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14. Inflation targeting by the 'tyrannical auctioneer': the predominance of a normative approach in monetary policy

Etelberto Ortiz Cruz

1. THE ISSUES

How is it possible that the usual recipe for orthodox monetary policy persists, in spite of its extremely feeble theoretical structure? This chapter argues that the reason rests on its normative base, and not on its theoretical structure. This is evident because its main line of policy intervention does not arise from its price, monetary or macro theory, but from its normative view. The chapter presents an alternative framework to analyze the way in which inflation targeting works in a small open economy.

The new monetary consensus revolves around a model of ‘inflation targeting’, which is concerned with coordination and the compromise of the Central Bank (CB) to strive for one particular rate of inflation. That orthodox model can be reduced to three equations: the first is a sort of IS curve; the second is a sort of Phillips augmented expectations model; and the third might be something like a Taylor rule.¹ Information and compromise presumably create a more transparent framework, reducing discretion through a reference price: i, the rate of interest. Within this framework the presumption is that monetary policy is neutral and the level of activity in the economy is determined by a host of real factors such as technological change, capital accumulation and so on. Inflation is conceived predominantly as a demand phenomenon and to some extent also as a cost impact. The effect of asset inflation and exchange rate overvaluation plays no role in that model. Disturbances can exist only for market or government failure.

In that model, the level of economic activity is a given and its long-run equilibrium cannot be altered by any government action. Therefore monetary policy implies an agenda that follows straightforwardly from its normative view, namely:
• *Rules are preferable to discretion*  This is meant to reduce the enormous power vested in the CB in order to avoid unnecessary impacts on private agents, particularly financial intermediaries.

• *Accountability* is meant to enforce responsible decision making on monetary policy makers.

• *The neutrality of monetary policy* cannot be understood as a real condition, but as a task for policy makers, namely, a call not to induce biased effects through monetary policy that may be harmful to some while privileging others. Real impacts are meant to increase or reduce effective demand and output, without any distributive impacts.

• Monetary policy becomes the leading policy, over and above other policies, particularly trade and fiscal policies. Evidently the main concern is the rate of inflation, while growth, overindebtedness and unemployment turn into secondary targets.

For the orthodox policy agenda the rest of the issues are by and large secondary or conditional. For example, for monetarism mark I the CB exerts control through the quantity of money, while for monetarism mark II it does so through the rate of interest.

Nevertheless, the situation for a small open economy poses a threefold difficulty:

• Recent models place the emphasis on targeting inflation expectations and the rate of interest (Taylor 1993, 2001), but neglects completely the particular characteristics of a small open economy, as is evident in Clarida et al. (2001). They assume that an open economy is isomorphic to a closed economy, and the price equations ignore any incidence of an external price linkage.\(^2\)

• The dynamics of adjustment of interest and exchange rates is complex. It is not reduced to assets and money substitution; it goes all the way into the pricing structure. Therefore nothing is clear about the transition from one state of equilibrium to another. The sole consideration of the welfare properties of two points of partial equilibrium is by and large insufficient to understand the dynamics of adjustment.

• Inflation targeting through \((E, i)\) can turn into contradictory impacts because they can give rise to differing expectations on inflation rates and adjustment paths. The difficulty is not reduced to different time paths for adjustment and equilibrium, as in Ball (2001). The difficulty is that both variables go through different channels of incidence,\(^3\) but necessarily have an impact on real prices and distribution.
But conventional wisdom in monetary theory seems to be at odds with the common practice of day-to-day operation of monetary policy. It reasserts the neutrality of money and monetary policy even if the CB does not fix the necessary amount of money every day. The actual direction of monetary policy appears as a basic price vector (BPV) for the economy, namely the rate of interest, and for an open economy we also have to consider the exchange rate, \((E, i)\). The quantity of money then adjusts consequently under any CB regime. But the structure of prices and distribution cannot remain the same.

The open economy introduces complexity, because it has to give proper consideration to two characteristics:

- The monetary policy price vector must consider that there is a very complex interaction between the rate of interest and the exchange rate; that generally is not considered in ‘macro’ and ‘microfundamental’ models. The path of incidence has to be analyzed within the pricing process.
- Those two prices, the interest rate and exchange rate, are crucial for the profitability of investment, distribution of income, and overall for the stability of the system, particularly for the real and financial sectors.

