OF GREEK CURSES AND STABILISATION PLANS IN ARGENTINA

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I. INTRODUCTION

In times of the Greek Empire an ancient though not proven wish assumedly stated; 'may the gods protect us from living in periods of transition'. Irrespective of whether the sentence was real, few doubts may even exist today that turmoil in transitions, let alone the cost for both countries and individuals, also impact on institutions and policies as the case is for those in charge of shaping the country's macroeconomic fundamentals.

In taking Argentina as a case study, our country underwent years of sustained chronic inflation during which all attempted strategies aimed at reverting the situation fell short of being successful. These disappointing results got the attention of many an outstanding economist, two of which, Guillermo Calvo and Carlos A. Végh authored important papers devouted to the case of emerging economies subject to long standing periods of chronic inflation.

Particularly, G. Calvo (2017) carried out in his seminal paper a thorough conceptual analysis of Interest Rate Based Stabilisation Plans (IRSP) and showed that their failure (despite some temporary success at the beginning) was inevitable whether the Taylor Rule included the market rate of interest or the one used by central Banks as the policy instrument. Main reasons for that were imperfect credibility on the part of economic agents over policy makers' stabilisation plans or the negative influence of backward looking inflation features in turn affecting their economic decisions.

It is also important to recall that, particularly as of 2010 the successive economic conductions in Argentina permanently attempted diverse stabilisation plans to checking the long standing levels of chronic inflation by the recourse to exchange rate anchors based on crawling peg mechanisms), not to mention the so called 'cepo' by which economic authorities introduced serious restrictions to the free functioning of the

exchange market and of operations in the external sector, .alongside the recourse to Central Bank's policy interest rates which, as will be shown in the next section, fell short of being effective (Rezk et al, 2022 and 2023).

Having said that, let it however be stated, in line with the message implied in the first paragraph, the main objective of the paper is to show that wrong or inadequate stabilisation plans counted for bad results; in this connection, the analysis carried out compare the economic performance of the three previous governments (C. F. Kirchner, M. Macri and A. Fernandez), particularly since 2010 through December 10, 2023 with that running from December 10, 2023 through July, 2024 when the political party led by Javier Milei won the election and brought about a new stabilisation programme.

The rest of this paper is organised as follows; Section 2 reviews some relevant theoretical and empirical literature on stabilisation plans and their performance in different scenarios. Section 3 in turn first analyses the Argentine macroeconomic scenario in the sub-period 2010-2023, including attempts aimed at curtailing inflation and also the sub-period 2024-25, during which the new elected government swiftly varied fiscal and monetary stabilizing strategies. Section 4 summarises robustness tests' results mainly from logit models. Section 5 concludes.

II. FUNDAMENTALS REGARDING STABILISATION PLANS

As will be shown in the next section, the Argentine macroeconomic scenario since the abrupt exit of the Convertibility Regime, and mainly from 2007 through 2023, was characterized by the so called phenomenon of sustained chronic inflation[1] which defied successive stabilising attempts to check it. It is therefore important, before dealing with the reasons for the mentioned policies' ineffectiveness, to review some valuable and important conceptual contributions which analysed this point particularly with reference to the performance of emerging economies.

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[1] The expression 'chronic inflation' was coined by F. Pazos (1972) who used it to describe the phenomenon of high and persistent inflation in some developing economies.

Calvo's paper (2017) which gathers the results of previous valuable research in this area[2] is particularly worth quoting here for its important policy implications. In his careful analysis, the author starts assessing the stabilizing role of a Taylor rule in small open emerging economies with perfect capital mobility and endogenous nominal money supply under two possible scenarios; that is, individuals' perfect or imperfect credibility[3].

Expression 1 below stands for the cash-in-advance constraint whereby the stock of money must be greater or equal to individuals' spending on home and tradable consumption goods.

$$1.\quad m_t \geq c_t/e_t + c^*_t$$

By assuming first the case in which individuals expect the IRSP (Interest rate based stabilization plan) to be successful, the domestic rate of interest is stated in 2 as follows:

$$2.\quad i_t = \rho + \varepsilon_t$$

in which i. ρ[4] and ε respectively stand for the domestic nominal rate of interest, the international rate of interest and the rate of devaluation of domestic currency. In turn, expression 3 shows the resorted to Taylor rule:

$$3.\quad I_t = \rho + \theta\pi_t \qquad \theta > 1›$$

in which π stands for the nominal inflation rate.

The stabilising performance of IRSP is analytical and graphically analysed by Calvo with the help of the ensuing diagramme 1 in which π (vertical axis) and e (horizontal axis) respectively stand for the already defined nominal inflation rate and the real exchange rate[5]. In the quoted case

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[2] See for instance Calvo (2007, 2016a, 2016b) and Calvo and Végh (1990, 1994, 1995, 1999)

[3] The analytical content of Calvo's paper to different scenarios can also be found in Rezk et al (2023), related to the Argentine case

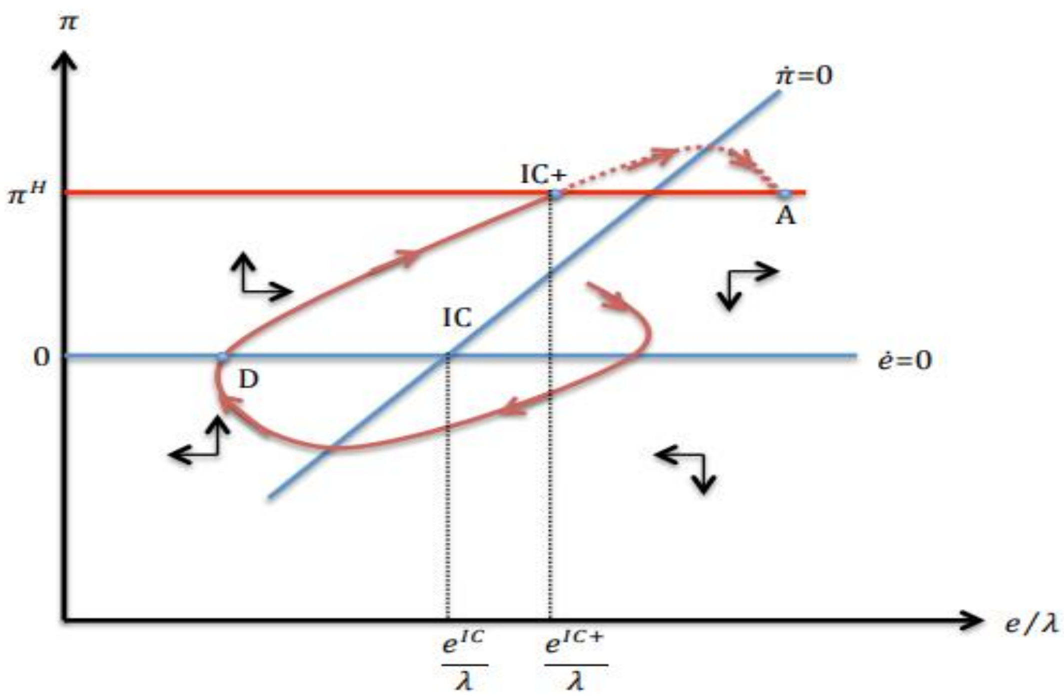
[4] ρ also stands for the international own-rate of interest on tradables, taken as given.

