Monetary Policy and Inflation Targeting Policy Standard Study on the Situation of Algeria (1990-2020)

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Abstract:

This study seeks to highlight the effectiveness of monetary policy in targeting inflation in Algeria during the period (1990-2020), by clarifying the theoretical aspects of both monetary and inflation-targeting policies to make their generalities known, we then make a standard study of this period using the distributed time gap Self-Regression (ARDL) model.

The study concluded that there is a positive and significant effect of the rediscount rate on the inflation rate in the long and short term, in addition to a positive and insignificant effect of the money supply growth factor in the broad sense on the inflation rate in the long and short term.
Keywords: *Monetary policy, Inflation targeting policy, Algeria, ARDL.*

1. INTRODUCTION

Economic policies are among the most important mechanisms that seek to achieve stability in economic activity by achieving several objectives, namely, achieving growth, maintaining stability in prices, achieving balance of payments and equitable distribution of wealth. Among these objectives, we find the goal of maintaining stability in public prices, through which we stifle and target inflation, since the latter has serious implications for economic variables (investment, savings, purchasing power...).

Based on the principle of inflation targeting, we find that one of the most effective policies in this regard is monetary policy, because of the instruments it enjoys to confront it, which are the price of rebate, compulsory reserve and open market policy, in addition to other qualitative instruments, through which it seeks to influence the money supply or increase, or to reduce the demand for inflation, and thus seeking to achieve a reduction in price stability or social repercussions Economic factors that contribute to impeding economic activity and curbing its growth.

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The researcher used the analytical descriptive method by which monetary and inflation-targeting policies were described, as well as the standard method used to highlight the impact of monetary policy on inflation in the period under study. The self-regression model was used for the distributed slowing-down (ARDL).

A desk survey was also conducted for books, letters, theses, periodicals, research and paper and electronic reports, which are relevant to the study.

a. Study problem

Hence the following problem:

Is monetary policy an effective tool for targeting inflation in Algeria during the period 1990-2020?

b. Study Hypotheses

In order to address the previous problem, the following assumptions were made:

- Inflation rates affected by the application of monetary policy instruments?
- Is inflation targeting the primary goal of monetary policy for long-term price stability?

c. Importance of Study

The importance of this research lies in the fact that the phenomenon of high inflation rates, which has reached high levels, has cast a shadow on the economic scene.

This has necessitated the adoption of inflation targeting policy, as it is a modern framework for monetary policy, through its instruments, in order to achieve the goal of price stability.

d. Study Objectives

This research aims to measure the effectiveness of monetary policy in targeting inflation in Algeria during the period (1990-2020), as well as knowledge of monetary and inflation targeting policy as a new monetary policy mechanism.

2. Theoretical framework for the Study.

2.1 General monetary policy statements.

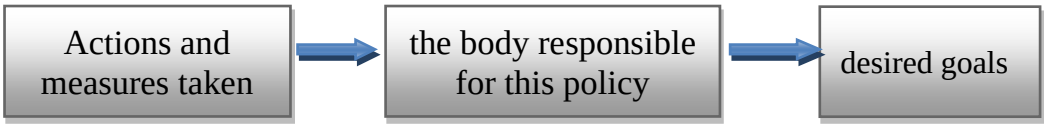
In this chapter, we will examine the most important elements of monetary policy in order to understand them in this theoretical respect and to plant a general idea on them among readers.

a. Concept of monetary policy.

There is no uniform definition of monetary policy among economists. Its definitions vary from one economy to another, depending on the objectives to be achieved and on the degree of development of the economy.

- is a set of procedures that the central bank uses to influence the liquidity available for circulation in the national economy. (walid, chawech, 2011, p. 156)
- Monetary policy is the act used to monitor the money supply from the central bank as a tool to achieve economic policy goals. (Jean pierre, patta, 1987, p. 277)
- Monetary policy is the various actions taken by the monetary authority in society, with the purpose of controlling and influencing credit, in line with the achievement of the economic goals to which the government aspires. (Marwan, 1998, p. 256)

The definitions generally have the same components:



Source: Prepared by researchers based on the above.

