Hi Geoff,

Thank you very much for your comments about our paper. It was a pleasure to meet you and have your comments. Certainly they are helpful. You have sent me by email two pieces of comments. The first one was the same that you have done at the PKSG Seminar and I have tried to answer it first as following.

Geoff: Is the point of extending FISF (or the saving- investment identity) to the international dimension to to show there is no necessary relation between the external position and ε? I would like to take this as analogous to the saving-investment identity being independent of r. As Keynes put it in his 1933 lectures: "Saving and investment balance at any rate of interest, therefore any analogy with demand and supply analysis doesn't work" (Rymes, 121-2).

Marco: Our paper does not make this point. We are just interested to show that Finance-Investment-Saving Fund (FISF) circuit works for the closed economy (as Keynes have shown) as well as it works for the open economy. If we are successful in showing that FISF circuit also works for the open economy we have contributed to the strength the Keynesian theory, and that it is why this contribution is important. Saving and investment balance at any real exchange rate, and in the open economy investment = national savings + foreign saving. Our point is that the distribution of savings between its national and foreign parts depends on the level of the real exchange rate.

Geoff: The current account is the same as the capital/financial account, independently of ε. This is simple national accounting or balance of payments arithmetic: any increase in the current account deficit must be matched by a surplus on the capital account. [adjusting for changes in reserves]

So the net flow of goods and services across a border is matched by a net flow of financial instruments in the opposite direction, and corresponding flows of income (...) That said, even in spite of this match, is there any reason the current account

might widen and/or exchange rate might change following an 'expansion in the public deficit'?

Marco: We are in agreement that any increase in the current account deficit must be matched by a surplus on the capital account. [adjusting for changes in reserves]. But, the paper does not address this issue. The paper is not concerned about the determinants of the real exchange rate. All that we say is that "If in some way government budget deficits change the relative prices of the economy (i.e. change the real exchange rate) they can trigger the substitution between national and foreign savings and can lead to worsening the current account balance." The current account balance is affected by the level of the real exchange rate, but it does not mean that international capital flows are not relevant as a determinant of the exchange rate. It does not deny the proposition that "The current account is the same as the capital/financial account, independently of ε". Our point is that "there is not a systematic relationship between an expansionary fiscal policy (budget deficits) and the real exchange rate appreciation", but, if in some way government budget deficits change the relative prices of the economy, they can lead to worsening the current account balance and it does not mean that investment is constrained by the reduction in national savings, as Krugman and the standard view argue. We argue that in some cases budget deficits may lead to the appreciation of the real exchange rate. For example, in the context of full employment an expansionary fiscal policy leads to rise in inflation and as a consequence the real exchange rate appreciates. As a result, investment remains equal national savings plus foreign saving, but the distribution of savings between its national and foreign parts change: there is a rise in foreign saving as well as a decrease in national savings (substitution of foreign saving for national savings) due to the real exchange rate appreciation.

Geoff: But going back to Krugman's process. An expansion in domestic demand may certainly lead to an increase in imports and hence deterioration in net exports.

Marco: We are in agreement with this proposition, but we have pointed out that this is not the only possibility: in the context of increasing returns, an expansion in domestic

demand may lead to an increase in both imports and exports and hence there is not a deterioration in net exports.

Geoff: For me the question is not whether $\Delta\mathcal{E}$ would change NX – and hence PM are unduly preoccupied with this causality – but whether NX would change $\mathcal{E}$. And so what if it did?

Marco: We are in agreement with this argument. The paper is not about the determinants of $\mathcal{E}$ or NX. It is possible that changes in international capital flows lead to changes in NX and $\mathcal{E}$. We just argue that national savings + foreign saving are a consequence of investment and that investment is equal national savings + foreign saving, but the distribution of savings between its national and foreign parts depends on the level of the real exchange rate. The paper is not about the determinants of $\mathcal{E}$ or NX.

Geoff: To protect r, he put in place capital control. [quote]/ If the economy generates its own savings, there is no need for foreign capital. The purpose of his CU was to protect $\mathcal{E}$. The system would permit an elastic supply of international money, and would automatically recycle any balance of payments imbalances, though with limitations on both deficit and surplus countries.

Marco: I am in agreement that "If the economy generates its own savings, there is no need for foreign capital". We argue that savings are not required to finance investment but they are important for funding it and, therefore, for the stability of the economic (and financial) system. Thus, if the real exchange rate appreciation leads to the substitution between foreign and national savings and if this process is due to changes in international capital flows, then capital controls are necessary for the stability of the system.

The second piece of comments and its respective answers are as following:

<u>Geoff:</u> we are in fundamental agreement is the importance of the I causing S process to the international dimension. As Mark suggested it is of importance to know to what extent this was pursued in eg historic contributions to the Cambridge literature as opposed to the mainstream/Keynesian – really we need an audit/purge.

My specific and main reservation is your giving too much importance to the exchange rate transmission.

<u>Marco:</u> But the aim of the paper is show that in the process where investment causes saving, the distribution of savings between its national and foreign parts depends on the level of the real exchange rate.

<u>Geoff:</u> My challenge to you is that the economics here is not about S/ε causality, it's about whether there is any necessary role for ε in the process.

<u>Marco:</u> Although we have mentioned the Krugman's argument that a fall in national savings (S) leads to an appreciation of the real exchange rate, we are not in agreement with this argument. We just have pointed out that Krugman's argument is mistaken from the Keynesian view. We also have argued that the role for ε in the process is to determine the proportion of savings caused by investment that is formed abroad (National Savings/Foreign Savings) in the context where investment = national savings + foreign saving.

<u>Geoff:</u> Now I think the extent that saving exists (or has to be sourced) overseas depends on the extent of imports caused by fiscal (or any domestic) expansion. For me any exchange rate discussion follows logically after this effect. So the argument is in two parts: first, the change in imports. It may be that this effect is not substantial is or offset by increased exports. Second, a fall in the current account may not mean a fall in the exchange rate. I tried to argue this through emphasising the offsetting flows on the current and financial/capital accounts. The saving created in W as a

consequence of expansion in Z is idle unless it funds the spending in Z, and is therefore automatically recycled, except under special conditions: most likely those associated with financial crisis (or hoarding reserves).

Marco: It is exactly what the paper shows: The saving created in W as a consequence of investment in Z funds the spending in Z.

Geoff: So a fiscal stimulus may lead to NX↓ and a corresponding reliance on foreign saving, but the effect may not be large and it is unlikely to greatly disturb ε.

Marco: We consider in the paper the possibility that an expansionary fiscal policy leads to an increase in imports and to a decrease in net exports with no needs for a disturb in ε. However, we argue that this is only a possibility and that another possibility is that, in the context of increasing returns, an expansion in domestic demand may lead to an increase in both imports and exports and hence there is not a deterioration in net exports.

Geoff: PS one final point would be to keep in mind the macroeconomic perspective, though Mark would probably say I am too hard line! I don't things like exogenous exchange changes, distributional consequences of exchange change, or relative changes between the prices of current and investment goods were of importance to Keynes's main scheme. Interesting side issues undoubtedly, but only once the main scheme is nailed down

Marco: The distributional consequences of exchange rate changes are of importance because there is no a study that shows how this things work in the Keynesian tradition and, thus, showing that how it works in the Keynes's scheme gives it more power in a world dominated by the neoclassical view.