Consequently, the theoretical framework necessary to analyze monetary policy is a pricing structure where it is possible to consider the different impacts of both the interest rate and the exchange rate on a price structure that is not necessarily homogeneous. Pricing in such an economy is always in the world of actual monetary transactions, and is open for adjustment to the vector of basic prices they receive, the exchange rate \(E\), and the rate of interest \(i\). That vector \((E, i)\), even if it is open for the interplay of different markets, has a strong interaction through the capital market, but always on the basis of the price vector the CB is sending to the economy. The role of the CB is to find the right price vector for the economy. In a small open economy that task goes even further, also fixing the minimum wage \(w\), which in turn regulates the wage bargain. Nevertheless, for the time being the incidence of \(w\) will not be fully analyzed for the sake of simplicity.

The essential proposition is that actual monetary policy can best be understood in a model that builds the relationship between the real and monetary side through the structure of pricing. The link is built between pricing and the investment decision. This is the form in which concerned agents, firms and banks, decide the amount of investment and prices for a particular BPV, namely: \((E, i, w)\), and then decide a certain demand
of credit. Monetary policy then is essential to form the magnitudes of effective demand and the basic framework in which firms decide their price vector. The coherence of the BPV is to be realized at the end of the process if firms are able to pay back their debts and/or recover the capital advanced in production. Within this context the neutrality of money is meaningless. The general macroeconomic framework is conceived as in a circuit model, as in Rochon (1999).

The working of a BPV \((E, i, w)\) may have a strong resemblance to the standard model of the Walrasian auctioneer. Let us recall that the image of the Walrasian auctioneer is a figurative construct about the form in which pricing forms a general equilibrium price vector. A price vector is sent by the auctioneer, and the excess demand and supply equations, one for every commodity in the economy, provide him with a disequilibrium signal. Then the auctioneer kindly adjusts the price vector, observing the sign of those excess demand equations. The adjustment process continues until every agent is in equilibrium because he can sell and buy as much as he wants, given a certain budgetary constraint. It is only then that exchange can take place.

The operation of the BPV sent by the CB takes three forms:

- There is one institution, the CB, that works as a real auctioneer – not through the auction of dollars or debt instruments, but through the basic price vector targeted by monetary policy: \((E, i, w)\).
- The CB has a figuration of equilibrium from a set of balances that it can actually observe, and are of its own concern, namely: the current account deficit, the balance with the banking system, and the balance with the public sector.
- The CB does not receive, and seems not to be interested in, the actual balance of the main economic agents in the economy, that is firms and workers. Therefore the accumulation of unused production capacity, unemployment and debts is ignored.

The last two characteristics led me to name that model the ‘Tyrannical Auctioneer’ (TA), because he who sets the basic price vector takes no account of the impact of the BPV on economic agents. This is not to be characterized as rigidity. The TA actually adjusts daily, but not necessarily in response to the disequilibrium perceived by firms. Therefore it is possible that the TA considers he is doing his job very well in terms of his own tasks and balances. He might even consider he has been flexible in responding to market signals, as in a floating model, though being unable to observe the difficulties of concerned agents, that is firms, in order to reach those price signals.
The chapter is presented in four sections. The second introduces a model of investment decision and pricing, including the impact of the rate of exchange and the rate of interest, related to the investment decision. The model is an extension of Ortiz (2003, 2004), following the essentials of Eichner (1984) about the need to consider financial costs in pricing behavior, but now including the difficulties introduced by a financial system that provides credit and requires to be funded in two currencies. Our contention is that the actual and more important difficulty for the system to close, that is, for firms to be able to pay back their debts, has been the blindness of the monetary policy model of the TA, ignoring private deficits. The blindness is introduced by the normative view of the TA. The last section advances some preliminary conclusions on monetary policy and institutional reform.

2. INVESTMENT DECISION: PRICING, FINANCE AND MONETARY POLICY

The essential macroeconomic view rests on a simple circuit model, as in Rochon (1999), which can be represented through the scheme presented in Figure 14.1. The solution of the model is advanced on two levels.
The first considers the whole structure of the model, where the investment decision is the initial step in response to a BPV sent by the TA. It rests on solving the investment–pricing decision as a dual.

- The second reconsiders the adjustment paths open for firms given their price equations. It is shown that the pattern of response to an anti-inflationary policy depends on the conditions of firms, as in Minsky’s classification, and on actual monetary policy.

This chapter deals with the first problem and suggests a first approach to some of the issues raised by the second. The investment decision is at the core of the model, from the point of view of macro aggregates, but also for the structure of prices and financial proficiency. But the essentials of the economic policy framework are set by monetary policy.