From this standpoint, we come up with a comprehensive definition where we say that monetary policy is a set of measures and procedures carried out by the monetary authorities, represented in the various mechanisms and instruments used by the central bank, for the control, control and management of the monetary offer, in order to solve existing economic problems or take preventive measures to potential problems in the future, all with a view to achieving the objectives for which they were set.

b. Monetary **Policy Tools.**

The Central Bank uses a number of instruments to achieve its stated objectives in monetary policy.

There are two types of instruments: quantitative and qualitative. However, these instruments vary from one economy to another, subject to the degree of consistency in the banking system and to the strength and durability of the entire economy. (issa, 2008, p. 20)

b.1. **Quantitative instruments**: a set of quantitative controls, administrative directives and procedures imposed by central banks or public authorities on commercial banks in order to control the credit process, and thus the volume of liquidity in circulation. (Fouad, 1997, p. 68)

- **Rebate policy:** The rediscount rate is the rate charged by the central bank for rededicating commercial or financial bank securities to meet liquidity shortages. (Zakaria douri, 2006, p. 192)

- **Policy on the Mandatory Reserve Rate (Mandatory):** The policy of the Compulsory Reserve is represented by the imposition by the Central Bank on commercial banks of a certain proportion of deposits held as reserves and free of charge, in the form of a credit balance with the Central Bank. (Khababa, 2008, p. 204)
- **Open Market Policy:** The Central Bank intervenes in the financial market to buy or sell various financial bonds, especially government bonds, in order to reduce or increase the monetary mass. This instrument is considered one of the most important instruments of monetary policy, especially in developed countries. (Edwin, 1989, p. 297)

It is worth noting that the Central Bank increases the discount rate and the mandatory reserve ratio, and it enters as a seller of securities and commercial (open market) in the event of inflation to limit the liquidity of banks and credit.

This is considered a contractionary monetary policy, and the opposite works when the economy stagnates, and it is considered at that time an expansionary monetary policy.

b.2. **Qualitative tools:**

Monetary authorities may use instruments other than those that have passed, depending on the situation and circumstances of each country, and the extent to which they are used depends on the responsiveness of economic operators to accept such procedures. The most important of these tools are: (Ahmed, 2014, p. 120)

- **Financing ceilings:** This policy limits the expansion of total finance to the planned level, by setting a funding ceiling for commercial banks. In excess of this amount, the central bank's excess value is equal to or a proper fine is imposed on it at the discretion of the monetary authority.
- **Regulation of consumer loans:** by setting a ceiling by the Central Bank of commercial banks for the funds used by the latter in the purchase of consumer goods, or by setting a maximum sales period in order to reduce the number of premiums and raise the value of the premium.
- **Allocation of funding:** by ensuring that the Central Bank guarantees the targeted distribution of the funds lent and that they are channelled in accordance with the State Plan, which establishes priorities such as channelling funds to priority sectors such as the agricultural and industrial sectors.

- **Moral persuasion:** The case in which the central bank persuades commercial banks to follow a policy without resorting to official orders and instructions depends on the extent to which the central bank is able to persuade, the extent to which commercial banks are willing to deal with it and their confidence in its procedures. (Mofid, 2007, p. 65)

b.3. Monetary Policy Targets.

Monetary policy goals vary from time to time and from country to country. There are those who broaden the range of objectives that monetary policy seeks to achieve, (Mishkin, 2001, p. 9) and those who narrow them to a few goals, and even restrict them to one goal.

Generally speaking, monetary policy goals are to distinguish between two types of these goals.