[5] Or the relative price of tradable in terms of home goods.

of perfect credibility (i.e. successful IRSP expected by agents), the inclined line represents combinations of π and e for what the rate of inflation = 0; that is, according to the stated Taylor rule used for the graphical example, the target inflation = 0[6]. The analysis carried out by Calvo (2017) concludes that in this scenario, given that local uniqueness is ensured and that there is a steady state equilibrium, the target inflation rate can be reached at once.

Contrariwise, if agents expect that the stabilization plan will be discontinued in $T > 0$ periods[7] and inflation will climb to a high level, denoted by $\pi > 0$ = initial inflation target, the case of imperfect credibility scenario is also shown in the ensuing figure 1.

FIGURE 1



Calvo (2017) analyses this case with the arrowed red line starting below the one standing for situations of 0 targeted inflation rate. In analyzing the new scenario, it is worth mentioning that point IC (imperfect

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[6] Although it is not necessary that the aimed at rate of inflation aimed equal 0, in this case this means that $\varepsilon_t = \theta\pi$.
[7] in line with the money based and exchange-rate-based stabilization literature (Calvo and Végh 1999).

credibility) in the above figure would correspond to steady state equilibrium solutions if the above Taylor rule held for all t. In change, the system will not start now at IC in reason of the regime change occurring at time T causing variables π and e to jump to a different steady state, which cannot hold in the interior solution.

Given agents´ schepticism over the previous stabilisation plan, policy makers are forced to set a new and more credible Taylor rule including a higher expected inflation rate π^H[8]:

$$4.\quad I_t = \rho + \pi^H + \theta(\pi_t - \pi^H)^9$$

From the graphical analysis of the Imperfect Credibility scenario the path followed by the arrowed red line seems at the beginning to indicate that the previous null rate of inflation can be reached again; nevertheless, this outcome will be soon discarded and the possibility of a much higher inflation will finally prevail as of point D.

Let it be emphasized that what the first stretch of the red arrowed line actually shows is a gradual decrease of the real exchange rate *e* which finds a floor at point D, at which stagflation defines the situation whereby underutilization of domestic economic capacity coexists with inflation rises (stagflation).

As the above figure shows, from D to IC+ a gradual depreciation of the domestic currency in real terms takes place allowing in turn to partially check capacity underutilization although full employment will only be restored at IC+ until the regime change at T and with a greater inflation rate π^H.

It is interesting here to summarize Calvo's conclusions for the performance of IRSP under Imperfect Credibility scenarios, in particular the

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[8] The **increase in the inflation target at *T* (from 0 to π^H) implies a sudden fall in the nominal interest rate at *T* [See Calvo (2017) p. 9 in fine].**

[9]**Calvo (2017) emphasizes that the system (14) and (15) fully describing the equilibrium dynamics of the economy for interior solutions still holds taking into account the new Taylor rule; that is, the system converges instantaneously to steady state and there is full-capacity utilization in the home goods sector.**

possibility of stabilisation plans may at the beginning work but later face periods of current account deficits and self-fulfilling stagnation prophecies. Furthermore, and given that after the Taylor rule-like condition includes a greater inflation rate, the result is a fall in interest rate and an increase in the consumption of both home and tradable goods restoring in turn full utilisation, it becomes then politically more difficult to get support for stabilisation plans aimed at fully eliminating inflation[10].

Another of Calvo's (2017) scenarios, the so called Liquid Central Bank Policy Assets, may better explain why successive Argentine stabilisation plans (or rather policymakers stabilisation's attempts) failed to curtail inflation levels during almost all the period considered[11].

The following assumptions need be stressed in relation to this scenario compared with those of the previous ones. There is no price inertia, nominal money supply is now exogenous and assumed to grow at a rate μ whereas a rate s is introduced as the central bank's policy instrument applied over assets yielding utility services[12].

Let it be assumed now that the following Taylor rule-like condition includes now the central bank's policy instrument s, as indicated by expression 5 below, being s and κ unrestricted parameters:

$$5.\ s_t = s + \kappa \pi_t$$ [13]

A worth stressing valuable conclusion here (shown by Calvo) is that neither changes in s nor the imposition of Taylor rules involving s (expression 5) will have any effect on long-run inflation while temporary effects are also totally ruled out. These striking but by no means surprising conclusions find support in the already stated assumption of exogenous

[10] In other words, what the situation describes is a trade-off between inflation and unemployment (the familiar ¨Philips Curve).

[11] That is, until January 2023.

[12] Calvo and Végh (1995) particularly stressed that "…the approach is plausible in economies with shallow domestic capital markets, where assets related to monetary policy (e.g., bank deposits, treasury bills) are held primarily for their local liquidity services, but their marginal liquidity may fall noticeably with the stock of those assets.

[13] $s = \kappa = 0$ holds prior to the inflation stabilisation programme

money supply and show, in Calvo's words "…*the contrast between interest-rate policy and the management of liquidity aggregates*"[14].

In strengthening his main argument, the following equation 6 is derived by the author, which compared with the previously stated Taylor rule-like condition reasserts the conclusion that the interest rate rule has no effect upon long run inflation:

$$6.\quad \Delta i_t / i_t = \mu - \pi_t$$

In terms of the analysis carried out for this scenario, Calvo (2017) somehow acknowledged monetarist arguments about the difficulty of efficaciously attacking inflation should central banks continued financing fiscal deficits directly endangering stabilization plans' chances of success. In sum, although stabilization plans could momentarily check inflation at the cost of capacity underutilization, it will eventually persist let alone 'credibility' problems on the part of individuals.

III. A DIFFICULT ARGENTINE MACROECONOMIC SCENARIO LASTING TOO MUCH

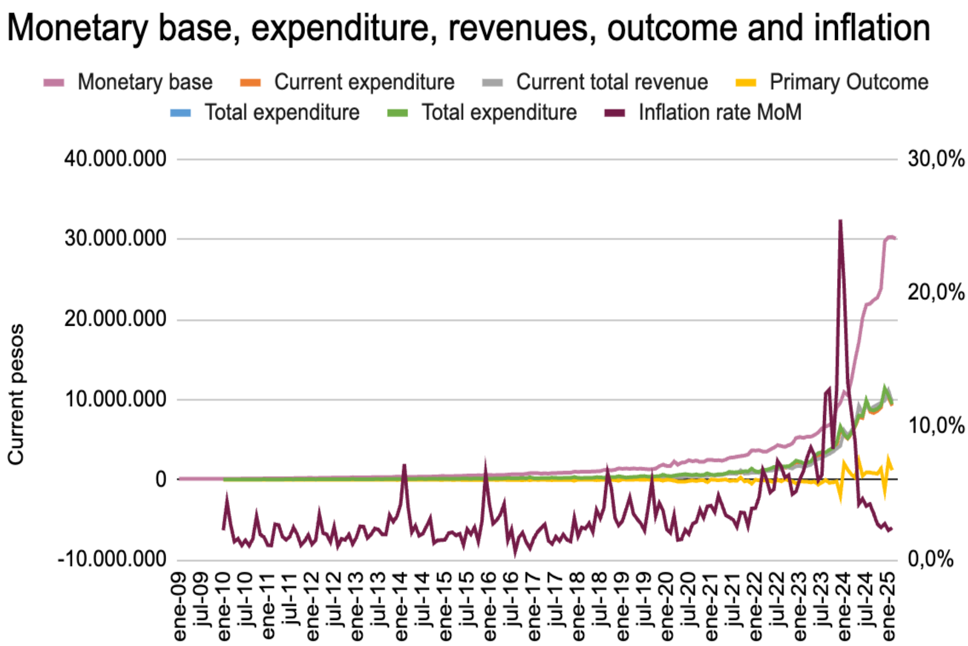
III.a Sub-period (2009-2023)

The ensuing diagramme 1 is particularly worth analyzing in so far as it contains a series of fiscal and monetary variables whose performances are not alien to the difficult situation the Argentine macroeconomics is undergoing, at least since 2007[15]. In the first place chronic inflation (as defined in footnote 1) stands as the principal economic problem, at least until 2023, which did not only thwart policymakers attempts seeking to check its oscillating rates in most of the period shown but also switched, as from 2020, to a pattern of increasing rates.

