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A Framework for Macroeconomic Consistency for Zimbabwe

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and
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This framework for macroeconomic consistency (applied here to Zimbabwe) provides an organizing device for checking the consistency of data, a snapshot of the principal resource transfers in an economy, and a tool for financial programing or model building.

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Khadr and Schmidt-Hebbel apply a framework for consistency, which they developed elsewhere, to Zimbabwe.

Using annual data for 1981 and 1987, they illustrate the usefulness of imposing consistency on the flow budget accounts (in both current and constant prices) of a developing economy.

This economy is represented by six sectors: the central government, public enterprises plus local government, the central bank, the deposit banking system, the nonfinancial private sector, and the external sector.

Such a framework, they contend, provides:

- An organizing device with which to check the internal consistency of data.
- A snapshot of the principal resource transfers in the economy, which can be helpful in diagnosing and analyzing macroeconomic imbalances and unsustainable resource flows.
- A tool for financial programing or a first step in a model-building effort that entails specifying behavioral relationships.

This paper is a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Susheela Jonnakuty, room N11-039, extension 61769 (90 pages with matrices and tables).

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I. INTRODUCTION

The objective of this paper is to apply a framework for macroeconomic consistency, developed elsewhere (Khadr and Schmidt-Hebbel, 1989), to Zimbabwe. The paper presents a comprehensive six-sector application, with a detailed discussion of data sources. While the detailed methodological discussion is presented in the paper referred to above, here the emphasis is put on the empirical implementation of our consistency framework.

The construction of a consistency framework involves specifying the budget constraints for the different "agents" or "accounts" in an economy and ensuring that they are mutually consistent (that is, any receipt or "source" in one account has a payment or "use" counterpart in another account). Budget constraints, if properly specified, must be ex post identities. At the end of a given time period, the sum of expenditures by an agent (whether current or used to acquire assets) must be identically equal to the sum of receipts (defined broadly to include receipts from borrowing or the accumulation of liabilities as well as sources of income) during that period. It is thus important to realize that a macroeconomic consistency framework contains no assumptions about behavior.

What then is the benefit of constructing a consistency framework and presenting economic and financial data for a given country in this form? This question is addressed again in the conclusion to this paper, but it can be noted here that such a framework provides: (i) an organizing device which checks on the internal consistency of the data; (ii) a snapshot of the principal resource transfers in the economy, which can be helpful in the diagnosis and analysis of macroeconomic imbalances and unsustainable resource flows; and (iii) a tool for financial programming and/or a first step in a model-building effort that entails specifying behavioral relationships.

The basic structure of the framework employed in this paper is based on our methodology for macroeconomic consistency in current and constant prices (Khadr and Schmidt-Hebbel (1989)), which extends previous work on consistency in current prices (see in particular Crouch (1972), Meyer (1975), Turnovsky (1977), Host-Madsen (1979), Marshall and Schmidt-Hebbel (1988), Easterly (1989)and Holsen (1989)) to consider real variables, relative prices and capital gains and losses on asset/liability holdings in a consistent macro-accounting framework.

In this paper we adopt a six-sector[1] breakdown, extending our previous three-sector illustration for Zimbabwe as presented in section 3 of Khadr and Schmidt-Hebbel (1989).[2] As in the latter, this paper's application to Zimbabwe covers two years: 1981 and 1987. However, in addition to a different sectoral breakdown, this paper presents a significant difference with our above-mentioned methodological paper by simplifying the computation of capital gains and losses, as discussed below.

A summary of the consistency methodology based on Khadr and Schmidt-Hebbel (1989) is presented in section II. We begin (subsection II.1) by specifying the budget constraints in nominal (current local currency unit) terms, drawing a distinction between current account and capital account transactions. We also show how all the budget identities can be depicted simultaneously in a convenient flow-of-funds summary matrix.

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[1] There are six sectors in terms of (aggregates of) economic agents. The national accounts identity is sometimes referred to as a seventh "sector", as in Holsen (1989) and Khadr, Mckay, Schmidt-Hebbel, and Ventura (1989).

[2] A five-sector consistency framework in current prices only is applied to Zimbabwe for 1985-1987, in the framework of a RMSM-X model, by Khadr, McKay, Schmidt-Hebbel, and Ventura (1989).