Intermediate targets are defined as monetary variables monitored by the monetary authority, which by their control can achieve the ultimate goals. These goals should meet a number of criteria, including at least: (Fouad, 1997, p. 55)

a relatively stable relationship with the final goal or goals;

** The monetary authorities should be able to monitor them because of the tools they have.

** The main and ultimate goals of monetary policy are:

Full On;

** achieving a high rate of economic growth;

** Balance-of-payments balance;

** Stabilize the general price level by eliminating inflation. (Jean pierre, patta, 1987, p. 299)

2.2. Inflation Targeting Policy.

Inflation targeting is "a modern framework for monetary policy analysis, characterized by an explicit quantitative target for short-term inflation and its long-term stabilization, by setting the indicator, target level, area of change, time horizon, and defining possible cases that allow monetary authorities to change the target and the absence of intermediate targets such as the targeting of cash pools or the exchange rate" (Delaplace, 2017, p. 118)

There are three ways to target inflation:

- Full inflation targeting: It concerns countries that use a level of credibility of medium or high degree with a framework of transparency that allows the central bank to achieve its objective, and countries that adopt this type of inflation targeting cannot maintain a low inflation level without an explicit commitment to the price stability target.

- Partial inflation targeting: When countries adopt an inflation-targeting policy with a low degree of credibility, characterized by the inability of the central bank to complete the price stability target because of its low level of credibility, it is specific to countries that are unable to cope with shocks and are characterized by weak monetary institutions and unstable financial situations.
- Voluntary inflation targeting: This is when inflation targeting policy is adopted with a very high level of credibility that allows for the achievement of the price stability target without adhering to a strict inflation targeting rule.

This allows countries to pursue secondary targets. The necessary information must be made available so that the central bank can predict the inflation rate, especially the prices of financial assets. (Ftiti, 2010, pp. 37-38)

Inflation-targeting requirements include five general and necessary prerequisites: (Leiderman, 1995, p. 2)

- The public announcement of a digital target or an explicit medium-term inflation rate area, as an instrument that explicitly commits the monetary authority to achieve a specific inflation rate or target range within a specified time frame;
- Institutional commitment that price stability is the primary long-term objective of monetary policy;
- Use of comprehensive information containing several variables related to the future period of control of the inflation rate;
- Increase transparency in the management of monetary policy by reaching out to the public and markets by disclosing the plans and decisions of monetary authorities;
- holding the central bank more accountable for achieving the inflation target as a key long-term monetary-policy objective.

There are also a set of conditions necessary to create the right environment for the successful implementation of inflation-targeting policy:

The independence of the central bank, the existence of a single monetary policy objective, the stability and degree of development of the financial sector (banking system), the advanced infrastructure and technology (the ability to collect data, the knowledge and knowledge of how to use such data effectively, the ability to determine conditional forecasting models), macroeconomic stability and the exchange rate system. (Mishra, 2013, p. 92)

3. Modelling the relationship between monetary policy and inflation in Algeria (1990-2020)

In this regard, we are launching the Standard Study on the Impact of Monetary Policy on Inflation (1990-2020) through the ARDL model, where the following variables were selected:

INF :inflation, the GDP (per cent per year) contraction factor;

M2 :growth of money supply in its broad sense (% annually);

DR : Rediscount rate.

This data was taken from the World Bank for the first and second variables, and the rediscount rate variable was taken from the Central Bank's Tripartite Statistical Bulletin, so the formula would be as follows:

$$\Delta inf_{\,t} = \mathrm{C} + \alpha_1 \mathbf{inf}_{t-1} + \alpha_2 M2_{t-1} + \alpha_3 \,\mathrm{DR}_{\,t-1} + \sum_{i=1}^{p} \beta_1 \,\Delta \mathbf{inf}_{t-i} + \sum_{i=0}^{q_1} \beta_2 \,\Delta \mathbf{M2}_{t-i} + \sum_{i=0}^{q_2} \beta_3 \,\Delta \mathrm{DR}_{\,t-i} + \varepsilon_t$$

Whereas:

- ✓ Δ It's the first-class difference
- ✓ C Fixed Stroke;
- ✓ pq_1q_2 maximum slowing down periods for variables (DR., M2, inf), respectively;
- ✓ t the direction of time;
- ✓ $\beta_1\beta_2\beta_3$ short-term relationship transactions (error correction);
- ✓ $\alpha_1\alpha_{\,2}\alpha_{\,3}$ Long-term relationship coefficients;
- ✓ ε_t Random error limit.

