Keynes and Minsky on Financial Regulation and Financial Fragility in the Context of International Economic Coordination

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for presentation at the 12th International Keynes Conference: The World Economy and Keynes: Past and Present, Hitotsubashi University, 6-7 September, 2016

Global Imbalances, Policy Coordination and the 2008 Financial Crisis

The financial crisis in developed economies that broke out in September 2008 brought a new interest in what had been one considered one of the main policy problems of the Great Moderation – increasing bilateral international payments imbalances. Rather than interpreting this period of macroeconomic stability as the cause of a Minsky process of increasing financial fragility culminating in extreme financial instability, a number of eminent economists instead identified global imbalances as the basic cause of the crisis that brought the Great Moderation to an ignominious end. In this explanation the crisis was caused by the emergence of a "global savings glut" identified as Asian savings that flooded developed financial markets, put downward pressure on interest rates and induced developed country borrowers to take excessively risky positions in real estate and to borrow to finance unsustainable levels of consumption (e.g. Bernanke 2009, Economist newspaper 2009, King 2010, Krugman 2009, Portes 2009). This explanation of the causes of the crisis led to renewed calls to increase global policy coordination, an exhortation that had remained unfulfilled as a response to the global imbalances of the earlier period.

However, in the aftermath of the Great Financial crisis the issue of international imbalances all but disappeared and there was no discussion of prudential financial regulations to deal with the problem. Instead governments concentrated on fashioning domestic prudential regulations that would shift the burden of financial support from government bailouts to the owners of private financial institutions. The watchword was to protect the taxpayer from bailing out fraudulent financial institutions, the solution was measures to create mechanisms for the resolution of insolvent financial institutions that did not require government support. The sharp collapse in international trade and financial flows in the aftermath of the crisis and its slow recovery also shifted attention away from the problems of the stability of the international financial system. The proposals to shore up stability of the international financial system thus shifted back to the traditional approach based on the idea that regulations and policies to promote financial stability in individual countries would automatically guarantee financial stability on the international level. The whole is equal to the sum of its parts: A global approach was not needed.

Instead of financial regulation the response to the problem of imbalances involved co-ordination of domestic macroeconomic policies. This official response was represented in the July 18, 2012 adoption by the Executive Board of the International Monetary Fund (IMF) of a "Decision on Bilateral and Multilateral Surveillance", also known as the Integrated Surveillance Decision (ISD) which took effect in mid-January 2013 (see IMF, 2012). The ISD extends Article IV consultations to multilateral surveillance to allow for a more comprehensive, integrated, and consistent analysis of individual country macro policies on the global economic stability in what is called "spillover analysis". It seeks countries to pursue a more balanced treatment of domestic and exchange rate policies by adding guidance on the conduct of member countries' domestic policies while maintaining the existing principles for exchange rate policies. It also stresses the contribution of the overall mix of policies to a country's domestic and balance of payment stability. However, the new approach has little impact since members have no

obligation to change policies as long as they are considered to promote their own stability. It thus continues to be based on countries' individual macro policies, rather than more global remedies.

Analysing Global Imbalances

The explanation of the crisis based on the "savings glut" and the policy remedy was undertaken on the basis of the 1950s macro textbook formulation of aggregate demand. If Y = C + I+(G-T)+(X-M) then writing Y-C = S then the external balance (X-M) = (S-I) + (T-G). Since the Asian government balances were roughly in equilibrium the Asian external surplus, the counterpart of the US external deficit, must have been the result of an excess of Asian S over I.[1]

Since most of the surplus countries had rough balance in their fiscal positions, global coordination would require policies to increase investment or reduce saving. And since China already appears to have excess capacity an increase in consumption is the new policy of rebalancing that China has announced. However, the counterpart of this cooperation in the deficit country should be a reduction in domestic consumption and an increase in investment. This is the aim of the policies in the US to reduce household debt via zero interest rates and quantitative easing to increase investment. It would thus appear that there has been a de facto coordination of policy between the countries with the largest bilateral imbalance. Unfortunately the imbalances do not seem to be responding, and the two coordinated domestic policies do not appear to be producing the desired results on external balances as the US deficit continues to increase.