In subsection II.2, we extend the conceptual apparatus to re-specify the budget constraints in real terms. We demonstrate how, by distinguishing among the price deflators for several different expenditure components of GDP, real GDP in any given year can be expressed as the sum of two sets of terms. The first set captures the real value of the expenditure components. The second set captures relative price change terms which arise from the fact that the deflator for a given expenditure component (e.g., consumption) may have changed at a different rate from the GDP deflator vis-a-vis the base year. We also show how for the capital account, the methodology enables us to split asset changes deflated to the base year into (i) asset changes from one year to the next in terms of command over units of GDP; and (ii) capital gains/losses on asset holdings due to inflation and/or nominal devaluation. Analogously with subsection II.1, we also present a matrix depiction of the budget identities in real terms. In subsection II.3, we present the stock balance sheets that correspond to the flow budget constraints.

Section III presents an application of the consistency framework to Zimbabwe for the years 1981 and 1987. The flow budget constraints in nominal terms and the corresponding summary matrices are presented in subsection III.1. This subsection also contains a brief discussion of what insights can be drawn from the exercise. The corresponding real (1980 Zimbabwe dollar) flows are outlined in subsection III.2. Consistent end-of-period balance sheets corresponding to the different accounts are presented in subsection III.3. Section IV concludes with a few remarks on the utility of a macroeconomic consistency framework and possible extensions or simplifications.

II. A METHODOLOGY FOR MACROECONOMIC CONSISTENCY

This section summarizes and simplifies the macroeconomic consistency methodology for current and constant prices developed by us elsewhere (Khadr and Schmidt-Hebbel (1989)).

II.1 Macroeconomic Consistency in Nominal Terms

We start by presenting the flow budget constraints that correspond to the different accounts in the economy. Six accounts are considered here: two non-financial public sector accounts (central government, and a consolidated public enterprise and local government account), two financial accounts (the central bank and the banking system), the non-financial private sector account, and the external sector account. A distinction among the private, public and external sectors appears justified in order to allow for behavioral differences and to distinguish among private, public, and foreign factor ownership. Further, the financial and non-financial sectors are separated due to the importance of tracing financial and monetary variables in the domestic economy as well as in the balance of payments.

The distinction between two branches of the public sector can be justified on grounds of data availability for the case study considered here and possible differences in behavior. The distinction between deposit money banks and the central bank is due to their differing roles and links with the balance of payments and the public sector. If desired, they can be easily consolidated into a single monetary system. Alternatively the central bank, central government, and public enterprises and local government (LG) could be integrated into a consolidated public sector, which often is a relevant aggregation for the analysis of the macroeconomic impact of the public sector on the principal macroeconomic

aggregates.[3] Finally, the private sector consolidates households and firms into one account, an assumption which could be relaxed subject to data availability and analytical requirement.

The flow budget constraints simply reflect the basic identity between sources and uses of funds for each sector. The presentation here separates current and capital account sources and uses of funds. Simply put, any capital account source or use of funds impacts on wealth, and therefore future income streams, whereas current account sources do not. We define saving for each sector as the "above the line" or current account excess of sources over uses of funds. This is also identical to the "below the line" or capital account excess of uses over sources of funds. A simplifying assumption made throughout the paper, which reflects data limitations in most developing country applications, is that there are no current account transactions of the two financial sectors. Since this is assumed to hold true for all time periods, the net wealth or equity of both the central bank and the banking sector is equal to zero.

In the capital account, a distinction is implicitly drawn between real assets or physical capital (for which there is no offsetting liability) and financial assets, which have corresponding liabilities. Changes in physical assets are written in terms of flows (capital stocks are not considered explicitly in subsections II.1 and II.2), whereas changes in financial assets and liabilities are written as first differences of the corresponding stocks.

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[3] For a detailed derivation of the consolidated public sector budget based on four public subsectors (general government, public enterprises, central bank, and other public financial institutions see Marshall and Schmidt-Hebbel (1988).

To specify the flow budget constraints in nominal terms (that is, in current local currency units), begin with the central government budget constraint. Central government saving is defined as:

(1) Central government saving ≡ central government value added + indirect taxes + direct taxes + net transfers to central govt from ROW + interest from private sector + interest from LG & parastatals - government consumption - subsidies - domestic interest payments - interest payments to ROW.

Note that central government value added is given by factor income accruing to the factors of production owned by the central government, and not the value of final output it produces. The same principle applies to LG & parastatals and the private sector. Furthermore, central government saving is identically equal to net asset changes:

(1') Central government saving ≡ central government investment + lending to the private sector + lending to LG & parastatals - borrowing from the central bank -borrowing from the banking system - borrowing from the private sector - borrowing from ROW - capital grants from ROW.