Based on this model, we proceed to perform various ARDL model tests, as follows:

3.1. The Unit Root test of the study model (The Unit Root).

To begin with, we will ascertain the study model's time series integration grades to verify whether the ARDL requirement, that the series be I (0) or I (1) integrated, requires a unit root test, so we will use two tests (ADF and PP).

It is well known that ADF is based on the premise that time series are generated by the AR process, while PP is based on the more comprehensive assumption that the time series is generated by the ARIMA process of self-regression.

Therefore, some statisticians believe that the test - which has the best potential for a test (when there is a small sample test) - is a small test The following two tabulations and tables show the following results:

Table N⁰(01) :ADF root test

variables	ADF Dickie Fowler				degree of integration
	First difference		Level		
	Result	statistician (ADF)	Result	statistician (ADF)	
inf	stable	(*) -6.680928	stable	-3.129111 (**)	(0)I
M2%	stable	6.601510(*) -	stable	4.293629 – (*)	(0)I
DR	stable	-4.456350 (**)	unstable	-0.492876	(1)I

Source: Prepared by researchers based on Eviews output.

Table N⁰(02) :Unit root test using PP.

variables	Philippe-Peron				degree of integration
	First difference		Level		
	Result	statistician (pp)	Result	statistician (pp)	
inf	stable	(*) -10.98909	stable	-4.362361 (*)	(0)I
M2%	stable	(*) -20.41578	stable	4.297471– (*)	(0)I
DR	stable	(*) -4.946618	unstable	-0.838336	(1)I

Source: Prepared by researchers based on Eviews output.

The results of Tables (01) and (02) indicate the value of t-statistic and its associated probability, which gave the results of both the ADF and PP test for all study variables, showing that for the DR., M2%, inf) series, they were stable at the level, the DR. was not stable at the level in both tests, i.e. we accepted the non-imposition in both tests, i.e. the chains contained a unit wall because the calculated value came below the tabular values, the first difference was stable in the Dickey Fuller test at the moral level of 5%, i.e. (*), the DR test was stable at the annual level, i.e., at the annual rate (*), at the annual rate of the alternative (%) Record does not contain a single root and rejection of the non-zero bound, i.e. the calculated value is greater than the tabular values, and therefore we conclude that the ARDL model terms are available as the variables are unstable in the second degree, and therefore applicable.

3.2 Test optimal slowing-down periods and detect estimation problems for model variables in ARDL.

In this item we will try to determine the slowing down periods given by the ARDL form, as well as the tests that are relied upon to detect estimation problems to ensure the model is valid.

a. Optimum slowing down time test.

To determine the length of the slowing down periods, we use two criteria (AIC, SC), especially SC, because it is rigorous in choosing the slowing down periods. The appropriate slowing down periods is selected based on the period when the value of each of these criteria falls. The following table shows the results of the two tests:

Table N⁰(03) :Optimal AIC and SC deceleration periods.

Testing	Optimal slowing-down periods q_1 p	Result
AIC	(2.0.1)	any two decelerations to inf and 0 slows for M2% and slows for. DR.
SC	(2.0.1)	any two decelerations to inf and 0 slower for M2% and slower for DR.

Source: Prepared by researchers based on Eviews output.

From the data in the above table, it is clear that the ARDL model has been used with two slowness for the inf dependent variable, 0 slowdown for the M2% independent variable Growth of money supply in the broad sense and a slow down for the DR. rebate price, i.e. the model (2.0.1) is the optimal model.

b. Detect estimation problems for form variables in ARDL models.

To detect the estimation problems of self-correlation, asymmetry test and normal distribution, there are a series of tests that ARDL adopts and we will summarize them in the following table:

Table N⁰(04) :shows the results of the tests of JB, ARCH, LM-TEST.