Assuming a one-period economy, the amount of capital advanced as

\[ I_t = \sum x_t \cdot P_t + X^m \cdot P^m \cdot \frac{L}{L_t} + \gamma \cdot L_t, \]  

which can also be read as fixed plus variable costs plus financial costs; therefore the amount due to be recovered is: \( \sum x_t \cdot P_t + X^m \cdot P^m \cdot \frac{L}{L_t} + \gamma \cdot L_t + F_t(i_t) \), plus a profit, \( \Pi \), as a residual. \( F_t(i_t) \) represents the financial cost necessary to make the investment.

Therefore the investment decision calls for an optimization of the relationship of the value of the capital advanced, \( I_t \), and the productive resources bought for production, given the outstanding prices \( \{ P, P^m, P^m, \gamma, \alpha \} \). The optimization problem considers a given technology, and the basic price vector set by the TA. For the time being we can assume constant returns to scale. The budget restriction is set by the size of the amount of capital available, that is, \( I_t = H_t + F_t(i_t) + F_t'(i_t^*)E_t \), where \( H_t \) is the capital owned and \( F_t(i_t) \) the capital obtained through finance from either domestic or external sources.

It is important to realize that in fact we have three analytical problems:

1. The investment decision by firms, which in turn has two associated problems: the investment–pricing and the investment–finance decisions. These problems are approached by considering them as a dual.
2. The balance of the TA, concerning at least three balances within his realm: the banks’ balance the external account balance and the public deficit. This aspect will not be dealt with here; see, however, Ortiz (2004).
3. The incidence of monetary policy through the basic price vector on firms and the way that feeds back to inflationary expectations and behavior.
Firms maximize the value of the produce obtained, \( P, Q, \) with the inputs \( \{ \Sigma x_{ij} P_j + X^m P^m E + wL \} \) advanced as investment, given the actual restriction of capital available, which is \( \{ I_i = H_i + F(i) + F(i^*)E \} \). The amount expected to be recovered: \( P', Q' \). Therefore the firm’s maximization problem has two parts. The first is the investment–pricing decision:

\[
[\Sigma x_{ij} P_j + X^m P^m E + wL_i] (1 + \pi^{*i}_i) + F_i(i) \geq P'_i Q'_i \quad (14.2)
\]

This states that the firm would be willing to invest in the means of production necessary to obtain certain amount of production \( Q'_i \), at a price that reflects the expectation \( P'_i \) to recover the capital advanced.

The second relates to the investment–finance decision:

\[
I_i = <[\Sigma x_{ij} P_j + X^m P^m E + wL_i] (1 + \pi^{*i}_i) + F_i(i)>, \quad (14.3)
\]

This states that surplus obtained should pay for the credit obtained plus the outstanding rate of interest.

The TA expresses his policy targets through the basic price vector. The targets are a particular rate of inflation \( p \) and a certain amount of external savings to serve the external debt. Therefore the TA would recognize the result of his policy instrument in any deviation of the actual rate of inflation \( p \) to the one targeted \( (p - p) \) and through changes in external reserves. In the usual targeting model, \( E \) would be compromised to stand for an inflationary expectation as an ‘anchor’. Consequently the main adjustment variable at hand is the rate of interest. In the presence of an important external debt, the CB will try to control the external spread, and might be reactive to a loss in external reserves and commercial banks’ deficits.

The difficulty is with the capability to assess and react to the likely effects of such policies. Next we shall analyze them in the analytical framework provided by the TA model.

The firm’s investment problem has two mutually related processes. One is about pricing, namely, that the amount produced and sold should approach the expected value \( P', Q' \), which was at the core of the investment decision. The other relates the investment decision to its form of finance and the expected cash flow, given the price expected. The main proposition is that the investment–pricing–finance conditions form a dual. Therefore it is an approach to inflation from capital theory, which in the post-Keynesian tradition demands a model based on the investment decision.

