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The Algerian Bank's Sterilization Policy and the Sustainability Problematic: Roberto Frenkel's Scenarios (2005-2015) *

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السياسة التعقيمية لبنك الجزائر وإشكالية الاستدامة: سيناريوهات *Roberto Frenkel (2005-2015)*

ملخص:

تهدف هذه الدراسة أساسا إلى سبر غور السياسة التعقيمية المطبقة من طرف بنك الجزائر بشكل مستمر دون أن تظهر بوادر الخوف من تكاليفها المتراكمة خلال فترة لا بأس بها من الزمن. وتعد سيناريوهات Roberto Frankel من أفضل المعادلات التي تعطي الدلالة المتكاملة الجوانب في هذا السياق، ولأجل هذا تم الاعتماد على بيانات سنوية تزامنت والطفرة النفطية في الجزائر (1520– 2005) تخص جميع المتغيرات التي نصت عليها تلك المعادلات من أجل محاكاة السيناريوهات وتشخيص وضعية بنك الجزائر. ولقد أكدت نتائج الدراسة أن السياسة التعقيمية مازالت لحد الآن تتصف بالاستدامة في التطبيق استنادا إلى ثلاث نتائج فرعية تمثلت في: المستوى المتدني لسعر الفائدة المحلي (2%)؛ هامش مناورة واسع لاستقلالية السياسة النقدية (يتراوح بين 16 إلى 28%)؛ ونتائج شبه مالية موجبة طيلة الفترة ككل.

الكلمات المفاتيح: سياسة التعقيم النقدي، شرط الاستدامة، الأدوات التعقيمية المكلفة، امتصاص فائض السيولة، سيناريوهات Frenkel.

Abstract:

This paper mainly aims to explore the reality behind the continued implementation of the sterilization policy by Algerian bank for a long time without concerns about growing costs. For this purpose, we try to simulate Roberto Frankel's model scenarios using annual data covering the period 2005-2015. Our findings showed that the sterilization policy is so far sustainable given to three main sub-results, namely the domestic interest rate at a low-level (less than 2%) which certainly guarantees the sustainability condition, a large room for the monetary autonomy (ranged between 16 and 28%), and a positive quasi-fiscal result for the whole period.

Keywords: Sterilization policy; Sustainability condition; Interest-bearing instruments; Mopping up excess liquidity; Frenkel's model scenarios.

1. Introduction

To cope with large capital flows, many countries have relied on monetary sterilization policy, which is broadly defined as the monetary operation through which a rise in net foreign assets is offset by a decrease in net domestic assets, thereby keeping the monetary base constant. As the policy works to strength the central bank independence, it has been and continues to be an explicit trend towards adopting this policy. Also, it is based on a substantial idea which explains the offset mechanism between monetary counterparts (both foreign and domestic assets) to effectively isolate the monetary base from capital movement.

Once the host economy starts to receive capital inflows, the problem may not be related to how much the central bank can decrease its domestic assets to offset the increase in foreign ones, but it is much more related to the sustainability of policy implementation, i.e. to what extent the central bank can absorb the operation costs engendered by the interest rates paid to lure the counterparties in order to engage in the sterilization process.

Over the last few years, Algeria has experienced unprecedented petrodollar revenues resulted from the oil prices scaling up, and in view of the regulatory and legal Commitments imposed on oil exporters (Sonatrach and its foreign partners) to waive all returns (dollar denominated) to the Algerian bank (AB) in exchange for an equivalent amount denominated in local currency, a structural excess liquidity has emerged as a new phenomenon in need of mopping up to avoid the overheating pressures in the economy.

Along the lines of the central banks that applied the same policy, the AB has been relying on Interest-bearing instruments which demonstrate the cost side at the end of their maturity even if it is long. To explain this issue in detail Aizenman (2009: pp. 777-801) focuses on the difference between, on the one hand, the return paid on central bank liabilities issued to sterilize domestic liquidity and, on the other hand, the return earned on foreign reserve assets, as long as the latter is higher than the former there is no fear about sterilization sustainability. However, the problem is in the nature of policy per se, as it is designed to prevent a decline in interest rates, it maintains the incentives for continuing capital inflows, thus perpetuating the problem (Cardarelli et al. 2010: pp. 333-356). Also, Calvo et al. (1993: pp. 108-151) describe it as a step that tends to keep up a high domestic-foreign interest rate gap and

that gives rise to increased fiscal burden. Not to mention the sterilization game, which adds insult to injury, when the banks start to borrow cheaply abroad and invest these funds domestically in high-yielding sterilization bonds, as it happened in Czech during 1995 (Christensen, 2004).