From Current Account Imbalances to Financial Market Imbalances

For those who argued that global imbalances in the form of a savings glut were a major cause of the crisis this should have been the end of the explanation, since when augmented by the charge of currency manipulation it was sufficient in and of itself to explain the movement of the external imbalances in favour of Asia and against the United States. And the new domestic policies should have been a sufficient remedy. But, to convert this explanation of the cause of international imbalances into a cause of the financial crisis, it was necessary to link current account imbalance to financial markets. This was done by noting the investment behavior of Ms Wantanabe and Ms Wu seeking higher risk-adjusted (safe haven) returns on their savings in developed country capital markets. This was said to lead to Asian savings flowing into developed country capital markets and to put downward pressure on interest rates; it was this expansion in liquidity and decline in interest rates which then became the cause of the over-borrowing by households in the developed country markets to finance consumer expenditures and residential real estate investment. However, just as there is little evidence that a large fiscal deficit has a positive impact on interest rates (cf. Japan since 1990), there is no evidence that a large external deficit has a negative impact on domestic liquidity and interest rates. Indeed, experience suggests just the opposite.

[1] Note that this reasoning formed the basis of the so-called "Lawson Doctrine", which argued that since the external account was determined by the savings and investment decisions undertaken by private individuals in free markets governments should not intervene to attempt influence its size, irrespective of whether it is positive or negative (in the case of the UK is was increasingly negative). In the US the corollary was the enunciation of the Cheney doctrine; since the dollar is the global reserve currency, not only is the external balance optimal, the government balance was irrelevant, so that policy should be to reduce the size of government and increase the role of private market in determining savings and investment.

Alternative Explanations of Imbalances and Financial Crisis

This suggests that not only the current approach to macro policy cooperation to deal with global imbalances, but also the explanation of the role of global imbalances in propagating the crisis, is inadequate if not mistaken. Both of these aspects of the savings glut explanation and response to the crisis may miss important lessons for international financial stability. First, it mistakes the impact of current account imbalances on the behavior of financial markets – basically by applying the erroneous loanable funds explanation of pricing in financial markets. Second, it denies the possibility that even if all domestic financial conditions appear to be sound, this does not preclude the possibility that a systemic crisis may induce insolvency in the system as a whole. Indeed, this is the basis of Minsky's theory of financial fragility. Thus, both the analysis of the impact of financial imbalances on the recent crisis and the remedy to prevent them from causing crises in the future appear to be based on questionable analysis.

First, as Borio and Distyatat (2011a,b) pointed out, any good student of Keynes would have recognized that the global savings glut argument is an international version of the loanable funds theory of interest rates. Any Keynesian would consider savings as a residual of the financing decisions that are taken to fund consumption and investment, and in particular the measure of savings that is implicit in this approach is a residual in balance of payments accounting, generated by the offsetting of inflows and outflows of goods and factor services cannot be interpreted as a measured of the actual funds from international markets available to financial markets. The current account measures income flows from the NIPA accounts, not financial flows better represented in the flow of funds accounts. Now, while it is true that the capital account balance must equal the current account balance, it is also the case that it does not measure the financing available to participants in financial markets, whether domestic residents or foreigners. For example, non-repatriated profits of foreign firms are debits on current account and credits on capital account and while they formally represent foreign savings, they clearly do not represent new funds entering financial markets, and they may have an impact on the financing behavior of market participants.

Borio and Distyatat suggest that a more appropriate measure of the impact on domestic capital markets in developed countries would be gross financial flows. This measure suggests that Asian savings are not the source of the problem: "the bulk of the spectacular expansion of global gross capital flows (inflows plus outflows) since the late 1990s, from around 10% of world GDP in 1998 to over 30% in 2007, has been driven by flows between advanced economies. Flows from, or, between, emerging markets have been much smaller." Their conclusion is that "The failure to distinguish between gross and net capital flows is a manifestation of the broader failure to distinguish sufficiently clearly between saving and financing. Saving, a national-accounts concept, is simply income (output) not consumed. Financing, a cash-flow concept, is access to purchasing power in the form of an accepted settlement medium (money), including through borrowing. Investment, and expenditures more generally, require financing, not saving. And it is only once expenditures take place that income, investment, and hence saving, materialise."

