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International capital movements, speculation, and the ›conservation of saving‹ principle. A ›Harcourtian‹ interpretation of global imbalances and the global crisis

*Lilia Costabile**

This paper is inspired by the contributions made by Geoff Harcourt concerning the macroeconomics of open economies, international capital movements and speculation (e.g. Harcourt 1994, Dalziel/Harcourt 1997). This conceptual framework is developed in a simple model, useful for validating some of Harcourt's policy proposals for open economies, as well as for interpreting global imbalances and the global crisis. More specifically, this paper describes the workings of two economies, Home and the Rest of the World (RoW), which are related through both trade and capital flows. On this basis, this article: (i) develops the relationship between income levels in a deficit country (Home) and in a partner country (RoW); (ii) studies the role of key parameters in the two countries' main macroeconomic functions; (iii) applies the main results to global imbalances and in particular to the US, which plays the role of Home in the present context; (iv) suggests a possible link between global imbalances, speculation, and the international role of the dollar; (v) proposes an enlarged version of Harcourt's ›modest proposal for taming speculators‹.

JEL classifications: E42, F41, F33

Keywords: global imbalances, capital movements, speculation, international monetary system

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1. Introduction

Global imbalances are a pervasive characteristic of the world economy. They have come into the spotlight in this decade, particularly with reference to the high and rising US current account deficit and its counterparts in the high and rising surpluses of some emerging and oil exporting economies.¹ Following the eruption of the global crisis in 2007, attention has also been drawn to speculation in financial markets, and to the links connecting them to high international capital mobility. Geoff Harcourt has contributed to our understanding of both phenomena, with his analysis of open economies and international capital movements (see, e.g. Harcourt 1992 and 1994, Harcourt/Dalziel 1997) and with his famous ›modest proposal for taming speculation‹ (Harcourt 1994). This paper proposes: (i) to interpret the real/financial links among countries, and global imbalances, in the light of a framework of analysis inspired by Geoff Harcourt's papers, yielding some ›Harcourtian‹ results; (ii) to evaluate his ›modest proposal for taming speculation‹, when speculation occurs in the presence of global imbalances. This article is organised as follows: Section 2 presents a model incorporating the relationship between income levels in a deficit country (Home) and in a partner country (RoW, the Rest of the World), which are related through both trade and capital flows. This model validates some of Geoff Harcourt's propositions and policy recommendations that, though originally proposed in the 1990s, are particularly relevant to the current situation and the current debate on economic policies in advanced economies. In addition to enabling me to discuss and support many of the main propositions of the Dalziel and Harcourt (1997) paper, the model presented here provides a useful framework to think about global imbalances, a theme that has attracted much attention in this decade, before *and* after the outburst of the global crisis in 2007, for its potential destabilizing influence on the world economy. Section 3 applies the model developed in Section 2 to the analysis of current global imbalances, recasts the current debate in terms of the main variables and parameters adopted in that model, and presents my own interpretation. I argue that the asymmetric nature of the current international monetary system is among the main roots of global imbalances via its effects on the world demand for US reserves and other assets, and, through this channel, of the global crisis. Finally, I evaluate Geoff's ›modest proposal‹ for taming speculation in a global context where the international role of the dollar, international capital movements, and speculative activity are closely interlinked.

By discussing Geoff's points on these issues, my main underlying purpose is to continue the dialogue that we started in one summer many years ago, when I was writing my M.Phil. dissertation and, with typical generosity, he offered to read it and comment on it, helping me with his advice to complete that enterprise.

1 As expected (IMF 2010), the US current account deficit is rising again, as trade recovers after the fall in 2008–2009 (B.E.A. 2010).