As the cost of sterilization is likely to increase as the volume of issuance increases, or as the policy implementation lasts a long time. In such circumstances, the central bank may instead choose to rely on reserve requirement ratio, but Mehrotra (2012: pp. 111-131) explains that such a step requires a trade-off between the yield on central bank securities and the rate of remuneration on required reserves. Eventually, the massive sterilization will lead to the quasi-fiscal deficit of a central bank, which may hurt its independence and credibility (Dalton and Dziobek, 2005) and, even more, it may depart from the predetermined exchange rate path, in order to liquidate part of the domestic debt through surprise inflation (Calvo, 1990). Briefly, if countries start to engage in greater monetary sterilization, it will have to be able to contain the cost side, especially in the long run.

Our paper mainly asks whether sterilization policy of the AB over the period 2005-2015 was and still sustainable? The next sub-questions that need to be answered are: how long can AB sterilization continue without eroding its policy autonomy? And what are the limits to sterilization?

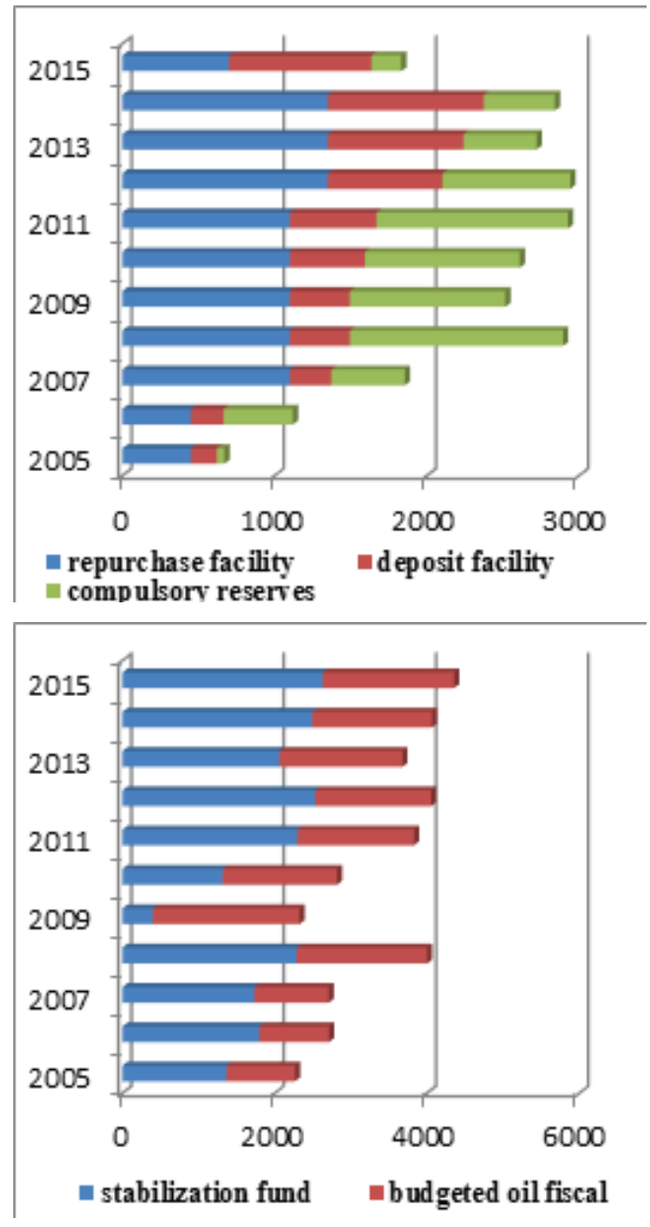
2. The Mix of Sterilization Instruments of the Algerian Bank

The essential piece of the puzzle of sterilization costs is the so-called "hard currency monetization" as explained above. Consequently, the AB will be obligated to bear the cost of the absorbed liquidity represented in the interest rate paid to the counterparties that already participated in the sterilization process.

