# REVIEW OF *MONETARY REGIMES AND INFLATION– HISTORY, ECONOMIC AND POLITICAL RELATIONSHIPS* BY PETER BERNHOLZ (EDWARD ELGAR PUBLISHING LTD., UK 2006, 224 PAGES)

PHILIPP BAGUS

There exist many books on inflation. Yet, Peter Bernholz´ book is different as it entails an analysis of all the world´s hyperinflations and the currency reforms ending them. Using a public choice approach Bernholz spells out the political forces that start and end hyperinflations.

Using the common definition of inflation as an increase in the general price level, Bernholz distinguishes between moderate inflation and hyperinflation. In his working definition, a high or hyperinflation begins when the real stock of money corrected for GDP growth falls.

Through out his book Bernholz points to the importance of monetary regimes for monetary stability. He defines:

> By a *monetary regime* we understand the set of rules governing the institutions and organisations which finally determine the amount of money supplied. If we turn our attention to the laws and decrees containing all such formal rules we speak of a *monetary constitution*. (p. 12)

Bernholz distinguishes three monetary regimes for which he compares their inflationary nature.

First, metallic standards like a gold or silver standards.

Second, «weakened» metallic standard, such as the gold exchange standard after World War I or the Bretton Woods system.

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Third, discretionary paper money standards. Discretionary paper money standards can be further distinguished according to the dependence or independence of the central bank and according to their foreign exchange rate regime, namely if they have a fixed exchange rate regime or not.

While the monetary regimes up to World War I were metallic standards (with minor exceptions), a regime change occurred in 1914 up to the 1930s. There was a general transition toward weakened metallic standards. Unsurprisingly, monetary instability rose. In fact, as Bernholz points out, all hyperinflations with the exception of the inflation of the Assignats during the French Revolution occurred after 1914.

Bernholz´ historical analysis is very useful for illustrative purposes. He shows that price inflation in metallic standards was smaller than in weakened metallic standards or paper money standards. His empirical assessment also reveals that price inflation in regimes with an independent central banks was lower than in regimes with a dependent central bank. The same applies to fixed exchange rates regimes, which produced lower price inflation rates than regimes with an unfixed exchange rate.

In addition, Bernholz found inflation was higher in democratic regimes for public choice reasons. Democratic governments bought votes financing it through inflation. Another interesting empirical finding of Bernholz is that small countries with strong international economic relations were more favorable to monetary stability than larger countries (p. 212).

The most famous findings of Bernholz´empirical research, and what made his book a kind of insider tip among financial journalists during the recent sovereign debt crisis, is that all hyperinflations were caused by huge budget deficits financed through the printing press. In this context, Bernholz calculated empirical thresholds. Historically government deficits higher than 40 percent of government expenditures resulted in high inflations and hyperinflations. Similarly, government deficits higher than 30 percent of GDP caused hyperinflations. Most budget deficits were caused by war. Sometimes these deficits were also provoked by the cut of foreign transfers for a government that had got used to it or by the rise to power of a populist movement that sharply increased public spending.

Bernholz points out that at a certain point the monetization of deficits by the printing press becomes self-defeating. As his empirical research shows in high inflations budget deficits actually increased, because tax revenues depreciated in real terms before they could be spent. Price inflation made tax revenues worth less, thereby increasing the government deficit. He calls this effect Tanzi´s law.

As prices rise faster than the money supply in a hyperinflation, the real stock of money tends to fall. The question remains how transactions can be managed with a smaller real stock of money. Bernholz offers three answers.

First, the velocity of money increases. Second, economic agents return to barter for a part of their transactions. Third, there is a substitution effect that he calls Thier´s Law. Good currencies, namely specie and foreign exchange expulse and substitute the bad national currency. The importation of these good currencies is reflected in a balance of payment surplus.

Naturally and spontaneously an «unplanned currency reform» emerges in the market (p. 85). People simply switch to foreign exchange and specie for economic calculation and transactions. Government reacts to this and may legalize the result. Indeed, the Zimbabwean government legalized the pay of taxes in US dollars because it needed tax revenues that did not become worthless instantaneously. Similarly, in Weimar Germany people started to use foreign exchange. Yet, for nationalistic and prestige reasons the Weimar government did not want to accept foreign exchange for the payment of taxes. Hence, it needed its own stabilization plan for the national currency. Yet, the crisis for the monetary system had been solved before spontaneously on the market when in a private currency reform the mark had been substituted by specie and foreign exchange.