2. *A model of global imbalances along ›Harcourtian‹ lines*

This section refers mainly to Geoff's paper with Paul Dalziel (to which I will refer as D&H 1997) and studies some of their main propositions within a two-country model, reproducing their hypothesis that the domestic economy (Home, in the present paper) runs a current account deficit, while the rest of the world (RoW) finances this deficit via capital flows into Home. The model presented here is similar to the one that D&H probably had in mind in their *Note* (D&H 1997), and is able to reproduce several of their main propositions, concerning both analytical issues and policy recommendations. However, it differs from their presentation of the argument in one main aspect: the relationships between the two countries' income levels are derived here from a model incorporating explicitly the two countries' macroeconomic behavioural functions. As my starting point, I adopt what I define as ›the standard model‹ (Robinson 1952), which I modify in order to incorporate the financial relationship between the two countries. I assume fixed exchange rates and given prices. The first assumption may sound unrealistic in the present world, but in fact it captures well the exchange rate regimes legally or factually adopted by many countries, particularly in the developing world (in developing Asia in particular) in their trade relationship with the United States. China is the leading example (although it has recently introduced some degree of flexibility in its exchange rate policy). For simplicity, I assume the exchange rate equal to unity. The second assumption is made in order to capture some features of this two-country world that are independent from price movements. One version of the standard model is the following. As usual, in each country we have $Y = C + I + X - M$, where Y is national income, C is consumption, I is net investment, X are exports and M are imports. From this, using the saving function rather than the consumption function, we get:

$$S - I = X - M, \quad (1)$$

which is the formula of income determination adopted here. Notice that this is not a national income identity, as S , I , X and M are not *ex-post* variables, but behavioural functions as specified below. Consequently, (1) is an equation expressing what I will call ›domestic equilibrium‹. This equation is satisfied only for the level at which the difference between voluntary savings and voluntary net investment is equal to the current account balance which, at that level of income, could be either positive, negative, or equal to zero; in the latter case only, the country is also in ›external equilibrium‹. Notice that the definition of domestic equilibrium adopted here does not imply full employment. The macroeconomic functions are as follows: investment is autonomous; the saving function includes an autonomous component plus an income-dependent component; imports are partly autonomous, and partly dependent on the country's own income; the export function is expressed as the imports of the other country, and includes both an autonomous component and an income-dependent component.

$$I_i = \bar{I}_i \quad i = H, R, \quad (2)$$

$$S_i = \bar{S}_i + sY_i \quad i = H, R, \quad (3)$$

$$M_i = \bar{M}_i + m_iY_i \quad i = H, R, \quad (4)$$

$$X_i = \bar{M}_j + m_jY_j \quad i = H, R; j = R, H. \quad (5)$$

Notice that in equation (5) each country's exports are expressed as the other country's imports.

Let us look at the equilibrium conditions in RoW. Solving the system (1)–(5) for Y_R we get:

$$Y_R = \frac{1}{s_R + m_R} B + \frac{m_H}{s_R + m_R} Y_H, \quad (6)$$

where $B = [\bar{I}_R + \bar{M}_H - \bar{S}_R - \bar{M}_R]$. I assume B to be positive.

Now let us consider how equilibrium is determined in Home. I modify the standard model because here I wish to study the case, also studied by D&XH (1997: 627), when Home is running an external deficit, and the counterpart to this deficit is a net capital inflow from RoW. In order to take these circumstances into account, RoW's saving function is partitioned here into two components, according to the coefficients $(1 - b)$ and b , of which the first one is held by RoW's residents in RoW's own financial instruments, while the second flows to Home to buy Home's financial assets. Hence, equation (3) is re-written for country RoW as:

$$S_R = (1 - b)(\bar{S}_R + s_R Y_R) + b(\bar{S}_R + s_R Y_R). \quad (3')$$

Because RoW finances Home's deficit by holding Home's financial assets, the second term in RoW's saving function is equal to Home's current account deficit. Therefore, imposing this equality and combining equations (4) and (5) to determine Home's current account deficit, we obtain:

$$\bar{M}_H + m_H Y_H - (\bar{M}_R + m_R Y_R) = b(\bar{S}_R + s_R Y_R). \quad (7)$$

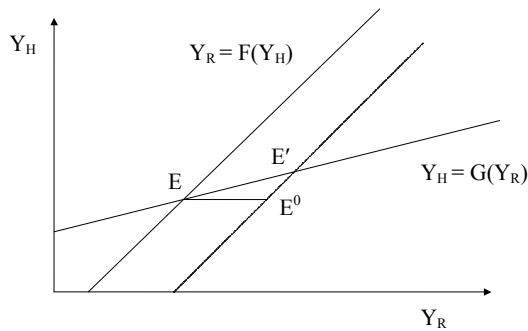
Equation (7) can be solved to get Y_H as a function of Y_R , as follows:

$$Y_H = \frac{1}{m_H} (A) + \frac{bs_R + m_R}{m_H} Y_R, \quad (8)$$

where $A = (\bar{M}_R + b\bar{S}_R - \bar{M}_H)$ is assumed to be positive.

