

## THE INSULATION ARGUMENT IN NEOCLASSICAL INTERNATIONAL ECONOMICS: A CRITIQUE

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**A**mong the arguments advanced by mainstream economists in favor of independent fiat currencies, the thesis that the exchange rate completely insulates the economy from changes in foreign prices has a central importance. For example, “In a fiat money regime, in theory, monetary authorities could use open market operations, or other policy tools, to avoid the types of shocks that may jar the price level and real activity under a specie standard and hence provide short-run and long-run nominal stability” (Bergman, Bordo, and Jonung (1994, p. 68)).<sup>1</sup>

In particular, “there is a widespread belief that countries tied to a fixed exchange rate regime are more susceptible to foreign monetary disturbances” and “textbook open economy macroeconomic models suggest that a standardized foreign monetary policy shock will have a smaller impact on countries that maintain flexible exchange rates” (Kouparitsas 1999, pp. 48, 60). In other words, “one of the most telling arguments in favor of floating rates was their ability, in the theory, to bring about exchange-rate changes that insulate economies from foreign inflation” (Krugman and Obstfeld 1991, p. 539).<sup>2</sup>

The occurrence of changes or shocks emanating from foreign markets is not a sufficient condition, however, for monetary nationalism. Another condition for the independent fiat currencies to be desirable in mainstream literature, are the “asymmetrical” effects these shocks can have on different economies. That is because only an asymmetric shock requires asymmetric responses, that is, different exchange rate policies.<sup>3</sup>

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<sup>1</sup>This view is supported by Obstfeld and Rogoff (2002, pp. 631–34).

<sup>2</sup>Meyer (1997, p. 8) is also clear on this issue: “floating exchange rates tend to insulate a country from monetary shocks abroad.” See also Lahiri, Singh, and Vegh (2003).

<sup>3</sup>For instance, Corsetti and Pesenti (2001, p. 2) state:

Fixed exchange rates can be supported by optimal monetary policies only when all shocks are correlated worldwide or when local prices are

The aim of this paper is to criticize the foundation and the relevance of the insulation argument. In what follows, I will attempt to show that:

(1) The favor flexible exchange rates enjoy in the literature is in part a result of the confusion between devaluation and free exchange rates; (2) Asymmetric shocks cannot provide a basis for the insulation argument, for their meaning is either a definitional truism or simply absurd; (3) Devaluation cannot offset the impact of foreign trade shifts on the domestic structure of production, and it instead produces additional problems; (4) A policy of monetary nationalism cannot prevent foreign-engineered business cycles from affecting domestic economic conditions, even if this is the only (but neglected) instance when a case for insulation could be rightly made.

The system of independent fiat money has been criticized extensively by Austrian scholars. Since the publication of Mises (1912, pp. 261-62 and 453-76), the author has attacked the arguments of free-floating state-issued money advocates, showing that their main tenets express a fallacious inflationist doctrine. International considerations invoked by mercantilist-Keynesian theorists are also refuted, especially in the discussion of devaluation in Mises (1998, pp. 783-87), and in Hayek's (1989, pp. 35-54) masterpiece. Rothbard (1990; 1995, pp. 254-74) demonstrates the weaknesses of the case for fiat currencies and point to the peril of conflating Friedmanite flexible exchange rates with the free-market process.<sup>4</sup>

However, the rising importance of international considerations for mainstream defense of managed currencies was not anticipated by Austrians. Neither was the innocent view of floating currencies as providing a shield against foreign-engineered inflation. The following analysis attempts to reassess the insulation argument in the light of these developments and on the basis of the Austrian tradition.

#### FLEXIBLE EXCHANGE RATES VS. FREE PRICES

For a new student of economics, and even more for the public at large, the insulation argument sounds very appealing. For who would not wish his country (or the region he lives in) to be sheltered from foreign-induced turmoil? Indeed, what can be more satisfactory than to benefit from (foreign) trade, but to be isolated from any adverse market change originating beyond one's borders? In such wonderful clothes, the insulation argument seems very attractive.

Before addressing the details of the insulation argument, it is worth considering a fallacy frequently associated with the defense of floating currencies.

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fully inelastic to exchange rate fluctuations. Otherwise, the relative price adjustment associated with the implementation of the optimal policy requires exchange rate flexibility.

<sup>4</sup>Also see Sennholz (1979, pp. 136-45).

