

POLITICS, CENTRAL BANK, MONETARY REGIME AND GOVERNMENT BANKRUPTCY

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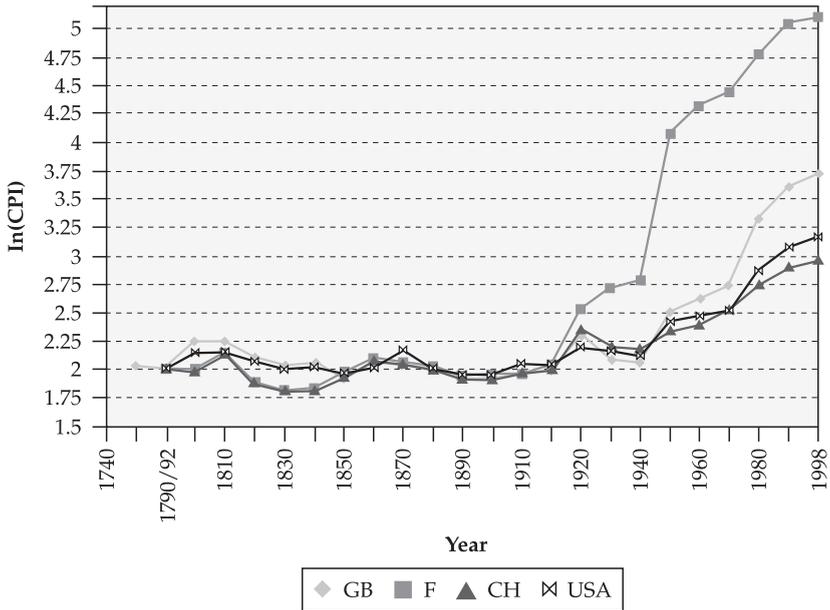
I INTRODUCTION

The damages and suffering caused by inflation during the course of history are enormous. Still, the worst excesses of inflation occurred not before the 20th century. This development was a consequence of the further technical development of money from coins to paper money and book money together with changes in the monetary regime or constitution ruling supply and control of money. Sustained inflation has always been a monetary phenomenon in the sense that the increase of the money supply is a necessary condition for its occurrence. Moreover, if an increase of the money supply is permanently outstripping the growth of real gross domestic product it is also a sufficient condition for inflation. But that is not the whole story. For it has still to be asked which are the factors and institutional settings that allow the excessive growth of the money supply. And here historical evidence provides a clear answer (Figure 1).

During the rule of the gold and silver standards until the outbreak of the World War I or after the restoration of it until the Great Depression of the 1930s no upward trend of the price level, but only long-term swings can be observed. But after the demise

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FIGURE 1
DEVELOPMENT OF COST OF LIVING INDICES
(French Figures for Switzerland before 1890)



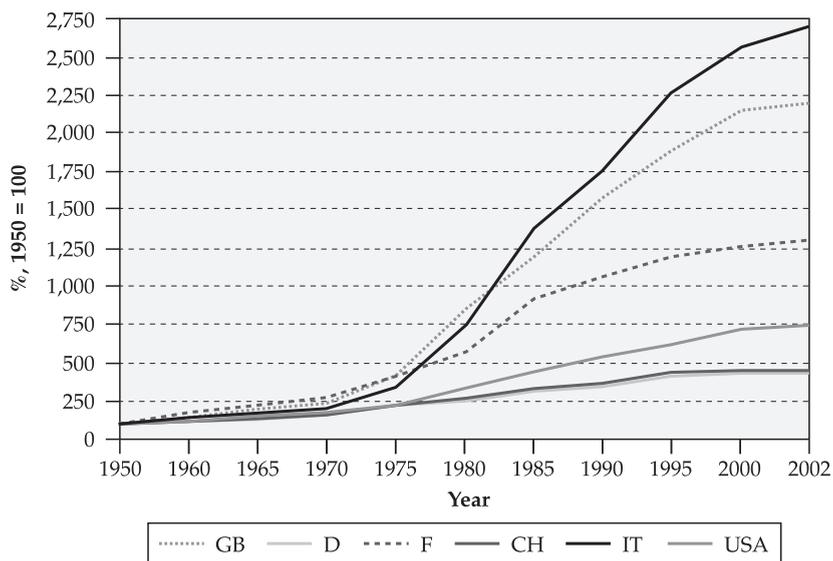
Sources: Mitchell (1976), pp. 735-747. Statistisches Bundesamt (1981), pp. 704-706. US Bureau of the Census (1976): Historical Statistics of the United States: Colonial Times to 1970. Bicentennial Edition. Statistisches Bundesamt (2000), pp. 230f.

of the convertibility of banknotes into gold at a fixed parity and thus the introduction on a discretionary paper money standard the price level rises dramatically even in the respective developed countries.

