

FROM MONETARY NATIONALISM TO MONETARY IMPERIALISM: FRACTIONAL RESERVE BANKING AND INTER- GOVERNMENT COOPERATION

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This article has a twofold purpose. Its first goal is to pay tribute to Friedrich von Hayek as an outstanding monetary theorist. Its second objective is to further elaborate, on the ground of Hayek's main findings, the deficiencies of the contemporary monetary order, namely by presenting the phenomenon of monetary imperialism. Against this background, the article also contains a re-interpretation of present-day monetary institutions and a critique of internationally sponsored economic stabilization policies.

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The first section offers a presentation of Hayek's early monetary thought, especially in the policy area of monetary nationalism. This presentation, even though a due tribute to Hayek, is delivered in full awareness of the fact that Hayek is not the Austrian economist *par excellence*. Indeed, a number of scholarly articles have demonstrated that, with respect to a few critical issues, Hayek's economic and social thought is not fully reconcilable, not to say contradictory, with the praxeological method¹ or libertarian ethics.² The second section expands Hayek's approach to monetary phenomena in order to show how monetary nationalism leads to monetary imperialism. In that respect, a special emphasis is put on the political nature of multiple paper monies and on the fractional reserve banking principle. Finally, within this analytical context, the third section appraises the recent increase in cooperation between governments, as observed since the policy response to the banking and public finance crises in Europe.

THE IMPERFECTIONS OF THE CONTEMPORARY MONETARY SYSTEM

In a series of five lectures delivered in 1937, and published under the title *Monetary Nationalism and International Stability*, Hayek offers an in-depth analysis of the main deficiencies of the present-day monetary system. In a nutshell, he identifies two factors that disrupt international economic relations: the fractional reserve commercial banks and the national central banks. The former are the primary source for the international transmission of the business cycles, while the attempts of the latter to correct the imbalances *de facto* amplify the resulting instability.

THE FRACTIONAL RESERVE AND THE SWINGS IN THE MONEY SUPPLY

The instability generated by the fractional reserve banking system, or a banking system working on the proportional reserve

¹ See in particular Salerno (1993), Block and Garshina (1996) and Hoppe (1996), as well as Stalebrink (2004).

² Hoppe (1994) and de Jasay (1996).

principle as Hayek puts it, is rooted in the fact that a relative change in the demand for the different types of media of exchange results in a nominal change in the aggregate supply of money.³ For instance, a decline in the aggregate demand for cash is followed by an increase in the supply of bank credit and bank-created fiduciary media. Indeed, because banks keep fractional reserves only, the lower demand to hold cash, even though it is offset by an equally higher demand to hold deposits, creates extra liquidity for the banks. This extra liquidity serves then as a foundation for a bank credit expansion that is much larger in size. In Hayek's own words "the most *pernicious feature* of our present system" is that "a movement towards more liquid types of money causes an actual decrease in the total supply of money and vice versa" (Hayek, 1989 [1937], p. 82).⁴

Hayek's chief interest lies in the implications of the fractional reserve principle for the process of economic adjustment to relative changes in international demand. At the international level, the "*pernicious feature*" implies that gold movements between countries lead to a contraction of bank credit and the overall money in the gold-exporting country, while credit and money expand in the gold-importing country. Hayek emphasizes that under a purely metallic currency, i.e., under a 100 percent commodity standard, there is no systematic relation between an outflow of money and the level of interest rates. However, the situation changes in that mixed metallic standard where banking is organized along national lines according to the principle of national proportional reserves. The outflow of money, because it contracts credit at home and expands credit abroad, does imply an increase of the domestic interest rate beyond its natural level and a decline in the interest rate abroad (*ibid.*, pp. 17, 28). Interest

³ Hayek does not present an elaborate classification of the monetary objects into money proper (or money in the narrow sense) and money substitutes, i.e., claims on money proper, such as the one that Mises elaborates in his *Theory of Money and Credit* (Mises, 1953 [1924], pp. 50–59). Nevertheless, it is clear from his exposition of the problem that these are the categories in which he develops his analysis.

⁴ This is a point from which Hayek would not divert in his later writings: "The special difficulties caused by the fact that under existing arrangements the reduction of the distinct cash basis of one country requires a contraction of the whole separate superstructure of credit erected on it would no longer exist [under his proposal of competitive paper monies]" (Hayek, 1990 [1976], p. 103).

rates become disconnected from the social time preference and propagate malinvestments.

On the grounds of this central finding, Hayek concludes that a crucial ingredient for international monetary stability is to reform banking in line with the 100 percent reserve principle. As a consequence, the solution to current monetary problems is rooted in a far-reaching reform of the banking sector itself: "It seems to follow from all this that the problem with which we are concerned is not so much a problem of currency reform in the narrower sense as a problem of banking reform in general" (*ibid.*, p. 80). In addition to his explicit support for the 100 percent reserve banking, Hayek elaborates an acute critique of a national monetary policy that would aim at correcting the imbalances in the banking sector.

CENTRAL BANKING, THE ECONOMIC CYCLE AND MORAL HAZARD

Hayek's critique of central bank monetary policies debunks the alleged benefits of what he calls *monetary nationalism*, namely the doctrine according to which the aggregate money supply on the territory of the nation should not be determined in line with the market forces that govern the flows of money among the different regions of that same nation (*ibid.*, p. 4). Put simply, this corresponds to the case of independent national currencies, which are produced under the privileged control of inter-independent central banks. Under such a system, the adjustment process to relative changes in international demand is meant to take place by means of relative changes in the currency values, not through actual money transfers. Hayek demonstrates that such a purely monetary adjustment, far from bringing about the necessary real changes, introduces new disturbing factors.