[14] Calvo (2017), p. 14.
[15] Lines in diagrammes reflect variables' performance since 2010.

Diagramme 1 also puts in evidence the unsustainable fiscal policy prevailing during the period, characterized by increases in public spending well above those of public receipts which resulted in turn in the loss of primary surplus. Policymakers' efforts did not seem then to be conducive to checking public deficits by resorting to classic solutions but to money printing instead, as the steady growth of the monetary base clearly accompanied that of fiscal deficits. Needless to emphasize, the recourse to money printing also impacted upon the inflation rates as it somehow boosted private consumption in a moment in which the economy was undergoing a marked recessive period and imports (as will be shown below) were subject to restrictions.

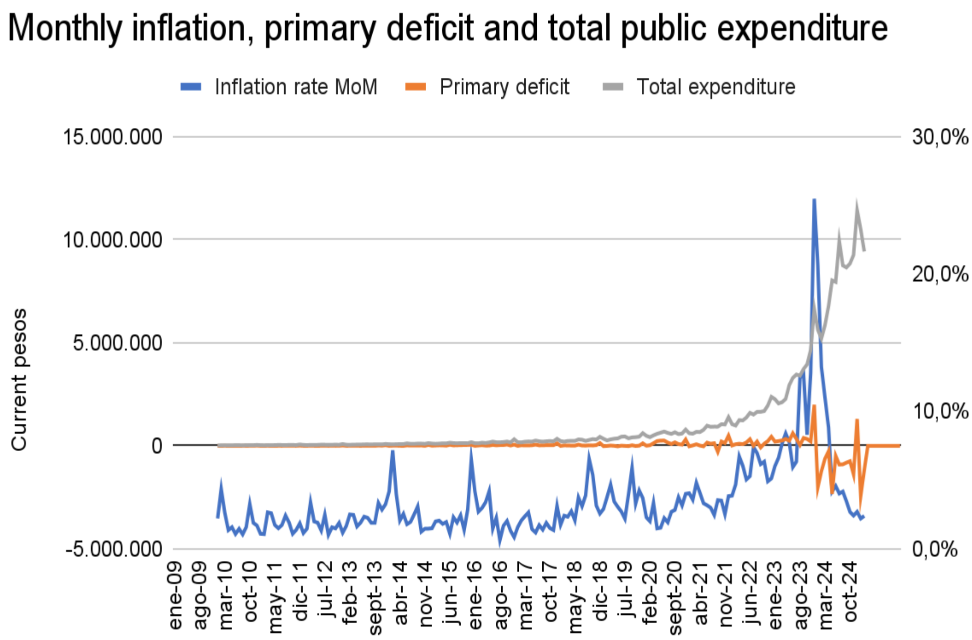
<u>DIAGRAMME 1</u>



<u>Source:</u> Own elaboration on the basis of information from the Central Bank and INDEC.

The reasoning line followed in the previous diagramme, with respect to the impact of public deficits and money printing upon inflation rates, during a great part of the sub-period considered, is much more noticeable shown by the ensuing diagramme 2 which in turn reflects the monthly levels of inflation rates and of two fiscal components: primary deficit and total public expenditure respectively.

<u>**DIAGRAMME 2**</u>



<u>Source:</u> **Own elaboration on the basis of information from INDEC.**

Let it be stressed at this point that difficulties faced by the macroeconomic scenario in this sub-period were not only the result of dubious fiscal and monetary policies applied, but also (and perhaps more crucially) of policymakers' management of the exchange rate, used as a stabilising anchor and subject to a crawling peg scheme which, during the first presidential time of Cristina Fernández (2007-2011), resulted in a devaluation of the peso close to 37% and in turn positive figures for the balance of trade. However, alarm bells soon went off in the face of the former's progressive deterioration[16] (shown by the diagramme 3 below). The aggravation of the situation in the external sector led policymakers to introduce the so called 'cepo' (padlock) before Cristina Fernandez finished

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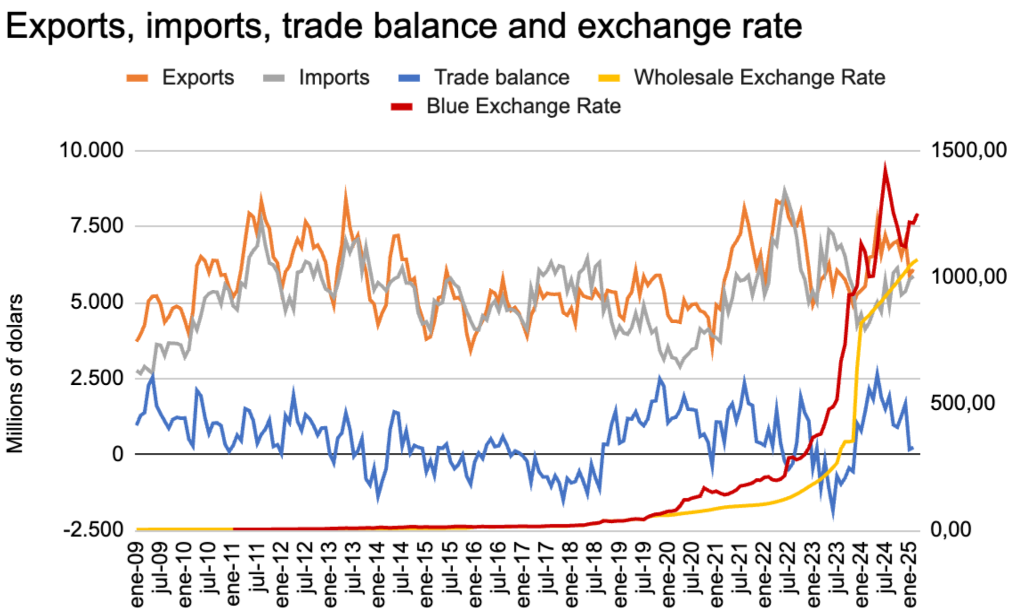
[16] Two reasons may at least be mentioned to explain this progressive deterioration of the balance of trade; first, a fall of the exported volume due both to the impact of domestic recession and also the smaller demand for developing countries' exports due to the so called crisis of developed economies and second, import increases during this period.

her first presidential term[17] whereby individuals or firms were at the beginning required to count with previous authorization from the Tax Organism for buying foreign currency but soon after, and given that the critical situation persisted in the exchange market persisted, the impact of the 'cepo' was tightened not only by reducing the amount of currency individuals could buy but extended it by introducing a series of custom measures aimed at curtailing imports.

DIAGRAMME 3



Source: Own elaboration on the basis of information from INDEC.