Many instruments have been recently created for the purpose of mopping up excess liquidity, which can be divided into two main categories: market-based and non-market based instruments. As for the first one, there are two tools(1) namely, repurchase facility (for seven-day, three and six-month) and permanent deposit facility (for 24 hours), the former describes as an interest-rate tender through which the AB announces the total amount that must be absorbed without predetermined interest rate as long as it does not skip its maximum level, whereas the latter can be considered as a volume tender because the AB announces a fixed interest rate with the volume of deposits unspecified before the auction. The second category also comprises two tools(2), the compulsory reserves and the stabilization fund (Le Fond de Regulation des Recettes), both of them do not involve any financial transaction to withdraw liquidity, but they are just quantitative barriers, rules or restrictions on market activity which try to keep potential injections of liquidity outside the banking system.

Figure 1.

Sterilization Instruments of the Algerian Bank



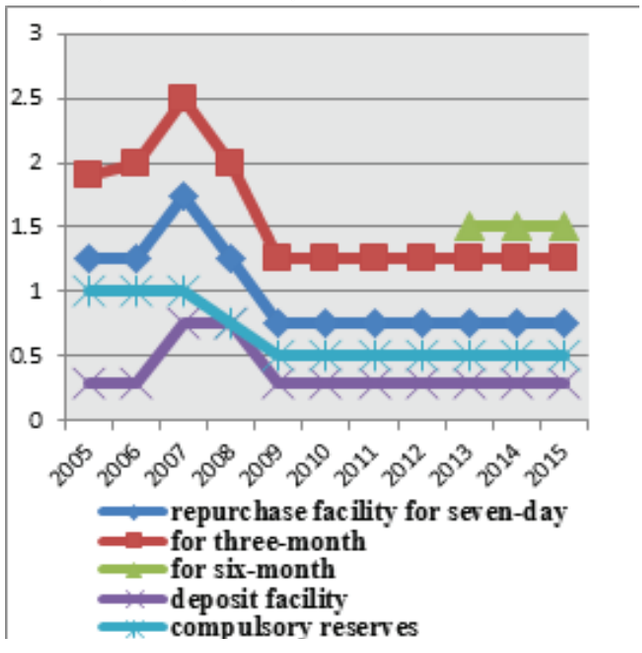
Source: AB and authors' calculations.

The repurchase facility often absorbs around 40 to 50% of the total excess liquidity, the remainder is shared by both the deposit facility and the compulsory reserves (roughly 30 and 25% respectively). The stabilization fund operates in a completely different way, we cannot consider it as a monetary tool, but this does not deny its important role because it confiscates the fiscal amounts resulting from the difference between the real and the reference price of the oil barrel. Actually, these amounts are not included in M2(3) structure, and they contribute to alleviating the net domestic assets of the AB (debit items) as a mechanism to offset the evolution of its foreign assets. Irrespective of its nature, it was able to curb more than 60% of monetized balances in all years except 2009-10. Thus, it has already eliminated the inevitable dealing with absorption costs.

It is also important to keep in mind that each instrument has a different activity rate excepting the stabilization fund, which is just a transformation of unremunerated funds from the treasury to the AB account, thus it does not entail quasi-fiscal costs as compared to other tools.

Figure 2.

Activity Rates (Yield/Cost) of the Sterilization Instruments



Source: AB.

At first glance, the repurchase facility seems to be the most costly instrument depending on its high activity rates, but this prejudgment is hazy unless the size of withdrawn liquidity and the mature of instruments are taken into account. In effect, all these indicators explain only one side of the sterilization sustainability, if we do not include the exchange rate variations, foreign interest rate, and the revenue resulted from reserves investment, we cannot confirm whether the policy has successfully worked over an extended period of time when shocks were durable

3. Model Specification

Using interactive equations, Frenkel (2007: pp. 29-36) formulates various models, through which he concludes the sustainability conditions, i.e. the conditions under which the central bank can continue to engage in the requisite sterilization policy without bearing excessive costs and eroding its policy autonomy over time.

The models that we will simulate later in our paper can be divided into three parts as follows:

3.1 The Sustainability Condition

$$s = i - r - e \ldots\ldots\ldots (01)$$

$$i = r + e \ldots\ldots\ldots (02)$$

$$i \leq r + e \ldots\ldots\ldots (03)$$

Equation (01) can express the costs of sterilization at any time, where (e), (i), (r) and (s) respectively represent the rate of growth of the domestic price of foreign currency (), the domestic interest rate, the international interest rate, and the cost of sterilization.

Simply, the cost of sterilization (s) is zero if the sum of the international interest rate plus the rate of growth of the exchange rate is equal to the domestic interest rate (Equation 02).