Changes in the currency exchange rates put in motion a redistribution of income among all industries, including those for which demand has not changed. This redistribution is not sustainable, in the sense that it is inconsistent with the new consumer preferences. Imagine that the international demand is shifting away from some national sector. Under a homogeneous monetary standard, the redirection of the monetary flows brings in itself a change in relative

income and profits which then redirect the factors of production so that the new production structure is consistent with the new demand structure. This natural equilibrating force is not available in the case of multiple and independent paper currencies. Here, the uniform depreciation of the currency does not bring about the required change in relative prices, which alone would reflect the new demand structure. Rather, it creates a generally inflationary environment, in which the adjustment process comes about by an increase in the prices and incomes in all other sectors. Hayek emphasizes that “the final positions will not be the same as that which would have been reached if exchanges had been kept fixed; because in the course of the different process of transition all sorts of individual profits and losses will have been made which will affect that final position” (*ibid.*, p. 40).

The inflationary impact of the depreciation brings about a purely monetary, i.e., ultimately self-reversing, disturbance because it brings about a temporary boom in some sectors. The boom, however, is clearly unsustainable as the eventual rise in costs will reveal that there are no real funds to finance the expansion of the production (*ibid.*, p. 41). Hayek does not detail, in these essays, the operation of the trade cycle. Nevertheless, he makes it clear that the inflationary policy of the central bank leads to investment decisions that ultimately will have to be reversed. Whatever its other alleged benefits, monetary nationalism will always disturb the economy because of the boom-bust cycle that it generates.

Hayek also adamantly explains the fallacy behind that other most celebrated benefit of inflation, namely to allow economic adjustment in the event of rigid wages, or alternatively to avoid the need for painful cuts in nominal wages. Nowadays, this is still an often referred-to argument in favor of recovering competitiveness by means of an external devaluation, when internal devaluation is considered politically unacceptable or simply impracticable. Here again, Hayek emphasizes that inflation is in no way a substitute for the natural decline in the wage of that specific type of labor which faces a negative demand shock relative to all other types of labor. It merely brings about a generalized decline in all real wages, which cannot restore equilibrium in the relative cost structure. Moreover, the decline in real wages might be expected to be short-lived, as wage earners will be quick to learn the negative impact

of inflation on their real incomes and will require an adjustment. In anticipation of the rational expectations doctrine, Hayek clearly states that it will soon prove illusory that it is easier to depreciate wages by creating inflation rather than to allow specific nominal wages to go down:

But of one thing we can probably be pretty certain: that the working class would not be slow to learn that an engineered rise of prices is no less a reduction of wages than a deliberate cut of money wages, and that in consequence the belief that it is easier to reduce by the round-about method of depreciation the wages of all workers in a country than directly to reduce the money wages of those who are affected by a given change, will soon prove illusory (*ibid.*, p. 53).

Furthermore, Hayek argues convincingly that a system of independent central banks suffers from a built-in inflationary bias. First, if the central bank adopts the policy to stabilize the national revenue, group pressures will prevent it from engineering a deflation when a deflation would be needed in order to offset an increase in the international demand for the products of some industries. For all practical purposes, a stabilization policy would be followed in one direction only, and most notably in the countries where prices tend to fall lowest relatively to the rest of the world. In this sense, "The possibilities of inflation which this offers if the world is split up into a sufficient number of very small separate currency areas seem indeed very considerable" (*ibid.*, p. 43). Second, Hayek points out that, whatever the specific policy the central bank chooses to follow, it will always act as a lender of last resort. This empowers it to provide all the money that would be needed by banks in the event of a bank run. In full knowledge of this, commercial banks lend less prudently and expand their balance sheets beyond natural limits. In a sense, central banks lose the full control of the money supply and are bound to accommodate an inflationary boom started by the banks.⁵ Hayek identifies the control of the

⁵ This is another point that the later Hayek would reiterate:

The ultimate victory of the advocates of the centralisation of the national note issue was, however, in effect softened by a concession to those who were mainly interested in the banks being able to provide cheap credit. It consisted in the acknowledgment of a duty of the privileged bank of issue to supply the commercial banks with any notes they needed in order to redeem their demand deposits—rapidly growing in importance. This decision, or rather

money supply as “the fundamental dilemma of all central banking policy,” and stresses that the only means to restrain banks’ credit expansion would be to credibly commit not to act as a lender of last resort. Such a commitment, however, would be contradictory with the very idea of independent national currencies and central banks (*ibid.*, p. 13).

Thus, Hayek’s early monetary thought reached two main conclusions. First, a system of multiple national central banks, which act as lenders of last resort for the domestic financial systems, is inherently inflationary. Second, such a system is marked by a high degree of economic instability, as the generalized inflation prevents the necessary real adjustments and introduces monetary disturbances which culminate in the business cycle.⁶ Let me develop Hayek’s first conclusion by further exploring the immanent tendencies of a system of multiple central banks.⁷

recognition of a practice into which central banks had drifted, produced a most unfortunate hybrid system in which responsibility for the total quantity of money was divided in a fatal manner so that nobody was in a position to control it effectively (Hayek, 1990 [1976], p. 91).