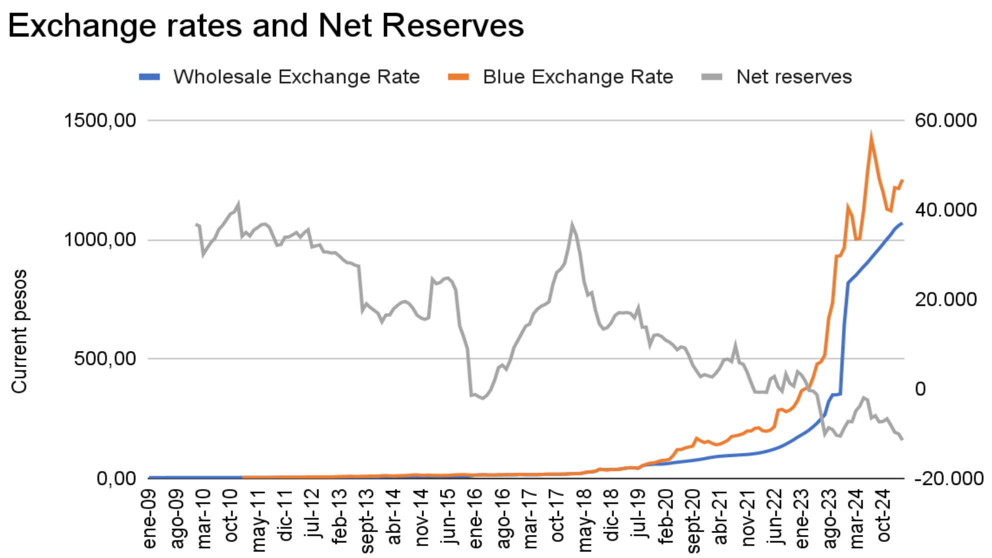
Far from being successful, the 'cepo' showed soon its inefficacy (see diagramme 3) as not only the fall in exports (caused by the exchange rate lag) was much greater than that of imports feeding the balance of trade deficit, but permitted also an informal exchange market to emerge known as 'the dollar blue'.

Diagramme 4 below helps to visualize the situation the external sector situation underwent as a consequence of 'cepo'. In the first place,

[17] October 2011.

the emergence of an informal market for foreign currency (blue dollar), a lagged value for the crawling peg rate of exchange and consequently a loss of reserves to the extent that export growth was smaller than import growth. Nevertheless, conclusions of the paragraph were still more far reaching when explaining the failure of stabilisation efforts during the 'cepo', when a positive relationship between the 'blue' exchange and inflation rates was clearly noticed doing away with policymakers' expectation of using the rate of exchange as an anchor[18]. Let it point out that this version of 'cepo' lasted until December 2015, when it was lifted by Mauricio Macri, the elected president for the period (2015-2019).

DIAGRAMME 4



Source: Own elaboration on the basis of information from the Central Bank and INDEC.

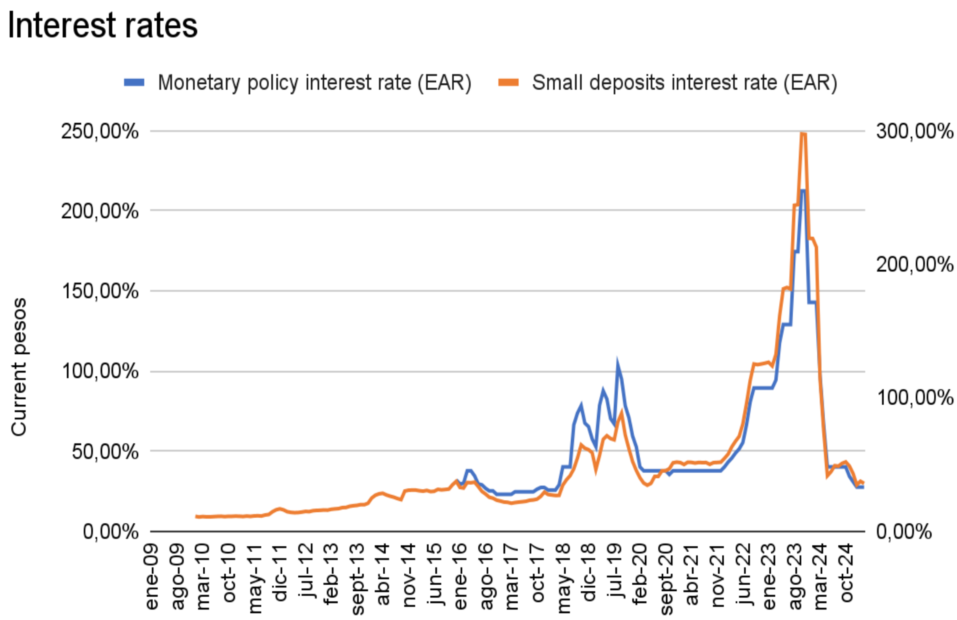
In the meantime, and with reference to the role assigned to interest rates as stabilising instruments, LEBACs are in the first place worth mentioning. These Central Bank´s short term bonds[19] created in 2002 could

[18]This is very easy to understand as private agents availed the informal exchange market value and, given the liquidity resulting from a growing monetary base, in turn increased their foreign currency demand in anticipation of what they expected to be an inevitable devaluation.
[19] (36 to 252 days).

be bought through a bidding process in which the smaller rate of interest offered (cut off interest rate) decided how the monetary authority would place them (between both private individuals and/or banks). This bond had the objective of absorbing liquidity in order to stabilize the rate of exchange and curtail the rate of inflation; as of October 2018 lebacs were gradually replaced by leliqs, only accessible to banks and investment funds.

The ensuing diagramme 5 respectively depicts the paths of the Monetary Policy Interest Rates paid on Lebacs and Leliqs (equivalent to the central bank's policy instrument s of the previous section) and of the small deposits interest rate, while monthly inflation rates included in diagramme 6 seeks in turn to shed light over the formers' actual stabilising power.

<u>DIAGRAMME 5</u>

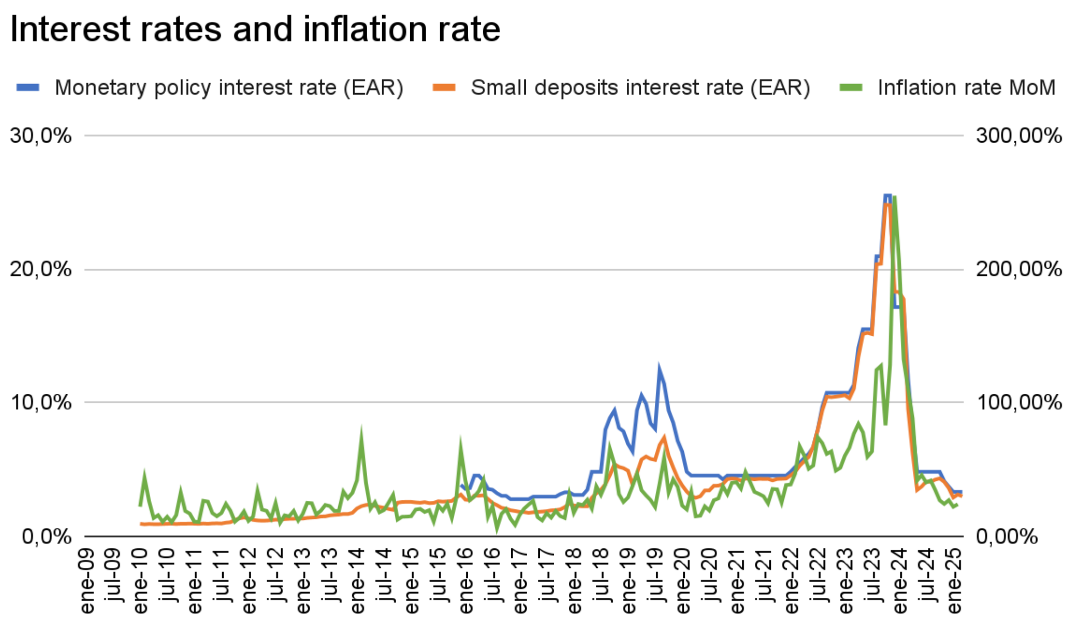


<u>Source:</u> Own elaboration on the basis of information from the Bank.

