

# BALANCES, IMBALANCES AND FISCAL TARGETS

## A NEW CAMBRIDGE VIEW

Wynne Godley and Alex Izurieta<sup>\*</sup>

CERF – Cambridge Endowment for Research in Finance

UNIVERSITY OF CAMBRIDGE

### **SUMMARY**

*This paper first deploys a simplified accounting matrix to illustrate the concepts to be used. It will argue that macroeconomic analysis is facilitated if the main income and expenditure variables which make up the GDP are arranged in a double entry format so that they can all be seen as transactions involving at least two parties. Such a framework shows how the gap between each sector's receipts and outlays implies an equivalent rise or fall in its net acquisition of financial assets. One conclusion will be that financial balances (relative to income flows) must stay within certain limits if debts are not to grow excessively, implying that the monitoring of these balances may yield a warning that unsustainable processes are at work, with strategic implications for the conduct of policy. Furthermore, the fact that the net acquisition of financial assets by any one sector necessarily implies an equivalent change in the opposite direction in the sum of net acquisition by other sectors, has strong implications for the way in which targets for public borrowing should be set. The main conclusions will be illustrated using US and UK data.*

---

\*

The authors are grateful to Victoria Ilyasova for her sustained statistical assistance.

## CONCEPTUAL FRAMEWORK

*Figure #1: A Simplified Transactions Matrix*

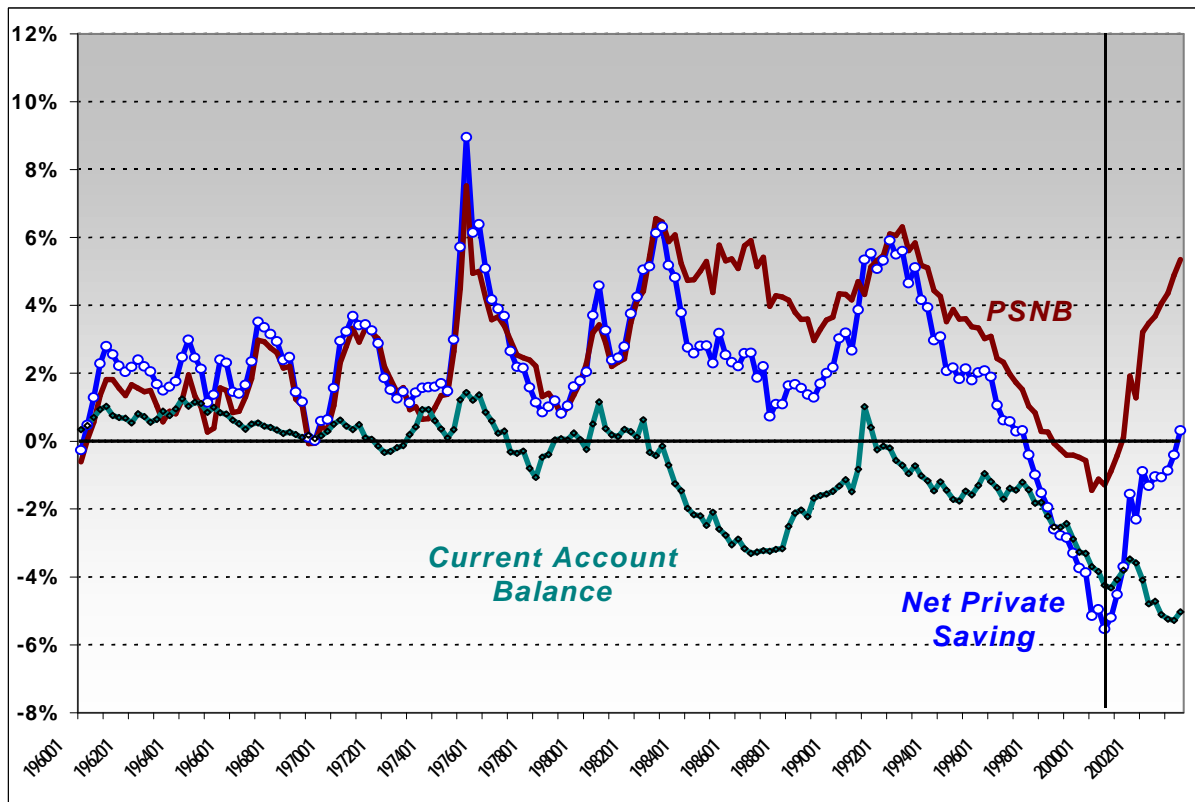
	INC. / EXP.	PRODUCTION	GOVT	EXT.	S
<i>1. Private exp.</i>	<b>- <math>PX</math></b>	<b>+ <math>PX</math></b>			<b>0</b>
<i>2. Exports</i>		<b>+ <math>X</math></b>		<b>- <math>X</math></b>	<b>0</b>
<i>3. Govt. exp.</i>		<b>+ <math>G</math></b>	<b>- <math>G</math></b>		<b>0</b>
<i>4. Imports</i>		<b>- <math>IM</math></b>		<b>+ <math>IM</math></b>	<b>0</b>
<i>5. GDP</i>	<b>+ <math>Y</math></b>	<b>- <math>Y</math></b>			<b>0</b>
<i>6. Taxes, Fact. Paym. etc.</i>	<b>- <math>TP</math></b>		<b>+ <math>T</math></b>	<b>- <math>TF</math></b>	<b>0</b>
<i>7. Financial Balances</i>	<b>+ <math>NAFA</math></b>	<b>0</b>	<b>- <math>PSNB</math></b>	<b>- <math>BP</math></b>	<b>0</b>

In this matrix the national income identity is shown, reading vertically down column 2, as the appropriation account of a postulated production sector. It says that gross domestic product,  $Y$ , is equal to private expenditure,  $PX$ , plus government expenditure,  $G$ , plus exports,  $X$ , less imports,  $IM$ . Every item in the  $GDP$  identity has a counterpart with the opposite sign some other column. Taxes less transfers,  $T$ , are received or paid by the government; net property income, taxes and transfers,  $TF$  and  $TP$ , are paid by respectively the external and private sectors. We have a total in line 7 which makes public borrowing,  $PSNB$ , equal to the private net acquisition of financial assets,  $NAFA$ , (that is saving less investment, or net saving) minus the balance of payments surplus,  $BP$  – or plus the deficit.