⁶ Quite consistently, Hayek’s ideal monetary system would be based on a single international currency with banks holding 100 percent reserves. Most notably, Hayek considers an international paper standard to be preferable, as it would avoid the cost of diverting a useful commodity from its other possible uses. He sees the international gold standard as a second best to the international paper standard. However, he recognizes that such a second best is still preferable in a world that is fragmented politically and “so long as an effective international monetary authority remains an utopian dream” (*ibid.*, p. 93). This bias for an international paper standard should be seen as contradictory to some extent, as Hayek himself points out how critical the management of monetary institutions is for a successful implementation of the rule they are meant to implement: “Whatever the permanent arrangements in monetary policy, the spirit in which the existing institutions are administered is at least as important as these institutions themselves” (*ibid.*, p. xii). What is then the guarantee that in a politically unified world, the single monetary authority will be indeed effectively immunized against inflationary temptations? To Hayek’s credit, he clearly sees that political unification is a pre-condition to establishing a world paper money (*ibid.*, p. 75). Some forty years later, and still in the absence of political unification, he would offer an alternative proposal for monetary reform, based on repealing legal tender laws and on effective rivalry between privately-issued paper monies (Hayek, 1990 [1976]).

⁷ While it is not the goal of this article to show the differences between the young Hayek and the later Hayek, let us emphasize here that Hayek’s later monetary analysis is entirely rooted in a specific and erroneous view of the monetary equilibrium that could be qualified as the “nominal monetary equilibrium approach.” This approach implies a need for elasticity of the money supply, so that changes in the (nominal) demand for money do not remain unsatisfied, and thereby a source

MULTIPLE MONEY PRODUCERS AND THE DRIVE TOWARDS MONETARY IMPERIALISM

Hayek offers a sophisticated analysis of the economic consequences of the doctrine and policy of monetary nationalism. But he does not show much interest in an investigation of the very nature of independent central banks. Such an essentialist study would be a needed complement to his analysis and would put existing and emerging monetary institutions in a new perspective.

THE POLITICAL NATURE OF PAPER MONIES

The distinctive feature of modern central banks is their political and privileged position within the economy. Indeed, the very framework in which paper monies are produced and introduced into circulation is fundamentally different from that of commodity monies. Commodity monies, which evolve out of direct voluntary exchanges, are subject to the rules of both horizontal and vertical competition. On the one hand, different commodities can be competing for fulfilling simultaneously the function of a medium of exchange. Additionally, various producers of the same commodity can be competing for offering certification services with regards to the specific monetary objects. On the other hand, and much more importantly, the producers of any of the commodities which serve as media of exchange must compete, in the context of generalized scarcity, with the producers of any other good. This implies that on the market an expansion of the money supply is costly, as factors of production must be bid up from other sectors. Thus, the price mechanism, through its influence on the expected relative

of disturbances. Within this approach, notions such as “the optimal quantity of money” (Hayek, 1990 [1976], p. 81) and “the needs of the trade” (*ibid.*, p. 89) make sense. It is this view of the monetary equilibrium, which makes Hayek a defender of rival paper monies, and an opponent of a commodity (and in particular gold) standard. Indeed, under the assumption that the nominal supply of money should adapt to the demand for money, a growing economy would need a growing money supply, that a commodity standard might not be able to accommodate. Hence, the stunning conclusion: “There just is not enough gold about” (*ibid.*, p. 110). Hayek’s fatal error consists in ignoring that the demand for money is really a demand for real cash balances. This means that, with respect to the very fundamental monetary analysis, Hayek has gone in a direction that is the very opposite of the Mises-Rothbard approach.

profitability of any business venture, naturally regulates the quantity of money in the economy.

This natural regulation of the production and purchasing power of commodity monies also ensures that the entrepreneurs who venture into supplying media of exchange do not benefit from a privileged position. Their income and wealth are positively affected if the demand for money relative to other commodities, including other media of exchange, rises; inversely, a negative income effect occurs if competition intensifies or demand declines. Competitive money producers must cope with the uncertainty related to the management of private property, and could occasionally be driven out of business, exactly as any other capitalist entrepreneurs. Most significantly, the fact that they supply the economy with a medium of exchange does not confer on them any special status that would allow them to claim more of the aggregate output of the economy than what they earn on the market, i.e., what other property owners transfer voluntarily to them through free and mutually beneficial exchanges.

Things are altogether different with paper monies. To begin with, it should be emphasized that the acceptability of paper monies in the daily exchanges is rooted exclusively in the government's fiat. Given that they have no non-monetary utility, and therefore no alternative source of valuation, the foundation for ever agreeing to hold paper monies comes from the legal certainty that any attempted rejection will be defeated by fiat intervention. Paper monies owe their existence entirely to legal tender regulations, enforced by coercive states. This conclusion is important as it underlines that states and paper monies share a common essential feature, namely their coercive nature. In a sense, states and paper monies are consubstantial.⁸

One implication of this political nature of paper monies is that their production and supply escape the discipline imposed by the market. Competition-driven cost considerations and consumer-determined return expectations are absent from the calculus of paper money producers. Indeed, the costs of producing one or ten units of a given paper money are all identical, which implies that the marginal cost

⁸ For further developments on the inter-linkages between states and money production, see Hoppe (1990).

of increasing the money supply is zero. This grants a very special privilege to any paper money producer—namely, the capacity to acquire for free goods and services already produced by others. A paper money producer could “consume without producing, and thus seize the output of the economy from the genuine producers” (Rothbard 1991 [1962], p. 23).⁹ The supplier of paper money is then involved in nothing else but a special kind of exploitation, which could be labeled monetary exploitation, to be distinguished from exploitation by means of taxation or direct regulation of the economic activity. It is now understandable why paper money production is always legalized, protected, and *de facto* controlled by the states, which do not admit of any rivalry in the exercise of their local monopoly of expropriation.