Identity (1) thus defines the current account balance for the central government, and (1') its capital account. Note that, investment aside, the elements on the right-hand-side of (1') are measured as changes in stocks. Thus lending to the private sector is simply the difference between the stock of loans outstanding at the end of this period and the stock at the end of last period.[4]

Next, the budget identity for LG & parastatals is given by (2) and (2'):

(2) LG & parastatal saving ≡ LG & parastatal value added - subsidies + subsidies - interest payments to central government - interest payments to the private sector - interest payments to the ROW.

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[4] The exception to this rule is capital grants from abroad, since they do not imply a liability accumulation which reduces future income streams.

(2') LG & parastatal saving ≡ investment of LG & parastatals - borrowing from central government - borrowing from the private sector - borrowing from central bank - borrowing from banking system - borrowing from ROW.

For both the central bank (identity (3')) and the banking system (identity (4')), saving and net asset changes are identically zero:

(3') 0 ≡ lending to government + lending to LG & parastatals + lending to banking system + foreign reserve accumulation - increase in vault cash - increase in banking system deposits - increase in private sector deposits - currency - borrowing from ROW.

(4') 0 ≡ lending to central government + lending to LG & parastatals + lending to the private sector + increase in vault cash + increase in deposits at the central bank + increase in foreign reserves - borrowing from central bank - increase in demand deposits - increase in quasi-money - borrowing from ROW.

For the non-financial private sector, the budget identity is given by (5) and (5'):

(5) private saving ≡ private sector value added + transfers from central government + transfers from ROW + workers' remittances + interest from central government + interest from local government and parastatals + interest from ROW -private consumption - direct taxes - profit remittances to ROW - interest payments to central government - interest payments to ROW.

(5') Private saving ≡ private investment + increase in currency + increase in demand deposits + increase in quasi-money + increase in deposits at central bank + lending to central government + lending to LG & parastatals + foreign asset accumulation - borrowing from central government - borrowing from central bank - borrowing from banking system - direct foreign investment - borrowing from ROW.

Finally, the budget identity for the external account is given by (6) and (6'):

(6) ROW saving ≡ Profit remittances to ROW + interest from central government + interest from LG & parastatals + interest from private sector - resource balance - transfers from ROW to central government - transfers from ROW to private sector - workers' remittances - interest from ROW to private sector.

(6') ROW saving ≡ capital grants to central government + direct foreign investment + central government borrowing from ROW + LG & parastatal borrowing from ROW + central bank borrowing from ROW + banking system borrowing from ROW -accumulation of foreign reserves by central bank - accumulation of foreign reserves by banking system - accumulation of foreign assets by private sector.

Appendix I presents the nomenclature for identities (1) - (6'). This nomenclature is used consistently throughout the remainder of the paper. The identities as written in Appendix I also highlight the fact that, for example, in the resource balance we distinguish among imports of capital, intermediate and consumption goods. In addition, all transactions involving the rest of the world (ROW) are denominated in foreign currency and therefore multiplied by the exchange rate to convert them into local currency units.

It is worth emphasising that all flows which are pure transfers (that is, all flows which are not value added) should cancel out among agents. Thus summing the current account budget identities (1), (2), (5) and (6) yields the identity:

(7) Central government saving + LG & parastatal saving + private saving + ROW saving ≡ Central government value added + LG & parastatal value added + private sector value added + indirect taxes + subsidies - central government consumption - private consumption - resource balance.

Similarly, summing the capital account budget identities (1') to (6') yields:

(7') central government saving + LG & parastatal saving + private saving + ROW saving ≡ central government investment + LG & parastatal investment +

private investment.

Taken together, (7) and (7') give the income-expenditure identity for the gross domestic product.

Another way of presenting identities (1) - (7') is in the form of a summary flow-of-funds matrix (see Matrix I), adapted from Easterly (1989). Mutual consistency among the budget identities is then assured by construction. Briefly, the first set of rows and columns depict the current sources and uses for the different accounts. Thus, line 2 [5] of the matrix depicts current sources, and column 2 current uses, of funds for the central government. Treating saving as a "use" ensures that the row and column sums are identical. The second set of rows and columns depicts capital sources and uses for the different accounts. Thus, line 9 shows capital sources, and column 9 capital uses, of funds for the central government. Here, treating saving as a "source" ensures the identity between the row and column sums. Note that the bottom right-hand submatrix captures all changes in financial assets and liabilities. Finally, line 1 and column 1 of the matrix depict the income-expenditure identity for GDP.