Although they only refer obliquely to earlier literature on this subject, their approach reflects not only Keynes's insistence on savings as a residual, as income not consumed, but to the Schumpeterian and Austrian approach to financing of economic activity via the banking system in which the ability of banks to create purchasing power provides the definitive explanation of the divergence of saving from

investment. In this approach it is the size of bank balance sheets, not household savings, that will be the effective constraint on investment expenditure and on the determination of interest rates. Since there is no physical or real constraint on the size of bank balance sheets (although there may be regulatory constraints), interest rates should then be the result of the conditions banks place on borrowing from the financial system and the production and consumption decisions of the private sector. Thus, had Keynes, or Mises, or Schumpeter, or Hart, or Hawtrey, or even Hayek been confronted with the excess saving argument they would have responded in exactly the same way – the cause of the low interest rates in the developed could only have been the result of the lending behavior of the developed country financial institutions.

This still leaves the problem of the impact on global imbalances and global financial flows. While this question had not been dealt with in Keynes's *General Theory*, there was extensive analysis in *The Treatise on Money,* Volume II – the Applied Theory of Money. Facing the collapse of the international gold standard system, Keynes there undertakes a detailed analysis of the impact of financial globalization. In particular he noted that with open international financial markets that prevailed under the gold standard, interest rates in all countries should tend to uniformity as a result of financial arbitrage. Thus, an international financial market with a single international monetary standard such as the gold standard implies that the Central Bank loses control over domestic interest rates. Any attempt to use interest rates to offset domestic fluctuations due to imbalances in savings and investment would then create interest rate differentials and international capital flows that would eventually undermine the country's commitment to the international standard.

The most important point of Keynes's 1930 analysis for the present discussion of international imbalances is his exposition of line of causation that dominated pre-war thinking on these issues: international capital flows determine domestic conditions and trade flows, rather than the other way around. "The belief in an extreme mobility of international lending and a policy of unmitigated laissez-faire towards foreign loans … has been based, … on too simple a view of the causal relations between foreign lending and foreign investment. Since lending and investment must be equal, an increase of lending must cause an increase of investment … and a decrease of lending must cause a decrease of investment; …Indeed, the argument sometimes goes further, and -- instead of being limited to net foreign lending -- even maintains that the making of an individual foreign loan has in itself the effect of increasing our exports. All this, however, neglects the painful, and perhaps violent, reactions of the mechanism which has to be brought into play in order to force net foreign lending and net foreign investment into equality."

Keynes goes on "I do not know why this should not be considered obvious. If English investors, not liking the outlook at home, fearing labor disputes or nervous about a change of government, begin to buy more American securities than before, why should it be supposed that this will be naturally balanced by increased British exports? For, of course, it will not. It will, in the first instance, set up a serious instability of the domestic credit system -- the ultimate working out of which it is difficult or impossible to predict. Or, if American investors take a fancy to British ordinary shares, is this going, in any direct way, to decrease British exports?"

Keynes then makes his criticism of maintenance of the gold standard "It is, therefore, a serious question whether it is right to adopt an international standard, which will allow an extreme mobility and sensitiveness of foreign lending, while the remaining elements of the economic complex remain

exceedingly rigid. If it were as easy to put wages up and down as it is to put bank rate up and down, well and good. But this is not the actual situation. A change in international financial conditions or in the wind and weather of speculative sentiment may alter the volume of foreign lending, if nothing is done to counteract it, by tens of millions in a few weeks." Here it is clearly domestic financial conditions that determine the external accounts, and capital flows are the main determinant of disruptions in the adjustment process.