A thorough inspection of diagramme 6 does not show, until the end of 2015, evidences of policy successes in terms stabilisation, as none of interest rates seemed to have induced a contraction of inflation. Furthermore, the temporary reduction of their rates as of December 2015 seemed to be better explained by President Mauricio Macri's decision to lift

existing currency controls (cepo)[20], as soon as he began his presidency, and to resort in change to monetary aggregates as the main stabilising tool. This situation continued until June 2018 when the Government, facing an inflation outbreak, switched to a strict interest rate stabilisation plan based on inflation targeting which was not also successful[21] and forced policymakers to restore the exchange market restrictions (cepo) in August 2019. Although interest rates' increases were maintained, they did not either succeed in checking the oscillating but steadily increasing path of the inflation rate, which continued throughout the presidency of Alberto Fernández (2019-2023).

<u>DIAGRAMME 6</u>



<u>Source:</u> Own elaboration on the basis of information from the Central Bank and INDEC.

Thus far, two important lessons can be derived from the performance of interest rates and of intervention in the exchange rate as stabilising policy tools in Argentine. As regards the use of interest rate based

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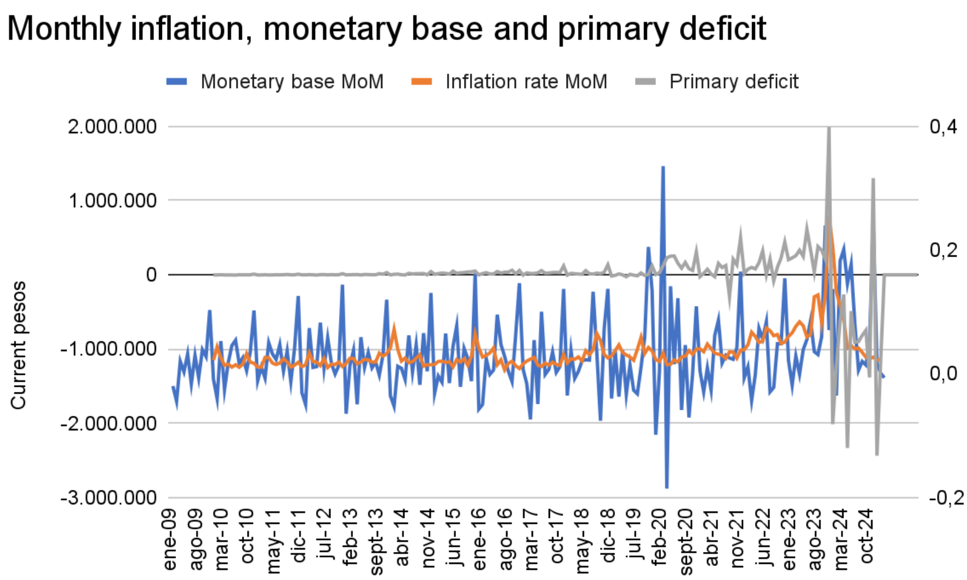
[20] This decision was accompanied by a devaluation of peso of around 40,4 per cent.
[21]For a detailed analysis of the application of inflation targeting in Argentina see Di Tella, R. (2019), Working Paper 20-025 NBER.

stabilisation plans (IRSP), Di Tella (2019) two main comments are here particularly worth recalling: in the first place, the recourse to inflation during stabilization plans. As can be clearly noticed in the ensuing diagramme 7, Di Tella's preconditions did not seem to be met targeting together with a floating exchange rate is not usual unless it were used to consolidate previously achieved inflation reductions; secondly, fiscally credible trajectories may help to anchor inflationary expectations during the analysed sub-period.

On the other side, let it be emphasized that unsatisfactory results also fell in line with Calvo' s (2017) predictions for his Liquid Central Bank Policy Assets scenario; that is, with exogenous money supply interest-rate rules involving *s* (the central bank's policy instrument) had no effect on long-run inflation. As mentioned above, the author also stressed stabilising policies' useless should the monetary authority persisted in financing public sector's deficits as is clearly shown by diagramme 7.

DIAGRAMME 7



Source: Own elaboration on the basis of information from the Central Bank and INDEC.

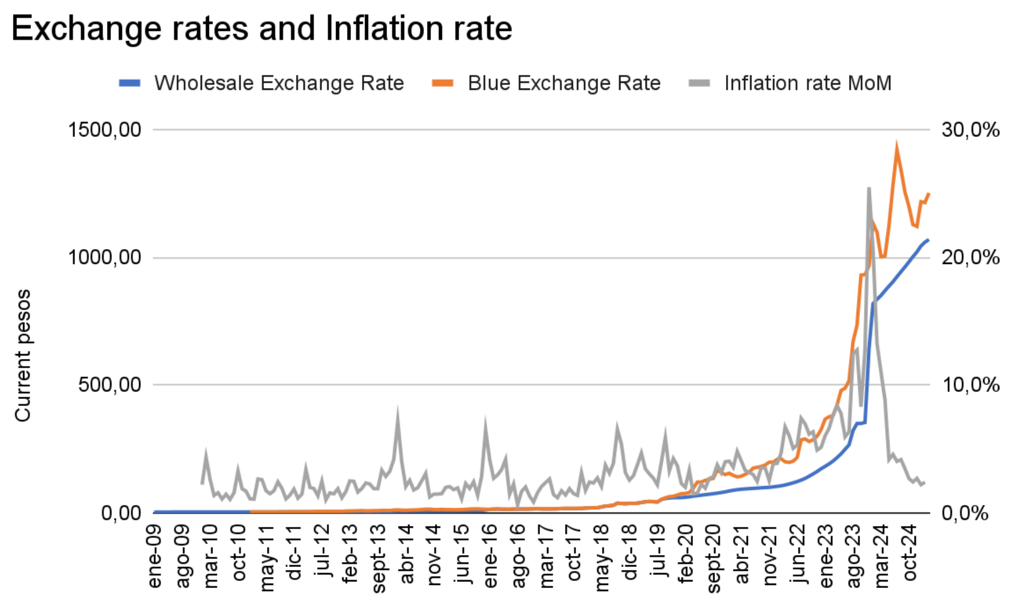
As previously mentioned, the path of the exchange rate responded to a crawling peg mechanism whereby economic authorities periodically

informed its official value. In this connection, the ensuing diagramme 8 reveals that the anchoring performance of the official exchange rate fell short of expected during this sub-period as an informal exchange rate (known as blue dollar), resulting from exchange restrictions introduced in 2011, started to be regarded by private individuals and firms as much closer to the real exchange rate. Two reasons at least justify paying sufficient attention to the preceding assertion; in first the place, the evidence rendered by diagramme 8 shows that the anchoring role expected the official exchange rate would have upon inflation rates was seldom verified. In the second place, and as mentioned above, the fact that the official exchange rate lacked credibility among private agents (as opposed to what happened with the informal or 'blue' exchange rate) permanently brought about the phenomenon of 'self-fulfilling expectations' whereby individuals and firms expected 'peso' devaluations seeking to reduce the gap between the official and informal rates would sooner or later inevitably take place, as in fact occurred[22] in January 2014, 12,4% (Cristina Fernández de Kirchner); December 2015, 30.4%: August 2018, 20.8%; September 2019, 25.3% (Mauricio Macri); August 2023, 22% (Alberto Fernández). Needless to emphasize, devaluations were a blow to stabilizing efforts as they in turn accelerated the rate of inflation.