And this is not all, as can be seen by looking at Figure 2. Here we observe a similar increase of price levels until the breakdown of the Bretton Woods system in 1971-1973. After that prices rise much more quickly in Italy, Britain and France than in Switzerland, Germany and the USA.

The reasons for these developments are obvious. The latter three countries enjoyed independent central banks, whereas the former did not. And the Bretton Woods System was dominated by the US Federal Reserve System (Fed), an independent central

FIGURE 2
DEVELOPMENT OF COST OF LIVING IN SEVEN
DEVELOPED COUNTRIES, 1950-2002



Sources: See Figure 3.

bank, whereas the other countries had to follow its lead apart from some de- or revaluations because of fixed exchange rates to the dollar.

This leads to the following conclusions: Inflation has been the higher the greater the influence of politicians on monetary policy. During the gold standard politicians had no influence on monetary matters. With a discretionary monetary system their influence increased, but much less when central banks were legally and in fact independent. But since their directors are only human beings and not bound any longer by automatic rules, they can be influenced by political and psychological pressures and also by the ideas prevailing in their environment. Thus inflation was higher even with independent central banks than under the gold standard. It follows that inflation is absent or the lower the more the hands of politicians are bound by the monetary constitution. Given these relationships it is not surprising that

the Freiburg ordo liberal school as well as constitutional economics have been in favor of measures trying to limit political influences on monetary policies. The ordo liberals in Germany certainly favored an independent central bank in the 1950s. Priority of price stability was considered by Walter Eucken (1952, p. 169) as a constitutive element of a market economy. According to him an international monetary order has to fulfill the following minimal conditions:

- (a) it has to function automatically, so that the governors of central banks cannot determine monetary policy by discretion according to changing viewpoints.
- (b) The mechanism has to work as much as possible towards stability of exchange rates
- (c) A strong stabilizer has to be built into the mechanism, which works much more strongly than under the gold standard to prevent deflation and inflation.

His disciple Friedrich Lutz (1935, p. 247) had already stated that

A particular monetary constitution corresponds to each economic system and the gold standard is the monetary system of the free market economy.

Later he favored to accept the Chicago plan which proposed a 100% reserve requirement in central bank money for all demand deposits (Angell 1935). Eucken followed him in accepting this idea from the other side of the Atlantic, but proposed to introduce additionally the Graham (1937) plan envisaging a commodity reserve currency with convertibility of money into a commodity bundle of fixed proportions at a fixed parity. This shows how much ordo liberal thinking was influenced by earlier American constitutional thinking. Later Lutz proposed the acceptance of flexible exchange rates, given the relatively stable monetary policies of the Deutsche Bundesbank.

It is also well-known that Hayek (1978) came out in favor of free banking since he lost faith in the stability of money controlled by central bankers.

II MONETARY AND FISCAL POLICIES DURING THE FINANCIAL CRISIS.

Many historical examples demonstrate that stable monetary regimes as a constitution binding the hands of rulers and politicians have been often the victims of severe financial crises (see Table 1).

Such financial crises have especially arisen with the outbreak of wars when ordinary revenues of governments could not be adapted to the needs of war finance. It is not by chance that all European governments except Albania abolished the gold standard at the beginning of World War I. Similar events occurred during the Great French Revolution and the Napoleonic Wars. Even Britain suspended the gold standard at that time though it returned to it at the old parity after this period. Specie payments were suspended by an Order in Council in February 1797, that

TABLE 1
EMERGENCIES LEADING TO AN EROSION
OF STABLE MONETARY REGIMES

<i>Country</i>	<i>Period</i>	<i>Cause</i>	<i>Kind of Erosion</i>
European countries	1914	World War I	Abolishment of Gold Convertibility
Most Countries	1931-1936	Great Depression	Abolishment of Gold Convertibility
USA	1933	Great Depression	Devaluation of dollar against Gold, Prohibition of Owning Gold
UK, F, It	1958-1973	Deficits of Balance of Payments, too Expansive Policies	Devaluations of Pound, Franc and Lira in Bretton Woods System
USA, World Wide	1971-1973	Too Expansive US Monetary and Fiscal Policies	End of Bretton Woods System with Fixed Exchange Rates

is not by an Act of Parliament. Similar events happened even in earlier times when paper notes played no or only a minor role. Frederic II of Prussia debased Prussia's silver currency during the Seven Years War. And already more than 2000 years earlier Athens debased its silver currency during the Peloponnesian War and Rome did the same much more strongly during the chaotic periods of the fourth century A.D. with its many civil and international wars. But financial crises are not limited to wars. Thus it is not a surprise that the Great Depression brought about the final end of the gold standard. As President Franklin D. Roosevelt pronounced on April 5, 1933:

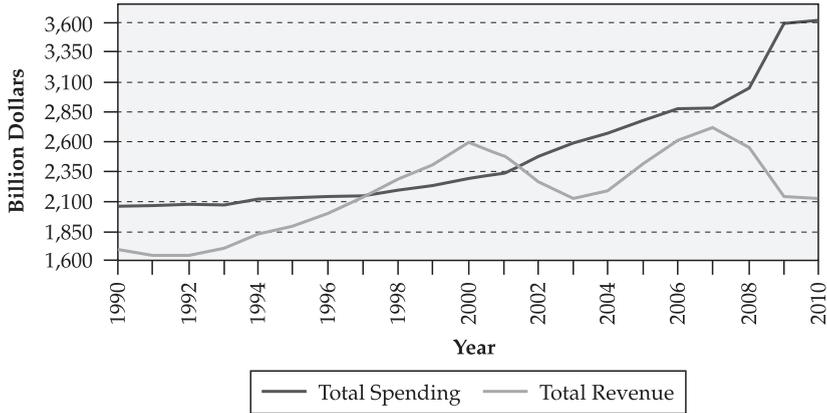
All persons are hereby required to deliver on or before May 1, 1933, to a Federal Reserve Bank or branch or agency thereof or to any member bank of the Federal Reserve System all gold coin, gold bullion, and gold certificates.

With these observations in mind we have to ask several questions. First, what were the policy responses of leading central banks to the recent financial crisis? Second, did their behavior and the influence of politicians on them threaten their independence? Third, are there any safeguards to prevent the threats posed by financial crises to their independence in the future? Are other institutional or constitutional reforms available to hinder politicians to influence monetary policies? In this section let me first consider the monetary policies of central banks since the year 2000.

I begin by stating two facts which in my view cannot be denied: First, that the present crisis has been initiated by the Fed's too expansionary monetary policies after the bursting of the New Economy Bubble. Second, that the Fed and the US government (Figure 3) embarked on even more expansionary policies to fight the present crisis. Indeed, their policies constitute an experiment on a scale which has never been seen before in the history of fighting crises.

Let me turn to the first point. In a mistaken fear of deflation the Fed, more or less followed by other central banks, lowered its interest rate to one percent and increased the monetary base

FIGURE 3
US FEDERAL SPENDING AND REVENUE
(Inflation Adjusted), 1990-2010



Note: 2010: Estimated.

by about 39% from 2000 to 2006 after the bursting of the New Economy Bubble. In doing so it encouraged an incredible credit expansion by the financial sector and thus allowed the subsequent asset bubble. Later it helped to pierce the bubble by raising its interest rate step by step above 5% and by strongly reducing the growth of the monetary base. Though the Fed thus initiated the crisis, we should not deny that it would never have taken such dramatic dimensions hurting the real economy without other well-known defects in the financial system like:

1. Banks neglected to maintain a sufficiently diversified portfolio.
2. The compensation systems for leading managers were far too much based on short-term performances.
3. The control system within banks failed.
4. Rating agencies financed by their customers grossly misjudged the values of firms and assets.
5. The measures by the US government to ease the buying of houses by relatively poor people proved to be mistaken.
6. American liability rules in case owners could not pay the interest on their mortgages encouraged too high levels of indebtedness.

7. The liability rules for gross mistakes by leading managers of business firms were too restricted.
8. The percentages of own capital required for banks by internationally agreed rules (Basle 2) and the valuation at market prices adhered to during the crisis exacerbated it.
9. The permission by Basle 2 for banks to employ their own models to evaluate risks was a mistake.
10. The control of financial institutions by government agencies failed.
11. The lack of knowledge of economic history by leading managers encouraged them to take overly risky decisions.