As shown in equation (3), the sterilization policy would be sustainable as long as the cost of the policy is zero or negative, i.e. the domestic interest rate is less or equal the sum of both the international interest rate and the rate of the exchange rate growth. However, the equation (3) can be considered as a narrow condition for sustainability because Frenkel made it broader in a way that the domestic interest rate could skip the maximum level () without hurting the sustainability.

Introducing important variables (e.g. the

foreign reserves yield and the total stock of liabilities) and assuming that the central bank has foreign reserves as its only asset. Likewise, it issues two liabilities: monetary base and sterilization bills that yield the domestic interest rate. Accordingly, the equation (04) divides the central bank's total stock liabilities (P) into monetary base stock (B) and the stock of interest-bearing liabilities (L):

$$P=B+L\ldots\ldots\ldots(04)$$

$$\Delta P=\Delta B+\Delta L=CE+iL\ldots\ldots\ldots(05)$$

At each point in time, if there is an excess supply of foreign currency (C) in the foreign exchange market, which the central bank purchases, taking current interest rate (i) and the exchange rate (E) into account. The increase in central bank's total liabilities can be expressed in equation (05), where (CE) is the value of the flow (C) denominated in local currency, (iL) is the flow of interest that the central bank has to pay over the stock (L) of interest-bearing liabilities. Knowing that the increase in the demand for monetary base equals:

$$\Delta B=B\delta(p+y)\ldots\ldots\ldots(06)$$

where (p), (y) and (d) are respectively the rate of inflation, the rate of growth of real GDP and the demand elasticity of the monetary base to nominal GDP.

Taking the central bank's stock of foreign reserves (R) and the foreign reserves yield (the international interest rate) (r), the increment of the local currency denominated reserves (ΔRE) defined as:

$$\Delta(RE)=R\Delta E+E\Delta R$$

$$=R\Delta E+E(C+rR)$$

$$=R\Delta E+EC+ErR\ldots\ldots\ldots (07)$$

As mentioned earlier, the sterilization sustainability, on the one hand, depends on the central bank›s burdens resulting from increasing its liabilities and, on the other hand, on its revenues derived from reserves invested abroad (taking exchange rate swings into account). As long as the former does not exceed the latter, the policy unsustainability cannot happen. Therefore, the condition of sustainability can be expressed as:

$$\Delta P\leq\Delta(RE)\ldots\ldots\ldots(08)$$

In other words, if the ratio between the central bank's total liabilities and the value of foreign reserves in local currency () does not increase (equals or less than 1), the sustainability will be achieved.

By substituting equations (05) and (07) in the above sustainability condition (equation 08) we obtain:

$$CE+iL\leq R\Delta E+EC+ErR$$

$$iL\leq R\Delta E+ErR\ldots\ldots\ldots..(09)$$

By dividing expression (09) by (RE) it results:

$iL/RE\leq e+r$ / where $e=\Delta E/E$ as mentioned above.

Or, $i\leq((e+r))/(L/RE)\ldots\ldots\ldots(10)$

The sterilization policy is sustainable with interest rates that are equal or lower than the second term of above equation. If we put

$$Lr=L/RE$$

as a ratio between the central bank's stock of interest-bearing liabilities and the value of foreign reserves in domestic currency, then the sustainability condition can be formulated as:

$$i\leq (e+r)/Lr\ldots\ldots\ldots.(11)$$

In contrast to equation (03), the domestic interest rate in equation (11) can be higher than (e + r) without hurting the sustainability if $Lr< 1$.

As the equation (11) includes a mixture of variables namely, domestic and international interest rates, (Lr) and also the exchange rate's trend, we can call it the broad sustainability condition.

3.2 The Degree of Monetary Autonomy

Depending on equation (11), the maximum interest rate that maintains the sustainability of sterilization policy can be expressed in equation (12). Also, the equation (03) suggests defining the degree of monetary autonomy as the difference

between the maximum domestic interest rate that allows the sustainability of sterilization policy and (r + e). by calling () the mentioned maximum rate and (g) the degree of monetary autonomy, the latter can be defined in equation (13).

$$Imax=(e+r)/Lr \quad \ldots\ldots\ldots (12)$$

$$g=Imax-(r+e) \quad \ldots\ldots\ldots (13)$$

By substituting equations (12) into (13), the degree of monetary autonomy is:

$$g=(e+r)/Lr-(r+e)$$

$$=((r+e)(1-Lr))/Lr \quad \ldots\ldots\ldots (14)$$

The lower (Lr) the higher the degree of monetary autonomy.