In sum, and for reasons already stated, this sub-period (2009-2023) will be remembered as one of lost opportunities in terms of economic stabilisation due to wrong fiscal, monetary and exchange policies which resulted in the failure to achieve expected goals. Suffice it to say that the inflation rate climbed respectively to 25.5%[23] and 20.6% in December 2023 and January 2024 and to.211.4% for the year 2023.

DIAGRAMME 8

[22] Only the most important devaluations are here quoted.
[23] It is here important to stress that it impacted upon December 2023's rate of inflation a measures taken by the Government whereby a series of actions were taken; in particular, tax reductions and increases in social spending which deepened the primary deficit and the need to resort to money printing (see Diagramme 7).



<u>Source</u>: Own elaboration on the basis of information from the Central Bank and INDEC.

III.b <u>Sub-period (2024-2025)</u>

As a result of the ballotage held on 19 November 2023 Javier Milei assumed the presidency on December 15 for the 2023-2027 term announcing a drastic change of current economic policies for others more effectively aimed at curtailing inflation, reducing the poverty level and favouring economic growth. In this regard, the new government embarked from the outset on a stabilisation plan based on a strict control and reduction of public spending seeking to eliminate public sector deficits and the need to resort either to new taxes or money printing[24].

According to what was emphasized above the main role was primarily assigned to fiscal and monetary policies and included, among the principal actions, deletion of areas and organisms considered unnecessary or their unification when possible, with the subsequent relocation, or dismissal of public employees according to each case; suppression of

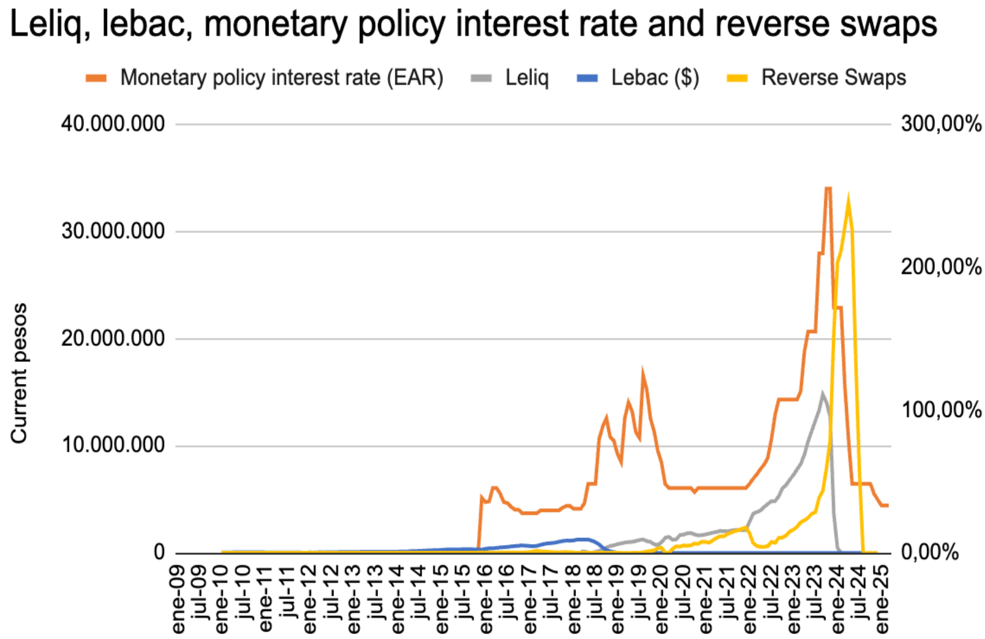
[24] Although objectives mentioned above also included reducing poverty and enhancing economic growth, given this paper's motivation already mentioned at the Introduction, the analysis here is mainly related to the performance of economic stabilisation policies.

most of discretionary transfers to provinces and individuals, in particular those so called trust-funds (fondos específicos); streamlining of payment mechanisms for social welfare benefits in order to eliminate the costly involvement of intermediaries and privatisation in course of publicly owned utilities and firms as well as the closure of those considered economically unviable, just to mention the main actions.

Apart from the abovementioned initiatives mostly related to Fiscal Policy, other important pending matters in the field of Monetary Policy were in turn tackled by the new Administration, as was the case of Central Bank's remunerated liabilities (leliqs).

As already mentioned above leliqs (created in 2018) were short term debt issued by the Central Bank and placed among banks and investment funds with the purpose of absorbing not required liquidity which could otherwise feed the demand for foreign currency. Nevertheless, the problem subsisted as leliqs, (reaching in September 2023 almost 0,75% of the monetary base), paid high interest rates (see diagramme 9) the yield of which was eventually transferred to the Treasury, entailing in turn an endogenous mechanism for money creation. The elimination of Leliqs (March 13, 2024) did not totally solve the problem as they were immediately replaced by another sterilising instrument called Reverse Swap issued on a one-day basis and assumedly yielding a smaller interest rate (see diagramme 9).

DIAGRAMME 9



Source: Own elaboration on the basis of figures from Central Bank

Thus far, it is widely acknowledged that the newly adopted fiscal and monetary policies must be credited for the success in controlling the inflationary process as its level gradually receded from almost a pre-hyperinflationary level of 25.5% in December 2023, and of 211.4% for the whole year to figures of 1.9% and 17.3% in July 2025. Series included in the following Table 1 availed the above assertion as the continuous pressure exerted both upon public spending and the volume of monetary base achieved, for the first time in years a monthly inflation rate of only one digit (April 24) and a decreasing path from there onwards. This substantial change of the macroeconomic scenario is also reflected by columns third and fourth of Table 1 respectively standing for the monthly and inter-annual variation of the inflation rate since December 2023.

TABLE 1

Month and year	Monthly Rate of Inflation (in %)	Monthly Accumulated Variation of Inflation (in %)	Inter-annually Accumulated Variation of the Inflation (in %)
December 23	25.5	211.4	211.4
January 24	19.4	19.4	250.7
February 24	16,8	40.9	288.0
March 24	10.6	51.1	286.4
April 24	8.4	64.4	287.8
May 24	4.8	72.1	276.9
June 24	5.4	81.2	274.4
July 24	3.8	86.7	262.8
August 24	4.4	95.3	237.5
September 24	2.7	102.1	208.3
October 24	2.7	107.0	182.7
November 24	2.9	113.0	167.3
December 24	2.5	117.3	117.3
January 25	2.2	2.2	84.5
February 25	2.4	4.7	66,9
March 25	3.7	8.6	55.9
April 25	2.8	11.6	47.3
May 25	1.5	13.3	43.5
June 25	1.6	15.1	39-4
July 25	1.9	17.3	36.6

Source: Own elaboration on the basis of figures from INDEC.

In addition to the aforementioned decrease in inflation rates, economic authorities also succeeded in restoring since 2024, and for the first time in the last fourteen years, primary and financial surpluses in its public accounts which respectively amounted to 1.8% and 0.3% of GDP[25]. It accounted for this result a strict fiscal policy whereby primary spending had a reduction of 27% which in turn meant 4.7 p.p. of GDP. Let it in this

[25] The exceptions were the primary deficit in December (month of high seasonality and the financial deficits in July and December.