Before taking up the second point, namely the possible consequences of measures taken by Fed and US government to counter the crisis, let me stress that crises cannot be prevented in an decentralized and innovative market economy. It may be possible to mitigate them by adequate reforms or even to prevent one or the other. But that is the best result one can hope for. This can be demonstrated by looking at the occurrence of crises from two different perspectives. By analyzing historical events Charles Kindleberger has shown in his book *Manias, Panics and Crises* of (1978) that 29 financial crises occurred from 1720 to 1975. This means that on average each decade experienced an unpredictable crisis, though very strong crises are rather rare. For instance, besides that of 1929 another one of 1873 has been severe, lasting about six to seven years and hitting the real economy from Europe to the USA, Argentina and Australia. Apart from this historical evidence for the inevitability of crises, mathematical chaos theory has demonstrated that systems characterized by non-linear feedbacks can be hit by unpredictable fluctuations. And a decentralized market economy has quite a number of such feedbacks, for instance changing expectations of consumers and producers, fluctuations in the volume of net investments, governmental interventions, central bank policies and the reaction of prices to unpredictable innovations.

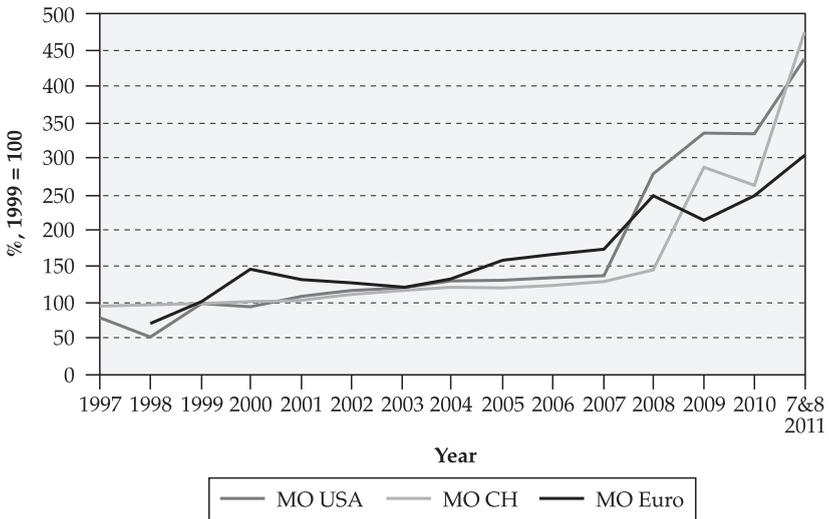
We turn now to the second point, whether grave dangers are looming because of the measures taken by central banks and governments to fight the present crisis. Let us first consider the

facts. Central banks led by the Fed have indeed lowered their interest rates to nearly zero percent. The monetary base of the Fed has grown by about 209.8% until December, 2011 since the end of 2007 (Figure 4). And this though the US inflation has already reached 3.5% in November 2011, with –at the same time– a rate of unemployment of about 8.6%.

The Swiss National Bank increased its monetary base by a record of 426.9% from the end of 2007 to November of 2011. The growth of the monetary base in the Euro Area looks more modest with 95.1% since the end of 2007 until April 2011 (Figure 4). But even this smaller increase has never been experienced in monetary history except in countries suffering from high inflation, And since the Greek crisis the ECB has begun to buy bad Greek government assets, and also Spanish and Portuguese and since June 2011 even Italian government bonds.

Since the beginning of this program in May 2010 it has bought such government bonds in the amount of 211,5 billion (European mrd.) euros. Moreover, it has accepted government paper as «safe» collateral for its lending to banks from Greece, Portugal