In some economists' minds, the case for floating fiat monies is equivalent to the broader case for free markets.<sup>5</sup> Fixing exchange rates between money, the argument goes, is similar to fixing any other price. By contrast, flexible exchange rates serve to equilibrate demand and supply, and allocate resources efficiently. This reasoning has erroneously induced many free market champions to support flexible exchange rates. Unfortunately, this claim is misleading. Fiat money is not an institution that emerged naturally on the free market; it degenerated from a money substitute through the breach of the contract that stipulated all money titles are entirely covered with money proper. It is an inflationary institution created by the state, and needs special regulations in order to survive on the market (Rothbard 1990, 1992; Hülsmann 1998). Although it is true that flexible exchange rates serve to balance the demand for and the supply of fiat money, people demand such money only because they are forced to do so.

In fact, mainstream economists are not interested in defending flexible exchange rates *per se*. Money is a commodity like any other good, therefore its value fluctuates as a result of changes in individuals' demands and the available stock. But this feature does not express any specific property of money, which might be relevant for our discussion. For instance, we can treat different kinds of money in the same way we treat various varieties of cheese. The price of different sorts of cheese varies as their particular conditions of production and subjective preferences of individuals change. But no economist has ever claimed that the flexibility of a particular cheese price "insulate"—whatever this could mean—the area in which it is produced or consumed. It is the same with money. As long as on the market there are a number of different monies produced in different conditions (it is not important if they are commodity money, like gold and silver in the past, or if we deal with the present situation characterized by the coexistence of independent fiat money producers), flexible exchange rates, i.e., free money prices, accomplish the same role as any other market price fulfills. No other specific property can be assigned to them.

What neoclassical economists understand when they discuss the "advantages" of flexible exchange rates, is something different. They actually point to the "advantage" of arbitrarily decreasing the value of a national currency in a certain context. This reduction in the value of money is not a natural phenomenon occurring on the market; rather, it is a measure purposefully undertaken by policymakers. Our criticism of the insulation argument should

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<sup>5</sup>For example, Friedman (1999, p. 7) declares: "Pegging an exchange rate is a governmental price-fixing measure, no different from pegging the price of wheat or the price of anything else." See, also, Johnson (1970). McCallum (1996, pp. 208-09) provides a critique of this fallacy but his argument resorts to the still fallacious idea that money is a public good. It should be mentioned that fiat money is not an institution associated to the free market. It was established deliberately by the state, and needs to be permanently shielded against competition through special laws.

prove that such a policy cannot attain its goal, and has completely different consequences instead.

#### TRADE SHOCKS AND DEVALUATION

The importance of insulation is derived from the occurrence of unfavorable foreign changes in demand. However, the incidence of a negative shock is not a sufficient condition for a region to be interested in preserving monetary independence. In principle, if that shock also hit other regions, it is possible to initiate a coordinated monetary expansion (Hefeker 2000, p. 166). Floating money is supposedly needed because of the occurrence of the so-called asymmetric shocks, i.e., adverse market changes which affect in a different way various regions or countries.

Now, of course, no change in data could possibly identically affect each individual, therefore, all trade shifts are asymmetric by necessity. In deciding what goods to buy (and in what quantities), the consumer faces the constraints of a limited income. His choice to buy a certain quantity of X decreases his ability to acquire other goods on the market. By so acting in the market, individuals not only determine nominal prices for every good, but at the same time, they also determine relative prices of different goods. Their decision to demand more or less of a certain commodity inevitably leads to a change in the structure of relative prices, and to a change in the distribution of income. On the market then, changes in consumption preference, no matter how small, always alter the distribution of wealth, and consequently, the choices different people will make in the future. No one can insulate himself from the effects of the actions of his fellows, except by refusing to enter any exchange and embracing a complete autarkic existence.

When addressing the question of market changes in general, and that of international price changes in particular, the usual observation is that we cannot describe such changes as explosions, or abrupt disruptions of previous trade patterns and capital structures. On a free market, neither consumer preferences, nor supply conditions typically change drastically and unexpectedly. On the contrary, the process of adjusting production to consumers' wishes generally goes on smoothly. Therefore, most "disturbances" tend to be temporary and have small amplitude. Given this state of affairs, there is not much scope for devaluation.<sup>6</sup> However, as I will argue, it does not follow from this that there would be more scope for it as "a last resort" policy tool, in those (rare) extreme situations when abrupt trade changes could possibly occur. Independently of how important and severe market changes are, it should be clear that the exchange rate cannot offset them, that is, it cannot cancel the need for the adjustment of relative prices.