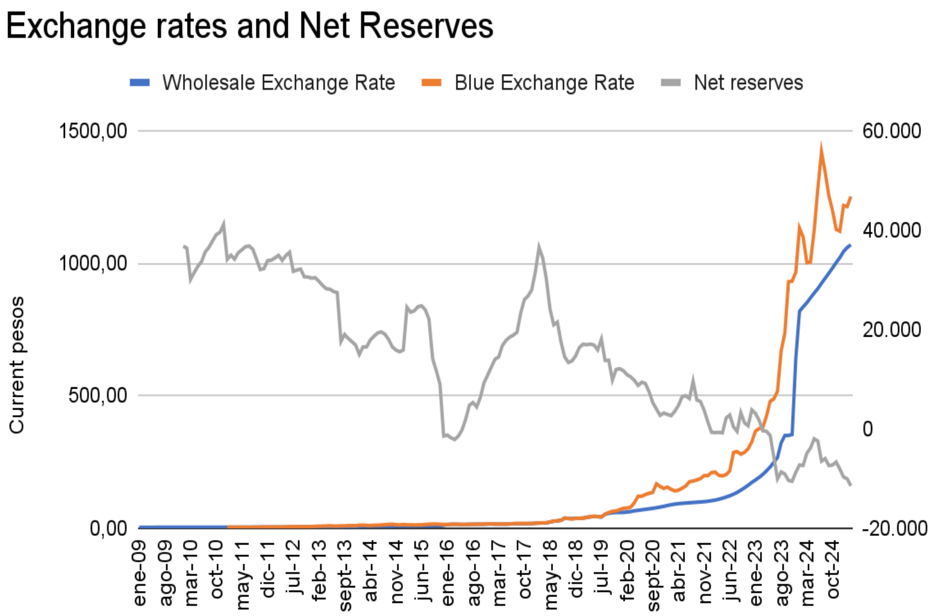
connection be pointed out that most of cuts fell on Universal Allocations for Social Protection (30.6%), Public Works (23.1%), Functioning of the State (12.4%), Economic Subsidies (12.4%) and Transfers to Provinces (9.7%). Finally, in what has passed of 2025, the government managed to sustain the primary surplus but it incurred in financial deficit in July due to debt's due interest payments.

An important policy decision taken by economic authorities was, notwithstanding the positive results produced by the application of the new fiscal and monetary policies and contrariwise to what happened in previous experiences, not to immediately lift restrictions on the exchange market for what the crawling peg mechanism persisted until April 14, 2025 when the government (after approval and support from IMF to the proposed economic plan) deemed convenient to definitively do away with the 'cepo'. Let it be said that although the decision taken on April 14, 2025 amounted to a return to free flotation of foreign currency (dollar) and exchange market operations, some restrictions still persist. Likewise, the government informed that it would sell dollars if its value exceeded a superior band of $ 1400 and it would buy if the exchange rate fell below a lower band of $ 1000[26].

It has already been said above that the emphasis of this sub-period analysis would mainly be placed in the stabilising impact of new fiscal and monetary policies. However, recalling this paper's title and in spite the already described advances in the stabilization field, it is here worth stressing that the situation of the external sector falls so far short of the government' s expectations in reason particularly of the permanent shrinking of the level of net reserves depicted by the following diagramme 10, at least since November 2024 till March 2025.

DIAGRAMME10

[26] **System also known as 'dirty float'**.



Source: Own elaboration on the basis of figures from Central Bank

Suffice it however to say that the above diagramme 3 already advanced a graphical explanation for that as it showed the increase in imports after the government proceeded to disarm a number of customs regulations mainly aimed at restricting them. As official figures show, the 2024 record balance of trade results (18.889 million dollars) mainly fueled by agricultural exports, did not seem to repeat in 2025 (4436 million until July) in part given to the increase of goods and services imports. On the other side, for the negative impact on the level of reserves of payments the government realized to sovereign debt's holders, banks and international organisms[27].

The performance of the economic activity level (measured by the EMAE) represents a second element of government concern as it experienced a drop of 1,8% in 2024; at the same time and even when figures for 2025 show an inter-annual increase of 6.2%, last reports anticipate projections of stagnation or negative variations in several months. In this connection, it goes without saying that part of the problem must be sought

[27] Let it however be emphasized that after lifting the 'cepo', and having its economic programme approved, the IMF granted a loan of 20000 million dollars to the government destined to strengthen its level of international reserves.

at government's generalized increase of interest rates which, in seeking on one side to absorb liquidity which might otherwise feed foreign currency demand and revive in turn inflation, this on the other side makes more difficult firms' access to credit which might induce higher capacity utilisation.

IV. ROBUSTNESS TESTS' RESULTS FROM LOGIT ESTIMATIONS

As a dependent variable a binary indicator was used, equal to one for a successful stabilisation plan and zero otherwise. The success of the stabilisation programme would mean that the cumulative increase of inflation for the period under consideration (t) and the six consecutive ones (t+6) (measured by the growth of the consumer price index) was below 12,6162%. In such a case, the dependent variable is set to one. The decision to take a cumulative rate was based on that the manipulation of policy instruments does not generally have an immediate effect upon the objective of price stability, but rather on the future. Moreover, the use of cumulative inflation aims at better capturing the case of sustained low-inflation environments. An accumulative increase of the inflation rate of 12,6162% in six months corresponds to a monthly inflation rate of 2%. The predictor variables were chosen with the intention of including monetary, fiscal, financial and external factors in the analysis. As a starting point, and recalling Calvo's paper (2017) previously quoted, the first variable to be included in the analysis is the interest rate since it is the first instrument designed for price stability when using Taylor rule-like conditions. Moreover, the second variable to be included is the monetary base, which is considered by the quantitative theory of money as one of the main factors impacting upon the inflation rate; suffice it to mention here that this has been also empirically acknowledged in the recent economic past of Argentina through different money aggregates strategies. Lastly, considering Argentina's prolonged history of persistent chronic inflation, the incorporation of a deterministic trend as a predictor allows the model to account explicitly for this structural characteristic. This inclusion

captures the systematic temporal pattern observed in the conditional probability of success, emphasising that the effectiveness of stabilisation programme cannot be assumed to be entirely time-independent.

Given the time-series nature of the data spanning from December 2009 to December 2023, the initial estimation based on a standard logistic regression was extended by adopting a generalised linear autorregresive moving average (GLARMA) framework. Specifically, in this case, a Binary ARMA (BARMA) specification was applied, as the dependent variable is binary. Unlike the traditional logit model, GLARMA models account for serial dependence by introducing autoregressive–moving-average components into the Pearson residuals of a generalised linear model. Accounting for this dependence is essential, as ignoring it can lead to inefficient estimators and potentially biased inference due to underestimated standard errors. By explicitly modelling this dynamic structure, the GLARMA approach provides more reliable inference on covariate effects and ensures robust standard error estimation, thereby improving model adequacy (Dunsmuir & Scott, 2015).

In the context of a BARMA specification, the conditional mean is linked to the predictors through a logit link function, which reduces concerns regarding strict stationarity of the explanatory variables. Unlike traditional autoregressive models for continuous responses, GLARMA models capture time dependence through ARMA structures on the Pearson residuals rather than imposing stationarity on the covariates themselves. Consequently, differencing or detrending the predictors was not considered necessary, as modelling them in levels retains their economic interpretability (Dunsmuir & Scott, 2015). The only exception was the monetary base, which was log-transformed in order to stabilise the variance and attenuate the effect of extreme fluctuations, particularly prevalent in this variable.