FIGURE 4
DEVELOPMENT OF MO: FED, ECB AND SNB, 1997-2011

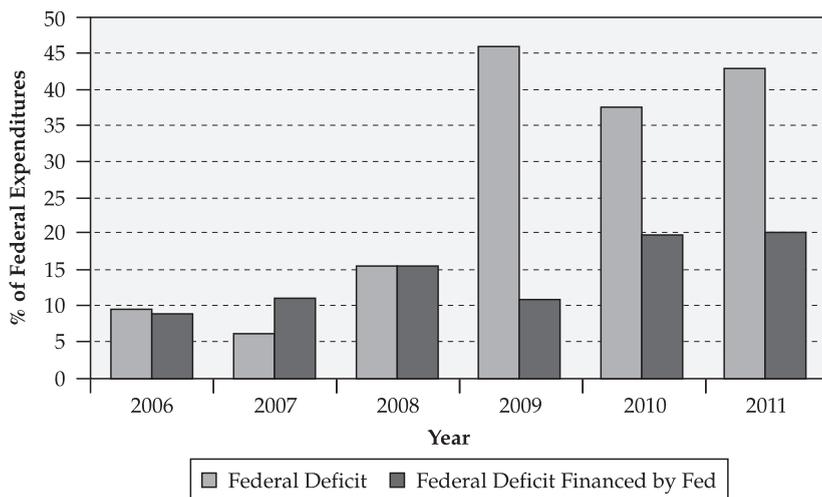


and Ireland. This makes it more difficult to reduce the excessive monetary base in time to prevent inflation, which has already reached 2.7% in the Euro Area. Finally national central banks of these countries have built up huge debts of more than 400 billion euros within the European payment system Target 2, whereas the Deutsche Bundesbank has accumulated together with other central banks a corresponding amount in the system. Both amounts about cancel within the ECB so that they do not turn up in its balance sheet. But in a case that these debts are lost, 30% would have to be born by the Bundesbank. Moreover, these debts, too, make it more difficult for the ECB to reduce the monetary base in time.

Government finances, too, have worsened dramatically because of the measures taken to fight the crisis. The US federal deficit rose from 2.9% of Gross Domestic Product (GDP) in 2007 to 10.2% in the second quarter of 2011. The indebtedness of the USA reached 79% of GDP in the same quarter. During fiscal year 2009/10. 40.6% and in fiscal year 2010/11 41.8% of Federal expenditures were covered by credits (Figure 5). Historically such deficits have often been the precursor of substantially higher inflation (Bernholz 2003, pp. 69-74). In Great Britain the deficit grew from 2.7% in 2007 to 10.3% in 2010. Meanwhile the new government has taken steps to strongly reduce the deficit. British debts amounted at the end of 2010 to 79.9% of GDP. The Bank of England, however, is still sticking to its expansionary policies, though the inflation has now reached 5%. In the Euro Area the deficit of member states increased from 3% 2004 to 6.2% of GDP in 2010. The debt reached 85.3% of GDP in the end of 2010, with Italy at 118.4 and Greece at 144.9 leading the development. The budgetary crisis of Greece following in 2010, and similar developments in Ireland, Portugal and now threatening Italy have demonstrated that weaker economies have used the low interest rates to indebt themselves beyond any reasonable limits.

But were the measures taken by the Fed and other central banks as well as those of the respective governments not justified because of the dramatic situation and the dangers threatening in the crisis? It is difficult to form a judgment because of the extraordinary extent of the measures and because we do not know the further

FIGURE 5
US FEDERAL DEFICIT AND DEFICIT AS FINANCED
BY FED AS % OF TOTAL EXPENDITURES



course of the crisis. Speaking to members of the board of central banks one is assured that they are technically able to reduce the blown up monetary base and to increase their interest rates to normal levels any time. This is probably true. Asking, however, whether they will be able to do so given the political and psychological pressures to be expected when timely measures to prevent inflation by rising interest rates have to be taken, the answer by them is again «yes». But this seems to be rather doubtful since they would have already to occur at a time when tender growth has just set in and when unemployment may still be rising. For a stiffening of monetary policies to fight inflation has to set in about two years before results can be observed because of the usual time lags. It is thus not surprising that former board members of central banks and well-informed economists are much more skeptical concerning the chances to increase interest rates and to reduce the monetary base in time to prevent substantially higher rates of inflation.

It is thus probable that we have to face some bad consequences of a mistaken policy in the future. Already Sir Walter Bagehot

(1873) recommended to the Bank of England to lend freely in a crisis drying up the money markets among financial institutions, a policy which was rightly followed by the central banks during the recent crisis. But Bagehot also recommended to do this at a penalty interest rate and only to institutions who were solvent judged from the value of their assets in normal times. And Wick-sell warned already in 1898 against the dangers implied by lowering the interest rate below its natural rate (in my judgment a real rate of 3-4% for developed countries) in a discretionary monetary regime.

III

DID THE FINANCIAL CRISIS AND THE MEASURES TAKEN AGAINST IT UNDERMINE THE INDEPENDENCE OF CENTRAL BANKS?