Keynes and the IMF on external Imbalances

Of even greater interest in the present discussion is the marked similarity between Keynes's analysis of the impact of external capital flows on domestic performance under the gold standard and the early analysis of the Research department of the IMF. Under the Bretton Woods System international financial stability was linked to stable exchange rates, and exchange rate stability was linked to rough balance in countries' current account balances. As noted above the Keynesian theory of the time located the balance of aggregate demand. But data on the variables included in the simple Keynesian model were often unavailable, in particular for reconstructing and developing countries. Indeed, as noted in Boughton (2011, 383) "When the IMF began entering into stand-by arrangements with member countries in 1952, its primary concern was to ensure that the borrower needed the proceeds to help balance its external payments. That the government would take appropriate actions to correct the underlying cause of the imbalance was assumed implicitly. In most cases, the appropriate actions were assumed to be policies to establish or preserve currency convertibility with stable prices and sustainable public finances. Simple Keynesian models could be used to calculate domestic multiplier effects from fiscal policy. … What was missing was a general model for calculating the effects of monetary policy… ". To remedy this problem and provide a means of assessing a country's needs for Fund assistance Jacques Polak developed an approach that relied solely on monetary data (cf Polak, 1957, Boughton, 2011). The role of domestic or fiscal policy does not even appear in Polak's original specification of the policy conditionality associated with the earliest IMF program lending. Indeed the reduced form of the model looked like this:

$Y(t) = Y(t-1) + \Delta DA(t) + X(t) - M(t)$ ……..(1)

$M(t) = mY(t-l)$ ……(2)

With $\Delta DA(t) + X(t) - M(t) = \Delta MO(t) = Y(t) - Y(t-1)$

where DA is domestic credit created by the banking system, MO the quantity of money and M imports. Since X and m are exogenous income growth is given by the current account balance and the growth of bank credit, and the money supply is given by the same factor representing the unit elasticity of the demand for money. Other things being equal the only policy tool available to the government is DA.

Boughton, (ibid: 383-4) goes on to point out that the Fund's first application of "performance criteria," for Paraguay in July 1957involved "an agreement by the authorities that they would not draw on the arrangement unless they succeeded in keeping bank credit from rising and in keeping within a specified ceiling on government expenditure -- were not based explicitly on the Polak model, but many subsequent arrangements were. The model quickly became the cornerstone on which the IMF's policy conditionality was built "

As noted, the advantage of Polak's model was that it relied on available data whereas the data requirements for a full scale Keynesian model were not available. In Boughton's words" Polak's insight was that a simple monetary model could be specified for developing countries so as to mimic the properties of a Keynesian model without the cumbersome and inapplicable behavioral relationships that were essential for the latter." (ibid., 384). "None of these elements was new. As Peter Kenen noted, Polak merely "resurrected" the monetary approach, which "had a long history, going back to David Hume"(ibid., 385).

"In this model[2] , a contractionary monetary policy (a decrease in DA) will lead to a decrease in income (Y) via aggregate demand, with the multiplier depending on the marginal propensity to import (m) and the velocity of money (1/k). An exogenous fall in export demand {X) or net capital inflows (K) would have identical effects to monetary policy, as would a cut in government spending (G) if that variable were added to the model (as it was in later versions). The effect on the current account balance (X-M) is similarly related to monetary policy, with a contraction in domestic credit leading to a decrease in imports through the marginal propensities to import and hold money. With no change in exports or capital flows, that change would translate directly into a rise in foreign exchange reserves. In this simplest formulation of the model, a strengthening of the payments balance requires a specific amount of tightening of monetary policy." (ibid., 385)

Basically, in this early IMF approach monetary policy is equivalent to fiscal policy or changes in capital flows although Boughton (2003:386) notes that "The very limited role of private-sector capital flows in the two decades between publication of Keynes' General Theory and the Polak model meant that economists had little reason to spend mental energy on modeling their effects." It was only with the development of what came to be called the Mundell-Fleming model that grew out of Meade's elaboration of the distinctly Keynesian model and the policies to make compatible "internal and external balance', basically full employment growth and balance of payments equilibrium that fiscal policy was treated as independent of monetary factors.

