

The Theory of the Global “Savings Glut”

Prabhat Patnaik

For some time now, Mr. Ben Bernanke, Chairman of the Federal Reserve Board, has been arguing that three observed phenomena in the world economy in the decade after 1996, viz. the substantial increase in the U.S. current account deficit, the swing from moderate deficits to large surpluses in “emerging-market countries”, and the significant decline in long-term real interest rates, can all be explained as the fall-out of a world “savings glut”. While Mr. Bernanke himself has not explicitly linked this “savings glut” to the world financial crisis, others have, especially authors from the IMF stable. They have argued that the low long-term real interest rates caused by the “savings glut” gave rise to the asset price inflation whose inevitable collapse has precipitated the current crisis. The present paper is devoted to a close examination of this “savings glut” theory. For the sake of simplicity, it looks at the basic analytical issues in a single-period context.

I

The theory runs as follows: for any country (or a group of countries) in any period we can plot savings and investment as functions of the (real, long-term) interest rate, for a given real exchange rate. Hence for any given configuration of exchange rate and interest rate there would be a certain excess (positive or negative) of domestic savings over domestic investment, which would be exactly equal to its current account surplus. If this interest rate-exchange rate configuration actually prevails, then since the current account surplus of this country will necessarily equal the current account deficit, and hence the excess of domestic investment over domestic savings of the rest of the world, the interest rate-exchange rate configuration in the rest of the world must be such as to generate exactly this excess.

Now, suppose, the exchange rate remaining unchanged, there is an outward shift of the savings curve plotted against the interest rate in this country. Then there will be an increase in excess savings at the given interest rate. Let us assume for a moment that the interest rate remains unchanged even as the excess savings are realized. Then the increased excess savings must raise the current account surplus of the country. There will have to be a matching increase in the current account deficit of the rest of the world, and hence in the rest of the world’s excess of investment over savings. But this increase will be achieved in the rest of the world, where no shifts of curves have occurred, by *a movement down the savings and investment curves* through a lowering of the interest rate. But of course the interest rate of the country in question is linked to the interest rate in the rest of the world. There will therefore be a lowering of the former which will modify our initial assumption of an unchanged interest rate in that country; but the lowering of the interest rate will not be so large as to nullify completely the initial rise in excess savings. There will therefore be a general lowering of interest rates everywhere, combined with an increase in the current surplus in the country where the savings curve had shifted out and a corresponding increase in the current deficit in the rest of the world.

If we denote the exchange rate of the country by e and the excess of savings over investment by ε , use subscripts 1 and 2 for the country in question and the rest of the world respectively, and assume for simplicity that the interest rates in both places are equal, then it must be that $\varepsilon_1(i)/e = -\varepsilon_2(i)$. Now if the function $\varepsilon_1(i)$ shifts outwards, but $\varepsilon_2(i)$ remains unchanged, then since $\varepsilon'(i) > 0$, the new i at which equality is reached will be lower, and the new ε_1 will be higher, than their original values.

A shift in the saving curve of the country in question in other words raises its current surplus, raises correspondingly the current deficit of the rest of the world, and lowers interest rates everywhere. If the “emerging market” economies are taken as the “country” and the U.S. as the “rest of the world” (which does not do much violence to reality), then the observed phenomena mentioned earlier can be explained by an outward shift in the savings schedule of the former, which constitutes the global “savings glut”. Since a progressive undervaluation of the exchange rate of the former is analogous to an outward shift of the savings curve, it also contributes to the global “savings glut”.

II

This theory however is fundamentally incorrect. The basic problem with it is that the savings schedule drawn against the interest rate necessarily assumes a particular level of income. In other words, for any given exchange rate, there will be one particular curve, relating savings to the interest rate, for every level of income, so that in each country there is not one but an infinity of such curves, one for each level of income. When Mr. Bernanke talks about an outward shift of “the” savings curve in the “emerging market economies”, he is assuming a given income. Likewise when he talks of a movement down “the” savings curve in the U.S. he is again assuming a given income in the U.S. His theory in short illegitimately assumes given levels of income everywhere, i.e. that income adjustments can never occur.

With income adjustment, a rise in the level of desired savings at any given level of income, interest rate and exchange rate (such as is supposed to have occurred in the “emerging market economies”), will reduce aggregate demand in the domestic economy, which will lower income not only in the domestic economy, but globally. In short, *a global “savings glut” will produce a global recession, where there is no necessary reason for any change in the long term interest rate, and also no reason why current surpluses and deficits relative to GDP should move in the manner suggested by the “glut” theorists.*

Since each curve relating savings to interest rate is drawn for a given level of income, it follows that the interest rate cannot be determined in the flow space without reference to the stock equilibrium, i.e. without bringing in the whole question of the demand for and supply of money. A reduction in the level of income may still reduce the interest rate by lowering the transactions demand for money, if money supply is “given”, but not in a world of endogenous money with “administered” interest rates. What is more, if the short term rate is fixed by monetary policy, which is normally the case, the long

term rate may *rise* with a reduction in income, if the perception of risk, associated with the long-term asset, increases owing to such a reduction.

