Sectoral balances, savings and investment in Solomon Islands

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The Solomon Islands fiscal deficit widened to a dramatic and clearly unsustainable degree over 1989–1991. The driving force behind this development has been growth in current rather than capital expenditures, with an increasing resort to domestic rather than foreign financing, imposing strains (given savings) on both domestic borrowing for investment and the balance of payments.

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Reliable national accounts data for Solomon Islands have not been available for several years. In order to provide estimates of the flows and balances between public, private and overseas sectors in Solomon Islands for the years 1985–92, use is made of the fact that national income flows must have their counterpart in changes in stocks, as recorded by the financial system.

From the principles of national income accounting, which require ultimately a balanced set of double-entry accounts, a deficit in any one of the public, private and overseas sectors must be offset by a net surplus in the other two. If private savings are insufficient to finance the government deficit and private investment—that is the nation as a whole spends more than it earns—it becomes indebted to the overseas sector by running a current account deficit. The current account is part of the balance of payments, which also includes the capital account and change in reserves, and the balance of payments must (by definition) be in balance. Thus, a current account deficit must be financed by a capital account surplus (and if not, then by some loss of foreign reserves), leading to an increase in net claims on the economy by the outside world.

Following standard practice, the public sector balance is defined as a deficit (the fiscal deficit) and private and overseas balances as surpluses (the excess of private sector savings over investment and the current account respectively). Thus

private sector surplus–fiscal deficit–current a/c balance = 0

The accounts can also be rearranged by consolidating private and public sectors to give the nation's overseas sector position. This gives

national income – absorption
= current a/c balance
= private sector surplus – fiscal deficit

where absorption represents all expenditure by domestic residents on consumption and investment goods (be they imported or domestically produced) by both public and private sectors.

The definitions of each sector conform with existing approaches adopted in Solomon Islands, themselves in line with standard international approaches and tailored to the availability and reliability of data on stocks and flows. The public sector is here defined to cover the Solomon Islands Government and the Central Bank of Solomon Islands, but excludes statutory corporations. The private sector covers all other resident organisations and resident individuals. The overseas sector refers to any non-resident's dealings with Solomon Islands.

The balance for any sector refers to the difference between its expenditure and income—a deficit when expenditure exceeds income, a surplus when expenditure is less than income. The consequence of a deficit (surplus) for any one sector must be a reduction (increase) in the stock of all financial assets representing its net claims on the other two sectors. Thus, the balance of any sector can be measured either by flows (the difference between expenditure and income) or by its net acquisition of financial assets (the change in its net claims on other sectors). Any discrepancy between these two approaches, for any sector, can be thought of as the 'net errors and omissions' for that sector. If 'net errors and omissions' are deemed to lie 'below the line' (that is the line dividing flows from changes in stocks) for any sector, then that sector's balance is measured by its reported flows. If net errors and omissions for any sector are assigned 'above the line' its balance is measured by net acquisition of financial assets. Here the flow definitions are adopted for the public sector balance (the fiscal deficit) and overseas sector balance (the current account), whilst the absence of reliable national accounts data means the private sector surplus (the excess of savings over investment) must be measured by the change in stock approach. This is done by means of a financial survey.

The financial survey

The financial survey can be considered by analogy with the monetary survey which is regularly presented by the Central Bank of Solomon Islands. The monetary survey covers the Central Bank and the three commercial banks operating in Solomon Islands. The financial survey additionally incorporates the Australian Guarantee Corporation (AGC), the National Provident Fund (NPF), the Development Bank of Solomon Islands (DBSI) and the Investment Corporation of Solomon Islands (ICSI).

In the following exposition, the non-bank private sector refers to the private sector other than commercial banks. The non-financial private sector additionally excludes the Australian Guarantee Corporation, the National Provident Fund, the Development Bank of Solomon Islands and the Investment Corporation of Solomon Islands.