For Meade "while fiscal and monetary methods of inflating or deflating domestic expenditure will have broadly similar results on the national incomes and balances of trade of the countries concerned, the monetary method of reducing interest rates may cause a significantly larger increase in the transfer of capital funds abroad and thus involve a significantly larger unfavourable movement in its total balance of payments." (Meade 1951, quoted in Broughton,2003:2) Thus monetary policy would have bigger impact on the external balance than fiscal policy because of the impact on capital flows.

The Fleming-Mundell models, based on Hicks IS-LM model sought to extend this idea of the relative impact of monetary and fiscal policy on internal and external equilibrium in line with the developing policy of Keynesian "fine tuning" of the domestic economy, resulting in the idea of a preferred "policy assignment" according to different exchange rate regimes. The conclusion was that monetary policy would be more efficient in maintaining external equilibrium and fiscal policy to provide

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[2] Boughton refers to a subsequent elaboration of the model:
MO = kY. With k constant
M = mY . With m constant
ΔMO = ΔDA+ΔR
ΔR = X –mY +K
which explicitly shows reserve balances R and net capital flows K, both absent from the initial version.

domestic price stability and full employment under floating rates. In essence Polak's explanation of the external balance remained intact, as did Meade's assessment of the impact of monetary policy, with the explicit addition of fiscal balance in determining income growth. But, this brought a subtle change in policy prescriptions. Now, monetary factors came to be linked to capital flows, and delinked from income and import growth, which was determined by fiscal policy. In the Fleming-Mundell approach, monetary policy became an enabling factor to allow an internal disequilibrium, to be maintained by borrowing from the rest of the world. In short, any international imbalance was no longer a question of inappropriate monetary policy or capital flows, it was the result of inappropriate domestic fiscal policy.

Thus in Polak and Rhomberg's (1962) analysis of the role of policy coordination in promoting global economic stability they note the importance of "large movements of short-term capital. These movements have become far more important in the last few years as a result of the restoration of convertibility. These new developments have brought with them a potential threat to international economic stability, arising this time from the capital account rather than from the trade account of the balance of payments" and make it "make it more difficult to contain inflationary pressures." They then address the causes of capital movements as: "attributable to differences in interest rates, one approach to the problem lies in the co-ordination of interest rate policies. *This is without doubt a most important field for the further extension of international co-operation.* Before much advance in this field can be expected, it will be necessary, however, to clarify what is meant by "co-ordination" of interest rate policies. On the one hand, the aim of such policies could be to ensure that national interest rates are sufficiently different so as to reflect adequately the different cyclical positions among countries; on the other hand, the objective could be to make interest rates in different countries sufficiently alike so as to minimize the international movements of short- term capital. It would appear that in the long run the closer integration of the industrial countries will tend to lead to a similarity in interest rates …. This may entail that monetary policy in the industrial countries would have to be more uniform than it has been in the past. To the extent that individual countries find themselves in different phases of the business cycle, their stabilization policies would have to rely to a larger extent on fiscal and other nonmonetary measures, while the objective of a co-ordinated monetary policy would be to assist in the attainment of the appropriate international average levels of employment and prices. Interest rate differentials are, of course, not the only determinants of capital movements." (Polak and Rhomberg, 1962, italics added) While their concern is to argue in favour of increased fund resources, it is nonetheless interesting that the analysis follows Keynes's discussion of interest rate coordination and also foreshadows Greenspan's interpretation of the Mexican crisis as the first capital account crisis."

The real intent of the Polak-Rhomberg paper was to argue for an expansion in IMF quotas to provide sufficient liquidity to be able to meet the expected impact of increasing international capital flows. This did not occur and by the mid-1970s Guido Carli would note that "This function has been taken over by the private banking system, and primarily by the U.S. banks, through operations carried out by their branches at home and abroad. The private banks have shown a greater ability than the official institutions not only to create the necessary liquidity for the development of trade but also to organize its efficient distribution. As a result, the IMF's ability to enforce observance of rules of conduct has diminished; it should be remembered that, as originally conceived, the Fund's prescriptive powers derived from its ability to exclude refractory countries from access to conditional credit. As almost all credit is now drawn from other than official sources, the Fund's ability to lay down conditions has been correspondingly reduced. And as the function of creating international liquidity has been transferred

from official institutions to private ones, so the task of supervision has passed from international bodies to national ones, whose surveillance, though keener than in the past, has nonetheless never reached beyond the boundaries of national interests." (Carli 1976)