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<sup>6</sup>For an extended critique of "asymmetric shocks" and their importance for monetary independence, see Glăvan (2004, pp. 35-36).

The common neoclassical textbook emphasis on the crucial role terms of trade play in international adjustment springs from an extreme interpretation of Hume.<sup>7</sup> According to Hume's price-specie-flow mechanism, a deficit in the balance of trade leads to an outflow of gold, which in turn triggers a deflation. And since deflation "scares" mainstream economists, their shift to flexible rates seems only prudent. What they overlook, however, is that in a world with a consistent capital market, temporary disturbances affecting the exchange of consumption goods provide only a partial picture of the state of one region's external payments (Sennholz 1979, pp. 140–41). Under a gold standard, changes in trade patterns are in general correlated with (if not determined by) inverse movements of capital, so that gold need not be a significant variable in the adjustment process. Economic history in general, and the history of the gold standard in particular, teaches us that whenever a region (country) experienced significant trade deficits, it also experienced significant capital inflows. Therefore, the distribution of money among regions remained largely stable and the adjustment process entailed neither deflation nor inflation.<sup>8</sup>

Now, one might say, if there are negative trade shocks, there must be also positive shocks. Imagine the case of a region for which the demand of goods increases. Under a fixed exchange rate system, this development will result in an inflow of money and, consequently, a rise in prices. With a flexible rate, the region could very well protect itself against such foreign-induced increase in prices.<sup>9</sup> The additional supply of foreign currency resulting from exports expansion would leave the domestic money quantity unchanged, altering the value of local money in terms of foreign money instead. Nevertheless, it is one thing to accept that such positive shocks do occur, and quite another to maintain that the policymakers will let the exchange rate appreciate to the proper degree, preventing domestic money prices from increasing. As Mises noticed, governments make use of flexibility in one sense only.<sup>10</sup>

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<sup>7</sup>A good argument against the interpretation that a negative terms of trade shock, if not countered by inflation, may entail deflation and large-scale unemployment can be found in Calvo (2000, p. 6): "The main problem with the argument is that it ignores the financial angle . . . a devaluation may tend to solve the unemployment problem but it may deepen financial difficulties."

<sup>8</sup>See the "revisionist" paradigm advocated by McKinnon (1998).

<sup>9</sup>The reader must be careful not to confuse this phenomenon with so-called "imported inflation," supposedly due to the depreciation of the exchange rate, which is nothing else than domestically engineered inflation, and is the very reason for depreciation in the first place.

<sup>10</sup>Mises (1998, p. 781): "This flexibility, however, is practically always a downward flexibility. The authorities used their power to lower the equivalence of national currency in terms of gold and of those foreign currencies whose equivalence against gold did not drop; they never ventured to raise it."

## DEVALUATION AS A POLITICAL MAKESHIFT

We have seen that conventional emphasis on asymmetric shocks is misleading and the mainstream framework is deficient in this respect because, among other things, it completely overlooks the significance of the capital market. The fact is, nevertheless, that neoclassical economists consider such shocks to be an important source of disturbance in the economy. Further, I will present the standard case for insulation as expounded in mainstream literature, explain the essential connection between devaluation and monetary policy, and show the perverse effects of monetary nationalism.

Mainstream economists have traditionally seen in floating fiat money a shield against foreign-transmitted disturbances. As they have repeatedly emphasized, if this monetary arrangement had been in place during the '30s, then what we now know as the Great Depression could have been largely avoided. The theoretical foundation for the insulation argument goes back to Friedman's (1953) "Case for flexible exchange rates" where he shows that any external change in data will alter the balance of payments structure, and can be dealt with by means of a corresponding adjustment in the exchange rate.

The changes in the demand for and supply of goods exchanged on the market tend to alter the structure of relative prices. Some goods, and their factors, prices tend to decrease relative to the prices of other commodities, and vice versa. According to the mainstream assumption, domestic prices and wages show some downward stickiness, which can be mitigated by devaluation.