In the financial survey coverage, financial intermediaries dealing principally in home finance are excluded as use and construction of residential property is deemed to represent consumption rather than investment. This is because houses are not deemed physical assets acquired for productive purposes (and are thus treated as 'consumer durables'). Consequently a rise in the stock of home loans extended by any financial intermediary represents borrowing for consumption purposes and does not alter savings or investment. Furthermore, in the balance sheets of those financial intermediaries which are included in the financial survey, an adjustment is made for changes in credit extended for home loans and other forms of personal consumption. If the stock of such credit rises by $x, then $x is deducted from the change in all credit to, and all deposits made by, the non-financial private sector. This provides one difference in methodology to the monetary survey, which makes no such adjustment.

Credit unions are also excluded from the financial intermediaries covered by the financial survey. This is because data on credit unions are relatively poor (compared to data on the other financial intermediaries), and also because credit union lending is both relatively small-scale and predominantly for consumption purposes (thus affecting neither aggregate savings nor investment by the argument outlined above).

Finally, before turning to consideration of the survey itself, it should be noted that the methodology will understate both savings and investment to the extent that current income is saved and used for investment without entering the financial system. A further underestimation of investment will also arise to the extent that deposits are drawn upon for informal lending between non-financial agents. As regards savings from current income the principal source will be reinvestment of company earnings. As regards use of deposits for informal lending (for investment purposes), this is likely to occur between individuals and small firms (it should be noted that informal lending sourced via current savings would require many individuals of substantial income to make any sizeable macroeconomic impact). Data availability and the plausible extent of such activity (remembering that it is the aggregate macroeconomic extent that is relevant to the present analysis) are again the reasons for excluding coverage of such activities at the present time.

In the monetary survey, savings by the private sector would implicitly be measured by the rise in M3 (which represents the increase in all non-government deposits with banks and currency in active circulation—the latter being a liability of the public sector to the non-bank private sector). The financial survey principally differs from the monetary survey (over and above the 'consumption loan' adjustment noted above) by including funds entering the financial system from statutory National Provident Fund contributions by employees and employers (changes in deposits with the Australian Guarantee Corporation are also included). These contributions are deemed to represent private sector savings (albeit 'forced savings'), that is they increase 'deposits' with the financial sector available for lending, directly or via other financial intermediaries, to each sector. This provides the savings with financial intermediaries shown on the 'change in liabilities' side of the financial survey. In obtaining the final figure for savings, changes in public debt held by the non-financial private sector are also included (this is usually a minor aspect, apart from 1992 in which a rise of SI$6.6 million was registered).

For investment the monetary survey would implicitly represent borrowing for investment finance by the change in credit to the private sector. The financial survey differs in three respects here. First, as explained above, the 'consumption loan' adjustment is made. Second, in coverage, the major non-bank sources of credit are included—the Australian Guarantee Corporation, National Provident Fund, the Development Bank of Solomon Islands and the Investment Corporation of Solomon Islands. Finally loans by the Central Bank to the non-bank private sector are excluded (whereas the Central Bank's credit to the Investment Corporation is included in credit to the private sector in the monetary survey). This is both because such loans are principally to other financial intermediaries in the survey (the Development Bank and the Investment Corporation of Solomon Islands) and therefore consolidated out, and are also in line with the treatment of 'net lending' adopted by the government in its flow definition of the fiscal deficit (recalling also that the Development Bank of Solomon Islands is included with the Solomon Islands Government in the public sector definition). Although net lending increases public sector claims on the private sector (and would therefore lie 'below the line' on a pure stock–flow distinction) rather than deficit financing, it is effectively taken as an item of public sector expenditure (and any future repayment will be registered as revenue—negative net lending). The consequence of this *vis-à-vis* the financial survey is that net lending will tend to raise the 'other items net' in the change in liabilities side of the financial survey and private sector borrowing on the change in assets side (as Development Bank and Investment Corporation on-lend funds). Thus net lending is shown as a memorandum item below. All these considerations define domestic borrowing for investment purposes by the financial sector—the final figure for investment (as derived from the change in stock approach) adds foreign borrowing as recorded by net long-term private capital inflows.