To conclude this section, it should be stressed once again that the exact specification of the budget identities presented in this paper can (and should) be changed to reflect the case at hand. For example, one may prefer to work with (say) a consolidated account for the monetary system. This would involve adding identities (3') and (4') to obtain a single budget identity for the monetary system. Similarly, one may wish to implement a more detailed breakdown of (say)

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[5] The line should be read all the way across the matrix; that is, across the entire length once the two portions (labelled "current account" and "capital account", respectively) are placed side by side.

MATRIX I: NOMINAL MACROECONOMIC AND FINANCIAL FLOWS FOR A 6-SECTOR ECONOMY
CURRENT ACCOUNT

	National Accounts	Central Government (G)	Public Enterprises and Local Government (PL)	Central Bank (CB)	Banking System (BS)	Non-Financial Private Sector (PR)	External Sector (F)
National Accounts		C_G $- E\ MC_G$				C_{PR} $- E\ MC_{PR}$	$E\ XGNFS$ $-E\ MINT_{PR}$
Central Government	GFY TI		$i_7\ GK_{PL}$			$i_6\ GKTR$ TD_{PR}	$E\ NTRGO$
Public Enterprises and Local Government	PLFY GSUB	$- GSUB$					
Central Bank							
Banking System							
Non-Financial Private Sector	PRFY	GTR $i_3\ B_G$	$i_8\ B_{PL}$				$E\ NTRPR$ $E\ WREM$ $E\ i^*\ R_{PR}$
External Sector		$E\ i^*\ BF_G$ $E\ MC_G$	$E\ i^*BF_{PL}$			$E\ rr\ FK$ $E\ i^*\ BF_{PR}$ $E\ MC_{PR}$	$E\ MINT_{PR}$
SAVING & BORROWING							
Central Government		S_G					
Public Enterprises and Local Government			S_{PL}				
Central Bank				$S_{CB} = 0$			
Banking System					$S_{BS} = 0$		
Non-Financial Private Sector						S_{PR}	
External Sector							S_F
Total Saving		S_G	S_{PL}	$S_{CB} = 0$	$S_{BS} = 0$	S_{PR}	S_F
Total Uses	Y	Total Uses	Total Uses	T. Uses = 0	T. Uses = 0	Total Uses	Total Uses

MATRIX I: NOMINAL MACROECONOMIC AND FINANCIAL FLOWS FOR A 6-SECTOR ECONOMY
CAPITAL ACCOUNT

	Central Government	Public Enterprises and Local Government	Central Bank	Banking System	Non-Financial Private Sector	External Sector	Investment	Total Sources
National Accounts	IN_G	IN_{PL}			IN_{PR}			
	$- E\ MI_G$	$- E\ MI_{PL}$			$- E\ MI_{PR}$		Subtot. Inv.	Y
Central Government								Gross Income
Public Enterprises and Local Government								Gross PL Income
Central Bank								Gross CB Income = 0
Banking System								Gross BS Income = 0
Non-Financial Private Sector								Gross PR Income
External Sector	$E\ MI_G$	$E\ MI_{PL}$			$E\ MI_{PR}$		Import Inv.	Gross F Income
SAVING & BORROWING								
Central Government			dDC_G	$dCBS_G$	dB_G	$E\ KTG$ $E\ dBF_G$		G Borrowing + Saving
Public Enterprises and Local Government	dGKPL		dDC_{PL}	$dCBS_{PL}$	dB_{PL}	$E\ dBF_{PL}$		PL Borrowing + Saving
Central Bank				dH_{BS} $dDBBS_{CB}$	dH_{PR} $dDBPR_{CB}$	$E\ dNFB_{CB}$		CB Borrowing + Saving
Banking System					$dDEP_{PR}$			
			dDC_{BS}		dQMON	$E\ dNFB_{BS}$		BS Borrowing + Saving
Non-Financial Private Sector	dGKTR		dDC_{PR}	$dCBS_{PR}$		$E\ dBF_{PR}$ $E\ dFK$		PR Borrowing + Saving
External Sector			$E\ dR_{CB}$	$E\ dR_{BS}$	$E\ dR_{PR}$			F Borrowing + Saving
Total Saving								Total Saving
Total Uses		Asset Accum.	Asset Accum.	Asset Accum.	Asset Accum.	Asset Accum.	Total Investment	

tax revenue accruing to the government by distinguishing between wage and profits taxes. In general, the preferred specification will be guided by: (i) data availability in a given application; and (ii) the underlying analytical or policy questions, particularly if the construction of a macro consistency framework is viewed as a prerequisite to the specification of a behavioral model that would address these questions.

