	0.025	0.07	0.16	0.17	0.23	0.13	0.10	0.18	-0.09
Coefficient monetary stability	-	19.6	2.42	0.81	0.58	0.47	1.46	2.4	0.88	-0.33
Years	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
ΔM2/M2	0.14	0.22	0.11	0.08	0.15	0.001	0.008	0.084	0.11	-
ΔGDP/GDP	0.20	0.20	0.12	0.03	0.03	-0.03	0.06	0.06	0.09	-
Coefficient monetary stability	0.7	1.1	0.91	2.66	5	-0.03	0.13	1.4	1.22	-

Source: By authors based on: (Bank of Algeria, December 2008, p. 26), (Bank of Algeria, march 2013, p. 26) , (Bank of Algeria, March 2016, p. 26) and (Bank of Algeria, December 2019, p. 26).

The data of the previous table are translated in the following figure:

Figure5: «the evolution of the coefficient monetary stability in Algeria during the period (2000-2019) »



Source: By authors based on table6.

Through Table 6 and Figure 5, we notice that the monetary stability coefficient witnessed many changes during the study period, as it reached 19.6 in 2001, which is a very far from the optimal value estimated at 1, and this is evidence of a large inflationary gap during the year 2001, after that it witnessed a significant decrease in the year 2001. 2002, when it reached 2.42, which is also greater than 1, and thus there is an inflationary gap, but the value of this gap is smaller than that recorded in 2001.

In the years 2003, 2004 and 2005, the monetary stability coefficient decreased below the level of 1, reaching 0.81 in 2003, 0.58 in 2004 and 0.47 in 2005, indicating the existence of a deflationary gap. However, this gap is not severe because the levels of the monetary stability factor in these years were It is less than 1, but close to it, while the monetary stability coefficient increased again during the years 2006 and 2007, reaching 1.46 and 2.4, and then decreased to 0.88 in 2008, which are levels that do not reflect monetary stability but close to it.

While the year 2009 witnessed a significant decrease in the monetary stability coefficient, as it recorded a negative value estimated at -0.3. This is due to the decrease in the gross domestic product during this period and the decline in liquidity as a result of the repercussions of the global financial and economic crisis of 2008-2009, which caused a decrease in fuel prices in Algeria.

After that, the monetary stability coefficient increased in 2010 to 0.7, then 1.1 in 2011 and 0.91 in 2012, and it can be said that nearly monetary stability was achieved during the period 2011 and 2012 and this is because the level of the monetary stability coefficient approaches 1.

In 2013 and 2014, the monetary stability coefficient witnessed an increase, reaching 2.66 in 2013 and 5 in 2014, and this is evidence of an inflationary gap that increased in intensity in 2014 as a result of a large surplus in liquidity that was not reflected in the gross domestic product and thus caused inflation.

In the year 2015, the monetary stability coefficient decreased and recorded a negative level of -0.03, and this is evidence of a sharp deflationary gap and this is the result of the decline in the gross domestic product in this year, then in 2016 it increased to 0.13 and the deflationary gap remained during this year with a slight decrease compared to the year 2015. While the years 2017 and 2018 recorded a monetary stability level of 1.4 and 1.22, this is evidence of a weak inflationary gap and approaching monetary stability, and this is the result of pumping liquidity in order to remedy the deflationary gap caused by the economic crisis that has befallen Algeria since 2015.

2. The evolution of the inflation rate in Algeria during the period (2000-2019) :

The inflation rates reflect the direction of the general level of prices and the ability of the monetary policy adopted to maintain its stability. In the following table, we will present the development of inflation rates in Algeria during the period (2000-2019).