If the price equation is expressed in unit terms, the investment–finance decision for firm \( k \) can be represented as the maximization of the rate of profit after paying for current and financial costs:
\[ \Pi^* = \phi \left[ I_k \left( P' \right) - \left( \Sigma a_{ij} P_j + \alpha^n P^n E + w_i \right) (1 + \pi_k) - f_i (i) \right] \]

(14.4)

where \((P' \pi)\) is the gap between forward and spot price of the \(k\)th firm. In a way \((P' \pi)\) is an implicit function of the outstanding BPV: \((P' \pi | (E', \iota', w'))\). Therefore \(I_k (P' \pi | (E', \iota', w'))\) represents the marginal efficiency of capital as an investment function in response to the BPV. (Given the complexity and extension of the optimization problem, it is presented in the Appendix.) The reaction functions obtained for the pricing problem are:

\[
\frac{dp_k}{dE} = \frac{I_{k(p,E)} - \alpha^n P^n (1 + \pi_k)}{I_{k(p)} - (a_k) (1 + \pi_k)} \geq or \leq 0 \tag{14.5}
\]

\[
\frac{dp_k}{di} = \frac{I_{k(p,i)} - (1 + f_k (i))}{I_{k(p)} - (1 + \pi_k)} \geq or \leq 0 \tag{14.6}
\]

\[
\frac{dp_k}{dw} = \frac{I_{k(p,w)} - (l_k) (1 + \pi_k)}{I_{k(p)} - (a_k) (1 + \pi_k)} \geq or \leq 0 \tag{14.7}
\]

There are 16 possible cases, depending on the size and sign of the investment elasticity coefficient. Essentially two general patterns are considered, such that the price gap between spot and forward prices gives rise either to additional investment or to inflationary pressure.

Equation (14.5) shows the alternative reaction patterns of prices to variations in the exchange rate. It will be positive when devaluation induces a price adjustment such that price increments induce an increase in investment higher than the increase in costs of imported inputs. And it will be negative when the induced price increment induces more inflation and a reduction of investment.

Equation (14.6) shows the alternative reaction patterns of prices to variations in the rate of interest. It will be positive when the price impact induces an increase in investment higher than the increase in financial costs and is high enough to absorb the impact on profitability. And it will be negative in two cases: (1) when the increase in financial costs is higher than the investment elasticity coefficient, and (2) when firms look for an increase in profitability through an increase in prices rather than through productivity.

Equation (14.7) shows the alternative reaction patterns of prices to variations in the wage rate. It will be positive when a wage rise allows a higher investment rate, because the rise of productivity is higher than the
increase in labor costs. Consequently wage increases would not lead to a
distributional inflation race. It will be negative otherwise.

The usual policy trade-off between rates of interest and exchange rates
can be analyzed through the following expression:

\[
\frac{dE}{di} = \frac{\Gamma_{x}\beta - (1 + f_{2}(u))}{\Gamma_{x}E - \alpha p \pi(1 + \pi_{c})} \equiv or \leq 0
\]  \hspace{1cm} (14.8)

The \((E, i)\) relationship shows itself to be very sensitive to the elasticity
coefficient of finance and the demands for imported inputs. This is a complex
relationship for two reasons. First, when \(f_{2}(u)\) rises, \(\pi\) diminishes. For inflation
targeting to work, it is necessary for the numerator to be positive. For
equation (14.8) to show a negative slope it is necessary for the denominator
to be negative; that is, the increase in import costs needs to be higher than
the increase in domestic prices to induce an increase in investment. This
condition can only be fulfilled at all if inflation is at a low level. Therefore
the condition for inflation targeting success is that inflation is not seen as
too high by firms. Then, how is it that inflation targeting can work when
inflation is indeed a problem? Firms should be forced to absorb the increase
in financial costs without increasing prices through a reduction in the profit
margin. But that would not be a condition leading to higher rates of invest-
ment and level of activity. In fact it should lead to a reduction of income and
employment that does not necessarily lead to curbing inflation. Figure 14.2
presents the impact on inflation of changes in interest and exchange rates. It
makes it clear that it can only be effective within a small range of values for $(E, \bar{r})$. After that the impact can turn entirely adverse.

Therefore the elasticity coefficients are likely to be small or even negative. But if both sides are negative, the $(E, \bar{r})$ relationship can show a positive slope, therefore feeding back again for inflation increase. In this case further increases in the cost of finance would render a loss and push firms to look for a nominal adjustment.

The orthodox case reduces to a small fraction of the price reaction function. The analysis from the point of view of prices in fact shows that the policy trade-off is between price (nominal) adjustment and productivity, given the firm’s financial conditions.