If we also assume that the marginal propensities to save and import in both countries are constants, with values between 0 and 1, equations (6) and (8) are linear, and their graphical representation is that given in Figure 1, where the income of Home is given on the y-axis and that of country RoW is on the x-axis. The two continuous straight lines representing these two equations cross at E in the positive quadrant in the Y_R, Y_H space if the condition that $0 < b < 1$ is met. If $b = 1$, the two countries' income lines have equal slopes, and there is no international equilibrium (see the Appendix). I assume the condition $0 < b < 1$ to be verified.

Figure 1: Income lines and international equilibria



This model shows that:

- (i) the incomes of the two countries are positively related;
- (ii) a multiplier process is set in motion in both of them whenever one of them expands. For instance, if investments rise in RoW, the positive impact effect on RoW's own income (as illustrated by point E^0 in Figure 1), will be magnified by the repercussion effects operating via the increase in RoW's imports, which, by raising Home's income, will increase its imports and, consequently, further add to the expansion in RoW, until the new equilibrium is established at point E' ;
- (iii) Home's income is positively related to the coefficient b . This means that country RoW residents' willingness to hold Home's financial assets as a destination for parts of their savings, rather than invest in their own financial assets, is expansionary in Home and, consequently, in both economies.

Points (i) and (ii) above confirm Geoff Harcourt's view that internationally co-ordinated fiscal and monetary policies of an expansionary nature are the best policy recommendation in order to sustain or re-establish full employment on a world scale (Harcourt 1994: 2491). Referring to our Figure 1, a cooperative policy of this type implies that each country should let its own income curve shift rightwards, thus imposing an expansionary impulse on the world economy. By contrast, contractionary policies initiated in one country in order to address an external deficit may set the stage for world deflation. According to D&H (1997: 629) it is true that contractionary policies will reduce imports in the country adopting them, but

»this will not necessarily reduce a balance of payments problem, if all other countries adopt a similar strategy, but may only increase the international economy susceptibility to widespread recession«.

It is worth stressing that, while Geoff gave these recommendations in the 1990's, with the problems of that decade in mind (see e.g. the world economic problems as described in Harcourt [1994: 2490]), they are particularly relevant today, when the global crisis is still

imposing deflationary pressures, sometimes aggravated by contractionary policies, on the world economy. At the present economic juncture, these recommendations apply particularly well to the debate on macroeconomic policies in Europe.

The present model is also in accord with D&H's (1997) proposition that, although the savings and investment equality does not hold true for each individual country, it is true on a global scale. This is an application (proposed by D&H) to the international economy of the ›conservation of savings principle‹, by which the voluntary savings generated by an act of investment via the multiplier always match the value of the investment expenditure that initiated the expansionary process (D&H 1997: 623–625, 627). In my model, this principle holds true, even though domestic investment does not appear explicitly in Home's income function, because each side of equation (7) is just another way of expressing the country's excess of (domestic) investment over (domestic) savings. Thus, *ceteris paribus*, the savings generated in the two countries (as a consequence of an investment expenditure in either of them, or in both) are brought into equality with investments via the multiplier process. On this basis, by re-establishing the *S*-and-*I* equality on a global scale, D&H (1997) correctly reject the Feldstein and Horioka's contention that ›the traditional Keynesian interpretation that exogenous changes in the level of investment cause income to vary until the resulting saving equals investment‹ as invalid in an open economy with perfect capital mobility (Feldstein/Horioka 1980: 319). D&H also correctly argue that

»there is no ›worldwide pool of capital‹ to which excess domestic saving can be added or from which domestic savings can be supplemented [...]. Rather, the investment expenditure must come first.« (D&H 1997: 628)

Finally, point (iii) above is helpful in discussing global imbalances, by focusing on the financial side of the two countries' international interdependence, captured here by the parameters b and $(1 - b)$ (the latter measuring RoW's degree of ›home bias‹ in asset holdings). Within the upper limit $b < 1$, a rise in b raises the value of Home's multiplier.