Breusch-Godfrey (LM-Stat) Autocorrelation Test			
F-statistic	0.155496	Probability	0.8572
Obs*R-squared	0.422394	Probability	0.8096
asymmetry test (ARCH)			
F-statistic	1.756245	Probability	0.1966
Obs*R-squared	1.771669	Probability	0.1832
JB normal distribution test (Jarque Bera)			
Jarque Bera		0.849167	
Probability		0.654042	

Source: Prepared by researchers based on Eviews output.

The Breusch-Godfrey test shows that the corresponding probability is 0.8572 greater than the different morale scores 1%, 5%, 10%, for the F-statistic test, but for the estimated OBS*R-squared probability 0.8096 is larger than the different morale scores, but we're weighing the result of the Fisher test because it's more effective at detecting self-confusion, and

therefore we accept the hypothesis of no self-correlation problem in the regression pots of this model.

For the ARCH test, the corresponding probability is 0.1966 greater than the F-statistic test morale variant, and for the Obs*R-squared probability of 0.1832 greater than the different morale ratings, we reject the alternative test and accept the non-discriminatory assumption that the random error limit of the study variables in the model is constant.

Also, for the JB test, the probability value was 0.654042, which is greater than the various degrees of morale, and therefore we accept the hypothesis of no regression estimators following the normal distribution

Depending on the results of the diagnostic tests of the estimated models, the validity of using this model in estimating the long-term relationship can be decided.

c. **Testing common integration using a bounds test.** (Mohammed, 2018, p. 63)

This test detects the presence of concurrent complementarity, and at this stage a common complementarity between variables is ascertained by applying the Boundary test, which is based on the Wald Test to detect the long-term balance of variables. The common integration of variables is tested in accordance with the ARDL model formula by the following assumptions:

** No hypothesis $H_0: \delta_1 = \delta_2 = \ldots\ldots \delta_m = 0$ (no co-integration);

** The alternative hypothesis $H_0: \delta_1 \neq \delta_2 \neq \ldots\ldots \delta_m \neq 0$ (find cointegration).

This test follows Fisher's non-standard F distribution so that rejecting or accepting the support hypothesis depends on comparing the calculated F value, which takes the following formula:

$$F = \frac{(SSER - SSEU)/m}{SSEU/(n-k)}$$

It represents:

SSEU: sum of remaining boxes for original unrestricted form, (alternative hypothesis);

SSER: sum of the remaining boxes of the restricted form (support hypothesis);

m: Number of restricted form parameters;

k: Number of variables;

n: The number of views with tabular values within the critical limits proposed by Pesaran and Al, 2001 at a certain emotional level.

The table is two-edged:

** Lower Critical Bounds value that assumes that the variables are complementary from I (0);

** The Upper Critical Bounds value, which assumes that the variables are complementary at the degree I (1).

After the calculation of a Caesarean value, it is compared to the tabular critical value and the decision is made as follows:

** If $F_{cal} > F_{upper\ criticql}$ In this case, the presumption of nullity and acceptance of the alternative presumption (i.e., the existence of a common complementarity) would be rejected;

** If $F_{cal} < F_{lower\ criticql}$ In this case, the presumption of nullity and the rejection of the alternative (lack of common complementarity) will be accepted;

** but if $F_{upper\ criticql} < F_{cal} < F_{lower\ criticql}$ If, in this case, the test is considered to be unsettled (uncertainty area).

Table N⁰(05) :Bounds test results for ARDL model

ARDL Bounds Test Date: 09/24/22 Time: 12:29 Sample: 1992 2020 Included observations: 29 Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	6.820314	2
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

Source: Prepared by researchers based on Eviews output.

The table above shows that the F-stat value = 6.820314 is greater than the upper limit of the critical values at the different morale scores shown in the table above, thus rejecting the nothingness hypothesis and accepting the alternative hypothesis of a long-term equilibrium relationship between the study variables.