### 2.1 Pricing and Firms’ Financial Conditions

Given the price model, profitability essentially depends on labor productivity and the wage rate. Net profitability depends on a twofold effect of the rate of interest: the impact on financial costs, and the impact on the level of economic activity. If real (direct) costs are sensitive to the level of activity (either increasing returns or diminishing returns to scale), we should expect a differentiated response to increments of the rate of interest. There are three cases, presented in Figure 14.3, that demand our attention:

First, a small $f^r$ coefficient, slightly sensitive to changes in the rate of interest, which can be associated to the notion of a firm in a hedge position. The speculative case, with a medium $f^r$, more sensitive to variations in the rate of interest. And the third, with a high $f^r$, very sensitive to changes in the rate of interest, which is the case of a Ponzi condition.
Figure 14.3 represents how prone firms would be to look for adjustment in nominal prices, given their financial condition. Overall the impact of a monetary policy increasing the rate of interest depends on the actual composition of firms across the economy. Theory and experience suggest that permanent shocks would tend to move firms from hedge to speculative and from speculative to Ponzi conditions (Kregel 2004). Therefore, for a rise in interest rates to induce a reduction of inflation, two conditions would be necessary:

- The assumption that there is no change in the financial conditions of firms, which amounts to assuming that firms would be ready to cope with the impact on profitability.
- The additional financial cost will not be transferred to prices, because there is another policy instrument that actually stops prices, the threshold of competition, that will be at a lower level, according to the overvaluation of the exchange rate.

The need to adjust nominal prices has to be contrasted with the capabilities of a firm to succeed in terms of a real adjustment in respect of the other firms. This depends not only on competitive conditions but also on the actual structure, which allows to adjust to changes in the BPV. Therefore part of the adjustment is absorbed through real prices and part through nominal adjustment.

Consequently successful reduction of inflation through a rise of interest rates essentially works through the destruction of firms’ profitability, therefore with real costs to the level of income and employment. It might be argued that getting rid of Ponzi firms is positive for the economy. But moving all firms to their limit can lead to a condition of systemic financial instability and crisis. That is why the leading question should be: why can a firm not find another path of adjustment except to adjust its price level? I find three reasons:

1. The need to adjust to some other price increments, either wages or input prices. This sort of adjustment may come through inflationary expectations, and has also been analyzed as a cost-push effect.
2. The need to adjust because there are windows of opportunity given by market conditions. This may include effects of demand and profitability, and could be partly demand driven. But it may also imply looking for an increase in the rate of profit. A real adjustment will then be induced.
3. The need to adjust given that its profitability vis-à-vis financial conditions is untenable. This is a situation not considered properly
in the literature when inflation is induced by restrictive monetary policies.

The notion that an increase in the rate of interest induces a reduction in the level of investment and activity may find support either in neoclassical and new Keynesian literature or in some post-Keynesian views. But the marginal efficiency of capital is the result of the comparison of spot with future prices, with the spot and the expected rate of interest. If the contrast results in contango, it turns into a reduction of the rate of investment, but only if firms are unable to increase their future prices. Notionally, then, two paths of reaction appear to a firm: either to reduce its rate of investment, or try to increase its actual prices. That indeed depends on competition and the level of economic activity. But it depends largely on monetary policy: if the CB increases the rate of interest with the intention to reduce inflation, there is but one possibility open for firms working in Ponzi and speculative conditions: to look for a nominal adjustment, even if temporarily.

But competition pushes back prices, reducing the rate of inflation so far as it also pinches profitability across every firm. This can be coped with for a short while by speculative firms, up to the point where they are driven to the limit to turn into Ponzi conditions.

Once a point like $\mu$ in Figure 14.4 is reached, inflationary expectations will bifurcate in the face of a basic price vector set by the monetary authority. This is likely to occur after a point like $\mu$, where further increases in the rate of interest would force firms to look once again for higher nominal prices. Inflation targeting, then, is subject to very stringent
conditions about the presumed paths of adjustment open for firms. A policy proceeding otherwise becomes contradictory.

2.2 Inflation Targeting and Information

There is another difficulty introduced by the price signal itself, namely, a higher nominal rate of interest carries the information that the inflationary expectation is higher than the rate already recognized, therefore hitting the expected rate of profit. Firms then might try to pass the impact on to consumers. This is associated with a fall in real wages and effective demand.

But the core of the argument is between the structure of prices and pricing behavior in relationship to the pricing process induced by monetary policy through the BPV on \((w, E, l)\). The very notion of inflation targeting rests on this relationship and not solely on ‘inflationary expectations’, as if these were to work in a sort of vacuum of pricing structure.