LIMITS ON PAPER MONEY PRODUCTION AND MONETARY IMPERIALISM

Given the lack of any natural, i.e. market-driven, check on the quantity of paper monies produced, the question of the limits on their supply is of particular interest. As a matter of fact, this is a problem with which money producers themselves have been confronted—how should monetary policy be conducted? Much, if not all, of the mainstream monetary research of the past century can be seen as an attempt to provide an answer to that apparently simply question. However, the large variety of mainstream practical advice has left untouched the core of the problem.

The problem itself is not a trivial one, especially in the light of not infrequent cases of hyperinflation. A hyperinflation develops

⁹ Interestingly enough, the later Hayek seems to be in agreement with Rothbard: “But it is *really a crime like theft* to enable some people to buy more than they have earned by more than the amount which other people have at the same time foregone to claim. When committed by a monopolistic issuer of money, and especially by government, it is however a very lucrative crime which is generally tolerated and remains unpunished because its consequences are not understood” (Hayek, 1990 [1976], p. 105; our emphasis). Notice, however, that Hayek would attribute the quality of crime to the monopolistic and legally protected nature of the government-issued paper money, as he sees no contradiction in the very notion of competitive private paper monies: “Voluntarily accepted paper money therefore ought not to suffer from the evil reputation governments have given paper money” (*ibid.*, p. 111).

when expectations for a continual loss of purchasing power lead to a significant drop in the demand to hold money.¹⁰ Such expectations arise when monetary prices have been increasing already for a significant timespan, which in itself is the result of major increases in the money supply. The typical central bank response is to further increase the money supply, in order to address an alleged shortage of money; this only feeds the inflationary expectations. The end-result of this vicious circle is a galloping increase in prices and a deteriorating capacity for money to intermediate exchanges. Money users might then turn spontaneously to an alternative medium of exchange, produced either by the market, or by another central bank. From the outset, this would suggest that a paper money producer faces no strict quantitative limit, save for the extreme risk of eviction by a foreign rival. However, this risk is crucial from the point of view of the state, as it implies a significant loss in its exploitation capability. It also highlights an important limiting factor, namely the very existence of, and rivalry between, other paper money producers.

The extreme case of hyperinflation also makes it clear that a paper money producer, despite all legal tender legislation, ultimately relies on the individuals' consent to continue to accept its product. This consent, which must be renewed time and again, is always relative to the quality of services rendered by rival monies. Indeed, any state which alone intensifies monetary exploitation faces either a gradual depreciation or a sudden devaluation of its currency relative to foreign currencies.¹¹ This very fact limits its capacity to further increase the money supply through two channels. First, the loss of purchasing power means that a stronger increase in the supply of money would be needed in order to yield the same expropriation effect. Second, the public consent is endangered, which could lead to a further depreciation of the currency.

It is clear that the obstacle confronting a single state wishing to expand its monetary exploitation is the very existence of multiple

¹⁰ For a recent case study of this phenomenon, see Coomer and Gstraunthaler (2011).

¹¹ The foreign exchange regime, fundamentally, matters little. Under flexible exchange rates, the depreciation is gradual, though not necessarily immediate. Under a fixed exchange rate, a point in time comes when the central bank cannot any longer support the peg, in which case the depreciation (devaluation) is sudden.

paper money producers. The solution to this conflict situation is to deprive rivals of their capacity to act independently. This not only helps the state to increase monetary exploitation internally; it also allows it to grow externally and to enlarge the territory that it dominates. This tendency to expand monetary exploitation above the internal limits and beyond the current political boundaries is best characterized as monetary imperialism.¹² Indeed, the conflict situation persists and the tendency to expand does not vanish so long as the last rival has not been deprived of the independent control of its money supply. Monetary imperialism is in the very nature of paper monies and can be seen as a specific expression of the general conflict between rival states, in particular with regards to money production.

As long as there are multiple paper money producers, the policy of monetary imperialism could not be avoided. Moreover, its expansion is guaranteed by the fractional reserve banking itself. Because they are regularly weakened by the bust phase of the economic cycles they themselves create, the inherently bankrupt fractional reserve banks regularly drag the domestic state into bailing them out, thereby significantly endangering its financial condition and capacity to act independently. It follows that at any given moment, some paper money producers are weaker than others. According to a generalized progression theorem, political centralization and ultimate unification is in the interest of both the financially strong and the financially weak political entities (Hülsmann, 1997). Hence, the same weaknesses of fractional reserve banks that bring national central banks into existence also make sure that the centralization process is fully completed internationally. Commercial bankers might even actively promote submission to a stronger foreign paper money producer, given that they critically depend on the reliability of a lender of last resort.