## RECENT TRENDS IN THE U.S.

Figure 2 shows the history of the three financial balances in the U.S. since 1960 all expressed as percentages of GDP. The private balance and the balance of payments are both drawn as surpluses while the government balance is drawn as a deficit; these signs are chosen so that the private balance is clearly seen as the sum of the other two.

*Figure 2: Financial Balances of Main Sectors of the U.S Economy; per cent of GDP*



Particular interest attaches, in the first instance, to the period 1992-2000 at the end of which a vertical line has been drawn. Towards the end of that time there was a veritable tidal wave of self-congratulation in the U.S. public discussion. There had just been the longest period ever of uninterrupted growth: there was a “New Economy” christened “Goldilocks” (not too hot and not too cold); the good times were here to stay; Alan Blinder compared the U.S. economy to ‘Old Man River’ who just kept rolling along, while Edmund Phelps declared that growth had become structural; and so on. There had been a steady improvement in the general government’s budget which had achieved a surplus and some people attributed the successful performance of the economy, at least in part, to this because it had allowed interest rates to fall, thereby stimulating investment<sup>1</sup>. The Congressional Budget Office

<sup>1</sup> See, for instance, Greenspan (2000) “Federal Reserve Report on Monetary Policy Before the Committee on Banking, Housing and Urban Affairs, U.S. Senate”, Washington D.C. July 20:

*“[...] by substantially augmenting national saving, these budget surpluses have kept real interest rates at levels lower than would have been otherwise. This development has helped foster the investment boom that in recent years has contributed greatly to the strengthening of U.S. productivity and economic growth.”*

(CBO) was predicting that the budget surplus would actually increase over the subsequent ten years and the use of fiscal policy to stimulate the economy had been finally and forever foresworn<sup>2</sup>.

Yet it only needed a glance at the configuration of financial balances to infer that a situation had been developing which was unsustainable. The change in the government's balance had steadily, and on an increasing scale, been withdrawing purchasing power from the economy and the same thing was true of the balance of payments. It could therefore be inferred that the motor driving the economy had resided entirely in a wholly exceptional rise in private expenditure relative to disposable income, causing the whole private sector to fall ever more deeply into financial deficit. And it was easy to ascertain that this private sector deficit had itself been powered by a prolonged surge of lending, resulting in record levels of household and corporate debt relative to income. It was this pattern of balances which led us, in a series of papers published around that time<sup>3</sup>, to point out that the private financial balance would eventually revert towards its long term average and that when this happened the stance of fiscal policy would have to be transformed if a severe recession was to be avoided; also that net export demand would eventually have to be raised as well.

As the chart shows, the turn-round in the private balance did indeed occur. But the resulting recession was short and shallow because there was a fiscal *volte face* – that is, a fiscal turn round so large that there was a record deterioration in the budget. Meanwhile the deterioration in the current account balance continued and the famous “twin deficits” made their reappearance with a vengeance. The radical change in fiscal policy stance took place with hardly anyone admitting that an earthquake had taken place in the system of ideas supposedly underpinning the formation of economic policy. It has not been uncommon to read articles putting the recent performance of the U.S. economy (with its recovery following an unusually short and shallow recession) entirely down to its inherent vitality and flexibility and failing altogether to mention the fiscal expansion.

But the configuration of balances between since 2000 suggests that the expansion has again been powered by forces which, while different, must again prove unsustainable in the long run. It seems impossible that the fiscal expansion can be continued much longer, taking the budget deficit and eventually government debt into uncharted territory. Even if it rises no

---

<sup>2</sup> See, for instance, CBO (2001) ‘The Budget and Economic Outlook: Fiscal Years 2002–2011’. January, pp. 18. “Net indebtedness” of the Federal Government was expected to turn into positive by 2009.