The value of 1 R-squared= from the border test indicates that independent variables explain 100% of the changes in the inflation logarithm and that the rediscount rate was much larger than the effect of the growth of monetary supply in the broadly representative sense of monetary policy on inflation in Algeria.

d. Estimation of the long-term model and error correction formula of the ECM model using the. ARDL model

After ensuring that there is a common integrity to the model variables, we will estimate the long-term relationship and the error correction form in the following table:

Table N^0(06) :Estimation of error correction model, short-term relationship and long-term relationship form of ARDL model.

ARDL Cointegrating And Long Run Form
Dependent Variable: INF
Selected Model: ARDL (2, 0, 1)
Date: 09/24/22 Time: 13:27
Sample: 1990 2020
Included observations: 29

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF)	0.211603	0.160835	1.315657	0.2013
D(M2)	0.014493	0.183045	0.079176	0.9376
D(DR)	4.807922	2.235059	2.151139	0.0422
CointEq(-1)	-1.109133	0.219422	-5.054796	0.0000

Cointeq = INF - (0.0131*M2 + 1.5382*DR -0.2292)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
M2	0.013067	0.164283	0.079538	0.9373
DR	1.538177	0.413857	3.716690	0.0011
C	-0.229169	3.419409	-0.067020	0.9471

Source: Prepared by researchers based on Eviews output.

d.1. **Estimation of the long-term model using a model ARDL:** shows the lower part of Table 06 Estimation of the long-term relationship.

The statistical and economic analysis of the results of this table are as follows:

- The growth of the money supply in the broad sense has had a weak, positive effect on long-term inflation, and corresponds to economic

theory, but was not statistically intangible at a moral degree (0.9373), since the increase in the growth of the money supply in the broad sense by 1% leads to an increase in inflation of approximately 1.31%;

- The rediscount rate has had a strong, positive effect on long-term inflation, which is contrary to economic theory, since the increase in the rediscount rate is a deflationary monetary policy that leads commercial banks to be relatively reluctant to rediscount commercial paper at the central bank, since they lose a large proportion of these notes in exchange for liquidity preference, so they keep these notes until they reach their due date, to the extent of unavoidable needs. In this process, we limit the circulation of cash. This effect has been very moral, acceptable at a moral level of 1% (0.0011), since the increase in the rediscount rate by 1% leads to an increase in inflation of about 153.82%;
- The fixed limit value of 0.2292 refers to the part of the effect on inflation that cannot be explained by independent variables, or in other words, that percentage of the effect on inflation even if there is no broad-concept cash supply and rediscount price.

From the above it is clear:

The growth of monetary supply in the broad sense has had a very weak and positive impact on inflation through monetary policy, for several reasons:

- The problem of the lack of confidence that Algerian society has in banks, as a result of several illegal practices, leaves us with a very weak monetary policy. This is despite the many banking reforms that Algeria has undertaken, the most important of which is the 90/10 Law on Money and Credit, which has shown what is known as the problem of trading outside banks, in the absence of a real political will. The following are the following:

▪ Weak effectiveness of monetary policy, as monetary policy actually targets only the small part of the monetary block because most of it does not circulate within the banking system, which results in a lack of good control of the monetary block in the economy;

▪ Depriving the Algerian economy of additional financial resources that can be channelled and allocated optimally to finance investments and productive projects, thus creating real added value that does not result in the exacerbation of inflation, in contrast to the rampant imaginary projects that have no economic benefit other than the use of real estate and the loans resulting from it.