We could distinguish two general forms of monetary imperialism: unification and cooperation. Unification results in the effective reduction of the number of paper money producers. Monetary cooperation is a less intuitive and more subtle case of imperialism, as the number of paper money producers is not reduced, even though they

¹² This concept has been introduced to Austrian analysis by Hoppe (2003). However, it was coined some thirty years ago in Michael Hudson (2003 [1972]).

act as one for all relevant purposes. This broad classification offers a reinterpretation of the present-day monetary arrangements.

PRESENT-DAY MONETARY INSTITUTIONS IN THE LIGHT OF MONETARY IMPERIALISM

Three distinct institutions bring about monetary unification, in which case the dominant central bank expands the territory on which it controls the money supply: dollarization, currency boards and monetary unions.

Dollarization occurs in cases of hyperinflation when people spontaneously quit the domestic money and begin using a foreign paper money of better quality. The domestic money producer is evicted, while the foreign central bank gains an extension to its territorial monopoly. Cases of official dollarization have also occurred recently. An official agreement allows the otherwise evicted central bank to keep some form of existence, and maybe even to get back a portion of the seigniorage it used to earn. The most prominent current examples of dollarization include Ecuador, El Salvador, East Timor, Uruguay, Nicaragua, Kosovo, Montenegro, and most recently Zimbabwe.

The currency board addresses the issue of sharing seigniorage by design. The set-up of a currency board always proceeds from an official agreement, by virtue of which the domestic central bank declares that it will produce cash banknotes and replenish domestic banks' accounts exclusively in exchange of the foreign "reserve" currency according to a pre-fixed conversion rate. From an economic point of view, the domestic currency is no longer money *per se*, but a simple money substitute redeemable in the foreign money. Hence, a currency board effectively transfers the monopoly of money production to the foreign central bank. Its own specificity lies in the fact that the evicted central bank keeps its physical existence, while its economic nature is transformed from a money producer into a deposit bank. Real-world examples of currency boards, such as those in Hong Kong, Lithuania, Estonia and Bulgaria, have all operated on the fractional reserve principle. This means that only a small portion of the foreign currency received has been effectively kept in reserves as such; the vast majority has always been invested in interest-yielding securities denominated

in the foreign currency. The yield on these securities has functioned as a partial compensation for the lost seigniorage that the currency board used to earn as money producer, and explains why a central bank might prefer transforming itself into a currency board rather than accepting a spontaneous dollarization.¹³

The third form of monetary unification, namely the set-up of a monetary union, is not much different in essence. Should the single money of the union be already produced by one of the member states, then the union is tantamount to official simultaneous and multiple dollarizations. If a new paper money is introduced, then the set-up of the union must undergo an initial stage where the member states peg their currencies to the new money, to be issued by a new central bank. In a sense, the new paper money, which lacks a history of prices, must be born as a money substitute, initially produced by a *de facto* currency board. The next stage consists in interchanging the nature of the monetary objects, whereby the money substitute becomes money and vice versa. In the final stage, the money substitutes, i.e. the previous paper monies, disappear physically. The different stages of the European Monetary Union, until the eventual physical introduction of the euro in January 2002, perfectly fit into this sequence. Currently, both the East African Community and the Gulf Cooperation Council countries are contemplating completing their plans for establishing currency unions.¹⁴

Because the monetary union reduces the number of rival paper money producers, it diminishes the limit on monetary exploitation and contributes to global inflation. The expected end result is higher inflation than otherwise and strengthening of the tendency towards further monetary centralization. Monetary unions also facilitate the less straightforward form of monetary imperialism, namely the inter-government and inter-central bank cooperation.

¹³ For an Austrian interpretation of currency boards, see Gertchev (2002).

¹⁴ The French Franc Zone, which combines a large number of countries from Central and Western Africa, and as many as four different currencies, might also mistakenly be taken for a monetary union. After the euro replaced the French franc, the peg is now to the euro. However, the so-called "monetary institutes" in the four geopolitical areas of the Zone must hold their reserves in French government bills, these holdings being administered by the Banque de France. Hence, the French Franc Zone consists of four currency boards.

By coordinating their policy actions, i.e., by increasing monetary exploitation together, paper money producers eliminate the disturbing divergent developments in the currencies' purchasing powers. Thus, users' consent is better secured, as no viable alternative is left. The permanent risk of bankruptcy of fractional reserve banks encourages cooperation between paper money producers on an ongoing basis.

Assume that a central bank decided to remain conservative and not to expand the money supply together with the other central banks. Its money would then appreciate relative to the other currencies, and will keep appreciating so long as users expect the conservative central bank to keep its policy. Because its money maintains purchasing power better, its international demand increases, which would result in higher inflows of deposits at the commercial banks. Paradoxically enough, the conservative central bank loses its capacity to control domestic banks' liquidity. Furthermore, a sudden change in users' expectations could reverse the international flows of liquidity and cause the illiquidity of the commercial banks, especially if they have used the deposit inflows for credit expansion, at home or abroad. The attempts of the central bank to recover control over the liquidity of the banks, for instance by means of a sterilization policy, *de facto* imply that a foreign-induced monetary policy has to be followed. The extreme policy tool for insulating the national banking sector from the phenomenon of "hot money" is to abandon the conservative policy early enough, i.e. to accept monetary cooperation. A recent case in point is the decision of the Swiss National Bank not to let the Swiss franc appreciate below 1.20 francs for a euro since July 2011.