The result that the deficit country, Home in the present model, benefits from an increase in RoW residents' willingness to hold Home's own financial assets is not surprising. This happens because what these holdings actually do is finance Home's excess of aggregate demand above the level of domestic production. This way of interpreting the effects of a rise in b on Home's ›savings gap‹ can be seen more clearly by reading equation (1) as stating that domestic absorption ($C + I$ in the present simplified model) is greater than domestic income (Y) by an amount ($M - X$) equal to its borrowing from foreigners. In other words, Home can ›live beyond its means‹ only because the rest of the world is willing to let it do so, and any increase of RoW's willingness to hold its financial assets (as measured here by the parameter b) raises its ability to do so. Secondly, the Rest of the World (that is, to take a first step towards the real world, the countries contributing to finance the external deficit of the biggest debtor in the world economy) also benefits from its own propensity to buy Home's financial assets, because this willingness contributes to a higher income level via its expansionary effects on Home's income, which is partly converted into RoW's exports into Home. In other words, a high effective demand in the home country means a large market

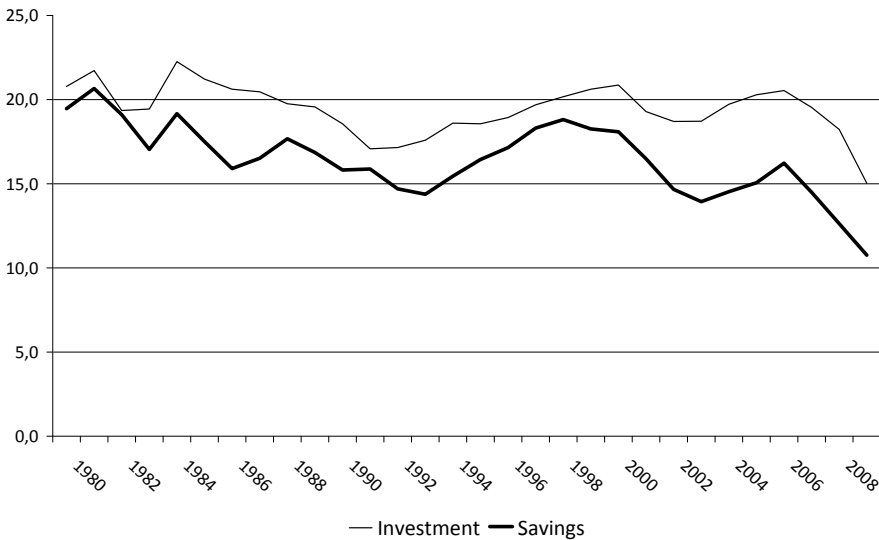
for the goods and services produced in the rest of the world, i.e. high exports from RoW. To take a second step towards the real world, this result is suggestive of the US role as the ›locomotive‹ of the world economy.

Summing up, according to the logic of the present model, RoW has an interest in financing Home's external deficit by holding part of its savings in the form of Home's financial assets, while Home has an interest in absorbing RoW's savings, thus being enabled to ›live beyond its means‹. This situation has been described as one of ›mutual co-dependency‹ between China and the US (Mann 2004).

3. Global imbalances, the international monetary system, and speculation

Global imbalances have been at the centre of debate in recent years. In terms of our model, this debate revolves around the determinants of Home's current account deficits and the characteristics of RoW's saving function. Before summarizing the main positions in this debate, I would like to introduce the steps of my argument in this section, and illustrate how it relates to Geoff's ›modest proposal for taming speculation‹. Firstly, while the debate has focused mainly (but not exclusively, see below) on the causes of the increase in RoW's savings (where, as in equation [3], $S_R = \bar{S}_R + s_R Y_R$), my interest is rather on the reasons why b is positive in equation 3', why it has been positive for so long (i.e. since the 1980s) and, finally, why it has increased in the last years before the global crisis. As we have seen, the parameter b is a measure of the willingness of RoW's residents to lend to Home. So my question is not why RoW's savings increase, but rather why, at each level of RoW's savings, a portion b of these savings is channelled to Home's (the US) financial market rather than invested in RoW's own financial markets, and how is this portion determined. This, in my opinion, is the real question. A rise in other countries' savings does not necessarily determine global imbalances. Rather, these have developed as a consequence of the channelling of these savings into US debt instruments and equities. Secondly, I argue that the time horizon under investigation should be extended: While the current debate has concentrated mainly on the years since the middle 1990s (starting, more or less, with the Asian crises), the US has in fact been running current account deficits for almost three decades, not just for the last fifteen years. The domestic counterpart to this deficit is the persistent ›savings gap‹ experienced by the US economy, which is illustrated in Figure 2. Thus, the further question arises whether there are basic, ›structural‹ causes that produce this persistent current account deficit and this persistently negative savings gap.