Consider the following case. Because of a decline in the foreign demand for a regional export, a deficit begins to develop in the balance of trade. In the view of Rolnick and Weber (1989, p. 3):

To bring the trade into balance, the prices of goods and services produced in the deficit country must fall . . . if the prices of goods and services are slow to adjust (as is often argued, at least for downward price adjustments) then the trade imbalance will persist. With floating exchange rates, the trade imbalance causes the value of a deficit country currency to fall . . . the terms of trade will decline . . . therefore, the demand for goods and services of the deficit country increases while the demand for those of the surplus country falls.

According to Larrain and Velasco (2001, p. 23):

The alternative is to wait until excess supply in the goods and labor market pushes nominal goods prices down. One need not to be an unreconstructed Keynesian to suspect that the process is likely to be painful and protracted.

As Hayek (1989, p. 36) summed up the insulation argument:

The main advantage of a system of movable parities is supposed to be that in such a case the downward adjustment of wages could be avoided and

equilibrium restored by reducing the value of money in the one country relative to the other country.

The decline in foreign demand entails a disequilibrium between the receipts and payments made by domestic residents with the rest of the world. This developing deficit in the balance of payments implies a net outflow of money, which under the gold standard, would reduce the quantity of money (gold) available. This reduction in the supply of gold would be the natural response of the market to the decrease in the domestic demand for gold, which actually happens every time individuals make payments in excess of their receipts. This process would be, however, only temporary, because there is no reason to suppose that people's demand for cash balances has declined. If exports decrease, that is, if the receipts from foreign trade have diminished, then, *ceteris paribus*, spending must decline also (imports should fall).

Under the present system of independent fiat currencies, this mechanism does not work. The obvious reason is that policymakers perceive the decline in spending as problematic, for it means that some industries for which there is less demand must contract. Their prices would consequently drop and, under present regulations of the labor market, workers would be laid off.<sup>11</sup> But this process is presumably what governments wanted to avoid when they replaced the gold standard with the present independent fiat standard. The insulation argument points exactly to the idea of keeping unchanged the "aggregate demand" in order to prevent a downward spiral of wages and employment. The central bank is called upon to offset the decline in the foreign component of aggregate demand through a "relaxation" of monetary policy, that is, through an increase in the quantity of money.

In the context of a new money relation, the old exchange rate between domestic and foreign currencies becomes obsolete, and would float downward. If the central bank tries to defend the value of its currency, it should sell foreign exchange from its reserves against the national currency. But the result of such intervention would produce opposite results to those pursued by the central bank. It would mean that a certain amount of national money should be withdrawn from circulation, in exchange for the foreign exchange reserves sold on the market. This entails a conflict of policies and is ultimately doomed to fail.

As Austrian economists<sup>12</sup> have repeatedly pointed out, there can be no devaluation without inflation. The objective of currency manipulation is to substitute the government adjustment of the value of money for the market adjustment of money prices. In mainstream economic thinking exchange rate

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<sup>11</sup>Through its labor policy—imposing minimum wages, distributing unemployment "insurance," accepting collective bargaining—the state harms the pricing process and makes unemployment unavoidable.

<sup>12</sup>See, for example, Mises (1998, pp. 771–78) and Rothbard (1990).

policy is not independent of, but rather embedded in the monetary policy.<sup>13</sup> For this reason, the insulation argument ultimately boils down to the same mistaken idea of macroeconomic tuning advocated usually by Keynesian theory.

It is important to stress that inflation would not solve the original problem of wage stickiness. Hayek understood the proper meaning of monetary policy when he wrote:

Now of course no monetary policy can prevent the prices of the product immediately affected from falling relatively to the prices of other goods in the one country. . . . Nor can it prevent the effects of the change of the income of the people affected in the first instance from gradually spreading. All it can do is to prevent this from leading to a change in the total money stream in the country. (Hayek 1989, p. 37)

A sustained policy of decreasing the value of the national currency would suppose an increase in the domestic money supply.<sup>14</sup> The injection of an additional quantity of money (increasing monetary base) would entail a proportionately higher expansion of credit, with subsequent misallocation and redistribution of wealth. Eventually, it means that the whole national structure of prices would be raised.