From the point of view of the more expansionist central banks, it is also in their own interest to cooperate even *ex post*, i.e., to provide support to foreign central and commercial banks in difficulty. A severe banking crisis in one country could undermine the stability of fractional reserve banks elsewhere, not only because banks' balance sheets are interlinked through the international inter-bank market, but also due to the very low degree of divisibility of confidence in banking. Despite their inherent rivalry, paper money producers do share a common interest, in particular the avoidance of bank runs. The coordinated policy decisions between the five major central banks since 2008, and

especially the US dollar/euro swaps which were meant to provide dollar liquidity to illiquid European banks, are good real-world examples of monetary cooperation.

Monetary cooperation is an instance of general inter-government cooperation, which can also take the form of direct financial assistance through inter-government loans. These official loans, which have become lately very prominent in Europe, merit examination on their own.

OFFICIAL LOANS AND THE IMPACT OF ECONOMIC STABILIZATION PROGRAMS

The structural weaknesses of the fractional reserve banks lead to often unforeseen bailouts, the magnitude of which is unknown upfront and results in sizable budgetary deficits.¹⁵ This puts governments in a difficult financial situation, due to ever-increasing funding costs. Beyond a point, the costs become so high that governments decide to stop issuing new securities and look for an alternative funding option. Such an alternative is offered by the so-called official international assistance, which is typically dispensed either bilaterally or, most often, by the International Monetary Fund. The outburst of the public finance crisis in the European Union has led to a wave of unprecedented inter-government solidarity that brought about a number of specific and dynamically evolving instruments for granting aid to fellow members of the Union. The latest is the European Stability Mechanism, which is a permanent financial institution, mandated to lend up to EUR 500 billion to euro area member states. Other instruments exist also for members of the Union who have not adopted the euro yet.

¹⁵ Hayek himself makes very clear the link between government monopoly on money production and chronic budgetary deficits. Moreover, he has no illusions about the redistributive implications under democracy: "The ease with which a minister of finance can today both budget for an excess of expenditure over revenue and exceed that expenditure has created a wholly new style of finance compared with the careful housekeeping of the past. [...]. Under the prevailing form of unlimited democracy, in which government has power to confer special material benefits on groups, it is forced to buy the support of sufficient numbers to add up to a majority" (Hayek, 1990 [1976], p. 119).

Since 2008, seven out of the twenty-seven member states of the Union have received official assistance.¹⁶ Typically, funding has come from the IMF for one third and from the applicable instruments of the Union for the remaining two thirds, while the active involvement of the European Central Bank has been sought to ensure continuous liquidity provision to the national banking sectors. Once the total loan envelope is determined, effective disbursements take place in quarterly installments after experts of the lending institutions review, and deliver a positive opinion upon, the implementation progress with a pre-defined so-called economic stabilization program. This program details the specific policies and attached deadlines that the government must follow with respect to fiscal, structural and banking issues. It is a *de facto* conditionality agreement between the lenders and the borrower that is meant to ensure the imbalances in the economy will be resolved and the funds are properly spent.¹⁷ Thus, the overall impact of the inter-government cooperation is determined by the economic stabilization program itself.

ADMINISTRATIVE STABILIZATION VERSUS MARKET-DRIVEN RESTRUCTURING

In order to grasp the essence and impact of an official foreign-funded stabilization program, we must compare it to its counterfactual, namely how fiscal and economic imbalances would have been addressed without foreign assistance. In a nutshell, this counterfactual would have consisted in a market-driven restructuring of both the economy and public finances.

¹⁶ The specific experiences of some of these economies are schematically presented in Stein (2011).

¹⁷ These agreements are laid down in a Memorandum of Economic and Financial Policies, signed between the national authorities and the IMF, and in a Memorandum of Understanding signed between the national authorities and the European Union. These documents are public and freely available on the internet. The process of granting official assistance starts by a written request from the national authorities in a so-called Letter of Intent, which officially acknowledges the existence of imbalances and shows pre-commitment to a number of key policies. As a matter of fact, the Letters of Intent are drafted by the administration of the international institutions (IMF, European Commission, and European Central Bank).

To begin with, the government's funding difficulties would have resulted in a restructuring of its spending. Expenditure cuts would have been simply unavoidable in the absence of official assistance. The economic role of the high interest rates that private lenders start to ask is precisely to signal the increased scarcity of funds and to impose a lower expenditure pattern on the government. A self-imposed correction based on higher taxes would not convince financial markets. First, higher taxes would not address the structural problem that is at the origin of the high public debt. Second, they would undermine future productivity and the capacity of the government to easily generate additional revenues, should further contingencies arise.

The adjustment of government expenditure to the available tax revenues would also automatically contribute to addressing weaknesses in the private sector. A cut along all forms of subsidies would lead to the bankruptcy of businesses which were artificially maintained at a cost for taxpayers. The subsequently released factors of production, including labor, would be redirected to sectors where they would be better employed, even though at a lower nominal remuneration. A market-driven restructuring in government finances would, in a sense, free the economy from that part of the government's interventions that private lenders consider excessive.