Figure 2: Investment and savings in the USA in percent of GDP



Source: International Monetary Fund, *World Economic Outlook*, April 2010.

As will be seen presently, while the varying phenomena into which the current literature has delved explain why different countries rotate in the role of the net surplus/net lender country, the debate has not sufficiently clarified why it is the US that should persistently play the role of the deficit/debtor country. By contrast, as we will see, the present interpretation focuses on some basic reasons for this persistent deficit/debtor position.

Thirdly, I ask whether speculation is in some way related to these basic factors, if they exist, and consequently if Harcourt's objective of 'taming speculation' requires that these factors are eliminated. I conclude that Harcourt's recipe for taming speculation could usefully be complemented by measures intended to remove these structural factors. Having thus announced the steps in my argument, let us now briefly recall some of the main interpretations of global imbalances, and see how they differ from the present one. According to one line of thought, which originated in Bernanke (2005), a 'savings glut' in the rest of the world was the origin of global imbalances. This savings glut is defined as the excess savings from Asian emerging market economies, an excess driven by rising savings and collapsing investment in the aftermath of the Asian financial crisis in the second half of the 1990s.

Further investigations along this line of thought have pointed to several possible causes of rising savings rates, for China in particular: these range from life-cycle motives, due to the increasing ratio of the working population over total population (Modigliani/Cao 2004), to precautionary motives, following the removal of 'safety nets', as welfare state provisions were weakened or abolished in China (Blanchard/Giavazzi 2005), and even to competition for wives »in response to ever rising pressure in the marriage market«, in the presence of a

rising sex-imbalance ratio, »which has made it progressively more difficult for men to get married« (Wei/Zhang 2009: 3). More recently, to the forefront of the »savings glut« hypothesis have come the surpluses of Middle East and North Africa countries, together with those of the CIS (Commonwealth of Independent Countries plus Mongolia). These surpluses were determined by the sharp rise in the price of oil in the years immediately preceding the global crisis. In this case the savings glut is modelled as the result of this exogenous price shock, sometimes related to the sharp rise in the Chinese demand for oil (»the China factor«), coupled with a higher propensity to save in oil-producing countries compared to the US (Belke/Gros 2010, Higgins et al. 2006).

Summing up: all these interpretations provide very interesting accounts of high (and rising) savings rates in the rest of the world. However, they fail to answer the following questions, which are relevant to the emergence of global imbalances.

- (i) Why, granted the high saving ratios and current account surpluses of other countries, is it just to the US that these countries should have channelled their savings? Because international imbalances would not be sustainable if these savings were invested in the countries where they originated (i.e., if $b = 0$ in our model), it follows that these interpretations do not sufficiently explain the emergence of global imbalances.
- (ii) Why did the US register persistent current account deficits for three decades starting in the 1980s, i.e. well before the rise in Asian and oil producing countries' savings rates? This leads us to raise the further question: Are there »structural« causes for the US persistent current account deficits and the corresponding »savings gap« illustrated in Figure 2?

Dooley et al. (2003, 2009) provide a partial answer to these questions by interpreting the large surpluses of developing countries as the result of their mercantilist strategies, implemented through pegged exchange rates, undervalued currencies with respect to the dollar, and increasing penetration into the US market. According to this »Bretton Woods II« hypothesis, the US needs financial inflows to offset its low domestic savings, while emerging countries willingly provide these financial flows, in order to promote their own export-led growth. This is another way or restating the »mutual co-dependency« mentioned above. However, this interpretation does not fully explain why it is just with the US, rather than with other large economies, that emerging countries should decide to establish this symbiotic relationship. Caballero et al. (2008) provide another interpretation. These authors argue that the savings inflows into the US were motivated by a lack of safe assets in the rest of the world, particularly in emerging markets, due to their underdeveloped financial markets and institutions. The superior ability to produce »sound« financial assets would consequently determine a sustained reallocation of savings towards the US. However, this benign view of the financial side of global imbalances was based on the assumption of a superior efficiency of US financial markets. As other authors have not failed to notice, this assumption has been disproved by the financial crisis, which exposed the high inefficiency of US financial markets (e.g. Obstfeld/Rogoff 2009). Another version of the »superior efficiency« interpretation