II.2 Macroeconomic Consistency in Real Terms

We now turn to the specification in real terms of the budget identities presented in the preceding section. A basic fact to recall is that a budget constraint in real terms is not linearly independent of its counterpart in nominal terms, i.e., the former is simply the latter divided by a common deflator. The deflator we use here is the GDP deflator (P). The initial step is therefore to divide (or deflate) all the budget identities (that is, (1) - (7')) by P.[6] Once this is done, there are two further steps. The first step involves splitting up each expenditure component of GDP, once deflated, into a real component and a relative price change component. The second step involves splitting up nominal asset changes, once deflated, into real asset changes and capital gains/losses. We now outline these steps in turn.

For the first step, we begin by deriving and setting aside deflators for all the individual expenditure components of GDP. We shall assume here that six such price deflators are avaliable: a consumption deflator (P_C), an investment deflator (P_{IN}), and (domestic currency) deflators for exports (P_X), intermediate good imports (P_{INT}), consumption good imports (P_{MC}) and investment good imports

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[6] We take the GDP identities as "budget" identities also.

(P_{MI}). Next, consider all the budget identities which contain an expenditure component of GDP (i.e., a consumption, investment, import or export term). For example, the only expenditure component in identity (1) is government consumption. Our objective is to divide deflated government consumption into two parts. Begin by rewriting identity (1) as

$$(8) \quad S_G \equiv TR_G - C_G$$

Where TR_G denotes total current revenue accruing to the central government. Now divide (8) through by P, and consider the term C_G/P. This term can be decomposed into real consumption (that is, consumption expenditure valued at unit base-period prices) and the relative price change for consumption goods versus gross domestic product as follows:

$$(9) \quad (P_{Ct}\, c_{Gt}) \,/\, P_t = c_{Gt} + [(P_{Ct} - P_t)/P_t]\, c_{Gt}$$

where c_G denotes real government consumption, defined as current government consumption divided by the consumption deflator, and t denotes a time-subscript. This decomposition process can be repeated for every deflated expenditure component in the budget identities (1) - (7').

For the <u>second</u> step, we focus on the changes in financial assets and liabilities. Recall that nominal changes in financial assets or liabilities are measured as a difference in end of period stocks. The deflated nominal changes can be decomposed into real asset/liability changes (that is, the change in the number of units of GDP that the asset/liability stock can command), and the

capital losses/gains that result from inflation and nominal devaluation[6]. Consider for example identity (1'). Once this has been deflated by the GDP deflator, the deflated change in nominal foreign debt of the central government can be decomposed as follows:

$$(10)\quad E_t(BF_{Gt} - BF_{Gt-1}) / P_t = (bf_{Gt} - bf_{Gt-1}) + [(\pi_t - \epsilon_t) / (1 + \pi_t)]\, bf_{Gt-1}$$

where bf_{Gt} is $E_t(BF_{Gt}/P_t)$ and bf_{Gt-1} is $E_{t-1}(BF_{Gt-1}/P_{t-1})$. π_t denotes the rate of inflation (proportional rate of change of the GDP deflator) and ϵ_t nominal devaluation between periods t-1 and t. The deflated nominal asset change is thus broken down into the change in the real foreign debt of the central government and the capital gain that results from a real appreciation.

An equivalent procedure can be applied to all the other deflated nominal asset/liability changes. For assets denominated in domestic currency, the nominal devaluation term ϵ_t will of course be absent. Finally, all terms in identities (1) - (7') which are neither expenditure components of GDP nor changes in financial assets are simply deflated by P and left as is.

As an example, Table 1 presents the budget identity in real terms for the central government, distinguishing by uses and sources of funds using the procedure outlined above. Real expenditure flows and real financial asset and

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[6] Here we introduce a significant simplification by not distinguishing between the period-average deflator (considered here) and the end-of-period deflator (not considered here). While the former is the relevant for deflating flows, the latter is more relevant for end-of-period dated asset and liability holdings. An explicit distinction between both deflators for asset/liability holdings and its implication for measuring capital gains and losses is drawn in Khadr and Schmidt-Hebbel (1989), section 2.2.