This is regarded as an advantage because it avoids the necessity to lower a group of particular prices, especially wages, when foreign demand for the products concerned has fallen and shifted to some other national region. But it is a political makeshift; in practice it means that, instead of lowering the few prices immediately affected, a very much larger number of prices would have to be raised to restore international equilibrium after the international price of the local currency has been reduced. (Hayek 1978, p. 110)

Devaluation brings about an unsustainable change in the spending pattern, distorting the allocation of resources. The rise of the foreign exchange rate will discourage imports and divert the demand toward those industries producing for the domestic market. The prices for their products will consequently tend to rise. Also, the exporting industries, which would otherwise have cut their prices, will benefit from devaluation because they will receive for their products almost the same prices in terms of domestic currency as before the change in demand.

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<sup>13</sup>Dehejia (2003, pp. 2-4) states this explicitly: "Monetary policy and exchange rate policy cannot sensibly be disentangled, so that it is misleading to refer to monetary policy without referring to exchange rate policy or vice versa. it is illogical to discuss monetary policy and exchange rate policy separately: for it is possible to fix the exchange rate, or the price level, but not both."

<sup>14</sup>Most economists agree that a central bank cannot target a higher exchange rate at the same time with maintaining the quantity of money unchanged through sterilization. Sooner or later, one of the two goals must prevail.



The manipulation of money has transitory effects only if market participants do not properly anticipate it. Neoclassical economists admit this when they emphasize the distinction between nominal and real price rigidity.<sup>15</sup> All the “benefits” of devaluation are purely temporary, and are possible only because not all prices (and especially the prices for factors of production) are equally quick to adjust. As long as the effects of devaluation on the money stream continue to work their effects, some industries (among which are, of course, the exporting industries negatively affected by the trade shift) will experience illusory profits. But once the change in spending has worked its effects throughout the economy, and all nominal prices have risen to match the old relative price structure, the real demand of the consumers cannot be hidden anymore. In particular, the cost-price structure of those industries affected by the foreign shock will make their contraction inevitable.

As such, the supposed “advantage” of floating is nothing more than the “advantage” of inflation. Not only that it will not relieve the pressure for relative prices to adjust to the new structure of demand, but it will also create additional disturbances within the system. Inflation falsifies economic calculation and leads to a malinvestment of still more resources and consequently, to an even slower adjustment of the production structure to the needs of consumers.

If the entire advantage obtained by floating consisted only in protection against adverse movement of some external prices, the discussion would be only of limited importance. It would parallel the discussion concerning the possibility of sheltering domestic producers from domestic decreases in demand. But can we imagine a situation when it would really be beneficial to insulate against foreign changes in market data? Yes, for example in the case of a boom experienced by a large region, which tends to affect the neighboring regions and, ultimately, the whole world market. If floating were but able

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<sup>15</sup>Murray (1999, p. 3):

Another necessary condition for flexible exchange rates to be both desirable and effective is that *real* prices and wages in the economy not (sic) be fixed or completely rigid. Flexible exchange rates help stabilize an economy by overcoming the stickiness that is assumed to exist in *nominal* prices and wages, thereby allowing *real* prices and wages to *re-equilibrate*. (emphasis added)

Compare this open statement with the view of Mises (1998, p. 783):

The objectives of devaluation were: 1. To preserve the height of nominal wage rates or even to create the conditions for their further increase, while real wage rates should rather sink. . . . However, neither the government nor the literary champions of their policy were frank enough to admit openly that one of the main purposes of devaluation was a reduction in the height of real wage rates. They preferred for the most part to describe the objective of devaluation as the removal of an alleged “fundamental *disequilibrium*” between the domestic and the international level of prices. (emphasis added)

to provide insulation, this would be very important in the case of preventing foreign business cycles from affecting domestic economic conditions. In this case, the gold standard would indeed present a serious shortcoming. However, it is not true that floating regional (national) money could be useful in this respect. As long as commodity trade and/or credit relations exist at all, no country could possibly insulate itself against the effects of boom and bust experienced by other regions. In what follows I will try to explain in more detail why this is so.