Bernholz also empirically assesses other effects of monetary inflation such as the distortion of relative prices. Prices of government services normally lacked behind other prices. Similarly and surprisingly prices of shares and houses fell relatively during hyperinflations. The redistribution of most hyperinflations benefited wage earners, while entrepreneurs held their positions and pensioners lost. Many people that had been able to live on the returns of their accumulated savings before the hyperinflation had to start to work again after their savings had been wiped out.

In the last part of his book Bernholz discusses the ways to end inflations taking into consideration political resistance. He maintains that one needs different means to end a moderate inflation than to end a hyperinflation. To end a moderate inflation it may be sufficient to appeal to national prestige:

> [N]ational prestige has also often played a part in resurrecting the old system and parity. A leading power like the United Kingdom would have lost status if it had not returned to the pre-war parity after the Napoleonic Wars and after World War 1. Finally, for a world financial centre, as London had been at the outbreak of World War 1, the absolute trustworthiness of a stable international currency, the pound, employed in worldwide contracts was essential. (p.145)

Thus, Bernholz makes a strong argument that the return to the gold standard at the pre-war parity in the United Kingdom was not a mistake, in contrast to the majority of economists who regard these episodes as times of unnecessary deflation and stress. He also mentions that Switzerland returned after World War I to the gold standard at the old parity successfully.

A moderate inflation leads to an undervaluation of the currency, because foreign exchange rates respond faster to increases in the money supply than other prices. These undervaluation spurs exports. To end moderate inflations, governments have to reduce the rate of money production. However, they will at some point meet resistance from the export sector that is enjoying the undervaluation of the currency. In order to overcome the resistance to the moderation and end of inflation, Bernholz recommends to fix the foreign exchange rate to a more stable currency but at a level where it is still undervalued providing a lasting advantage to export industries. The recommendation makes sense from a pragmatic political point of view, however, it might not be the most ethical solution and cause further distortions.

Lastly, Bernholz describes how to end a hyperinflation. He makes the point that it is not so important to reduce the actual rate of monetary inflation harshly. Such a harsh reduction could be counterproductive. Bernholz maintains that in a hyperinflation it is essential to restore confidence in the currency and get a fundamental change in inflationary expectations. If such a change is successful Tanzi´s law works in reverse. The velocity of money falls. People hold on longer to their money than before. The real stock of money increases as prices rise slower than the money supply, real government tax revenues increase and the budget deficit falls. Thus, even though the money supply may increase at the same rate as before, the change in inflationary expectation leads to a reduction in the deficit which then allows the government to reduce the rate of monetary inflation.

The fundamental turn in expectations might even be achieved through superficial policy changes. No real change is needed. In history, it worked to end hyperinflation by making the public believe in non-existing regime changes. The introduction of the German Rentenmark in 1923 is a case in point.

Of cours, there are also more real and lasting changes which can be employed to end hyperinflations. For instance, one can declare the central bank independent and introduce fiscal reforms that show the government´s willingness to cut expenditures and thereby the deficit. Other ways to restore confidence in a hyperinflationary currency is to introduce a fixed exchange rate regime and ask for foreign financial help.

Bernholz not only maintains that the rate of inflation should not be brought to hold at once, he actually argues that as the real stock of money had fallen in the hyperinflation, it is necessary to continue the monetary inflation to prevent mass unemployment and strain on the economy. He fears too much readjustment of the structure of the economy may put in jeopardy the reform in itself.

Politically, Bernholz recommends a return to metallic standards. Unfortunately, he makes the concession that small and export oriented countries should not adopt the gold standard since the overvaluation of their currencies would harm export and import competing industries. He recommends the return to metallic standards to big blocks such as the United States or the European Union. Probably, Bernholz has the example of his home country Switzerland in mind. While it is true that the introduction of the gold standard in a single small country will cause losses for exporters and import competing companies in the short run, there will corresponding profits for consumers. Consumers will have more purchasing power and create new jobs in other sectors of the economy. There will be a readjustment of the structure of production. The export and import competing sector will be reduced, other sectors will grow due to the increase in wealth and purchasing power of the citizens. These citizens can satisfy many needs cheaper than before, which allows them to satisfy additional needs that until this point had been left unsatisfied. It is true, of course, that if there is temporary unemployment and bankruptcies of export companies, these adjustments may cause political turmoil that ultimately can put in danger the whole monetary regime change.

In sum, Bernholz book is the most complete historical analysis of hyperinflations and monetary regimes available. I highly recommend it.