Table 11

ZIMBABWE

T-Table for Local Government and Parastatals
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1987	1987 %		1987	1987 %
Non Interest			**Non Interest**		
Value Added	498.00	5.12	Local Govt.& Parast.Saving	226.00	2.32
Subsidies from Central Govt.	350.00	3.60			
Less					
Subsidies from Central Govt.	350.00	3.60			
Interest			**Interest**		
			Int. paid to Central Govt.	62.00	0.64
			Int. paid to PR	137.00	1.41
			Int. paid to ROW	73.00	0.75
Total CA LG & Par. Sources	498.00	5.12	Total CA LG & Par. Uses	498.00	5.12

Capital Account					
	1987	1987 %		1987	1987 %
Investment/Saving			**Investment/Saving**		
Saving	226.00	2.32	Investment	653.00	6.72
Asset Changes			**Asset Changes**		
Capital transfers from CG	319.00	3.28			
Borrowing from PR	51.00	0.52			
Borrowing from ROW	-111	-1.14			
Borrowing from BS	90.00	0.93			
Borrowing from Central Bank	78.00	0.80			
Total LG & Par. Sources	653.00	6.72	Total LG & Par. Uses	653.00	6.72

(2) Spe = PEFY-GSUB+GSUB-i7.GKPE-i.E.BFpe-i8.Bpe

(2') Ipe = Spe+dGKPE+dBpe+E.dBFpe+dCBSpe+dDCpe

Table 12

ZIMBABWE

T-Table for Central Bank
Millions of Zimbabwe dollars, and as % of GDP

Sources | Uses

Capital Account

Asset Changes	1987	1987 %	Asset Changes	1987	1987 %
Increase in vault cash	-7.00	-0.07	Lending to Govt.	215.00	2.21
Increase in BS deposits	78.00	0.80	Lending to BS	83.00	0.85
Increase in Currency	10.00	0.10	Lending to PR	-125.00	-1.29
Increase in PR deposits	249.00	2.56	Lending to LG & Par.	78.00	0.80
Foreign borrowing	-26.00	-0.27	Accumulation of net reserves	53.00	0.55
Total CB Sources	304.00	3.13	Total CB Uses	304.00	3.13

(3') dDCg+dDCbs+dDCpr+E.dRcb+dDCps ≡ dHbs+dDBBScb+dHpr+dDBPRcb+E.dNFBcb

Table 13

ZIMBABWE

T-Table for Banking System
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Capital Account					
Asset Changes	1987	1987 %	Asset Changes	1987	1987 %
Borrowing from CB	83.00	0.85	Lending to Govt.	-22.00	-0.23
Increase in Demand Deposits	85.00	0.87	Accumulation of Vault Cash	-7.00	-0.07
Increase in Quasi-Money	313.00	3.22	Accumulation of deposits at CB	78.00	0.80
Borrowing from ROW	0.00	0.00	Lending to Private Sector	334.00	3.43
			Accum. of net foreign reserves	8.00	0.08
			Lending to LG & Par.	90.00	0.93
Total BS Sources	481.00	4.95	Total BS Uses	481.00	4.95

(4') dCBSg+dMbs+dOBScb+dCBSpr+E.dRbs+dCBSpe = dDCbs+dDEPpr+dQMON+E.dNFBbs

Table 14

ZIM3ABWE

T-Table for the Non-Financial Private Sector
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1987	1987 %		1987	1987 %
Non Interest			**Non Interest**		
Factor income	8058.00	82.87	Consumption of PR	5558.00	57.16
Transfers from Govt.	531.00	5.46	Direct Taxes	1507.00	15.50
Net transfers from abroad	-42.00	-0.43	Profit remittances to ROW	98.00	1.01
Workers' remittances	5.00	0.05	Savings of PR	1932.00	19.87
Interest			**Interest**		
Interest rec'd. from Govt.	351.00	3.61	Interest paid to Govt.	0.00	0.00
Interest on foreign assets	55.00	0.57	Interest paid to ROW	0.00	0.00
Interest rec'd. fr.LG & Par.	137.00	1.41			
Total CA Priv. Sources	9095.00	93.53	Total CA Priv. Uses	9095.00	93.53

Capital Account					
	1987	1987 %		1987	1987 %
Investment/Saving			**Investment/Saving**		
Savings of PR	1932.00	19.87	Private Investment	791.00	8.13
Asset Changes			**Asset Changes**		
Borrowing from Govt.	12.00	0.12	Lending to Govt.	613.00	6.30
Borrowing from CB	-125.00	-1.29	Accumulation of Currency	10.00	0.10
Borrowing from BS	334.00	3.43	Deposits at CB	249.00	2.56
Direct foreign investment	-40.00	-0.41	Demand deposits with BS	85.00	0.87
Borrowing from ROW	-1.00	-0.01	Savings deposits with BS	313.00	3.22
			Accumulation of Foreign Assets	0.00	0.00
			Lending to LG & Par.	51.00	0.52
Total Priv. Sources	2112.00	21.72	Total Priv. Uses	2112.00	21.72