#### INSULATION AGAINST FOREIGN TRANSMITTED BUSINESS CYCLE

The natural trend of economic development is to extend the division of labor worldwide. Consequently, the prices of goods tend to reflect the preferences of consumers and the production conditions prevalent in various places around the world. Therefore, it is clear that government engineered inflation will have effects far beyond the borders of any one state.<sup>16</sup> Today, since there are a large number of states, and a corresponding number of independent monetary monopolies,<sup>17</sup> prices and the international distribution of wealth are simultaneously affected by a wide range of inflationary impulses, the separate effects of which cannot be discerned with precision.<sup>18</sup> Further, it is evident that the more open an economy is the more its prices and economic calculation will be impeded by the monetary distortions originating in foreign countries. In addition, if any country is a large part of the world economy, then the monetary distortions it can generate will have an even greater impact upon the rest of the world.<sup>19</sup>

Monetary expansion exerts its damaging consequences beyond the borders of the state that generates it either directly, because foreign people employ the respective currency as medium of exchange, or indirectly, through its effects on interest rates. From the very beginning it is important to point out that the Misesian-Hayekian theory is more helpful than the mainstream

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<sup>16</sup>Moreover, as Heilperin (1968, p. 164) notes: "Even in the absence of an international monetary system, however, inflation albeit primarily a domestic phenomenon of individual countries, is far from being exclusively that."

<sup>17</sup>See for example, Rothbard (1990, p. 88), where he calls the state an "inflation producing center."

<sup>18</sup>As Heilperin (1968, p. 170) shows, in the universe of flexible exchange rates, "it is possible to have a large number of national inflations going on simultaneously, differing in intensity and sheltered by exchange controls and import restrictions adopted by the respective governments."

<sup>19</sup>Heilperin (1968, p. 164) notes that "relatively small and weaker economies" can experience inflation, without its own monetary policy being primarily responsible. This assertion is however either a simple truism, or completely untrue, because it simply disregards the possibility a state has to isolate its economy from international fluctuations, by imposing high tariffs and quotas, or controlling the foreign exchange market.

approach in understanding the international mechanism of the transmission of economic fluctuations. This is so because mainstream research regards the international monetary order as an interaction between separate national monetary systems. It usually conflates the geographic dimension of the national economy with the region in which the domestic money circulates. The Austrian theory allows us to analyze the effects of a monetary expansion without presupposing the existence of a geographical area in which the circulation of a certain currency is confined. It recognizes that money is a commodity and, therefore, the distribution of different kinds of money in the world is in permanent flux, determined by the change of the public's preferences and the available supply.

Conventional economics draws arbitrary boundaries not only between different monetary systems, but between separate production structures as well. The fact that there is no regional (or national) division of labor independent of the world division of labor is entirely disregarded. The simple existence of interregional (which, incidentally, can be international) trade forces the economist to think about the transmission mechanism of price variations. The exchange of commodities, capital or consumption goods deepens the division of labor and favors the extension of exchanges in the future. This normal evolution of human society has been occasionally perturbed by political interventions that attempted to separate economically certain regions by prohibiting to a lesser or larger degree the freedom of exchange. While these interventions had always (and still have) as their main goal the increase of government's revenue, only recently a number of economists provided the argument that separation can serve to insulate a region against foreign economic fluctuations. Particularly one type of intervention, enacting floating fiat money, was defended as a cure for economic problems.

It is important to stress that there are no autonomous regional structures of production. These structures are not built to serve exclusively the needs of domestic consumers; particularly for small regions or countries, consumption and saving preferences of their inhabitants are not the most important factor determining the shape of the capital structure. Instead external considerations are dominant. Regional production structures cannot be understood if we ignore global factors. In such cases, they appear completely inconsistent. In fact, we can go so far as to say that regional (national) structures of production are nothing more than fragments of the market-wide (worldwide) structure of capital.

Let us now take a closer look at the developments that take place just after the new fiduciary media has been injected into the economy. We will build our discussion upon the pathbreaking analysis of Hayek (1989, pp. 17-35).

The injection of the new money will increase first the incomes of the initial recipients. With an unchanged demand for cash, they will increase their spending, transmitting the inflationary impulse to other recipients. Since domestic individuals and industries are integrated in the global structure of production, it is clear that at some point in time, the increased spending flow

must leak onto remote (foreign) individuals and industries. They benefit also from the increased demand, for their prices are now rising relative to their buying prices, which are by and large the same as before the change in demand. The more open the inflating region, the sooner will the flow of spending spread to neighboring areas and contaminate foreign industries. In this case, commodity prices in the inflating area (country) need not rise too much, for only relatively few of its residents will manage to obtain a portion of the newly issued money.