Table7: «The evolution of the inflation rate in Algeria during the period (2000-2019) »

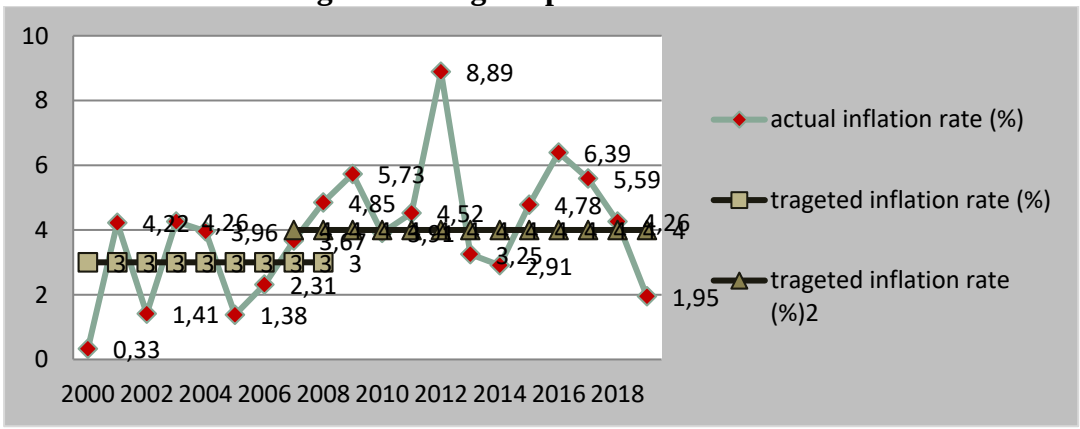
Unit: percent (%)

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Inflation	0.33	4.22	1.41	4.26	3.96	1.38	2.31	3.67	4.85	5.73
Years	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Inflation	3.91	4.52	8.89	3.25	2.91	4.78	6.39	5.59	4.26	1.95

Source: By authors based on: (World Bank, 2019).

Based on the data of Table 7 and based on the target inflation rate in Algeria, which is estimated at 4%, we will compare the inflation rates in Algeria for the period 2000-2019 with the target inflation rate by the Bank of Algeria, and we will explain this comparison through the following figure:

Figure 6: «The development of the actual and targeted inflation rate in Algeria during the period 2000-2019»



Source: By authors based on table7.

Through Table 7 and Figure 6, we note that inflation rates have witnessed unstable changes, as it recorded its highest value in 2012 at a rate of 8.89% and the lowest value in 2000 at a rate of 0.33%, These changes are due to many reasons,

including the growth of the money supply, the injection of funds to implement development programs, the increase in the prices of imported goods and the changes in the prices of fuel.

By comparing the rates of inflation recorded with the rate targeted by the Bank of Algeria in its monetary policy, we find that the monetary policy tools do not effectively affect the rates of inflation.

Conclusion:

We conclude from this study that the monetary policy is the tool adopted by the monetary authority represented in the Bank of Algeria in order to achieve monetary stability, which is represented in the ultimate goal of this policy represented in stabilizing the price level, but it cannot be said that the monetary policy in Algeria is effective in achieving monetary stability. Where The latter has experienced some shortcomings,

By the research we concluded a set of results that are an answer to the proposed hypotheses, which we summarized below:

- Monetary stability is the final and only goal of monetary policy in Algeria;
- It can be said that the reserve tool is not sufficiently effective in absorbing the excess liquidity;
- The Bank of Algeria introduced two monetary policy tools, namely the resumption liquidity tool and deposits facilities, which are more flexible tools compared to the reserve requirement;
- The monetary policy tools used in Algeria were not able to absorb the excess liquidity well during the study period;
- The money supply witnessed an expansion and a significant increase during the study period, and this is evidence of the inability of the monetary policy followed in Algeria to control the money supply in line with the requirements of the economy;
- The monetary stability coefficient was not stable at the required levels, as the years of school recorded the presence of inflationary gaps and sometimes deflationary gaps, but most of the years were of an inflationary gap;
- The inflation rate also witnessed a clear fluctuation during the study period. By comparing it with the target inflation rate by the Bank of Algeria in its monetary policy; we conclude that the monetary policy adopted was not effective in maintaining the stability of inflation at the target rate.