points to differences in yields between financial assets in developing countries and financial assets in the US (rather than to differences in their ›safety‹). In purely theoretical terms, this explanation makes perfect sense: one would expect investors' choices to be motivated by yields differentials.² But this interpretation, while perfectly well-grounded in theory, runs contrary to the weak responsiveness of capital flows to yield differentials. Actually, yield differentials between the US and other countries went in the wrong direction, largely as the result of a portfolio composition effect, by which US liabilities are heavily weighted towards liquid, low-yield debt instruments, while US assets are typically equities (Gourinchas/Rey 2005, Lane/Milesi Ferretti 2005). In turn, this portfolio composition effect arises because a large share of US securities is held by central banks rather than private agents. Today, dollar holdings still represent 62 per cent of world allocated reserves, with the euro coming next at 27 per cent (IMF 2010b). To give just an idea of the order of magnitudes involved, the value of foreign reserves has always been above 10 per cent of world output in the second half of the present decade, and above 20 per cent of the cumulative output of emerging and developing economies.

The portfolio composition effect, rooted as it is in central banks' reserve allocation choices, leads us to our alternative interpretation of global imbalances. Let us start by considering that while, as we have just seen, foreign central banks keep the bulk of their foreign reserves in US Treasury securities, the opposite is not true. In fact, reserves accumulation is virtually zero in the US, as can be seen in the Federal Reserve (FED) balance sheets (see also Bernanke 2009). This asymmetry arises out of the role of the dollar as the ›key‹ currency.³

A key currency is a national currency that also works internationally as the currency in which international payments are made (vehicle currency) and in which imports and exports are quoted (quotation currency). Moreover, it is widely used in international lending-borrowing contracts, of both the short and the long variety, thereby working as the standard of deferred payments. Finally, because of its pivotal role in international transactions and its superior liquidity, this international currency also becomes a store of value, both for private investors and for central banks. Consequently, it also works as the ›intervention‹ and ›reserve‹ currency, in which exchange market support is operated and foreign reserves are held.

The key role of the dollar in international transactions explains the asymmetric behaviour of central banks with respect to reserve accumulation. Foreign central banks institutionally need to hold reserves in dollar-denominated instruments, because they need to make some payments in foreign currencies, i.e. in a form of money which they cannot create. In other words, their liquidity (i.e. their ability to create money) is limited, because the money that they can create is not accepted as an international currency.

2 In this context, we may notice that Paul Dalziel, in his restatement and development of the D&H (1997) arguments, maintains that capital movements from one country to another are ›presumably‹ motivated by their ability ›to generate a higher rate of return than in [their] country of origin‹ (Dalziel 1997: 33). However, in his paper Paul Dalziel was not referring to the US as the deficit country.

3 The following analysis of key currency systems is based on my previous papers (Costabile 2006, 2009 and 2010, Costabile/Scazzieri 2008).

By contrast, the liquidity of the central bank of a key country (i.e. the country issuing the key currency) is unlimited, because it makes external payments by issuing claims on itself. In other words, there are no payments to be made by the central bank of the key country in a form of money which it cannot create.

True, in a gold-exchange standard, the key country's central bank (that is, the FED) would be required to convert its own currency into gold on demand. In other words, it would have to pay gold for its debt (the international money that it issues). Consequently, the need would arise for it to hold reserves in gold. But in the fiat money regime characterising the current international monetary system this need does not arise, as the key currency is inconvertible.⁴

The asymmetric behaviour of central banks with respect to liquidity creation and reserve accumulation helps to explain why a key country may become prone to running persistent external deficits.