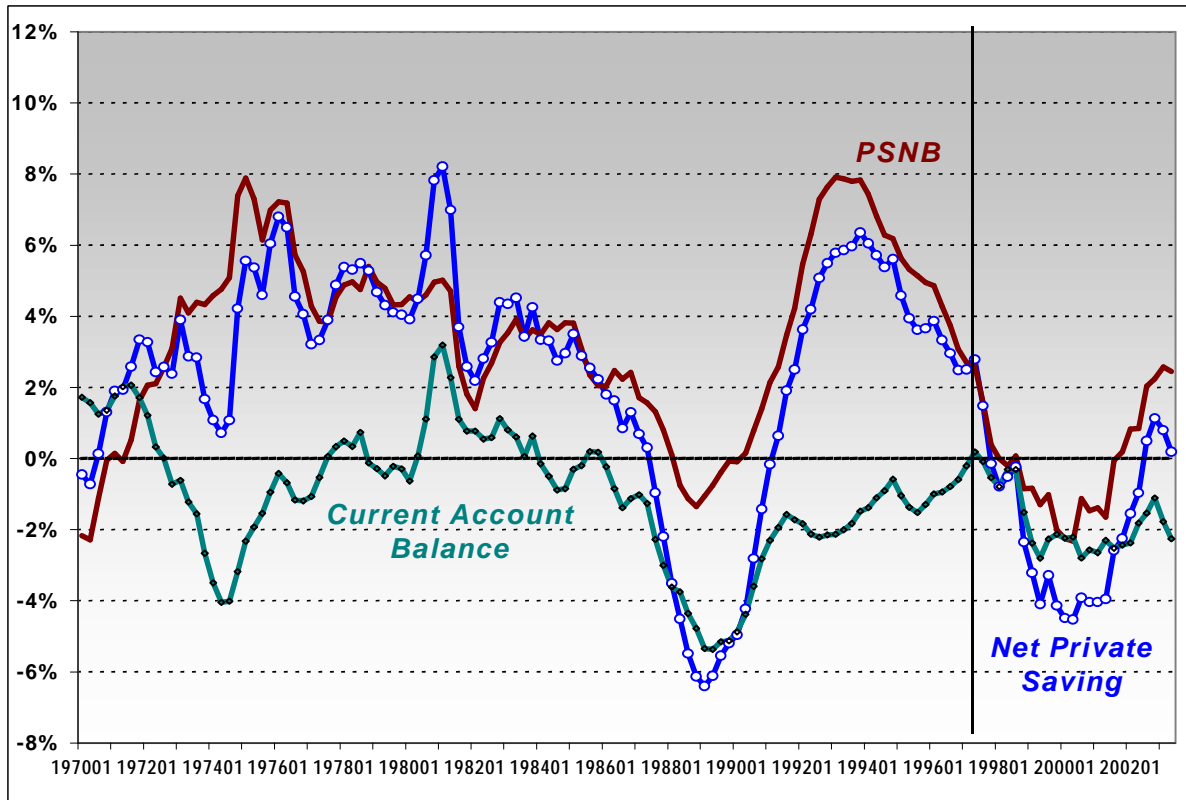
<sup>3</sup> Godley (2003, 2002; 2001a,b,c; 2000; 1999a,b); Godley & Izurieta (2002a,b; 2001a,b); Godley & McCarthy (1998), Godley & Martin (1999); Godley & Wray (1999); Izurieta (2003a,b).

further the present rate of deficit implies an unacceptable growth in public debt towards 100% of GDP. Private expenditure can hardly again become a motor for sustained growth as the private balance is still well below par and personal expenditure is still buoyed up by rapid increases in debt. So growth in the medium term looks to be dependent on sustained growth in net export demand. It is not impossible that this will happen but at the moment it looks problematic to say the least. The dollar must surely fall further. But there is, in addition, a big transfer problem which tends to get ignored. Any improvement in the balance of payments requires that Americans absorb less than 105% of what they produce, and it is not obvious what will get them to do this. In theory a devaluation should reduce real income by raising import prices but in fact import prices have not been rising enough to have a significant effect and the terms of trade in recent months seems to have been actually improving. And with the U.S. acting as a brake on world demand rather than a driving force, other countries, particularly Europe, must find new sources of growth within themselves if the global recovery is to continue. We shall explore these issues more thoroughly in a study which is in course of preparation. The purpose of this note is not to conduct a strategic review of the world economy – just to illustrate how the financial balances provide a suggestive framework within which strategic problems can be identified.

## **THE UNITED KINGDOM**

Figure 3 below shows the history of the three major balances in the U.K. Private net saving has on average been positive at nearly 2% of *GDP*, plus or minus 3% Public borrowing has on average been positive, averaging 2.5% plus or minus 2.5%. The current balance of payments has generally been in deficit.

*Figure 3: Financial Balances in the U.K.  
(Centred 3Q Moving Averages; per cent of GDP)*



The boom and bust of the period 1984-1992 has clear counterparts in the balances as the private and external sectors plunged into deficit and then went sharply into reverse. There followed a very successful period when economic recovery was, unusually, accompanied by an improvement in the balance of payments. Since 1997 all the balances have fluctuated within a fairly narrow range not too far from zero. However a closer analysis reveals some trends which give some cause for concern. Take first the balance of payments.

**Figure 4: The Current Account & the Primary Balance of the U.K. (Per Cent of GDP)**  
 [ Orange line is net property income from abroad ]