The market-driven solution would also make lenders aware of their own responsibilities. Beyond a point, the restructuring of government activities would also include a rescheduling of the outstanding public debt, which would imply losses for the investors in sovereign securities. Such losses would result in an appreciation of the risk associated to public debt, and then in higher yields asked for funding governments. This is the ultimate sanction that guarantees long-term discipline in public spending, both *ex post* and *ex ante*. In a sense, the very possibility for a market-driven correction of government excesses prevents the excesses from arising in the first place.

Against this background, an official economic stabilization program clearly thwarts the natural adjustment process.¹⁸ In

¹⁸ The point that government solutions to international bankruptcies are precluding more efficient private solutions has been made in Vasquez (1996, 1999).

essence, the cheap official funding allows the government to maintain its overall size without scaling down. Nevertheless, because the reality of the imbalances could hardly be denied, the necessity for adjustment is fully recognized both by the official lenders and the borrower. Because the market-driven correction is precluded, the adjustment must then take the form of administratively decided and implemented policy actions. This sheds new light on the nature of the so-called conditionality, often presented as a means for avoiding the build-up of moral hazard caused by the cheaper-than-the-market funding granted by official lenders (Vaubel, 1983). Conditionality appears to be much more fundamental and implied in the very notion of inter-government support. Not to say that its historical record in effectively preventing moral hazard is rather poor.

The key problem is that this administratively decided stabilization program faces an irreconcilable contradiction. On the one hand, the provision of sufficient financing to cover the government's funding needs over the next years reduces the urgency to adjust public finances and to undertake long-term oriented structural reforms. On the other hand, the policy conditionality itself is rooted in the awareness that an economic adjustment is much needed. This fundamental contradiction leads to very low incentives to implement unpopular, though deemed necessary, reforms.

In practice, this contradiction implies that an official stabilization program is unlikely to succeed. The official creditors do not have sufficient knowledge about from where the imbalances originate. It is not enough to point at excessive public deficit and debt; one must also find which government programs and policies are at the origin of the unsustainable spending. At the same time, assisted governments have little incentive to sort their finances and to terminate policies and practices that create financial holes. Why would a government fight bureaucratic resistance if funding is after all available? The typical response to this knowledge and incentives problem is to impose only a very gradual correction path on the general public deficit, and to subsequently adjust the conditionality requirements to the effective progress made by

the government.¹⁹ Thus, while some broad expenditure cuts are imposed, it is fundamentally up to the borrowing government to specifically identify them and to ensure their implementation.

Let me now examine the direct and indirect consequences of economic stabilization programs in some further detail.²⁰

LONG-TERM CONSEQUENCES OF OFFICIAL LOANS: INFLATION AND THE DEBT ECONOMY

From the outset, an official loan implies the bailout of holders of public debt, i.e., domestic and international banks or other investors, such as pension funds and insurance companies, to which commercial banks also have exposure. Because the official loan reduces the likelihood of losses for private investors, the market price of public debt does not decline as much as it would have otherwise. An official loan contributes then to maintaining the value of assets of investors in public debt above what their portfolio would be worth in the case of a market-driven restructuring. It produces a counterfactual redistribution of wealth from taxpayers to the government's creditors. Indeed, *in fine* the official loan is to be repaid out of future taxes. Hence, an economic stabilization program implies higher future taxation, i.e., a heavier government weight on the economy—the exact contrary of the natural solution.

An immediate first-round impact of an official foreign loan is to increase the liquidity of the domestic banking sector. This is due to the fact that part of the additional funding is spent on goods and services, including publicly employed labor, offered

¹⁹ Such adjustments of the requirements result in regular quarterly modifications of the Memorandum of Economic and Financial Policies and of the Memorandum of Understanding. The regular review reports serve then a double purpose: check progress with implementation and identify areas for adjustment. This alone speaks a lot about the strictness of the "imposed conditionality."

²⁰ A number of detailed and authoritative articles, which present the inefficiencies of IMF-sponsored bailouts, can be found in Smith (1984), Schwartz (1998), Meltzer (1998), Calomiris (1998), Bordo (1999) and Niskanen (1999). Some of these authors make the point that the IMF should be abolished, while others (Bordo and Meltzer) argue that international assistance should be limited to cases of illiquidity only, not of insolvency.

by residents. As the government spends more than it would have spent otherwise, revenues of state-employed factors of production are higher, and so are their owners' deposits at commercial banks. The banks, which are the ultimate beneficiaries of the increased liquidity, can use it for repaying their own creditors or otherwise improving their profitability by expanding bank credit into the economy. Thus, a foreign-funded economic stabilization program is immanently inflationary. Even when it is nominally limited to supporting the government alone, it contributes to refinancing all debt-based relationships created by the fractional reserve banking system. Given that they prevent local episodes of deflation and contribute to coordinated global inflation, official loans and the inter-government cooperation that puts them into place are definitely driven by monetary imperialism.

The specific economic policies that accompany the official loan can be categorized in three areas: fiscal, structural and banking. In the area of fiscal issues, it is required that the government gradually reduce its deficit over a number of years to a level considered sustainable. The sustainability is determined mechanically, based on the growth projections and the subjectively determined acceptable level of public debt. While in the European Union the sustainability threshold for public debt has long been put at 60% of GDP, it has been doubled since the crisis. Similarly, deficit requirements are not determined in terms of effective nominal targets, but relative to structural targets, i.e., allowing for cyclical slippages in public spending during the bust. Finally, only part of the deficit correction comes from expenditure cuts; tax hikes or an expansion of the taxable base are equally popular tools. Thus, an official foreign loan becomes an effective instrument for international tax harmonization. Tax optimization opportunities are reduced, which is a clear benefit to the foreign creditor states.