3.3 The Central Bank's Financial (Quasi-fiscal) Result

The equation (15) defines the central bank's financial result (Cf), and the equation (16) clarifies the requirements of a positive result. Taking into account and dividing equation (16) by (RE) we conclude that the domestic interest rate which ensures the sustainability condition (equation 11) is the same as that guarantees the condition of non-negative financial results (equation 17).

$$Cf\approx RE(r+e)-iL \quad \ldots\ldots\ldots (15)$$

$$Cf\approx RE(r+e)-iL\geq 0 \quad \ldots\ldots\ldots (16)$$

$$Cf/RE\approx r+e-iLr\geq 0$$

$$i\leq((e+r))/Lr=Imax \quad \ldots\ldots\ldots (17)$$

4. Data, Methodology and Simulation Results

4.1 Data Description

The domestic interest rate (i): as the AB does not declare this variable, we can calculate it depending on the weighted average of each sterilization instrument (repurchase facility for 7-day, 3 and 6-month, permanent deposit facility and the compulsory reserves), then we can calculate the geometric average for these weighted annual averages to get a consolidated domestic interest rate for the whole period.

The foreign interest rate (r): we can depend on what the AB periodically declares(4) (whether in its annual reports or during the interventions of the Governor, Mohamed Laksaci) as a weighted average foreign interest rate for its foreign exchange reserves invested abroad.

The growth rate of the domestic price of the dollar (e): an uncertain quotation is used for the Algerian dinar (DZD). Also, the dollar currency has only been taken into account, although there are other assets denominated in different currencies in the AB's investment basket. This in view of the fact that the revenues generated by the investment operations (rR) are entirely dollar-denominated in the balance of payments (under the item of the factor income).

(Lr): indicates the ratio between the nominal value of the liquidity absorbed by the AB depending on its interest-bearing instruments (expressed above as a stock of interest-bearing liabilities) (L), and the value of the exchange reserves denominated in Algerian dinar (RE)

(iL): reflects the costs side resulting from interest rate paid to the counterparties, which already participated in the sterilization operations.

All data used to simulate statistically Roberto Frenkel's model scenarios was collected from AB's annual reports and its statistical bulletins as well.

4.2 Methodology

The aforementioned questions can be answered through an analytical approach, which aims to gather a set of data (All the data are from the AB annual reports and covering the period 2005-2015) to run a number of steps, which are developed to simulate Roberto Frenkel's model scenarios. The first is to calculate a local consolidated interest rate of the different sterilization instruments in order to evaluate the costs volume and investigate the sustainability condition. The second is to determine the degree of monetary autonomy. The third is to assess the AB's financial (quasi-fiscal) result of the whole process.

4.3 Simulation Results

In this particular part, we try to explore the simulation results of both the broad and narrow sustainability condition (equation 03 and 11), then we can conclude the degree of monetary autonomy (equation 14), in addition to calculating the AB's financial Result (equation 16).

4.3.1 The Sterilization Policy Sustainability Condition

As explained above, the sustainability condition depends on the domestic interest rate, which should not exceed the sum (e+r) in the narrow sense and ((e+r)/Lr) regarding the broader sense. Therefore, we should first calculate the consolidated domestic interest rate (i) as shown in the following table:

Table 1.

The Consolidated Domestic Interest Rate (i) (%)

Interest rate	Liquidity mopping up operations			Deposit facility (for 24 hours)	Compulsory reserves (for month)	Weighted average
	7-day	3-month	6-month			
2005	1.25	1.90		0.30	1.00	1.64
2006	1.25	2.00		0.30	1.00	1.71
2007	1.75	2.50		0.75	1.00	2.09
2008	1.25	2.00	-	0.75	0.75	1.66
2009	0.75	1.25		0.30	0.50	1.04
2010	0.75	1.25		0.30	0.50	1.04
2011	0.75	1.25		0.30	0.50	1.04
2012	0.75	1.25		0.30	0.50	1.04
2013	0.75	1.25	1.50	0.30	0.50	1.31
2014	0.75	1.25	1.50	0.30	0.50	1.31
2015	0.75	1.25	1.50	0.30	0.50	1.31
Geometric average (i)					1.34	

Source: AB and authors' calculations.