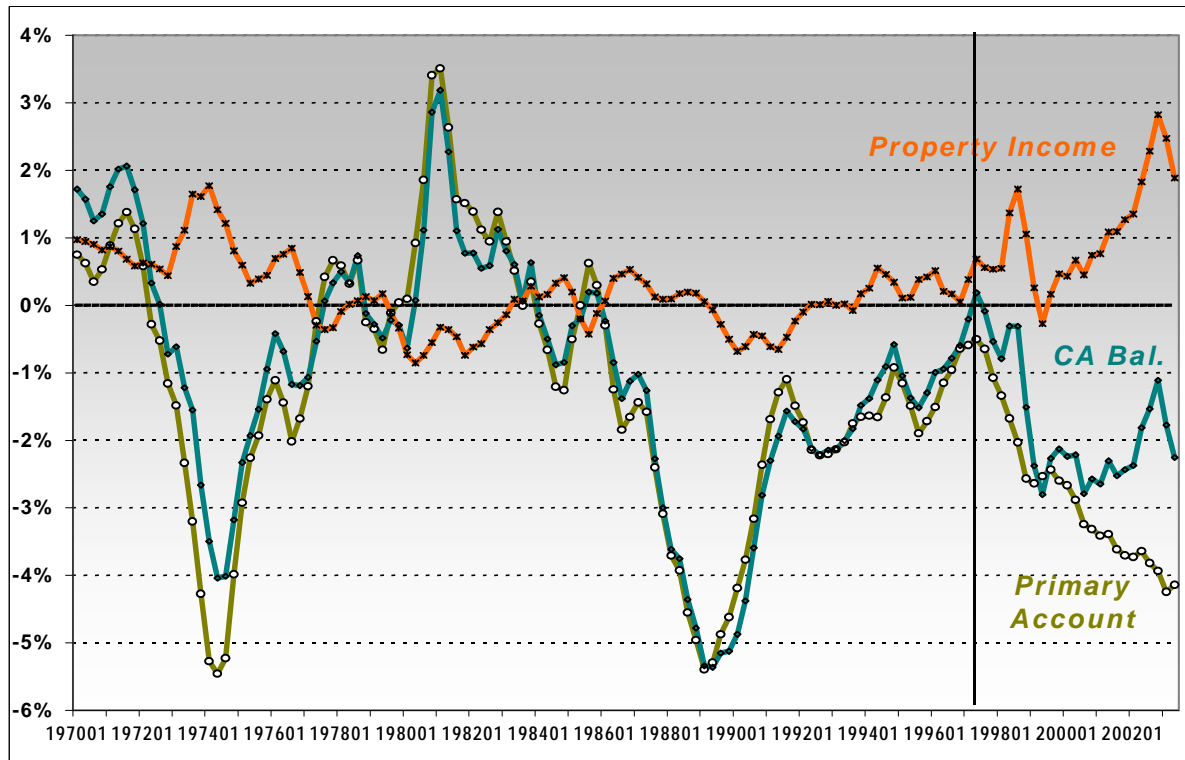


Figure 4 shows official estimates of the current balance of payments as a percentage of *GDP*, together with the “primary” balance of payments, (that is, the balance of trade plus net transfers) separately from net property income. The primary balance almost reached zero in 1997 but it has been deteriorating quite rapidly since then, reaching 4% of *GDP* in 2003. At the same time we know from a separate official source that the U.K. has been a net debtor since 1995<sup>4</sup>. Yet net factor income has been positive and, since 1999, rising so that it has recently reached about 2% of *GDP*. How is such a thing possible?

A significant part of the explanation appears to stem from the convention of measurement which (in accordance with internationally established practise) scores undistributed profits earned as a result of foreign direct investment as a positive item in the current balance of payments. This convention would have an obvious justification if direct investment took the

<sup>4</sup> ONS; Pink Book Table 8.1; Economic Accounts Table B14. See also M. Burnett and M. Manning (2003) ‘Financial Stability and the United Kingdom’s External Balance Sheet’, *Bank of England Quarterly Bulletin*, Winter, Vol. 43, No. 4, pp. 463-475.

form of building new factories. However, if the investment takes the form of acquisition of an existing foreign company by a British company via exchange of shares, without a penny changing hands (as seems to have generally been the case during the last six years) the convention leads to misleading if not downright incorrect results. The point is easily explained using a hypothetical example.

Imagine two companies, one American ("A"), the other British ("B"), which are identical - same business operations, same profits, same dividends and same expectation of capital gains by shareholders. Company B now acquires Company A using exchange of shares to do so. The whole value of the share exchange goes into the balance of payments figures as "direct investment" by the U.K. But simultaneously, under the double entry system of accounts, U.S. residents who previously held shares in A wake up to find themselves owning British shares of equivalent value that they are considered to have purchased (although they have not in fact paid anything) and that appear in the accounts as foreign portfolio investment in the U.K. This is already a bit strange. But the really big problem arises because the undistributed profits of A are discontinuously included as direct investment income received by the U.K., while the undistributed profits accruing to Americans who newly own British shares do not appear at all. So net income from abroad is considered, in the statistics, to have increased, although, by assumption, there has been no change in the flow of profits from both companies taken together, whether distributed or not.<sup>5</sup>

Note that in addition to the fact that the undistributed profits of the previously-U.S. company are not part of the private income flow, the swap of shares results in the official record of the current balance of payments showing an improvement although there was no actual transaction involving a money outlay and no simultaneous change in the national balance sheet of either country.

The spurious effect on net property income may have been large. Net undistributed profits arising from direct investment have risen, during the last seven years, to about 1.5% of GDP. If the current balance of payments, properly measured, has really been deteriorating fairly rapidly since 1997 we certainly have an unsustainable process on our hands; Britain cannot absorb more goods and services than she produces on an ever larger scale. If the balance of payments deficit, correctly measured, is already more than 3% of *GDP* this is sufficient to generate, ultimately, a net debt in excess of 50 per cent of *GDP*. At some point the deterioration will have to be reversed.

---

<sup>5</sup> W. Godley, 'Accounting for Acquisitions Via Share Exchange', Letter to the Editor, Financial Times, March 19, 2003.

### ***THE PRIVATE AND ( MORE PARTICULARLY) THE PERSONAL SECTOR BALANCE***

As Figure 3 showed, the private sector's financial balance, taken as a whole, having fallen into deficit in the period 1998-2002, has more recently recovered, though if it is true that the balance of payments is worse than the official statistics show a significant amount (perhaps 1 to 1.5% of GDP) should be shaved off the estimates of private income and therefore off the private balance.

On the present occasion it is useful to disaggregate the private balance into its component parts, personal and corporate. It is the former which should now be a cause for some concern.