The so-called structural policies relate to the fundamental conditions of conducting economic activity, such as labor contracts, pension arrangements, state monopolies, protected professions or trade barriers. The required adjustments in these areas are meant to increase the economy's overall productivity and its international competitiveness in order to generate sufficient surpluses that would allow timely repayment of the overhang of foreign debt. However, structural policies are also extending the

notion of improved efficiency to areas such as tax collection, public finances framework, or tax evasion. While structural policies do introduce higher economic freedom in some sectors, they also lead to a stronger government in general. In addition, much bolder and genuine reforms would have been implemented, had the national authorities not received an official foreign loan. It is alleged quite often that the conditionality attached to the foreign loan is the best opportunity for politicians to carry out reforms that would have not been implemented otherwise, for lack of social consensus. The truth, however, is that this argument wrongly compares the structural reforms under the loan conditionality to the situation prior to the government's financial difficulties, and that it ignores the impact of the cheap official financing.

Finally, the third policy area included in a program covers the banking sector. Measures aim at ensuring that banks are adequately capitalized and provided with sufficient liquidity. Undercapitalized banks, whether effectively or in light of the projected results of stress tests, receive state-funded capital injections, which are financed by the foreign official loan. In the event where the undercapitalized bank is also deemed nonviable, restructuring and resolution are applied, such as dividing the bank into two institutions or consolidating it with another entity.²¹ Without going into the detail of all possible banking sector measures, a common feature can be recognized: the fractional reserve principle of modern banking is maintained, while accidental changes in the business landscape are voluntarily admitted and even imposed. The banking sector is even more regulated, supervised, and controlled by governments. In substance, everything is done to avoid the far-reaching reform Hayek has called for.

This summary of the stabilization policies required by an official foreign lender shows that genuine problems are addressed by half-measures. Even though some benefits could be expected in the long run, they are immediately offset by increased government involvement in economic life. As a consequence, administrative programs are bound to yield poor results, which would quickly be

²¹ The international lenders have at their disposal readily available solutions, of which Parker (2011) has made a good summary.

used as evidence for the need for further government involvement.²² In a nutshell, economic stabilization programs promote anti-free market reform sentiments. This raises the broader question whether such programs are not anti-reformist in their very nature.

THE ANTI-REFORMIST NATURE OF THE ECONOMIC STABILIZATION PROGRAMS

I have noted already that in the absence of official foreign funding, national authorities could not do without major reforms. As a corollary, the economic conditionality attached to a loan delays, or even precludes, some critical reforms. In addition to this general pattern, the macroeconomic consequences of the foreign loan are fundamentally anti-reformist. Indeed, the loan brings about a generalized bailout of all creditor-to-debtor relationships and an increase in the money supply, both of which tend to maintain the social and economic status quo. The higher future taxes, which are the necessary implication of a foreign bailout, put a burden on the future wealth to be produced by the economy, i.e., on the younger generation. At the same time, current owners of wealth, which has been accumulated in an unsustainable manner, are mostly shielded from bearing the losses. Thus, a bailout hinders free entrepreneurship and precludes the natural renovation of the economic elites, which market-driven bankruptcies would have generated.

These conclusions are strengthened when we consider what would have been the specific impact of the market-driven restructuring on the banking sector. The unavoidable cuts in government spending would have resulted in a lower income for state employed factors of production and subsequently in lower liquidity with banks. This would result in a lower capacity of the economy to reimburse debts, to a surge in the non-performing assets on banks' balance sheets, and hence to the need to acknowledge unforeseen losses. A market-driven restructuring would have resulted, therefore, in an initial contraction of the money supply, which would have been further amplified by banks' own financial difficulties, and most certainly bankruptcies. The fractional-reserve banking system

²² This could be seen as an application of Mises's general theory of interventionism according to which interventionism tends to expand due to its own failures.

would have imploded in such a deflationary environment, due to its own structural vulnerabilities.

The main macroeconomic achievement of an official foreign loan is to preclude precisely this outcome. It makes sure that the money supply contraction is avoided, or at least significantly dampened, and that bank bankruptcies are contained. The end result is that financial instability remains embodied in the system, despite all official attempts to limit crises and their international transmission. The preservation of fractional reserve banking, which might be seen as the very rationale of the inter-government cooperation, becomes then a cause for the build-up of additional imbalances, and then for further cooperation and monetary expansion.

CONCLUSION: THE IMPORT OF THE BANKING REFORM

In conclusion, Hayek's early work on international monetary relations is strikingly topical. He has argued convincingly that the fractional reserve principle is a major cause of imbalances in the international economy. My goal here has been to further substantiate this insight on the ground of paper monies' political nature. This specific aspect of modern banking is an independent source of international conflicts, which find a temporary resolution in the phenomenon of monetary imperialism. Its current outcome is increased inter-government cooperation and further political centralization. The structural weaknesses of fractional reserve banking are the main driving force of these developments. Their ultimate consequence will be global monetary unification and inflation. This highlights once again Hayek's crucial insight that a fundamental banking reform is a prerequisite for any monetary reform aiming at international stability.

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