In addition to the results mentioned above some recommendations can be given in order to improve those results, as follows:

- Activating the use of electronic payment tools in order to enable the Bank of Algeria to better control the monetary supply;
- Strengthening the independence of the Bank of Algeria in controlling monetary policy and applying the tools it deems appropriate;
- Encouraging Islamic banking in order to withdraw the circulating monetary mass outside the banking circle in order to achieve greater effectiveness of monetary policy;

- Restricting the process of unconventional financing and not extending it in order to limit its negative effects on currency value and monetary stability.

Bibliographic References:

- Aguire, A., Brunnermeier , M., & Saravia, D. (2019). *Monetary policy and financial stability transmission mechanisms and policy implications.* Chile: central bank of Chile.
- Bank of Algeria. (December 2008). *Monetary and financial market.* quarterly statistical bulletin of bank of Algeria .
- Bank of Algeria. (December 2019). *Monetary and financial market.* quarterly statistical bulletin of bank of Algeria .
- Bank of Algeria. (march 2013). *Monetary and financial market.* quarterly statistical bulletin.
- Bank of Algeria. (March 2016). *Monetary and financial market.* quarterly statistical bulletin of bank of Algeria .
- Bank of Algeria. (march 2017). *Monetary and financial market.* quarterly statistical bulletin.
- Ben Aamra, A. (2020). *Monetary Policy Through Transition and Impact, a standard analytical study* (éd. First Edition). Jordan: Alpha Doc.
- Ben Elaria, H., & Belbali, A. (2017). Analyzing the effectiveness of monetary policy tools in light of excess bank liquidity - the case of Algeria during the period 2000-2014. *Finance and business economies review, 1*(4), 198-209.
- Bindseil, U. (2014). *Monetary policy operations and the financial system* (éd. First Edition). United Kingdom: Oxford University press.
- Chelghoum, A. (2017). The effectivenes of the Monetary Policy in Algeria during the period 2000-Juin 2015 - an analytical study. *Al-Bashaer Economic Journal, 3*(1), 34-49.
- Hasen Khalaf, H. (2018). The impact of the Monetary policy on the Economic stability variables in Iraq during the period 1990-2017. *Tikrit Journal of Administrative and Economic Sciences, 4*(44), 428-449.
- Krayah Kazaar Al-Shaibani, F. (2018). Monetary policy and its impact on inflation in Iraq after 2003. *Journal of the City College of Science University, 10*(2), 165-182.
- Langdana, F. (2016). *Macroeconomic policy denystifying Monetary and Fiscal Policy* (éd. third edition). USA: Springer International Publishing Switzerland.
- Mishkin, F. (2007). *Monetary policy strategy.* England: Massachusetts Institute of Technology.
- Moenjak, t. (2014). *central banking, theory and practice in sustaining monetary and financial stability.* singapore: Wiley & Sons.
- Mousaoui, S. (2015). The effect of financing through bank credit on monetary stability in Algeria during the period 1990-2013. *MAAREF Journal, 10*(19), 304-320.
- Rouchou, A. (2020). The Efficiency of Monetary Policy in Algeria under unconventional Financing -The study of the Algerian case of the period 2001-2018. *Journal of Economics, Management and Business Sciences, 12*(3), 35-50.
- Sawli, M. and al. (2018). The impact of monetary policy variables on inflation rates in Algeria: a standard study using the ARDL model during the period 1975-2016. *Journal of Economic and Management Sciences,24*(103),355-372.
- Walsh, C. E. (2017). *Monetary Theory and Policy* (éd. fourth edition). England: Massachusetts Institute of Technology.
- World Bank. (2019). *world bank.* Consulté le 11 28, 2020, sur data.world bank.org: https://databank.worldbank.org/source/world-development-indicators#