The Bank of England's discussions of personal borrowing are not fully coherent because they tend to be divided into two parts, relating to respectively secured and unsecured borrowing, without the two being brought together. Also the effect of secured borrowing is largely discussed using the concept of mortgage equity withdrawal (MEW), that is, the excess of net mortgage lending over investment in housing, which the Bank scans for its possible effect on consumption. However, to gauge the effect on the economy as a whole it seems more appropriate to look at personal borrowing in total and consider its effect on personal spending in total – consumption and investment combined; in other words the personal financial balance is a more relevant concept than personal saving.

*Figure 5: The Personal Sector Balance and Net Borrowing in the U.K.*

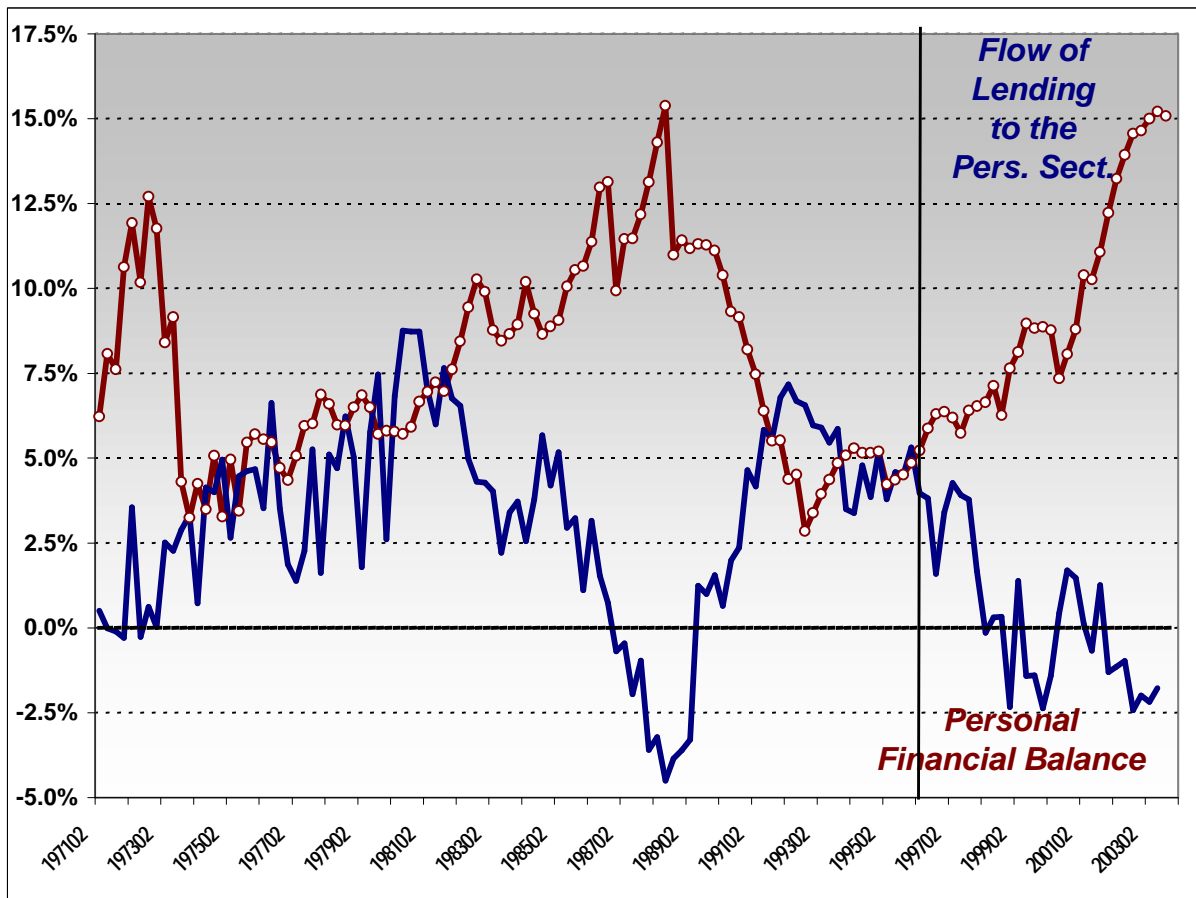


Figure 5 shows how, during the last thirty odd years, the flow of net lending has moved, with inverse fluctuations in personal spending relative to income. The series charted have two slightly unusual features. The upper line describes, not personal debt relative to income, but personal *lending* (the change in debt) relative to disposable income; it thus shows the extent to which disposable income was being supplemented by borrowing. The lower line describes the personal financial balance – the gap between income and total personal expenditure (consumption and investment combined) which is almost equivalent to “net acquisition of financial assets” in the financial statistics published by the Office for National Statistics (ONS).

Fluctuations in net lending were partly (sometimes largely) responsible for the cyclical fluctuations that occurred between 1953 and 1991. Credit controls were relaxed or removed

in 1953<sup>6</sup>, 1958, 1962 and 1971 in response to incipient recessions. But they were always re-imposed after a few quarters (in 1954, 1960, 1963 and 1973). Both ways the perceived effect was large and immediate. The apotheosis of “stop go”- the biggest “go” of all times - was caused by a series of policy changes between 1981 and 1983 of which the most conspicuous was the removal of all controls over consumer credit in mid 1982. However, an even more important change, though this was not obvious at the time, was the deregulation of mortgage finance. The major innovations occurred in stages between 1980 and 1983 when building societies were allowed to obtain funds in the wholesale market, and banks were allowed to engage in mortgage lending. Prior to the early eighties there were strict limits to the proportion of a property’s worth that could be borrowed, while it was impossible to withdraw equity at all. The only way to withdraw cash from property was to sell one’s house and buy a new one. But in the years following 1983 anything went. It was this ease of borrowing which caused, not only the durables boom in the later eighties, but the explosion in house prices which generated yet more borrowing and spending - a classic bubble which was bound, eventually to burst.