It is clear that this expansion of liquidity was generated by developed country banking systems, and that the result was the 1982 debt crisis and the "lost decade" for most Latin American countries. Indeed, Michael Pettis in his book *The Volatility Machine* (2001) based on his experience on the Latin American desk of Bear Stearns during the 1970s and 1980s concludes that "capital flows are less a function of local growth prospects and more a function of independent expansions and contractions in underlying liquidity in rich country financial centers." (ibid., 51) He identifies eight cases over an 180 year period in which the "capital flow … is so clearly a pattern. In each case within a relatively short period of time, there is a huge expansion of lending and foreign investment to parts of the world that had a little while earlier been largely excluded from foreign investment." (Ibid) In each of these cases the result was financial instability or a full scale financial crisis when the flows reversed.

Of course, it is precisely the impossibility of exercising domestic monetary control, in particular interest rates, in the presence of open capital markets that led to the downfall of the Bretton Woods system first, and then the early attempts to forge a European monetary union. Given the diverse monetary policy objectives of the US, France and Germany throughout the 1960s produced capital flows that eventually broke the ability of countries to maintain stable exchange rates. There never was a possible "trinity" of policy objectives, indeed, there was never even a duality in the presence of open capital flows for the control of capital flows would jeopardise independent domestic monetary and exchange rate policy. The only solution would be to eliminate them altogether.

Keynes saw this very clearly in his recommendations for formal controls over long term capital flows. In his *Treatise* discussion he notes that most countries have always had registration requirements for capital issues in their own markets and that these could be expanded internationally. He also suggests a tax (10 per cent) on purchase of foreign securities not listed in the domestic equity market. But to influence short-term flows would require further measures that involved sacrificing the independence of monetary policy. Keynes recommends a dual exchange rate structure that differentiates between financial flows and trade finance, given preference to the later, as well as a more flexible exchange rate structure via variation in the rates at which the Central Bank sets its bid and offer rates within the gold points To this end he also recommended active intervention in the forward market foreign exchange market, a suggestion that was first made in the *Tract on Monetary Reform*, to influence short-term interest rates on short term capital transactions. Keynes concludes that Central Banks should use a combination of bank rate, the forward rate and flexibility in its bid and offer rates to influence short-term flows. Controlling short term flows would then require sacrificing independence of short-term rates, but should leave freedom to influence long-term rates. Thus his repeated calls in the *Treatise* for monetary policy to apply to control of the entire range of rates across the yield curve.

As noted, Keynes was writing on the presumption that the gold standard would be maintained as the global exchange rate system. However, he notes that an ideal system would have flexible exchange rates. From the *Tract on Monetary Reform* Keynes argued that a flexible exchange rate system was preferable to a fixed rate system as long as there was a forward foreign exchange market in which traders could cover their exchange risks caused by higher volatility. This is basically the same position that he took to the Bretton Woods Negotiations in 1944 when it had become obvious that his plan for a

Clearing Union would not be adopted and the system would be based on the US dollar in place of gold. His Clearing Union approach, it should be noted, went even further in eliminating the intermediation of international capital flows in private markets, restricting them to transactions through the Union, or in the event, through the International Bank for Reconstruction and Development.

Minsky and International Financial Instability

Given that the financial stability of the Bretton Woods system was based on countries operating with current account imbalances that did not diverge from their foreign exchange reserves, it could be considered as equivalent to a hedge financial profile; a country with a current account surplus would have earnings on foreign claims that would exceed the costs of imports and debt service. The foreign exchange reserves would represent the cushion of safety that assured that foreign claims could always be met at stable exchange rates. When the cushion was exhausted as a result of a continued deficit, the country could apply for IMF lending which would be equivalent to a speculative financing position, on the presumption that the external balance would return positive and generate the foreign exchange necessary to replenish reserves and repay Fund borrowing.