(5) Spr = +PRFY+GTR+i3.Bg+E.NTRPR+E.WREM+i.E.Rpr+i8.Bpe-Cpr-i6.GKTR
-TDpr-r.E.DFI-i.E.BFpr

(5') dBg+dHpr+dDBPRcb+dCEPpr+dQMON+E.dRpr+Ipr+dBpe = Spr+dGKTR+dDCpr
+dCBSpr+E.dDFI+e.dBFpr

Table 15

ZIMBABWE

T-Table for The Rest of the World (ROW)
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1987	1987 %		1987	1987 %
Non Interest			Non Interest		
Paym. for Govt.Consump.Imports	277.00	2.85	Payments for Exports	2681.00	27.57
Profit remittances	98.00	1.01	Net Transfers to Govt.	0.00	0.00
Paym. for PR Consump. Imports	760.00	7.82	Net transfers to PR	-42.00	-0.43
Paym. for intermediate Imports	668.00	6.87	Workers' remittances	5.00	0.05
Paym.for Govt. Investm.Imports	127.00	1.31	Savings of ROW	39.00	0.40
Paym.for PR Investment Imports	280.00	2.88			
Paym.for LG & Par.Investm.Imp.	229.00	2.36			
			Interest		
Interest			Interest on net PR reserves	55.00	0.57
Interest rec'd. from Govt.	226.00	2.32			
Interest rec'd. from PR	0.00	0.00			
Interest rec'd. fr. LG & Par.	73.00	0.75			
Total CA ROW Sources	2738.00	28.16	Total CA ROW Uses	2738.00	28.16

Capital Account					
	1987	1987 %		1987	1987 %
Investment/Saving			Investment/Saving		
Saving of ROW	39.00	0.40			
Asset Changes			Asset Changes		
Increase in CB net-reserves	53.00	0.55	Inc. in Govt. for.borrowing	158.00	1.62
Increase in BS net reserves	8.00	0.08	Inc. in CB for. borrowing	-26.00	-0.27
Increase in PR net reserves	0.00	0.00	Inc. in BS for. borrowing	0.00	0.00
			Inc. in PR for. reserves	-1.00	-0.01
			Inc. in LG & Par. borrowing	-111.00	-1.14
			Direct Foreign Investment	-40.00	-0.41
			Capital Grants from ROW	120.00	1.23
Total ROW Sources	100.00	1.03	Total ROW Uses	100.00	1.03

(6) $Sf = i.E.BFg+i.E.BFpe+E.Mg+r.E.DFI+i.E.BFpr+E.Mpr+E.MINT+E.Igm+E.Ipm+E.Iem-E.XGNFS-E.NTRGO-E.NTRPR-E.WREM-i.E.Rpr$

(6') $E.dBFg+E.dNFBcb+E.dNFBbs+E.dBFpr+E.dDFI+E.dBFpe+E.dKTG = Sf+E.dRcb+E.dRbs+E.dRpr$

Table 16

ZIMBABWE

T-Table for the National Accounts
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account.					
	1987	1987 %		1987	1987 %
Central Govt. Consumption	2031.00	20.89	Government Value Added	152.00	1.56
Private Consumption	5558.00	57.16	PR Value Added	8058.00	82.87
Central Govt. Investment	351.00	3.61	LG & Par. Value Added	498.00	5.12
Private Investment	791.00	8.13	Indirect Taxes	1366.00	14.05
LG & Par. Investment	653.00	6.72	Less:		
Exports of GNFS	2681.00	27.57	Subsidies	350.00	3.60
Less:					
Central Govt.Consumption	277.00	2.85			
Priv. Consumption Imports	760.00	7.82			
Central Govt.Invest.Imports	127.00	1.31			
Priv. Investment Imports	280.00	2.88			
LG & Par. Invest. Imports	229.00	2.35			
Intermediate goods Imports	668.00	6.87			
Total NA Sources	9724.00	100.00	Total NA Uses	9724.00	100.00

(7) GDP = Cg+Cpr+Ig+Ipr+Ipe+E.(XGNFS-Mg-Mpr-Igm-Ipm-Iem-MINT)