In *The Observer* (29/8/89) one us wrote “[T]he expansion of household credit”...“has landed us with a new danger which not yet been properly appreciated. By the end of 1988 the level of household indebtedness had reached...about 100 per cent of disposable income...Suppose the debt ceased to rise altogether ...[there could be a fall in net lending causing] a recession comparable with that which occurred in 1979-81”. This was not a fashionable view; the euphoria generated by Lawson’s “miracle” budget had hardly begun to subside. As recently as autumn 1987 Nigel Lawson had stated to general acclaim that as a result of “sound policies” we were enjoying the benefits of a virtuous circle. “Low inflation,” he claimed, “public expenditure under control and sound public finances have led to sustained growth ...which in turn has brought about improved confidence and better business performance”. Well, the debt–income ratio did eventually cease to rise, causing a large drop in the flow of net lending. Furthermore the recession which ensued was indeed comparable with that which occurred in 1979-81, though it wasn’t quite so severe. Yet in May 1991 the overwhelming majority of forecasters were predicting substantial growth between 1991 and 1992 (see the table published by the Financial Times 7/5/91).

Will history repeat itself? The growth of net lending since 1992 broadly resembles that which occurred in the eighties and in 2003 the net lending flow was as high as at its previous

---

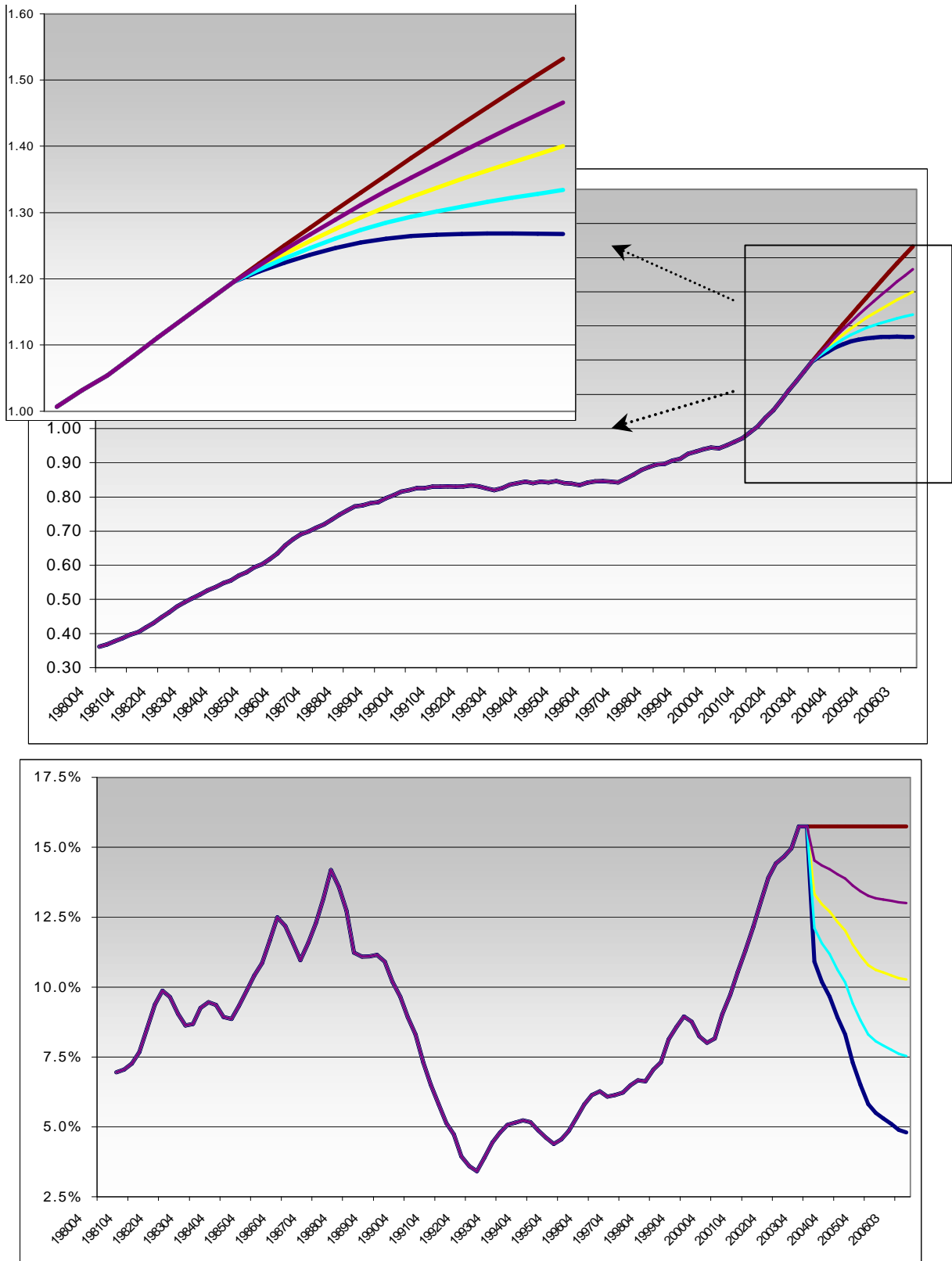
<sup>6</sup> It has not been possible to verify the exact date of the relaxation which occurred between 1952 and 1954.

peak in 1988. The level of household debt generated by this lending far exceeds that reached in 1988, though the burden of debt service so far remains quite moderate as a result of low interest rates. The personal balance has fallen rather erratically and was about 2% in deficit in 2003 – not as large as in 1988 when the deficit touched 3.8%.