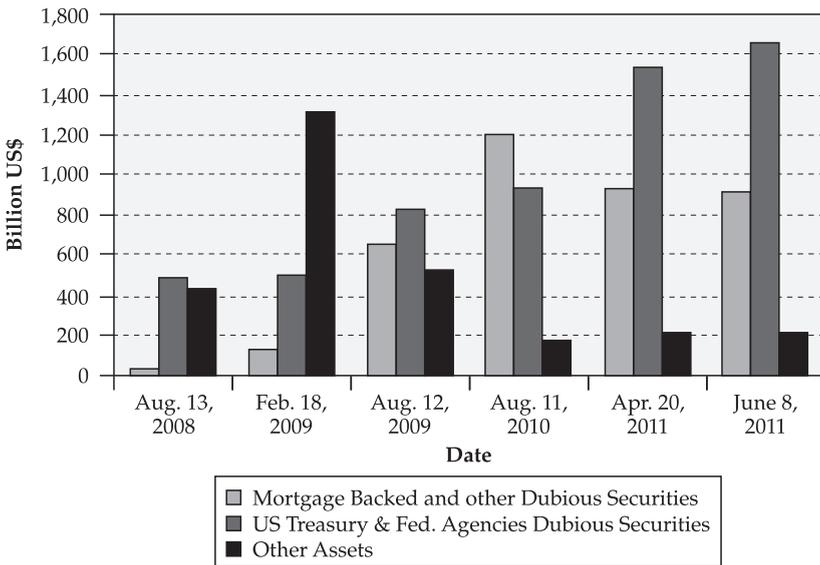
Unfortunately we have to answer the question whether the financial crisis may be undermining the independence of central banks with a clear «yes». The most recent example is the dramatic policy change of the ECB in the beginning of May 2010, which clearly violated the requirements of the Maastricht Treaty not to lend to member governments, if not legally –this is an issue still debated– then at least in spirit. Even worse, the ECB bought Greek government junk assets in the capital markets above market valuation, and there is a definite danger that all such outstanding assets will finally land with the IMF and the ECB. Moreover, the ECB also accepted bad Greek and other assets as security for its lending to Greek and other banks. According to reliable, though not official information only three of the members of the decisive body of the ECB, among them the two German representatives voted against this new policy.

It is perhaps not surprising that similar policies were already pursued by the Fed for quite some time before the ECB embarked on its new policies. For instance it had bought until June 17, 2009 665.7 billion dollars of mortgage-backed securities. Until June 16 of 2010 it increased these dubious assets to an amount of 1121 billion. In a note it mentions concerning them «Guaranteed by

Fannie Mae, Freddie Mac, and Ginnie Mae. Current face value of the securities, which is the remaining Principal balance of the underlying mortgages.» (Federal Reserve, H.4.1, Fn. 4). This means of course that these assets are guaranteed now by the federal government. To these dubious assets others under fanciful names like Maiden, Talf, AIA Aurora LLC and Alico Holdings LLC, which were sponsored by governmental measures were added. The increasing debt bought from the US Treasury and other federal agencies are together with these mortgages presented in Figure 6.

Even the Swiss National Bank has been led by the UBS crisis to lend at the end of 2009 21 billion francs to the Stabilization Fund created to take over dubious assets from the UBS. Though this amount has now been substantially been reduced, the SNB suffered a loss than more of 20 billion francs in 2010 because it had bought huge amounts of euros to stem the strong overvaluation of the franc against this currency most important for Swiss exports. This effort proved to be unsuccessful because the SNB

FIGURE 6
MAIN ASSETS OF FEDERAL RESERVE SYSTEM, 2008-2011



compensated the implied increase of its monetary base and did not announce a target exchange rate as it had done during a similar development in 1978. By now (July 2011) these losses have risen even more.

The developments described for the central banks reflect to a substantial degree the rising and often critical indebtedness of the governments described above, which can no longer be financed in capital markets for several countries. The European Commission, the governments and the IMF have tried to overcome these problems of over indebtedness by constructing huge safety nets of government credits and guarantees to save Greece, Portugal and Ireland from bankruptcy by at the same time demanding severe cuts of their deficits.. But the success of these measures has been doubtful, not only economically but also politically. I myself (Bernholz 2010), like others, have been from the beginning for open bankruptcies of the countries concerned. Better a horrifying end than horror without end.

IV WHAT ARE THE FORCES THREATENING THE INDEPENDENCE OF CENTRAL BANKS?