The above table presents the consolidated domestic interest rate (i) for the period as a whole, which equals 1.34%. The remaining step to judge the sustainability condition is to calculate the second party of both equations (03 and 11) in the following table:

Table 2.

The Narrow and the Broader Condition of Sustainability (%unless otherwise indicated)

Interest rate	(x) Dinar against 1 Dollar	(e)	(r)	(e+r)	(L) (Billion dinars)	(RE) (Billion dinars)	(Lr)
2005	73.36	1.79	4	5.79	671.2	4121.4	16.29
2006	72.65	-0.97	4	3.03	1121.5	5650.7	19.85
2007	69.37	-4.51	4	-0.51	1855.2	7643.2	24.27
2008	64.57	-6.92	4	-2.92	2895.1	9240.0	31.33
2009	72.65	12.51	4	16.51	2516.9	10818.3	23.27
2010	74.4	2.41	3	5.41	2610.8	12069.2	21.63
2011	72.85	-2.08	3	0.92	2927.8	13274.7	22.06
2012	77.55	6.45	2	8.45	2942.2	14785.7	19.90
2013	79.38	2.36	2	4.36	2721.3	15400.5	17.67
2014	80.56	1.49	2	3.49	2842.6	14414.6	19.72
average				4.45			21.27
2015	107.13	32.98	2	34.98	1832.6	15440.6	11.86
average				7.23			20.17

Source: AB and authors'calculations.

The above table shows the narrow condition of sustainability (equation 03) which is: (i.e. 1.34% £ 7.23%), as well as the broader sense (equation 11) (i.e. 1.34% £ 35.8%), both of them are absolutely realized. Therefore, the sustainability condition is so far valid.

Obviously, when taking (Lr) into account this makes the sustainability more viable (even if

(i) is more than 7.23%), but the substantial role has actually been played by the exchange rate depreciation(5) over time. If we exclude 2015 (the highest depreciation), the broad (narrow) condition would be calculated at a lower level 20.9% (4.45%). Thus, the more exchange rate depreciation the more sustainable viability.

4.3.2 The Degree of Monetary Autonomy

Indubitably, the monetary autonomy also depends on the domestic interest rate which reinforces the AB's ability to target the inflation independently without concerns about costs.

Depending on the above table 2, and substituting in equation (14), the autonomy degree can be derived as follows:

$$g=(7.23\%(1-20.17\%))/(20.17\%)\ ;$$

excluding 2015, g=

$$(4.45\%(1-21.27\%))/(21.27\%)$$

The ratio (g) reflects the range in which the AB can adopt any interest rate for its sterilization purposes, and remains able to target its domestic objectives unless this rate does not exceed the upper limit of that range 28.61% (16.47% excluding 2015). The latter, in effect, gives the AB a large maneuver margin given to the current domestic interest rate (for only sterilization operations) which does not even exceed 2%.

However, both massive foreign exchange reserves denominated in dinar, and liquidity absorbed at mild levels have eventually led to reducing (Lr) which is inversely related to the concept of the monetary independence, not to mention the favourable role of the foreign interest rate plus the dinar exchange rate (a weaker dinar signifies more nominal value of the foreign reserves and their returns). Therefore, the sterilization policy implementation is still in favor of the AB.

4.3.3 The Algerian Bank's Financial Result

Given the clear difference among the sterilization instruments (i.e. maturity dates, the interest rates paid and activity rates), the consolidated domestic interest rate could not properly reflect the costs side. Thus, the cost of each instrument would be taken individually (multiplying its interest rate by its activity related to liquidity absorption) in order to obtain the accurate costs as calculated in the following table:

Table 3.

The AB's Quasi-Financial Result (Billion dinars unless otherwise indicated)

	Liquidity mopping up costs					
	7-day	**3-month**	**6-month**	**Deposit facility**	**Compulsory reserves**	**iL trillion dinars**
2005	22,5	68,4		1,8	20,6	0,11
2006	12,4	88,2		16,4	25,8	0,14
2007	177,9	75,9		58,0	32,7	0,34
2008	123,8	66,0		168,0	35,5	0,39
2009	74,3	41,3		36,8	23,7	0,18
2010	74,3	41,3		36,6	29,6	0,18
2011	74,3	41,3		45,3	34,2	0,19
2012	74,3	41,3		30,2	45,2	0,19
2013	81,0	41,3	31.5	17,3	53,5	0,22
2014	81,0	41,3	31.5	16,9	61,4	0,23
Sum						2,19
2015	22.5	41.3	31.5	7.1	56.1	0,16
Sum						2.35