Minsky argued that such a system would be inherently unstable, even in the presence of controls on capital flows, because it would be impossible for all countries to hold hedge positions represented by current account surpluses. Any attempt to do so would produce a deflationary bias in the system since the measures to ensure financial stability would induce instability in growth and employment. Unlike the national system, in the international system there was no external source of liquid reserves via a lender of last resort. In the global system with capital flows this role could only be played by countries in deficit; in the case of the post war period this was the US. International imbalances are thus an inherent feature of the stability of the global economic system. This is simply an alternative way of looking at Triffin's dilemma – it was impossible to have one country (and its currency) play the role of lender of last resort under a stable exchange rate system, just as it was impossible to have a stable international system in which all countries enjoyed hedge financial schemes. This is the problem that Keynes's Clearing Union proposal was meant to overcome, by creating a scheme of endogenous financing independent of the external position and the currency of any particular country.

In this approach, the rise of bank financing noted by Carli meant that deficit countries could avoid limits on external imbalances by borrowing reserves from private markets, thus avoiding limitations on domestic monetary policy prescribed in IMF programmes. In the absence of an IMF program to ensure the return to external surplus, a speculative position could quickly become a Ponzi financing scheme, since a failure to raise market funding to service the external deficit would eventually lead to devaluation which in the international system is equivalent to a default, generating a generalized domestic debt deflation and financial crisis. In the post-Bretton Words of private international financial flows, financial crisis replaces the IMF conditionality in restoring hedge financing profile via a domestic recession and the restoration of an external surplus to repay debt.

Here the question of international stability is how to replace both IMF conditionality and financial crises, that is, policies capable to induce hedging profiles. The obvious is to limit domestic borrowing in international capital markets: capital controls. This is in essence the point of the original Polak model which considered domestic and external borrowing as equivalent in their impact on the external balance. In this model control over domestic monetary conditions implies control over capital flows – both inward and outward.

Here it is important to understand the import of the above cited distinction between the impact of net and gross capital flows. The former will not give a clear indication of the fragility created by international capital flows because the fail to represent the impact of flows on the structure of private sector balance sheets. This point is recognized by Pettis when he refers to the need to manage the capital structure of an economy, that is the structure of its balance sheet, seeking an "inverted" capital structure to support stability.

In the critique of the savings glut approach, gross capital flows were proposed as a better indicator of the impact on domestic financial conditions. This point is now easy to grasp, since a small net external balance may be composed of a large inflow of funds in one section of the market, relative to outflows in another sector of the market, leading to an impact on domestic interest rates, and in particular on relative rate spreads – the yield curve. For example, a small net balance on the current account may represent a large inflow of short-term funding that has been used to acquire long term claims on either domestic or foreigner borrowers. Put simply, a balanced current account may hide a substantial maturity or currency mismatch which over time may represent increasing financial fragility.

In the same way that Minsky argued that stability in the real economy over time might generate increasing financial fragility because of the way it is financed and create fragile balance sheets, the same thing is true of a country. And it still remains true that just as it is impossible for all countries to run hedge profiles in the form of current account balance, it is impossible for every country to have an international balance sheet that is stable, for every claim on foreigners is represented by a claim by foreigners. Every stable balance sheet has a counterpart in another country's fragile balance sheet.

This analysis suggests that that coordination of the international system to provide stability may be impossible as long as it considers global imbalances as a destabilizing factor. As was recognized by Keynes and then Polak, it is domestic monetary conditions, transmitted by international capital flows that generate instability at both the internal and external level. It is interesting that the IMF's new approach to spillovers now concentrates on monetary policy coordination (See IMF Spillover Report 2015). Prudential regulations of domestic financial institutions will not be sufficient to remedy this instability. Neither can international coordination. Since international instability is a systemic issue, it can only be dealt with on that level. The solution proposed at Bretton Woods has not succeeded; Keynes provided one possible solution that has not yet been tried.

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