Let us recall that inflation targeting partly works through information. In the usual expectations approach, if \((i = r + p)\), where \(p\) the expected rate of inflation, carries and projects the CB inflationary expectation. In a world of rational expectations every concerned agent in the economy knows the likely distribution of values for \(p\) at all times. Therefore, for an increase in the nominal rate of interest, no distributional impacts are expected as everybody is able to adjust, including nominal and real wages. If ‘rational agents’ know in advance the real value of \(r\), and the nominal rate of interest, a rise in the rate of interest informs three conflicting propositions:

- agents will have to face a higher rate of inflation;
- they will have to face an increase in financial costs and a reduction of effective demand; or
- their present capital stock is excessive or is overvalued.

Whichever is the understanding of the message, a rise in interest rates pushes in the direction of trouble signaled by Minsky. The real issue for firms is: how to adjust? In the rational expectations approach the whole process of adjustment is ignored, while the crucial question is: why should an increase in the nominal rate of interest lead to a reduction in the rate of inflation? It is evident that it is not through a reduction of \(M_k\), because such a reduction will occur as another consequence of the reduction of decisions to invest. In fact a reduction in \(M_k\) may come about through an increase in liquidity preference as a reaction to the uncertainty introduced by inflation targeting itself.
The case of the open economy is far more complex. Inflation targeting involves two major difficulties. The first is the relationship between the nominal exchange rate and the rate of inflation. This can be analyzed through changes in the real rate of exchange, which reflects the difference in rates of inflation between the domestic economy and the rest of the world. The fact that the CB pegs to a particular exchange rate does not imply that the expected rate of inflation should move on a par with inflation in the rest of the world. In fact it can only tell us that the CB is ready to penalize domestic firms for their attempts to adjust through higher nominal prices.

The market is then informed by two differing and not necessarily converging notions for the inflation path:

- the one implicit in the rate of interest, and
- another, implicit in the exchange rate.

It is evident that they may not necessarily be the same or convergent. The impact on profitability is complex, because it also carries a long-run impact of depressing the growth of productivity. The immediate impact on the capital value of export activities is evident. In spite of the real cost, nevertheless, usually in this case the issue reduces to a bet on how long the CB will be able to maintain that rate.

The impact through the credit channel can be consistent with a reduction in the level of economic activity, but not necessarily with a reduction in nominal prices. That depends on the form of the pricing functions.

Now it is evident that if the CB looks to reduce the rate of inflation through an increment of the rate of interest, it might well obtain the obverse. The sole point of a minimum rate of inflation is consistent with a particular rate of adjustment of the exchange rate at $E^*$ and with a maximum for the rate of interest at point $\mu$, where we have: min \{d$E$, d$i$, d$P$\}. With a fixed rate of exchange, (d$E$ $\to$ 0), an increase of the rate of interest can only move to lower rates of inflation when the economy is to the left of $\mu$, because in that phase the increase in d$i$ is associated with an adjustment of speculative and hedge firms, which is feasible with a reduction of d$P$. Nevertheless, once that point is reached, to the right of $\mu$ any further increase in the rate of interest leads to an increase in the rate of inflation. Increments of the rate of interest can only weaken the financial position of otherwise healthy firms, pushing them to look for another kind of adjustment. If the economy were to be in that position, the optimal policy would be a reduction of the rate of interest with a non-overvalued real exchange rate.
3. INFLATION TARGETING THROUGH THE BPV PRODUCES A BIFURCATION BETWEEN FIRMS AND BANKS AND IN 'INFLATIONARY EXPECTATIONS'.

Why, then, is it that the rule of increasing the rate of interest to fight inflation is so popular? The reason is that it can seem effective for a short while, because by pegging the exchange rate, imports can restrain domestic prices. However, it is not a higher rate of interest that stops inflation but the fixed exchange rate. Therefore the actual short-run price anchor turns out to be the exchange rate. In this case the higher rate of interest is powerless to stop inflation. This policy has a twofold impact: a drop in productivity across the economy, given the threshold of competition, and a growing gap between inflationary expectations induced by the exchange rate and the interest rate. Consequently, the exchange rate is highly questionable as a consistent anchor on price expectations, not only because a small open economy does not have unlimited access to supplies of external savings. Any CB knows that such a policy opens a gap for a speculative attack on the rate of exchange that unavoidably develops into sudden and violent inflation episodes. This can have very high costs not only in terms of stability, financial conditions, and in the level of income and employment. The sole reason to increase the rate of interest might be to widen the gap between the external and the domestic rates in order to attract external short-term capital flows, just to bridge the growing trade deficit.