The change of the price structure is difficult to predict, and this problem has been noticed by Hayek. As he explains,

we can see this more clearly if we picture the series of successive changes of money incomes . . . as single chains, neglecting for the moment the successive ramifications which will occur at every link. Such a chain may very soon lead to the other country or first run through a great many links at home. But whether any particular individual in the country will be affected will depend whether he is a link in that particular chain, that is whether he has more or less immediately been serving the individuals whose income has first been affected, and not simply on whether he is in the same country or not. (Hayek 1989, pp. 21-22)

The array of relative prices as shaped by the spending flows is unsustainable because it is not backed by a similar change in the pattern of demand. The distortion of the price structure redistributes wealth from those whose receipts are increased only late in the development of the inflationary process to those whose selling proceeds rise earlier. It is very possible for the monetary expansion to exert stronger effects upon the foreign industries than upon the domestic ones, if the former are among the first advantaged by the monetary injection. Eventually, the shift in prices would reverse itself to match the consumers' demand.

The monetary expansion will damage the economy not only through its direct influence on prices, but also through the deviation of the interest rate from the unhampered market level. Any (additional) quantity of fiduciary media impacts the capital market and leads to a considerable expansion of credit. The unexpected change in loan market conditions tends to put downward pressure on the rate of interest, and artificially stimulates the economy. The artificial fall of the rate of interest by one bank, in one sector, or in one segment of the capital market will spread step by step throughout the market. This development is caused by the competition among banks on the loan market.<sup>20</sup> Banks will search for the most profitable uses for their new money funds and, *ceteris paribus*, will direct additional loans toward businessmen acting in those regions where a higher interest rate prevails.

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<sup>20</sup>"The forces of competition obliges other lenders to follow their example," Mises (1981, p. 390).

In addition to the previous consideration, the fall of bond yields in the inflating region will cause investors to shift their attention to other investment opportunities. The differential between local and foreign interest rates will induce companies to sell securities in the first location affected by the monetary expansion, and buy securities in remote areas. Spatial arbitrage will reallocate commodity credit among regions in order to accommodate an increased external investment demand at a lower interest rate. Finally, the reduction of the interest rate will start a process of shifting production factors from their old employment, according to each national production structure, to longer processes, feeding an artificial global boom.

It is immaterial for the growth of the business cycles as to the geographical location of the inflationary impulse. The occurrence of errors is not conditioned by the physical determination of the money producer or of the members of the community of money users. As long as individuals are interconnected through the market they will be simultaneously exposed to the harmful effects of inflation.

Abroad, production is affected by the inflow of credit in the same way it would have been altered by an increase in genuine savings. With more funds available, entrepreneurs will undertake new investments and enlarge the capital base. Nevertheless, unlike in the case of genuine savings, this pattern cannot endure. In this case, the conflict over (always limited) production factors will become increasingly intense as entrepreneurs try to finish their investments while the consumption pattern requires a different allocation of resources.<sup>21</sup>

Acknowledging the errors committed in the past, entrepreneurs will attempt to borrow more from the banks, in a vain attempt to avoid insolvency. On the loan market then, the interest rate will tend to rise, providing more incentives for entrepreneurs to liquidate the malinvested capital. As Hayek explains, the different regions or countries affected by the previous boom cannot avoid the subsequent depression, even if they hinder (by any means) the rise in interest rates:

It will probably not be denied that a considerable rise in the rate of interest will lead to a fall in the prices of some commodities relatively to those

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<sup>21</sup>Mueller (2001, p. 17) makes a similar characterization:

International credit inflows allow a lower monetary interest rate than otherwise, and thus make economic agents overestimate the availability of real funds. The accumulation of foreign debt, which opens the chance for the borrowing country to acquire and maintain higher standards of capital goods, comes along with the expectation of future prosperity that accompanies the extension of the elevated level of production and consumption. Only when credit contraction occurs will it become clear that investors and consumers have extended themselves and that the presumed economic wealth lacks foundation.

of others, particularly of those which are largely used for the production of capital goods . . . compared with those which are destined for more or less immediate consumption. And surely, in the absence of immediate adjustments in tariffs or quotas, such a fall will transmit itself to the prices of similar commodities in the country in which interest rates are not allowed to rise. (Hayek 1989, p. 70)

To resume, the interregional transmission mechanism supposes two separate but complementary channels: the capital market and the commodities market. Over the last decades, technological progress and the international economic liberalization movement have made the international capital market the main transmission mechanism of “economic turmoil.” As we argued above, the integration of national financial markets into a common worldwide market makes much easier the transmission of fluctuations from an economy to another via capital flows.<sup>22</sup>