Firstly, the external constraint is softened in the US (which has now been the key country for about 65 years), because foreign central banks, by investing their dollar reserves in US Treasury securities, provide »automatic sterilization« (MacKinnon 1974: 16, 1996: 173–174) of the money flowing out of the US for external payments. This phenomenon, which can be interpreted within the framework of »the international circuit of key currencies« (Costabile 2010), had already been noticed by other commentators, including Charles De Gaulle, who spoke of an American »deficit without the tears«, and especially his advisor, the economist Jacques Rueff (Rueff/Hirsh 1965: 3), who described the situation of a key country by means of the metaphor of the fortunate customer continuously receiving back from his tailor, as a loan, the money that he had just given to him in payment for his suits. For a more recent statement, it is worthwhile reproducing the description provided by the FED itself, which is apparently well aware of automatic sterilization:

»Most dollar purchases by foreign central banks are used to purchase dollar securities directly, and thus they do not need to be countered by US open market operations to leave the supply of dollar balances at the Federal Reserve unchanged.« (FED 2005: 55)

Thus, reserve accumulation by foreign central banks is a first reason why the parameter b in our model is positive. The counterpart to this is that, as the external constraint is softened in the US, deficits can be sustained for an indefinite length of time. By contrast, other countries cannot sustain an external deficit indefinitely, because by so doing they would run out of reserves. Consequently, the international adjustment mechanisms are asymmetrical between the two country types.

Secondly, the magnet-like character of the US financial markets is self-reinforcing: By supporting the external value of the dollar (thus providing implicit insurance against its depreciation), foreign central banks encourage private investors to move their capitals

⁴ According to some commentators, *de facto* inconvertibility was the rule even in the gold-exchange standard system under Bretton Woods, which was defined by Harrod as »inconvertibility by gentlemen's agreement« (quoted in Triffin 1965).

to the US (for discussion of the direction of causality between private and official flows, see Galati/Wooldridge [2006]). This is another reason why the b parameter in our model is persistently positive.

Thirdly, international adjustment is asymmetric with reference to its stock dimension, too. While currency depreciations in debtor-countries normally imply an increasing burden of their external debt, by contrast a depreciation of its currency benefits the key country, by improving its net foreign position via valuation effects. The reason underlying this asymmetry is that, because of the special international status of its currency, the debt of the key country is typically denominated in its own currency, while other countries suffer from the original sin that their debt is typically denominated in a foreign currency (Eichengreen et al. 2005).

These are some of the asymmetries of our International Monetary System. This asymmetric system was introduced at the end of World War II. Geoff Harcourt has, in my opinion, correctly defined as a tragedy the fact that the alternative Keynes Plan did not win out at Bretton Woods (Harcourt 2003: 14).⁵ (See also Hacourt/Turnell [2005], and on the reasons why the Keynes Plan would remedy the asymmetries of our current system, see Costabile [2009].) Summing up, according to the present interpretation, the structural asymmetries of the existing key currency system underlie the persistent US deficits and the corresponding, persistent willingness of foreign residents and institutions to hold US financial assets.

In the last decade these phenomena were intensified as a consequence, partly, of US fiscal policies, partly of increased precautionary official demand for dollar reserves after the Asian crises, and partly as a consequence of increased savings in some countries (this last phenomenon being the only one considered by the savings glut hypothesis). The structural factors described above and their intensification in the last decade explain why a large part of US outstanding securities were held by foreign investors, both private and institutional. According to some estimates (Warnock/Warnock 2009), in 2005 foreigners held: (i) almost 25 per cent of all US outstanding securities; (ii) 51,7 per cent of total long-term US Treasury bonds, and 60 per cent of these holdings were by foreign central banks; (iii) 14,1 per cent of total US outstanding Agency Securities (such as Fannie Mae and Freddie Mac) (35 per cent of these were by foreign central banks); (iv) almost 20 per cent of corporate bonds outstanding. These huge capital inflows co-operated with the deregulated US financial system to exacerbate speculative behaviour. I do not intend to discuss in details how the US financial system operated, but simply make the point that these capital inflows, through their impact on asset prices and long-term interest rates, contributed to fuel the 'debt economy' which acted as the proximate cause of the crisis. In particular, they contributed to the expansion of financial institutions' balance sheets (Portes 2009), and to the increase in borrowing by households since the middle of the nineties, and even more so in the first decade of the new century. Rising leverage in the household sector was encouraged both

5 Geoff argues that Henry White's system was adopted. Other authors (James 1996: 65–66, Meltzer 2003: 585) argue that Williams's (1949) 'key currency' proposal actually won out over both the Keynes Plan and the White Plan in the factual implementation of the Bretton Woods agreements.

by low interest rates, and by the practice of borrowing against property – valued at inflated prices – which was used as collateral. The ›originate and distribute‹ model, by which risks were spread among uninformed lenders (the general public) did the rest. On the basis of the present interpretation, I now come to discuss Geoff Harcourt's ›modest proposal for taming speculation‹ (Harcourt 1994).