In the early 1970s the Hungarian Janos Kornai (1971) observed that it was characteristic for communist countries that no binding budget constraints for firms and other organizations were present. Obviously this fact contributed to the bad performance of these so-called planned economies. Now it seems to follow from public choice analysis that politicians and governments in democratic market economies are also not in favor of binding budget constraints. They try to push them outward to be more able to grant favors to their constituencies or to interest groups in order to win the next elections. And increases in taxes are certainly less favored for these purposes than to soften budget constraints by incurring debts in money and capital markets. But unfortunately for the intentions of politicians there exist limits concerning the amount of debts they can heap up. First, the interest to be paid on them swallows an ever bigger part of government revenues.

And second, creditors may become suspicious when observing a rising indebtedness and call for higher risk premiums on interest to be paid. In such a critical situation of over indebtedness only three alternatives are available:

1. To drastically reduce the deficit by cutting expenditures and raising taxes, where the former seems to be more successful in the long run. No doubt that this alternative is difficult to realize for politicians and certainly not liked by them.
2. To cut debts and thus interest payments by an open government bankruptcy.
3. To turn to a veiled government bankruptcy by lowering debt and interest payments by higher inflation.

At this critical moment establishing control of central banks may be helpful for government and politicians inclined to use the third alternative. And at this juncture a decisive difference between gold standard and discretionary monetary regimes becomes important. To make this clear let us look at the balance sheet of the Swiss National Bank (SNB, Bilanz 2009) as a least suspicious example (Table 2).

Before the end of the gold standard the SNB like other central banks could become illiquid or even move into bankruptcy by being no longer able to convert the banknotes it had issued at demand at the fixed gold parity into gold coins or bullion. It thus was confronted by a limiting budget constraint hindering it to over-issue its notes or to grant too much credit to banks. This is no longer true with the discretionary paper money of pure credit money standards which we enjoy nowadays. Even if the value of its assets would fall, let's say, because of the credit granted to the Stabilization Fund and losses in the value of foreign exchange reserves denominated in euros and dollars, below that of its debts, no liquidity crisis or bankruptcy would arise. For the 45 billion francs in banknotes are now inconvertible, that is they are in fact non-interest-bearing credits by the public to the central bank with endless maturity. The same is true for the current claims in francs of domestic and foreign banks, since they can always be paid back by the SNB with its own freshly printed

TABLE 2
SIMPLIFIED BALANCE SHEET OF THE SNB, END OF 2009
(Billion Swiss Francs)

<i>Assets</i>	2009	2008	<i>Liabilities</i>	2009	2008
Gold & gold Claims	38,2	30,8	Banknotes	45,0	49,2
Foreing exchange	94,7	47,4	Current claims of domestic banks	45,0	37,2
Reserves with IMF	1,2	0,7	Liabilities against govmt.	6,2	8,8
Int. Means oy payment	5,6	0,2	Current claims of foreing banks and		
Credits from foreign aid	0,3	0,3	intitutions	2,6	3,8
Claims from Repo Trans-Actions in US			Other current liabilities	3,3	1,4
dollars	—	11,7	Own papers issued	27,5	24,4
Claims from Repo Trans-Actions in			Other non-current liabilities	—	29,4
Swiss francs	36,2	50,3	Liabilities in foreing currenc.	1,5	0,4
Claims from franc swaps	2,7	50,4	Compensation for SDR claims		
Assets in Swiss francs	6,5	3,6	allocated by IMF	5,3	—
Credit granted to Stabilisation Fund	21,0	15,2	Capital & Reserves Including profits		
			or losses	75,8	59,0

banknotes. A liquidity or bankruptcy problem can only arise if the assets denominated in foreign money had a smaller value than its obligations in these currencies.

The consequences of this analysis mean nothing else than that apart from assets and liabilities in foreign currencies there exists no longer any budget constraint for central banks. And internationally the leading central banks have also moved some distance to push out the latter budget restrictions by granting each other swap facilities in the tens of billions. As public choice economists we should thus not be surprised that politicians are now very keen to get control of central banks and to undermine their independence. For if they succeed they are themselves no longer limited by those uncomfortable budget constraints.

V

ARE THERE ANY ESCAPES FROM THE UNDERMINING OF MONETARY STABILITY BY GOVERNMENTS?

Carl Schmitt, a well-known German professor of public and constitutional law, who was an early adherent of the Nazi movement, once pointed out that

Souverän ist, wer über den Ausnahmezustand entscheidet.

(SCHMITT 1993 [1922], p. 13)

which can be translated as: «Sovereign is he who decides on the state of emergency» that is when laws can be changed and even constitutional rules be suspended because of the emergency declared. Thus the real power in a state is revealed by answering the question who has the power to suspend and perhaps even to change the constitution in an emergency. Actually two sub-questions emerge: First, who has the right or the power to declare an emergency. Second, who has the right or power to take the actions foreseen by or to be interpreted into the constitution.