The “savings glut” theory however is erroneous not just because incomes will fall on account of such a “glut” *but even on its own terms, i.e. even when there is no actual fall in income either in the “emerging market economies” (EMEs for short) or in the “rest of the world” (in effect the US).* A rise in *ex ante* private savings in the EMEs, at the base values of the three variables, income, interest rate and exchange rate, will leave the level of income in the EMEs unchanged if countervailing fiscal measures are undertaken in the domestic economy, which keep the *ex ante* overall savings unchanged. But in such a case there will be no change in the current account surplus.

A rise in current account surplus, with income remaining unchanged, can, however, occur even if the *ex ante overall* savings in the EMEs (not just private savings) increase at the base values of the three variables, provided that *the external absorption of their goods and services rises at the same time to offset reduced domestic absorption.* This is what Bernanke visualizes. But for this to happen it must be the case that their current account surplus is constrained not from the side of external demand but from the side of the availability of goods and services for exports in the domestic economy, which presumes in turn that their output must be at “full capacity”. Any *ex ante* reduction in domestic demand in these economies in such a case leads not to a reduction in income but to a rise in the current account surplus, with income remaining unchanged, exactly as Bernanke visualizes.

Suppose this to be the case (though I shall question this supposition later). Then the rise in their *ex ante* overall savings, while leaving their own income unchanged will lower income in the ROW (in effect the US), which is not what Bernanke visualizes. For the Bernanke scenario to be realized, and for income not to fall in the US, the recessionary effect of the enlarged current deficit in the US has to be offset through some countervailing factor, say an enlarged fiscal deficit in the US. If this happens, and the increased desired savings in the EMEs are counterbalanced by, say, an increase in the US fiscal deficit, so that the level of income in the US does not change (just as *ex hypothesi* it does not change in the EMEs), *then it is not obvious why there should be any change either in the exchange rate or in the interest rate anywhere.*

Corresponding to the increased current account surplus in the EMEs, as a result of the rise in the desired savings at their base income, base interest rate and base exchange rate, there is an exactly equivalent increase in the current account deficit in the US, again at unchanged base values of the three variables; so there is no reason for the exchange rate to be any different: the EMEs will be willing to lend to the US an amount exactly equal to the latter’s increased requirement for financing the larger current account deficit (for otherwise their own income will fall, for lack of overseas buyers). Likewise the increased savings of the EMEs will be matched exactly by the increased borrowing of the US (owing to the larger fiscal deficit), so that there is no obvious reason for the interest rate to fall in the US (and hence also in the EMEs).

The Bernanke perception of a larger amount of finance capital, arising from the higher savings of the EMEs, moving around in search of placement opportunities and thereby reducing the interest rate everywhere, is erroneous because *the very process that gives rise to a larger supply of finance capital also gives rise to a larger demand for it*. Putting it differently, a “savings glut”, which is necessarily an *ex ante* concept, either does not get realized at all, because it causes income in the EMEs to shrink; or if it (or a part of it) gets realized as higher *ex post* savings in the EMEs, then it does so precisely because conditions have been created elsewhere such that it gets demanded at the base levels of income, interest rate and exchange rate, *ensuring that there is no “glut”!*

III

The notion of savings being exclusively a function of the interest rate (leaving aside the exchange rate) belongs to pre-Keynesian economics. Indeed on the basis of the assumption that both savings and investment were functions exclusively of the interest rate, pre-Keynesian economics concluded that Say’s Law would always hold, since the interest rate would always move to equilibrate savings with investment at full employment output. But since a saving curve, plotting savings as a function of the interest rate, could be drawn for every level of income, whence it followed that there was an infinity of such curves (which explains Keynes’ remark *apropos* Wicksell’s “natural rate of interest” that there is a “natural rate of interest” corresponding to every level of income), there was no reason why output would settle at the full employment level. It could settle anywhere, but where exactly it would settle could be known on the basis of an additional condition which referred to the stock equilibrium. The stock and the flow equilibrium conditions conjointly determined the interest rate and the level of income, and there was no reason why this level of income would be the full employment level.