Geoff argues that when speculation dominates, prices and quantities do not reflect real factors and/or productivity indices, but guesses about other people's guesses, and so on. Thus, he makes a distinction between investments guided by real indicators and those that purely reflect speculation. Accordingly, his proposed remedy is a taxation system that would tax transactions, especially on foreign exchange markets (but also in stock and housing markets), according to their nature, i.e. according to whether they reflect real or speculative activity. I propose that Geoff's discriminating criterion should be extended by distinguishing between international capital movements reflecting genuine return differentials, and those that are produced by the characters of the international payments system, which, as we have seen above, encourages money flows into the key country merely because of the privileged role of the key currency. Consequently, I also suggest that Geoff's proposal may be reinforced if international capital flows of the second variety (i.e. not reflecting real yield differentials) could also be curbed.

Because the incentives for financial mismanagement and speculation would not be weakened if the key currency system and the international capital flows associated with it were left untouched, I add to Geoff's proposal the further ›modest‹ recommendation that the international monetary system should be reformed to eliminate ›the absurdities associated with the use of *national* currencies as *international* reserves‹ (Triffin 1961: 10, emphasis in the original). The logical structure of the Keynes Plan still provides a useful blueprint for reform.

4. *Summary and conclusions*

Geoff Harcourt has produced important contributions to the discipline of economics with regard to economic theory, the analysis of economic policy, and the history of economic thought.⁶ In this paper, I have concentrated on his contributions to the macroeconomics of open economies, international capital mobility and speculation. By developing a simple model of two economies, Home and RoW, which are related through both trade and financial flows, I have reproduced some of his main theoretical points, such as that the ›conservation of savings principle‹ implies that investments on the global scale generate an equal amount of savings, thus reinstating the Keynesian principle against previous criticism. The model also validates some of Geoff Harcourt's policy recommendations, which are relevant to the present economic situation of the world economy, such as that international policy

6 In addition, Geoff Harcourt contributed to the development of the discipline through his teaching activity (Harcourt 2001).

co-ordination on expansionary policy, rather than a contractionary policy stance in deficit countries, is crucial for ›putting the world on a course to prosperity‹.

The model also offers a useful theoretical framework for analysing global imbalances. The focal point concerns the international allocation of savings, namely whether, and in which proportions, RoW chooses between holding its savings in domestic assets and channelling them towards Home's financial markets. A persistent external deficit, as that experienced by the US for about three decades, requires persistent financial support from the rest of the world. I have offered an explanation for sustained financial inflows into the US, based upon the international role of the dollar as the key currency, and the existing asymmetric system of international payments.

I have also argued that speculation in financial markets is closely related to these financial inflows. Therefore, I have proposed to complement Harcourt's ›modest proposal‹ for taming speculation via the taxation system, with the equally ›modest‹ proposal of introducing more symmetry in the international monetary system.

Appendix

Assume that the terms in brackets in equations (6) and (8) are positive, and that each country's propensities to save and import are constants, with values between 0 and 1. Under these conditions, the two lines representing equations (6) and (8) are straight lines with positive slopes in the space (Y_R, Y_H) . They cross in the positive quadrant. This can be shown by firstly taking their first derivatives. These are as follows:

$$\frac{dY_H}{dY_R} = \frac{bs_R + m_R}{m_H} \text{ is the slope of equation (8) with respect to the horizontal axis.}$$

$$\frac{dY_R}{dY_H} = \frac{m_H}{s_R + m_R} \text{ is the slope of equation (6) with respect to the vertical axis.}$$

We take the reciprocal of the latter, to get the slope of equation (6) with respect to the horizontal axis as: $\frac{m_H}{s_R + m_R}$. Now $\frac{bs_R + m_R}{m_H} < \frac{m_H}{s_R + m_R}$ as long as $b < 1$. The intercepts

of the two lines, A and B, are taken, respectively, with positive and negative sign (because equation (6) is now re-expressed in the Y_R, Y_H space).

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