The analogy of the change in net credit to government in the monetary survey is shown as government domestic borrowing on the change in assets side of the financial survey. The difference is one of coverage: borrowing from the other financial intermediaries (principally National Provident Fund) is also included. It should be noted that as for the monetary survey, government borrowing from the Central Bank is clearly a means of financing the fiscal deficit, although the Development Bank is a public sector institution (so that such borrowing would be excluded, given the sectoral definitions, on a pure stock–flow approach). This reflects the fundamental role of a central bank and the money creation process in an economy. A central bank uses its 'licence to print money' to provide domestic liabilities to match its lending to government and accumulation of net foreign assets. Although this is true in an accounting sense it must not be misconstrued into an inappropriate attitude to money creation by the Central Bank. The stock of net foreign assets cannot simply be increased by printing more money: it depends on balance of payments performance. Furthermore, the inflationary potential of printing money makes it the single most damaging form of financing the fiscal deficit (that is by raising 'inflation tax' and seigniorage revenues through the inflationary erosion of public sector debt).

Finally, the change in net foreign assets is the same for both monetary and financial surveys (Table 1).

Table 1 **Flow balance sheet of consolidated financial sector**

	Change in assets			**Change in liabilities**		
	Net foreign assets	Government domestic debt	Private sector domestic debt	Private sector assets	Other items net	Memo item net lending[a]
1985	-12.9	9.3	18.7	8.9	6.2	0.5
1986	19.9	-2.4	2.8	11.6	8.6	0.3
1987	5.1	18.2	14.0	27.8	9.5	8.6
1988	12.5	5.9	34.7	36.3	16.8	20.5
1989	-24.7	18.3	28.8	14.8	7.5	0.7
1990	-17.8	36.7	6.1	25.1	-0.1	3.7
1991	-16.2	69.6	-5.3	36.3	11.8	5.5
1992	44.8	23.4	9.7	66.5	11.4	3.4

[a]Net lending by the Solomon Islands Government and the Central Bank to the Development Bank and Investment Corporation of Solomon Islands. This item will tend to lead to greater private sector domestic borrowing and is recorded as a component of other items net.
Note: Consolidated Financial Sector incorporates the Central Bank, all commercial banks, the Australian Guarantee Corporation, National Provident Fund, Development Bank of Solomon Islands and Investment Corporation of Solomon Islands.

Table 2 **Private sector savings and investment**

	1985	1986	1987	1988	1989	1990	1991	1992
Savings	8.5	10.9	28.2	36.6	14.8	25.3	36.3	73.1
(o/w NPF cont)	8.5	9.7	11.2	13.4	13.3	17.5	22.4	23.3
Investment	25.7	15.5	18.6	62.9	85.5	63.9	69.8	43.8
Domestic borrowing	18.7	2.8	14.0	34.7	28.8	6.1	-5.3	9.7
Foreign borrowing	7.0	12.7	4.6	28.2	56.7	57.8	75.1	34.1

Note: Savings are as derived from the Financial Survey, adjusted for other purchases of government debt. Investment is derived from borrowing as defined in the Financial Survey plus long-term net capital inflows.

Sectoral balances: the data

All sectoral balances displayed particularly sharp swings in 1992 compared to 1991. The fiscal deficit was halved from its peak level of SI$69 million in 1991 leaving, for a given level of savings, potential for improving both investment levels and the current account.

In fact, however, the level of savings rose significantly by SI$37 million from their 1991 level (SI$36 million to SI$73 million), with only SI$1 million of this rise attributable to 'forced savings' of National Provident Fund contributions. Investment on the other hand fell by SI$26 million (from SI$70 million to SI$44 million) (Table 2). The fall in investment primarily reflected a sharp drop in long-term net private capital inflows (from SI$75 million to SI$34 million). Some offset was provided by a SI$15 million rise in domestic borrowing for investment, which substantially reflects the Investment Corporation's SI$9 million lending to the airline (lending by commercial banks to the private sector fell by SI$8 million). Thus the private sector surplus swung sharply (from a SI$34 million deficit to a SI$29 million surplus) and suggests depressed levels of demand for both capital and consumption goods.