At this point we have to ask if floating fiat money could be useful as a tool for insulating a region against foreign inflation. The proper answer stands on an accurate understanding of the nature of fiat money. The state can arbitrarily introduce a fiat money in its territory by enacting a legal tender law specifying that only government’s currency can be used as a medium of exchange. Fiat money separatism means not only monetary disintegration, that is, the multiplication of money, but also monetary isolationism. In the separating region only the new money decreed by the government can circulate, the old commodity or paper money being legally excluded from transactions. This gives the government the control over the quantity of money and indirectly over the level of money prices in the region. However, the structure of prices will continue to reflect the pattern of demand resulting from the valuations of all market participants, regardless of their location. Most important, monetary disintegration need not be correlated with the breakdown of the capital market. The multiplication of currencies will lead to a similar multiplication of money interest rates. Each currency will have its own interest rate, the height of which will reflect the pure rate of interest plus the expected inflation rate of the respective currency. Because the last component differs across the regions, there will be many market interest rates, all of them based on a common foundation—the originary interest rate. Therefore, infecting the originary interest rate with fiduciary media, regardless of the location or the size if the money issuer will induce entrepreneurs to malinvest the existing capital goods.

The international flows of credit are of paramount importance in explaining the recurrence of boom and bust some countries have recently experienced.<sup>23</sup> In this context, one could rightly ask if in the absence of capital

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<sup>22</sup>The argument that capital flows facilitate the international transmission of disturbances even under flexible exchange rates has been developed in the mainstream literature by Mundell, Fleming, Cooper, Miles, Dornbusch, and Krugman.

<sup>23</sup>See the Asian crisis. On the importance of international banking and capital market in the transmission of present cycles, see Obstfeld (1998, p. 1) “Indeed it is fair to say

mobility it would not be much easier for regional economic units to preserve their stability. Disintegrating the capital market seems for many thinkers the best way to escape the harmful consequences of inflation. Clearly, the impossibility to conduct exchanges undermines the process of price unification. The decomposition of loans and capital markets would certainly give rise to a multiplicity of different regional interest rates. Therefore, contaminating one regional interest rate with inflation need not have direct repercussions abroad. However, even in a repressed capital market, the artificial expansion fueled in a region by paper money injections would reverberate much beyond its borders. This is true because of the worldwide integration of commodities markets. When entrepreneurs begin to bid higher order production goods, using the money newly created by the monetary authority, the prices of these producers goods tend to rise everywhere. As long as the raw materials and capital goods' prices will not be uniform throughout the world, speculators will make a profit by importing them cheaper and exporting them to the places where prices are higher. Thus, monetary induced distortions in relative prices in one part of the world will quickly spread over the whole (world) market, even if free exchange of capital goods is confined to small areas.

Total insulation against a foreign induced business cycle can be achieved only by a complete prohibition of all exchanges, that is in an autarkic economy. Because the freedom of exchange allows individuals to specialize in production and thus contributes to the formation of an elaborate structure of capital, the isolationist region rejects the benefits of the division of labor. Thus, the counterfactual price to be paid by the protectionist would be a complete economic backwardness.

### CONCLUSION

In this paper I have tried to prove that the insulation argument for independent fiat currencies is flawed, both because of its lack of sound theoretical foundation, and because of its empirical irrelevance. We have seen that the confusion about essential monetary notions makes the case for monetary independence look intuitively appealing. However, the occurrence of asymmetric trade shocks cannot be a good reason in its favor, for such shocks are more an illusion due to an incomplete knowledge of economic history and to a weak understanding of the adjustment mechanism in a worldwide integrated economy. Moreover, regardless of the importance of such trade changes, devaluation cannot offset the need for relative prices and wages adjustment to match the impact of the change. And by the additional inflationary effects it entails, devaluation harms the structure of production and makes the adjustment even more difficult. Finally, we have seen that even if it

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that for developing countries, exogenous fluctuations in capital flows have once again become a dominant business cycle shock. They remain a potential problem in developed economies as well."

is desirable to insulate a region against a foreign shock—when this shock is the manifestation of a boom—it is impossible to do it. The insulation idea should therefore be eliminated from the field of international monetary economics, together with the policies advocated on its behalf.

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