Much of the public discussion assumes that a recession will only happen if there is a crash in house prices. But a severe check to personal spending could occur if there were a drastic fall in *lending* without house prices or household debt falling at all. Figure 6 shows how various assumptions about future ratios of debt to income translate into flows of net lending and *vice versa*. The top line shows what would happen to the debt ratio if net lending were to continue for two more years at its 2003Q3 level. It is not surprising, under this assumption, that the debt ratio would accelerate rapidly northwards since the most recent figures show that debt was already rising about four times as fast as income. The next line projects the rate of growth in the debt ratio during the past three years; and subsequent lines assume progressively slower increases until, at the bottom, the ratio is assumed to gradually stabilise at its present level without actually falling.

In the lower part of the chart these debt ratios are translated, mechanically, into flows of net lending. On the face it, a continuation of net lending at its October-November level (let alone a continued increase) is very unlikely since the debt ratio would rise from 120 per cent of income at present to 155 per cent in 2005. But even on this “extreme” assumption net lending would cease to rise. All the other scenarios show falls in net lending, the worst case being if the debt ratio stopped rising altogether – not a very strong assumption particularly if house prices were to fall or if interest rates rise very much more. In that case net lending would fall from 16.5 per cent of personal disposable income to perhaps 4.5 per cent; the net flow of funds available to the personal sector for spending or net saving would have fallen by 12 per cent.

**Figure 6: Personal Debt to Income Ratios According Borrowing Patterns**



The general view, including that of the Bank, seems to be that, while a crash in house prices is always possible, there is no particular reason to suppose it will happen. Furthermore, most of the lending has gone into the accumulation of financial assets and has not been spent. This could have happened if those house-owners who are trading down (selling, perhaps, immensely valuable houses that have become too large for them) keep the proceeds in the form of financial wealth and don't add to their spending at all. Therefore (the argument seems to go) if the lending now falls back this is more likely to result in a fall in asset accumulation than in spending.

None of these arguments is wholly convincing. We have been at pains to point out that no crash in the housing market is necessary to generate a sharp fall in net lending. The growth in the debt/income ratio must at some stage slow down, and this is a sufficient condition for net lending to fall substantially. Regarding the second point, we have already shown, in Figure 5, that while the personal sector financial balance has not fallen as much as in the late eighties, it has nevertheless fallen substantially – and into significantly negative territory. So it is not true (on this evidence) that all the lending has gone into financial asset accumulation; a significant part of it has had a counterpart in higher spending relative to income. Moreover it cannot be safely assumed that because the personal balance is less negative than at the peak of the last lending boom a fall in net lending will have a much smaller impact on spending now than it did then. There are plenty of people around who are anxious about their pension prospects and about the adequacy of their endowment mortgages. Perhaps, in the absence of a lending boom, net saving would now be higher than normal. Our sense is that the dangers implied by record lending and debt are being downplayed by the authorities and that the Monetary Policy Committee (MPC) should exercise extreme caution in raising interest rates much further (eg. to the extent implied by the futures market, which is predicting a rise to more than 4.5% in a year's time).

For all the sense of prudence and stability that the government has cultivated, the policy framework which it has put into place has not prevented a raging credit boom from developing, leaving us with the possibility that, having given that boom a last gasp by reducing interest rates in July, the MPC will, by further raising interest rates, severely check the economy. And if this happens there will be nothing for it but to watch the lending boom unravel. Consideration should then be given to finding ways to regulate the credit cycle.

### ***FISCAL STANCE, BUDGET DEFICITS AND GOVERNMENT DEBT***

All Euroland countries are supposed to ensure that their structural general government budgets should be close to balance or in surplus, and that deficits should never exceed 3% of

GDP even for cyclical reasons. In the U.K. there is a self imposed “Golden Rule” which states that the current (as opposed to capital) budget should only depart from zero for cyclical reasons, implying that it should be zero on average. It would appear that both of these rules have been made without explicit consideration being given to what the saving behaviour in any country actually is, and that they are based on the assumption that governments are able to use the same kind of prudential rules that apply to the management of the finances of an individual household.

Yet it has already been pointed out that the budget balance (measured as a deficit) is equal, by accounting identity, to the private financial surplus (the excess of saving over investment) plus the current balance of payments deficit (or less any surplus). In other words, from the private surplus plus the balance of payments deficit it could, without any knowledge whatever of the government’s fiscal decisions, be inferred that the public sector’s deficit is exactly equal to their sum down to last penny. Yet the government cannot directly control either private saving behaviour or the balance of payments; and to the extent that it cannot do so it must follow that the budget deficit is not under the direct control of the government either. The government can only set tax, benefit and interest rates, establish entitlements, and (maximum) cash limits to departmental expenditures. How the result of these decisions plays out in terms of realised payments and receipts by and to the government depends on what private economic agents (including foreigners) decide to do. The departures of the budget balance from zero are only logically possible to the extent that private net saving plus the balance of payments deficit differ (by an identical amount) from zero. The budget deficit can only cycle round zero (or any other number) if the sum of the two other balances also cycles around zero by an equivalent amount. The consequences of cyclical fluctuations on the budget balance will always be difficult to understand or estimate precisely. But the method adumbrated in this note can be used to obtain a reasonable notion of how the budget should look if the output gap were zero for any length of time. For instance, if it could be said that, with a zero output gap, the balance of payments, correctly measured would be something over 3% of *GDP* in deficit, while the private sector would have a financial surplus of 2 per cent (its average level during the last forty years) then it follows as a logical inference that the general government must normally have a deficit of at least 5 per cent of *GDP*. This is a conclusion which follows without any qualification at all, completely irrespective of what the government’s fiscal stance actually is. And it carries a powerful implication. Any attempt to reduce the deficit by tightening the fiscal stance would necessarily reduce output relative to productive potential. Looked at this way, a deficit in the balance of payments takes on a new kind of importance. The traditional concerns regarding external deficits are that they may be difficult to finance or may generate unsustainable foreign debts. The new concern,