Overall the fall in the fiscal deficit and turnaround in private sector surplus allowed for a significant improvement in the current account, from a SI$95 million to an SI$8 million deficit, reflecting the effects of generally depressed levels of absorption and a rise in income (the latter substantially due to a slight rise in the terms of trade and the boom in logging production).

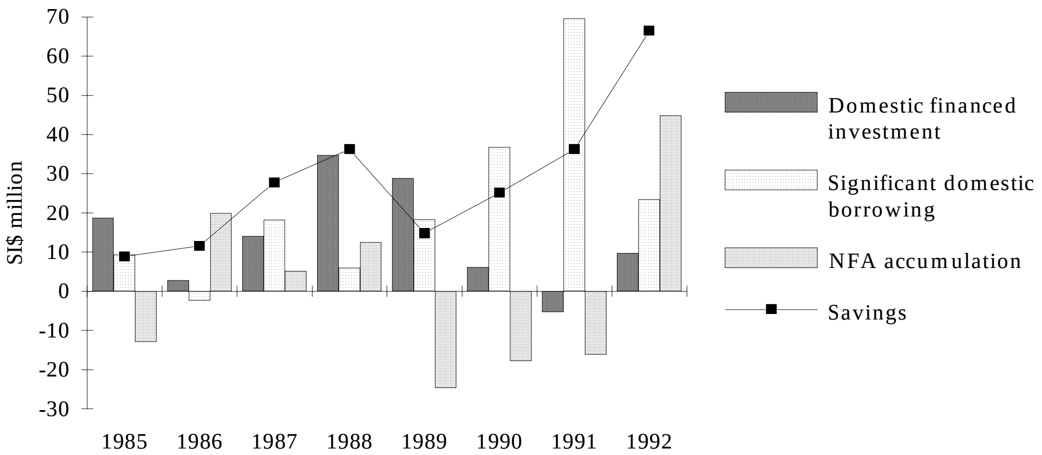
From Table 3 it can be seen that the above analysis is qualified, albeit slightly, by a SI$9 million swing in the 'discrepancy' in 1992. Potentially there are any number of possible causes. However, 'net errors and omissions' in measuring fiscal and current account balances were small and

Table 3 **Sectoral balances**

	1985	1986	1987	1988	1989	1990	1991	1992
Fiscal deficit	19.1	24.9	35.7	30.9	5.3	24.9	69.2	27.4
(S – I)	-17.2	-4.6	9.7	-26.3	-70.7	-38.6	-33.6	29.3
Current account	-42.6	-7.5	-12.2	-60.8	-79.1	-73.7	-95.2	-7.6
Discrepancy	6.3	-22.0	-13.8	3.6	3.1	10.2	-7.6	9.5