The BARMA (2) model reveals significant autoregressive dependence in the conditional binary response (θ_1 = 1.43, $p < 0.001$; θ_2 = 0.90, p = 0.013), confirming the presence of serial correlation and validating the choice of a dynamic specification over a static logit model. The

substantial reduction in residual deviance (92.5 vs. 216.5 for the null model) and an AIC of 92.1 indicate a markedly improved fit compared to a static logit model. Among the covariates, the log of monetary base (p = 0.095) and deterministic trend (p = 0.099) exhibit marginal significance, whereas the policy rate is not significant.

A higher log of monetary base (ln_bm) is associated with a lower probability of a successful stabilisation programme, which aligns with the well-documented empirical and theoretical link between money creation and inflation. Conversely, the deterministic trend suggests a positive effect on the probability of success, implying that stabilisation plans have become more likely to control inflation over time. This pattern may reflect institutional learning, improved policy design, or favourable shifts in the economic and social environment driven by credible signals from previous successful plans. While these variables are only statistically significant at the 10% level, their direction and interpretation remain consistent with economic theory.

Finally, the results indicate that interest rate management does not exert a statistically significant influence on the probability of a successful stabilisation programme. This finding suggests that policies centred primarily on interest rate adjustments may be insufficient, at least in isolation, to ensure the effectiveness of disinflation strategies in contexts characterised by chronic inflation. It reinforces the notion that structural and credibility-related factors, rather than short-term monetary instruments alone, play a more decisive role in determining the outcomes of stabilisation efforts.

TABLE 2. MODEL RESULTS

Binary dependent variable: one for a successful stabilisation programme and zero otherwise.

Estimator	Logit	GLARMA
Intercept	132,3569	112,4082
	(0,0047)***	(0,0877)*
Monetary policy rate	-154,9798	-171,4081

	(0,0361)**	(0,1368)
Monetary base (ln)	-11,3324	-9,6159
	(0,0055)***	(0,0945)*
Trend	0,2453	0,2127
	(0,0066)***	(0,0993)*
Primary result	0,0000	
	(0,5274)	
θ_1		1,4306
		(0,0000)***
θ_2		0,8954
		(0,0127)**
AIC	134,38	92,09684

Notes: p-values are noted in parentheses: *** p<0,01 ** p<0,05 * p<0,10. Standard errors are noted in brackets.

In order to evaluate the explanatory power of the model estimated, a histogram of the uniform Probability Integral Transform (PIT) and of the randomised residuals was plotted. The first supported the reliability of the forecasts given by the model, since it finds that the PIT values are close to uniformly distributed. The second one exhibits a close to normal distribution of the randomised residuals, which lets us to conclude the correct specification and diagnostic of the assumptions of the model. The same interpretation is found when analysing a qq-plot for the residuals and the autocorrelation functions, which shows normally distributed residuals and their white noise behaviour, suggesting furthermore a correct model specification.

Future work includes estimating a “parameter-driven” model. Whereas GLARMA is an example of an “observation-driven” models that assume the temporal dependence is explained with the observed variables, “parameter-driven” models presuppose the temporal dependence is caused by the presence of a latent dynamic factor (Wu & Cui, 2014).

As well, and seeking to improve the actual estimation, control variables to account for their influence over inflation that are not under direct or indirect control of stabilisation programmes, such as the evolution of wages or the activity level, could be included. Furthermore, testing for possible structural breaks in the time series data would be an interesting research possibility to improve the predictive accuracy, considering regime changes.

In sum, it is concluded that, through the application of an appropriate BARMA(2) model, it was possible to identify successful (and unsuccessful) policy instruments to tackle price stability in the context of Argentina's chronic inflation during the period of December 2009 to December 2023. The results indicated the significance of the monetary base as a policy instrument to achieve price stability and the opposite holds with regards the influence of the monetary authority's interest rate, as held by Calvo (2017). Additionally, the observed effect of trend highlighted the importance of time in achieving successful stabilisation programmes, reinforcing the notion that structural and of credibility-related factors play a key role, rather than isolated monetary adjustments.

V. MAIN CONCLUSIONS

Relevant papers dealing with chronic inflation in developing countries, as for instance Calvo's (2017) arrived at the conclusion that stabilization plans aimed at curtailing rates of inflation would most likely fail should scenarios of individuals' imperfect credibility prevail, or if central bank's rate of interest is used in Taylor rule-like conditions.

In relation to the first sub-period (2009-2023), the carried out analysis of the Argentine case showed pessimist results not only confirming the above advanced theoretic predictions but also strengthening the assertion that stabilisation policies would unlikely be successful unless they were accompanied by sound fiscal policies conducive to getting rid of harming public sector deficits.

In the light of what the Argentine case showed, it was somewhere verified that the inflation targeting (use of interest rate with stabilising purposes) with floating exchange rates have more chances of succeeding if applied for consolidating previously achieved inflation reductions.

The use of rate of exchange as an anti-inflationary anchor did not render the expected results during the sub-period being not oblivious to this, in the first place, severe restrictions placed to exchange market operations. Furthermore, private agents' perception that the used crawling peg mechanism resulted in an under valuation of foreign currency, not only permitted the so called informal exchange market to develop but mainly the idea that devaluations were inevitable (self-fulfilled prophecies).

Conversely to failed stabilisation plans resorted to in the previous sub-period, the new government that took office on December 15, 2023, launched from the beginning an aggressive fiscal programme for checking inflation founded on the strict control of the monetary base, a drastic reduction of public spending and the elimination of fiscal deficits. After a year and a half, economic authorities could exhibit solid results in this field, as single-digit monthly inflation rates reached since April 24 show it and the elimination of financial and primary deficits.

It cannot be ignored, however, that stabilisation efforts face certain resistance from private agents since, after eliminating almost all restrictions falling upon the exchange market, economic and monetary authorities resorted to high interest rates to absorb liquidity and impede a surge of demand for foreign currency (dollar). Needless to say, the former entailed a more expensive access to credit by firms and negatively impacted in turn upon investment and formal employment, as the monthly estimator or economic activity was recently showing and warning.

Finally, and in order to ascertain the soundness of evidences yielded by the economic review of the sub-period (2010-2023), a quantitative

analysis of stabilisation plans was undertaken using a logit model, which was subsequently improved by BARMA (2). This approach was necessary due to the binary nature of the dependent variable (successful or unsuccessful stabilisation programmes) and the time-series data, spanning from December 2009 to December 2023. The primary aim was to identify how policy instruments impacted in relation to the success or failure of these programmes set by policymakers, in the context of Argentina's chronic inflation.

Results indicated that the monetary base exhibited marginal significance, with a higher monetary base consistently associating with a lower probability of successful stabilisation programmes, aligning with the well-documented empirical and theoretical link between money creation and inflation, particularly when monetary policy decisions are not backed by sound fiscal policies. At the same time, the policy interest rate did not exhibit a statistically significant influence on the probability of a successful stabilisation programmes.

The above finding also confirms that policies solely reliant on interest rate adjustments (ie Taylor rule-like conditions may be insufficient, in isolation, for achieving effective disinflation strategies in environments characterised by chronic inflation. However, a deterministic trend also showed marginal significance, indicating a positive effect over time. This implies that stabilisation plans have become more effective at controlling inflation, reinforcing the notion that structural and credibility-related factors play a more decisive role than isolated monetary adjustments.

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