It is my hypothesis that constitutions binding the hands of politicians and governments in normal times can be undermined in times of emergency. Indeed, there exists overwhelming support

for this hypothesis in terms of empirical evidence. I have already mentioned above the abolishment of the gold standard because of World War I and the Great Depression. During the latter not only Britain abolished the gold standard, but president Roosevelt decided to devalue the gold parity in terms of dollars and even to forbid the possession of gold by American citizens. Even Switzerland which stuck to the old gold parity together with the other members of the gold bloc led by France until the devaluation in 1936, abolished the gold convertibility of its currency. And this though Article 39,6 of the Swiss Federal Constitution (SNB 1982, p. 380) said:

Der Bund kann die Einlöschungspflicht für Banknoten und andere gleichwertige Geldzeichen nicht aufheben und die Rechtsverbindlichkeit ihrer Annahme nicht aussprechen, ausgenommen in Kriegszeiten oder in Zeiten gestörter Währungsverhältnisse.

This means that the Federal Government is not allowed to abolish the convertibility of banknotes into gold except in times of war and disturbed currency relationships. Switzerland has thus suffered according to the government until the end of the 1990s for more than 50 years from disturbed currency relationships. Obviously the government in this case has been the Swiss sovereign by pretending that a permanent state of emergency existed. This was done by issuing a simple executive order of the Federal Government of June 29, 1954 (SNB 1982, p. 423, Articles 1-2).

It should thus not be surprising first, that the independence of the monetary regime from governments has been much more threatened after the abolishment of the gold standard. I have shown in my book on *Monetary Regimes and Inflation* (2003) that all 30 hyperinflations except one and that, moreover, most other very high inflations occurred after 1914. And second, related to that, that constitutional and legal safeguards for central bank independence can be much more easily eroded by governments, who as sovereign declare a state of emergency than under an internationally established gold standard. Moreover, it should be recalled that this standard has been often imitated by the countries of the periphery, with the consequence that their inflations and

devaluations were kept within much narrower bounds than after 1914.

Given these sobering conclusions let us ask which alternatives may be available to stabilize the monetary and financial system. We have seen that the gold standard and independent central banks have proved their merits for several decades, but fell victim to the sovereign declaring an emergency. It is true that one can strengthen the independence of central banks by turning them into currency boards safeguarded by the constitution. As is well-known, currency boards are only allowed to issue base money by either buying gold or foreign exchange of a stable currency. And such systems have worked well in several countries under difficult conditions, most recently in Estonia and Bulgaria (for a discussion of earlier cases see Hanke, Jonung and Schuler 1993). But it should be clear that they are also threatened by a demonetization of gold or the abolishment of the independence of the central bank issuing the currency on which they depend, not to speak of a removal of the currency board itself.

Another alternative proposed is the introduction of Free Banking, in which private banks would be allowed to issue banknotes besides creating deposits. Such a system would certainly remove the monetary system a greater distance from the government. And it has worked quite well for several decades in Scotland and also in Switzerland (Nedwed 1993, Selgin 1987, White 1984). But the regime of private banking was based in both cases on gold convertibility and was finally abolished in both countries by sovereign governments. Moreover, already in the 1870s private banks were forced by the Peruvian government to grant it credit in banknotes when it was facing bankruptcy. In exchange for these forced credits they were allowed to suspend the gold convertibility of their banknotes. Finally, it has been argued from a theoretical point of view that there exists still a gap in the theory of free banking, namely

that competitive banks can obtain economies of scale by pooling their reserves of high-powered money. ... This characteristic of banking would either prompt unregulated banks to merge into one institution, or if diseconomies of scale in other activities worked

against this, to centralize their reserve holdings with what would, in effect, become a banker's bank. (Laidler, 1992, p. 197)

Finally, instead of the gold standard a more general commodity standard with convertibility of banknotes and demand deposits into this commodity basket at a fixed parity has been proposed as an alternative. But quite apart from the question under which conditions there might be a chance for the introduction of such a system by governments or private banks, an international agreement or an imitation because of its success would be necessary for a world-wide acceptance of the same commodity basket. Once reached it might be more difficult for governments to abolish it because they would be isolated internationally, but an extended war or a deep world-wide economic crisis would offer a sufficient pretext for governments even in this case to get rid of the commodity standard by declaring a state of emergency.

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