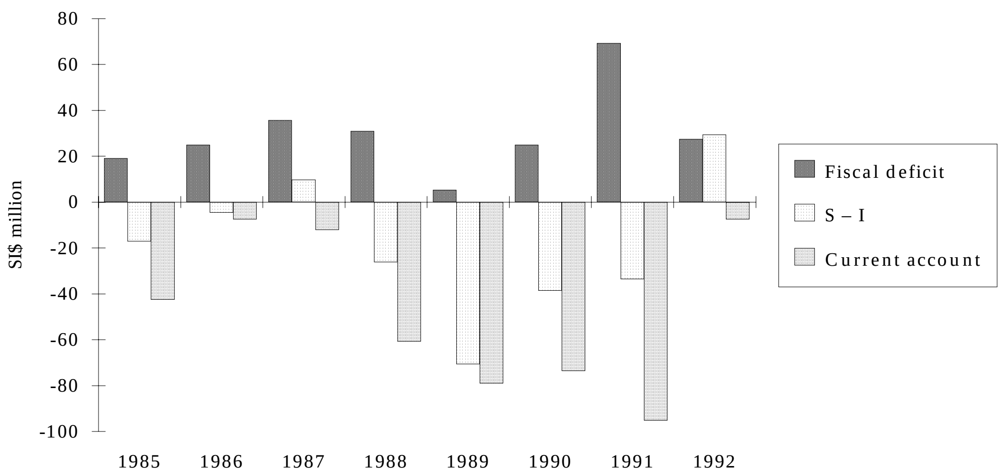
Note: The fiscal deficit and current account balance are flow definitions. Further details of these balances are in the Money and Banking and Balance of Payments sections of the Report. (S – I) is the excess of private sector savings over investment. The derivation of these is in Table 2. (S–I) should equal the sum of the fiscal deficit and current account surplus.

Figure 1 **Use of domestic savings by financial system,** SI$ million



little changed, suggesting the cause may be found in a somewhat exaggerated figure for savings. This reflects the fundamental and intractable problem of discrete time data in stock–flow analysis. Towards the end of 1992 sharp rises in commercial bank demand and time deposits by firms and individuals (that is, the non-financial private sector), were registered. For instance, total deposits by individuals rose SI$10.4 million in the last half of the year and total deposits by firms rose by SI$15.9 million in the last quarter. It is likely that both these phenomena reflect to some degree the effects of logging activity (with production rising by 80 per cent in 1992) together with other short-term deposits held in the system for non-investment reasons. Furthermore, as regards the discrete time point, there is already preliminary evidence in 1993 of a fall in savings levels, suggesting the rise in

Figure 2 **Sectoral balances,** SI$ million



savings may prove very temporary as the wealth is used for expenditures. The rise in disposable incomes from Budget changes introduced at the start of 1993 which has not as yet been reflected in a rise in deposits with the banking system is additional evidence suggesting the rise in savings may prove short-lived.

Along with the more recent developments just analysed, the data, and particularly their graphical presentation, also highlight medium-term developments.

As regards investment, a notable feature is the high levels of private foreign borrowing associated with large-scale foreign investment projects in the 1989–91 period. The lower capital inflows in 1992 may represent a reversion to more 'normal' levels. The cyclical nature of domestic borrowing is also apparent (although the 1987 and 1988 levels were somewhat 'artificially' boosted by high net lending). The need to restore private sector domestic borrowing, particularly from the banking system, and reconcile this with external balance, is clearly a major concern for the medium term.

Naturally, this time path of investment, and especially domestic borrowing, cannot be seen divorced from the overall macroeconomic picture. The level and financing of the fiscal deficit and level of savings are key aspects. Consider first the behaviour of savings, particularly after adjustment for 'forced' savings, during the period. These savings were high in 1987 and 1988 and then fell off over 1989–91 (with a substantial, albeit probably temporary, recovery in 1992 as discussed above) (Figure 1). This time path of savings is linked to the terms of trade which hit local highs in 1987, 1988 and 1992. Savings and the current account appear to benefit in the 'good' years with a rebound effect as saved income is subsequently used for consumption. The lesson here for the future, following the 1992 (moderate) terms of trade high, is obvious. The growth in imports towards the end of last year already suggests current expenditures are rapidly catching up with the recent rise in current income, even though much of the latter may prove temporary.