- The problem of the lack of diversification in the revenues of the Algerian economy and its dependence on oil resources, which in fact is subject to market fluctuations, and at the same time continuous demographic growth has led to the insufficiency of these revenues sometimes to cover the corresponding increased expenditures, resulting in a deficit in the general budget. Financing of this deficit is often through monetary issuance and with the inflexibility of the production system to add value to that cash issuance, which makes it directly reflect on purchasing power and exacerbates inflation, thus continuing a vicious circle;
- The lack of interest in, and freedom to enter, privatization in the banking sector makes us vulnerable to a respectable public banking sector that does not amount to providing quality banking services. Lending accounts are often for political purposes or specific loyalties rather than being directed to projects that are well-considered and effective. This creates an atmosphere of real competition and gives rise to quality and low-cost services that promote investment, thereby creating added value and reviving the economy and thus breaking the inflation bottlenecks;
- The issue of the independence of the Central Bank, although legally available and strong, is in fact not found to have any reassuring effect on the monetary situation in general, and monetary policy in particular, since the Chief Executive is not independent in his decisions and does not take into account the economic variables in this regard. His decisions are often a mixture of populism and politics, far removed from real economic requirements.
- The lack of a clear policy of inflation targeting by the monetary authority, which has resulted in a significant weakening of purchasing power year after year, not to mention a floor exchange rate, which is exacerbated year after year. This has affected the social situation of citizens, which leads to demands for higher wages and prices. Thus, the process remains in a vicious circle, without a strong production sector to overcome this impasse:

The rediscount rate had a very large and positive impact on inflation through monetary policy. This effect was in the range of 153.82%, since the monetary authority raised these rates in the early 1990s to achieve a sort of decrease in the growth of the monetary bloc. It began to decline from 1999 to be almost stable, 4% from 2004 to the end of the period.

This shows that this instrument was not activated in monetary policy in Algeria, not to mention that the effect was inconsistent with the growth of the monetary bloc.

This predicts the ineffectiveness of this means and the existence of some imbalance, especially with the adoption of the Algerian state's Keynesian approach through its expansion in government spending, especially since 2001, as it believes that these unemployment rates are a result from the reduction of various national programs The Algerian economy does not meet the requirements of the Keynesian approach, as the latter requires a flexible production sector and a sophisticated banking system that absorbs the increased demand resulting from this expansion of government spending and converts it into value-added that increases growth and reduces inflation - something that the Algerian economy lacks.

d.2. **Estimate error correction formula for a model (ECM):** The upper part of Table (06) shows the estimation of the error correction model and the short-term relationship. The statistical and economic analysis is performed according to the results of this Table as follows:

On the top, the independent variables were, statistically, at a 5% probability level change has a rediscount rate.

The growth of the money supply has been uneven, and the effects have been positive and negative, to the point of a fixed error. The growth of the money supply in the broad sense has positively affected by 1.45%, as has the rediscount rate by 480.70%. That is, when the above variables increase by 1%, it leads to an increase in inflation in the above rates.

The results of the error correction form showed that the slower error correction threshold factor reveals the speed or slow return of the variables to the equilibrium state. This coefficient must be both moral and negative in order to detect a common integration of the variables.

The absolute value of the error correction threshold factor indicates the speed of restoring balance. The negative signal shows the approximation of the kinetic model in the short term. The negative and moral coefficient associated with slowing the error correction threshold should be a more effective means of showing the common integration.

The correction coefficient also indicates the ability of the dependent variable to slow down one year at the level, and one of its specifications is negative. It means the percentage of short-term errors that can be corrected by one time in order to return to long-term equilibrium (i.e., the imbalance of

the previous year is corrected by the current year), and a morale that means that there is a long-term relationship and therefore a:

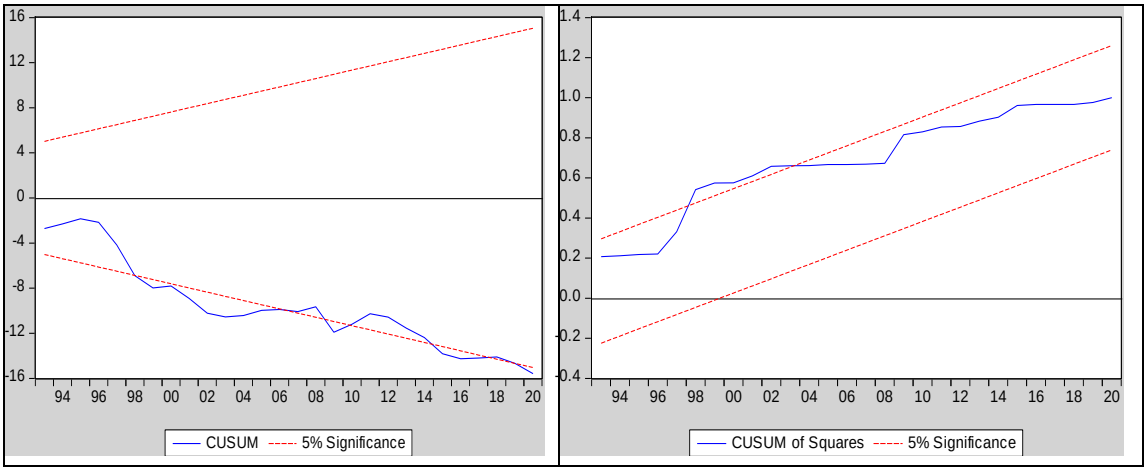
**** Negative (necessary condition):** The value of the error limit through the equation is (1.109133 -) and thus the negative condition is achieved. It can be said here that 110.91% of the short-term errors can be corrected at one time (year) in order to return to the long-term equilibrium, i.e. the correction factor (1-) Cointq, that 110.91% of the deviations and imbalances in inflation in the previous year (t-1) are corrected in the current year (t);

**** Morale (sufficient condition):** Probability of error limit 0.0000, i.e. accepted at level 1%, so long term relationship can be confirmed.

e. Transaction Structural Stability Test .

From the EVIEWS output, the results of the test are as shown in the figure below:

Fig N^0(01): Test of the cumulative recurrent sum of both the remainder and the remainder boxes.



Source: Prepared by researchers based on Eviews output.

From the graph shown in Figure 01, we see that for this model, the CUSUM error accrual test crosses a linear mean within the boundaries of the critical area, even if there is a deviation that is quickly returned by some stability of the model at 5% moral limits. Also, for the test of the sum of the cumulative error squares (of squares CUSUM), these tests show that there is some stability and consistency in the model between the long-term results and the short-term results.

4. Conclusion:

Controlling or influencing inflation is an inevitable consequence of the efficiency of economic policies, especially monetary policy, given the relationship between these latter and their intended objectives, especially the

general stability of prices. However, this is not the case in Algeria, where the effectiveness of monetary policy was limited, since inflation targeting requires an advanced monetary system and the independence of the central bank to enable it to predict the inflation target.

- **Study results**

Using the ARDL module, he came up with a number of results:

- A positive relationship between the rediscount rate and the inflation rate (discounted), which statistically is moral in the long and short run, but economically it is not identical and the economic theory is that this instrument is inversely related to the inflation rate, as the lifting from the latter results in commercial banks' reluctance to deduct their commercial paper before the due date and thus reduce the monetary supply and rein in inflation;
- A positive and progressive relationship between the money supply in the broad sense, the inflation rate and, statistically speaking, uneven. Economically, it is consistent with economic theories, since an increase in the money supply in the broad sense leads to an increase in inflation, since the productive apparatus is not flexible enough to contain the resulting excess demand;
- The monetary policy in Algeria is ineffective enough to contain inflation through the policy of inflation targeting, because the policy of inflation targeting requires an advanced monetary structure that meets the conditions of the latter of the independence of the central bank, and the power of infrastructure ...

- **Study Recommendations**

- The Algerian legislature must enact laws that are more serious in terms of legislation and implementation, thus ensuring the independence of the central bank and thus enabling it to develop its monetary system and modernize its monetary mechanisms and the new requirements in the modern monetary market in order to be flexible in such a way that it responds to all monetary transactions in a timely and appropriate manner;
- Developing the financial market as a support for the monetary market in terms of financing and avoiding the dependence of the State on monetary issuance in the event of a general budget deficit and thus inflation;
- To pay attention to the productive sector and to provide a suitable atmosphere for investment, with the aim of creating a production apparatus that can absorb increasing demand and thus reduce the general level of prices.

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