If inflationary expectations consistently follow the movement in the rate of inflation, the sole way in which the monetary authority can manage both is if they are the same, let us say at \( dP_i \). Therefore the pair \((E_i, i_i)\) might be consistent with a particular inflationary expectation \(E(P)\) at \((E_i, i_i)\), the one at which the rate of change in \(dE\) and \(di\) are at a level \(dP_i\). The difficulty arises from the fact that two rates of change for the interest rate might be consistent with \(dP_i\), the first with a decreasing rate of inflation, the second with a growing rate of inflation. This problem stems from the fact that inflation expectations are not stationary at point a or b in Figure 14.4. If a divine inspiration were to direct the TA to set the vector \((E_i, i_i)\) consistent with point \(\mu\), at least he could argue that the vector chosen would make inflationary expectation for both prices consistent. Nevertheless, once a BPV prevails, inflation targeting policies force the CB to be compromised to stand for it, which again is contradictory to the essentials of inflation targeting itself.

What is characteristic of a point like \(\mu\)? From what we have observed it is not a fixed \(E\), but a rate that could have the lower rate of adjustment, given the rate of change in rates of interest. Such a rate can be one that
keeps domestic prices aligned with foreign prices, namely, a constant real exchange rate, not a constant nominal exchange rate. A lower rate of adjustment to the exchange rate means looking for a lower rate of inflation than the rest of the world, which would have to be paid for dearly. This indeed can be a step towards ‘flexible rules’.

One of the leading ideas in the presentation already advanced is that the CB acts as the ‘tyrannical auctioneer’ (TA) because it is ready and able to recognize that there are disequilibria associated with its BPV \((E, i, w)\) when there is a growing disequilibrium in the balance of payments and in the financial condition between commercial banks and firms. According to our analysis, the TA should also recognize that there is a disequilibrium induced by monetary policy when there is a growing fiscal deficit with constant public expenditure. The issue then is if a CB, following the usual standard orthodox rule, just as the TA, can have a proper understanding of the actual impact of its policy. The argument is that it cannot because the standard reading of its own balances may not show individual firms and government disequilibria.

The point in dispute is that macroeconomic equilibrium may occur with individual disequilibria. According to Minsky (1986) and Kregel (2004), such disequilibria end up in systemic financial instability. What is the main signal of individual firms’ disequilibria? No doubt one is the financial instability syndrome, as Minsky and Kregel argued. But there is another equally important: the fall in productivity associated with the recessive conditions that standard policy rules impose. Therefore another idea for flexible rules might be that the CB should not wait to see growing non-performing assets in the banks to stop the increment of the rate of interest.

Usually a target inflation policy pegs to the rate of exchange and increases the gap between the domestic and the international rates of interest. The result could be that instead of one problem, we would have four additional problems:

- A growing trade deficit
- A growing fiscal deficit
- A growing external saving deficit accompanied by growing non-performing assets in banks’ portfolios
- A continuous deterioration of the financial system (Kregel 2004; Ortiz 2004).

But there may be five, not just four, problems, because the issue is if, in the presence of those growing deficits, there is a credible argument for inflationary expectations to be curbed. The line of reasoning already advanced is that there is no reason to accept that inflationary expectations
should be reduced. They have been repressed at the cost of financial stability for the whole economy. Whether commercial banks and the CB like it or not, the other path of adjustment opens its way—increasing valueless liabilities for the banking system. From experience we know that the limit comes when the international financial community considers it no longer feasible to accept additional external debt, neither private nor public. This is a point of bifurcation, namely a crisis.

Once the devaluation frees the repressed inflation, overshooting may contribute to accelerating inflation, which generally would be accompanied by further increases of the nominal and real rates of interest. The inflation bubble may go as far that the CB is unable to stand for a credible policy and introduces alternative adjustment dynamics. Inflation targeting under these conditions can work for a very short while only if the real expected rate of interest is almost nil or even negative, in order to consolidate the financial position of leading firms: hedge and speculative firms. In the long run, what turns out to be the actual inflation anchor, no doubt, is the wage rate, regrettably on the back of the labor class. Note that $w$ is also part of the BPV.

But we have also reached another important result. It is no longer possible to say that, *ex ante*, inflation targeting is necessarily consistent under any condition. The reason is that the core issue is the trade-off between inflation versus productivity, and this cannot be solved through increments in the rate of interest. If inflation is a viable way of adjustment for firms, instead of looking for better productive and competitive capabilities, then inflation targeting necessarily leads to financial fragility and not to growing productivity.