The fiscal deficit, though sharply reduced in 1992, had widened to a dramatic, and clearly unsustainable degree over 1989–91 (Figure 2). The driving force behind this development has been growth in current rather than capital expenditures

Figure 3 **Use of private sector funds from saving and foreign borrowing,** SI$ million

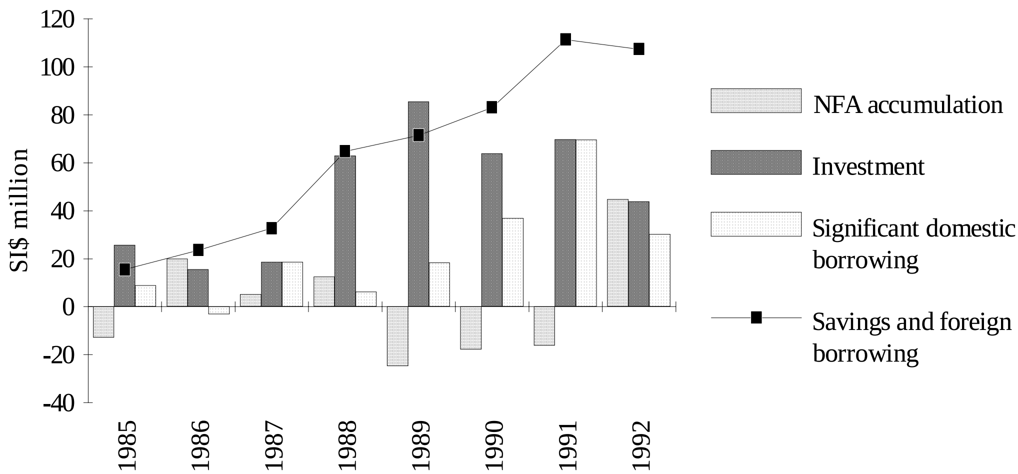
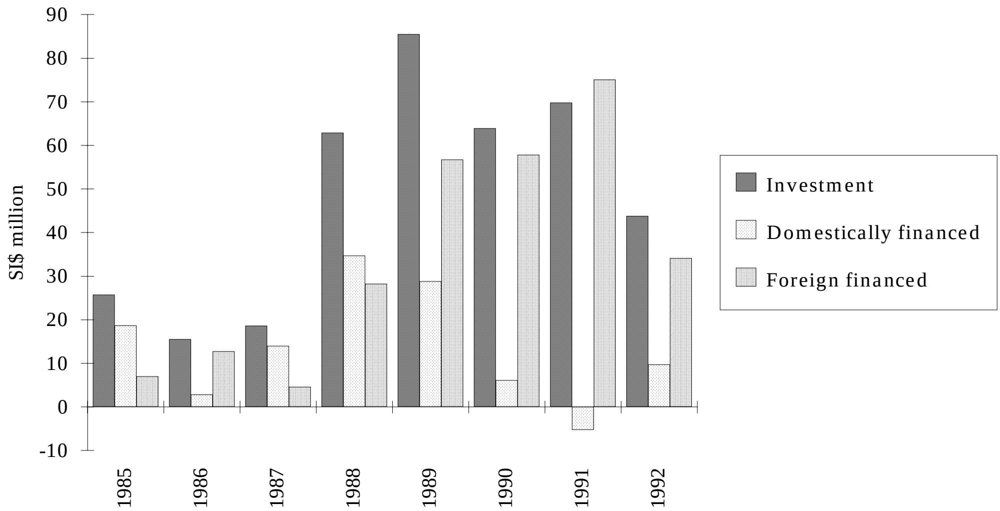


Figure 4 **Source of borrowing to finance investment,** SI$ million



and the widening of the deficit was accompanied by increasing resort to domestic rather than foreign financing, imposing strains (given savings) on both domestic borrowing for investment and the balance of payments. The results in the data are strikingly clear over 1989–91. The government's domestic borrowing hit SI$37 million in 1990, double the previously highest levels, and in 1991, reached an alarming SI$70 million (Figure 3). The SI$30 million domestic borrowing in 1992, though a great improvement on 1991, thus remains high by historic standards (Figure 4). The possible developments in domestic savings and efforts to restore private sector borrowing, highlight the continuing need for every effort to be made in continuing to restrain the government's use of domestic savings if external balance is to remain sustainable.