	RE(e+r) trillion dinars trillion dinars	(Cf)	
		trillion dinars	Billion dollars
2005	0,24	0,13	1.71
2006	0,17	0,03	0.39
2007	-0,04	-0,38	-5.53
2008	-0,27	-0,66	-10.27
2009	1,79	1,61	22.17
2010	0,65	0,47	6.33
2011	0,12	-0,07	-1.01
2012	1,25	1,06	13.65
2013	0,67	0,45	5.63
2014	0,50	0,27	3.36
Average		0,29	3.64
Sum	5,09	2,89	40.08
2015	5,40	5.24	48.94
Average		0.74	7.76
Sum	10.49	8.13	85.37

Source: AB and authors' calculations.

Until 2014, the AB's quasi-financial result was overwhelmingly positive except for the years: 2007, 2008 and 2011 where the losses respectively attained 5.5, 10.3 and 01 billion dollars due to the depreciation of the dollar against the dinar during the same years (4.5, 6.9 and 2% respectively). The level of foreign interest rates could not contain such changes as in 2006 (dollar depreciated by about 1% without recording a negative result). Overall, the average of the financial result equals to 3.6 billion dollars, and then it multiplies to 7.7 billion dollars in 2015 given the highest depreciation of the dinar which makes RE(e+r) in the same year higher than its total during the whole previous period.

Basing on the above table and substituting in equation (16) we find:

$$Cf \approx 10486.5-2352.4=8134.1>0 ;$$

excluding 2015,

$$Cf \approx 5085.4-2194=2891.4>0$$

Although the financial result average is positive, but it is important to keep in mind that losses, as mentioned above, took place in three times, each one of them detects a core meaning of the sustainability. In other words, if losses occur there would unquestionably be a suddenly uncovered issuing which in turn leads to inflationary pressures, i.e. in such circumstances (costs more than returns), the AB monetizes the losses to meet its liabilities resulted from interest rates paid to the counterparties. Eventually, as long as the liabilities do not exceed RE(e+r) we cannot deal with unsustainability issue.

5. Conclusion

This paper attempts to explore whether the AB's sterilization policy is sustainable during the period of its implementation depending on Frenkel's scenarios models, and by using annual data over a decade (spanning from 2005 to 2015) for several variables, in order to simulate the concerned equations.

The simulation findings regarding the equations 03, 11, 14 and 16 confirmed the sustainability of sterilization policy during the whole period given the following sub-results:

1. The domestic interest rate is less than 2% and guarantees the sustainability condition.
2. A monetary autonomy with a large room ranged between 16 and 28%.

3. A positive quasi-fiscal result, i.e. all costs engendered by the domestic interest rate have been contained by the desirable changes in both foreign interest rates and the dinar exchange rate.

In the light of the aforementioned results, it can be submitted the following recommendations:

1. Although the low-level of the domestic interest rate, it is better for Algerian Bank to adopt a new set of sterilization instruments with a longer maturities to avoid costs renewal as is the case with short maturities

2. The exchange rate has played a substantial role in maintaining the sterilization sustainability, but at the expense of the currency depreciation. Therefore, the Bank of Algeria should try to influence the other relevant variables, especially the foreign interest rate through an appropriate diversification in its abroad investment

3. In fact, it is not better to permanently rely on the monetary sterilization policy because it is not a panacea per se, but it is a painkiller which gives the Algerian Bank an ample time, meanwhile, it is useful to make the necessary adjustments in the medium and long-term.

Notes :

1. The repurchase facility for seven-day was created in 2002, and given the frequent monetization of hard currency inflows, the AB had created two other facilities for three and six-month in 2005 and 2013 respectively.

2. Actually, the compulsory reserve was created in 1990 (Money and Credit Law No. 90-10), but it had stayed inactive until 2004 where it has been revived. As for the stabilization fund, it was created according to complementary financial law 2000.

3. M2 is a measure of the money supply that includes all elements of M1 as well as "near money." M1 includes cash and checking deposits, while near money refers to savings deposits

4. The AB has a top-secret policy about its foreign reserves investment, it does not even declare where it invests them nor the detail about matures and yields of the concerned assets.

5. In effect, it seems more appropriate to call it "an exchange rate devaluation, not depreciation» i.e. the AB most likely responds to the phenomenon of fear of flotation, but this judgment needs further researches to prove it.

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