The main difficulty in the long run is that inflation targeting actually eliminates the more important source of adjustment for economies facing long-run or structural inflationary pressures, that is, its productivity growth. It kills the possibility for firms to introduce dynamic responses, technological, organizational and financial, to respond to disequilibria. From a dynamic perspective it destroys the virtuous circle of productivity and accumulation that is at the root of a reasonably well-ordered operating capital market.

Which path of adjustment is actually open for firms? Essentially that depends on monetary policy. But in a context of a contracting economy, firms are pushed to increase their level of indebtedness or to push for higher prices. This has been an important means of adjustment induced by financial reforms, and not because firms hide information from the banks. Banks might be interested in preserving firms, even ignoring if they are Ponzi, if for no other reason than because otherwise they might have to face a bigger problem if they go bankrupt. And this may well be the road for systemic instability and financial fragility.
Therefore what we actually find is that inflation targeting formed from a particular price vector \((E, i, w)\), although it is particularly directed to work within the first two adjustment mechanisms, is systematically biased towards a rather poor performance on both paths. What is even more paradoxical is that monetary policy, oriented to work through the price adjustment and the capital reallocation paths, necessarily diminishes or even destroys the third means of adjustment, which is actually more important, and necessarily the means with the greater potential to create a real and strong capital market.

The dominant discourse about rules has led to the independence of CBs, although in no way is it a guarantee that monetary policy can be made neutral or can be run properly in the best interest of society. Globalization and the current policy model turned monetary policy into an extremely important component of everyday decision making. The rule cannot be reduced to ‘make monetary policy neutral’, because such a thing cannot be done. Therefore, if monetary policy cannot be neutral in any meaningful way, a call for a new institutional device is in order. The TA is extremely powerful to define economic performance, resource allocation and the distribution of income. The imagined neutrality of monetary policy can only contribute to poor policy performance and crisis.

The proposition that the BPV is decided by the CB in fact amounts to saying that it cannot be formed by market forces in any straightforward way. This is not to deny that there are market forces at play. The point at issue is if they can ‘form’ the market. It is the conviction that market forces by themselves cannot provide a stable operation for those prices contained in the BPV that has led to the actual economic model.

The sole piece of advice in the direction of ‘inflation targeting’ and ‘flexible rules’ is that, in order to reduce the impact on productivity and the level of income, it is better to settle for a rate of exchange that fixes the real rate of exchange around unity. This will put the rate of inflation at the level of the rest of the world and reduce the need for a very wide gap for the domestic interest rate. It will also improve the conditions under which the financial system can run, in so far as it will not hurt otherwise healthy firms. In the long run it should help to avoid speculative attacks and sudden devaluations.

It is evident that the critique of the TA is a call for imagination in the design of new institutions. An alternative should be able to respond to the task of an efficient and reasonably good direction for the whole economy. In a democratic society, such a task cannot be granted to a group of ‘wise men’ on the grounds of ‘CBs’ independence’, while the whole economy is not independent of monetary policy. Therefore the call is not for ‘flexible rules’, but for a different institutional environment with societal development at its heart.
NOTES

1. For a broad review of the representation of the new consensus models, see Arestis and Sawyer (2006) and Lavoie (2004, 2006). A critical analysis is also in Smithin (2004).
2. This is also true of a number of models, as in the so-called ‘new consensus’, see Allsopp and Vines (2000).
3. New voices come from CBs’ orthodoxy, calling for a new approach that Weber, et al. (1991) call ‘flexible rules’ in order to highlight a growing concern with the ‘real impacts’ of monetary policy.
6. The ‘new consensus model’ for monetary policy would generally include some form of an IS equation, another kind of Taylor rule and a third that would resemble something like a Phillips curve. For an extensive critique of this model see Lavoie (2004, 2006).
7. Wage control through monetary policy is inherited from the period of ‘incomes policies’ where price and wage control arose as a necessary tool to curb inflation. Wage control policies were introduced to last, and now form an essential part of monetary policy.
8. There is a huge literature on the presumed ‘neutrality’ or ‘super-neutrality’ of money, which will be ignored here for space considerations.
9. An important literature exists questioning the relevance of this result, because it gives rise to an equilibrium that might not be related at all to monetary transactions (Hahn 1985).
11. If the CB is unable to identify the ‘natural’ rate of interest, the realized rate of inflation might differ from the targeted rate.
12. And I agree with Smithin (2004) that it is impossible or nonsense.

REFERENCES

Kregel, Jan (2004), 'Can we create a stable international financial environment that ensures net resource transfers to developing countries?', *Journal of Post Keynesian Economics, vol* (4), 573–90.