Thus the recognition of savings being dependent on the level of income in addition, if at all, to the interest rate, was a central feature of the Keynesian revolution, and it made its first appearance in Richard Kahn’s celebrated article on the “multiplier” in 1931. In contrast to the pre-Keynesian notion that the economy was always at full employment and that the interest rate equilibrated savings with investment at this level, Kahn advanced the novel idea that at any given interest rate investment generated a level of savings equal to itself (in a closed economy) via changes in the level of employment and output. Pre-Keynesian theory had been used by the British Treasury in the midst of the Depression (whence the term “Treasury View”) to argue that public works for increasing employment, financed by borrowing, were futile, since such works “crowded out” private investment, by using up savings, destined for private investment, in public works. This argument was based ironically on the assumption of full employment in the midst of the Depression! Kahn’s article had demolished the “Treasury View” which Joan Robinson had once called an instance of the “humbug of finance”.

The Bernanke argument represents a carry-over of the “Treasury View” and constitutes the “humbug of finance” at a global level.

IV

An increase in *ex ante* savings in the EMEs at base values of income, interest rate and exchange rate, will have, as we have seen, an income contracting effect for the world economy. If incomes do not contract because of countervailing measures, even then there is no reason for the base values of the three variables anywhere to change at all. It follows that if we notice an expansion in the level of activity in the US occurring at the same time as an increase in *ex ante* savings in the EMEs, then the cause for this expansion in the US must lie in some independent factor. The idea of larger *ex ante* savings in the EMEs themselves causing an *increase* in the level of activity in the US, which is presumed by all those who attribute the world financial crisis, experienced above all in the US, to the “savings glut” in the EMEs, lacks any theoretical basis. To understand the boom preceding the recent crisis we have to look at factors independent of the savings behaviour of the EMEs. These have to do with the US economy itself. Locating an “external” cause for the crisis simply will not do.

Once we locate the cause of the boom in the US in factors independent of EME savings behaviour, an implication follows. We have seen that if the Bernanke story of higher *ex ante* savings in the EMEs causing higher current surpluses is to hold, then exports from the EMEs must be supply-constrained rather than external-demand-constrained, and hence output in the EMEs must be “full capacity output”. In such a case however, the current account deficit of the US vis-à-vis these economies, as a proportion of its GDP, should be *inversely related to its level of activity*. While this must be true in a single period, testing this proposition from time series data, when several other things happen over time, becomes problematical. But, we can be a little more confident that if in a period of economic contraction in the US, the current deficit as a proportion of US GDP goes down, then the Bernanke proposition stands rejected.

What is remarkable is that while during the US boom the current account deficit of the US vis-à-vis the EMEs was rising relative to its GDP (which itself may not prove anything), during the recent crisis the US deficit vis-à-vis the EMEs has actually contracted relative to its GDP (which is a rejection of the hypothesis of exports from EMEs being supply constrained). True, after an initial contraction, this deficit has once again started rising, but its overall size relative to US GDP is smaller than before the crisis.

The question may be asked: why should the US deficit vis-à-vis the EMEs relative to the US GDP *shrink during the crisis*? Though it is not germane to the present paper, the answer may be that, apart from inventory adjustments, this ratio reflects the fact that EME exports to the US are more in the nature of “wage goods”, and a crisis reduces the demand for such goods relative to GDP.

V

What all this suggests is a story which is the very opposite of what the “savings glut” theory advances. The US economy expands and contracts owing to independent factors that have been much discussed and have nothing to do with EME current account surpluses. When it expands it pulls in exports from the EMEs and hence increases the

size of their current account surpluses (which could, depending on circumstances, rise relative to their own GDP and to the GDP of the US). And when it contracts, the opposite happens. The rise in the observed ratio of the excess of their domestic savings over their domestic investment then is because of a “demand pull” factor from an expanding US economy rather than a product of autonomous domestic *ex ante* savings decisions.

The fact that this “demand pull” does not take the usual form of a “profit inflation” for keeping down the share of the working population in the GDP of the EMEs, does not mean that it does not exist. As we know, an “income deflation” imposed on the working population can have the same impact in squeezing their share as a “profit inflation”, and in generating current account surpluses for a growing export market.

VI

A rejection of the “savings glut” argument does not mean an underestimation of the problem of world economic imbalances. In particular the fact that rapidly growing Asian economies, instead of improving the living standards of their own workers and peasants, continue to run huge current surpluses, cannot but be a matter of concern. But the explanation offered for these imbalances by the “savings glut” theory and the resolution suggested by it for the problem are both seriously flawed. The explanation does not lie in the spontaneous savings behaviour of these economies; and the resolution does not lie in mere fiscal measures on the part of the EMEs without a degree of “delinking” of their economies from the vortex of commodity and capital flows in the world economy.