already exemplified in spades in the U.S., is that a chronic balance of payments deficit will make it impossible to balance the budget. Either the target for the budget must be changed or effective steps must be taken to improve the balance of payments.

Finally, as the balance of payments of all countries taken together sums to zero, it must be the case that the sum of all budget balances exactly equals the sum of all private sector surpluses. As the sum of private balances is normally positive, it looks as though obedience to the Maastricht rule, that all budgets should simultaneously be balanced or in surplus is at best an injunction that will impart a disinflationary bias to the world system and at worst a logical impossibility.

## References:

- Congressional Budget Office. 2001. 'The Budget and Economic Outlook: Fiscal Years 2002–2011'. January.
- Burnett, M. and M. Manning (2003) 'Financial Stability and the United Kingdom's External Balance Sheet', *Bank of England Quarterly Bulletin*, Winter, Vol. 43, No. 4, pp. 463-475.
- Godley, W. 2003. 'The U.S. Economy: A Changing Strategic Predicament' *Strategic Analysis*. Annandale-on-Hudson, N.Y. The Levy Economics Institute of Bard College, February.
- . 2002b. 'Huge Fiscal Expansion Shortened U.S. Recession', *Financial Times*, Letters to the Editor, August 8.
- . 2002a. 'Kick-start Strategy Fails to Fire Sputtering U.S. Economic Motor'. *Policy Note* 2002/1. Annandale-on-Hudson, N.Y. The Levy Economics Institute of Bard College.
- . 2001c. 'Fiscal Policy To The Rescue'. *Policy Note* 2001/1. Annandale-on-Hudson, N.Y.: The Jerome Levy Economics Institute of Bard College.
- . 2001b. "The Developing Recession in the United States", *Banca Nazionale del Lavoro Quarterly Review*, Vol. 54, No. 219 (December), pp. 417-25.
- . 2000. Drowning In Debt. *Policy Note* 2000/6. Annandale-on-Hudson, N.Y.: The Levy Economics Institute of Bard College.
- . 1999b. rev. 2000. 'Seven Unsustainable Processes: Medium-Term Prospects and Policies for the United States and the World'. *Special Report*. Annandale-on-Hudson, N.Y.: The Levy Economics Institute of Bard College.
- . 1999a. 'Notes on the U.S. Trade and Balance of Payments Deficits'. *Strategic Analysis, Interim Report*. Annandale-on-Hudson, N.Y.: Levy Economics Institute of Bard College.
- Godley, W., and A. Izurieta. 2003. 'Coasting on the Lending Bubble. Both in the U.K. and the U.S.' *Cambridge Endowment for Research in Finance Strategic Analysis*, June.
- . 2002c. 'Strategic Prospects for the U.S. Economy: A New Dilemma' *Cambridge Endowment for Research in Finance Working Paper Series* No. 4, November, University of Cambridge, Cambridge.
- . 2002b. 'The Case for a Severe Recession'. *Challenge* Vol. 45 (2) April, pp. 27–51.
- . 2002a. 'Prospects and Policies for the U.S. Economy'. *Strategic Analysis*. Annandale-on-Hudson, N.Y. The Levy Economics Institute of Bard College, May.
- . 2001b. 'As the Implosion Begins?' *Strategic Analysis*. Annandale-on-Hudson, N.Y. The Levy Economics Institute of Bard College, June.
- . 2001a. 'The Developing U.S. Recession and Guidelines for Policy'. *Strategic Analysis*. Annandale-on-Hudson, N.Y. The Levy Economics Institute of Bard College, October.
- Godley, W., and W. Martin. 1999. How Negative Can U.S. Saving Get? *Policy Note* 1999/1. Annandale-on-Hudson, N.Y.: The Levy Economics Institute of Bard College.
- Godley, W., and G. McCarthy. 1998. 'Fiscal Policy Will Matter.' *Challenge*, Vol. 41, No. 1, January/February: 38–54.

- Godley, W., and L. R. Wray. 1999. *Can Goldilocks Survive? Policy Note 1999/4*. Annandale-on-Hudson, N.Y.: The Levy Economics Institute of Bard College.
- Izurieta, A. 2003b. 'Economic Slowdown in the U.S., Rehabilitation of Fiscal Policy and the Case for a Co-ordinated Global Reflation', *CERF Working Paper Series*. No 6, March.
- . 2003a. 'Slow Recovery Fable in Growth-recession Times? An Appraisal of U.S. Main Imbalances and Implications for the World Economy.' *Studies on International Monetary and Financial Issues for the G24*, Geneva, September.
- Magnus, G., A. Cates, P. Donovan and J. Aslin, 2003 "Debt Trap" *UBS Investment Research. Global Economic Perspectives*, August.