(7') GDP = GFY+PRFY+PEFY+TI-GSUB

MATRIX III
ZIMBABWE

CONSISTENCY FRAMEWORK
(Millions of Zimbabwe dollars, 1981 prices)

	CURRENT ACCOUNT										CAPITAL ACCOUNT							
	1981 National Accounts		1981 Government		1981 Local Gov.& Parastat.	1981 Central Bank	1981 Banking System		1981 Non Fin. Priv.Sect.		1981 External Sector		1981 Government		1981 Local Gov.& Parastat.		1981 Central Bank		1981 Banking System
National Accounts		Cg -E.Mg	684.00 118.00					Cpr -E.Mpr	3046.00 536.00	E.XGNFS -E.MINT	1097.00 454.00	Ig -E.Igm	135.00 41.00	Ips -E.Iem	351.00 106.00				
Government	GFY TI	53.00 456.00			i7.GKPE	21.00		i6.GKTR TDpr	0.00 538.00	E.NTRGG	0.00								
LG & Parastatals	PEFY GSUB	108.00 -122.00	GSUB	122.00															
Central Bank																			
Banking System																			
Non Fin.Priv.Sect.	PRFY	3938.00	GTR i3.Bg	288.00 8.00	i8.Bps	42.00				E.NTRPR E.WREM i.E.Rpr	-92.00 81.00 0.00								
External Sector			i.E.BFg E.Mg	113.00 118.00	i.E.BFps	2.00		r.E.DFI i.E.BFp E.Mpr	79.00 0.00 536.00	E.MINT	454.00	E.Igm	41.00	E.Iem	106.00				
SAVINGS & BORROWING																			
Government			Sg	-147.00												dDCg	75.00	dCBSg	0.00
LG & Parastatals					Sps	43.00						dGKPE	78.00			dDCps	86.00	dCBSps	-160.00
Central Bank																		dHbs dDBBScb	3.00 31.00
Banking System																dDCbs	4.00		
Non Fin.Priv.Sect.								Spr	602.00			dGKTR	3.00			dDCpr	75.00	dCBSpr	298.00
External Sector										Sf	528.00					E.dRcb	-120.00	E.dRbs	-5.00
Total Saving			Sg	-147.00	Sps	43.00		Spr	602.00	Sf	528.00								
Total Uses	GDP	4438.00	Total Uses	1068.00	Total Uses	108.00		Total Uses	4266.00	Total Uses	1614.00	Asset Accum.	216.00	Asset Accum.	351.00	Asset Accum.	120.00	Asset Accum.	167.00

	1981 Non Fin. Priv.Sect.		1981 External Sector		1981 Investment		1981 Total Sources
Ipr	540.00						GDP
-E.Ipe	185.00			Subtotal I	714.00		4433.00
							Gross Government Income
							1068.00
							Gross LG & Parastat. Income
							108.00
							Gross PR Income
							4265.00
							Gross ROW Income
E.Ips	185.00			Tot.Int.Imp	312.00		1614.00
		E.dKTG	15.00				Borrowing + Saving of Govt.
dBg	155.00	E.dBFg	118.00				216.00
							Borrowing + Sav. of LG & Par.
dBpe	181.00	E.dBFpe	123.00				351.00
dHpr	41.00						Borrowing + Saving of CB
dDBPRcb	-79.00	E.dNFBcb	124.00				120.00
dDEPpr	32.00						Borrowing + Saving of BS
dQHDN	131.00	E.dNFBbs	0.00				167.00
		E.dBFpr	37.00				Borrowing + Saving of PR
		E.dDFI	-14.00				1001.00
							Borrowing + Saving of ROW
E.dRpr	0.00						403.00
							Total Saving
							1026.00
Asset Accum.	1001.00	Asset Accum.	403.00	Total Investment	1026.00		

liability holdings are denoted by lower case letters. In addition to the interest and non-interest sources and uses of the current account (defined in equation (1), there now appears a relative price change term for each aggregate demand component. In the capital account, there is an additional relative price change term for investment (as compared to equation (1')). The capital account also introduces the capital gain and loss terms attributable to domestic inflation and nominal exchange rate devaluation.[7]

Again, the six sectors' budget identities (exemplified for the central government in Table 1) can be succinctly presented in the form of a summary matrix (see Matrix II). Matrix II is the "real terms" counterpart of Matrix I, and depicts explicitly the relative price loss items and the capital gain/loss items. For example, line 1 [8] of Matrix I, when divided through by P, can be decomposed into lines 1 and 2 of Matrix II using the procedure described above. Line 1 of Matrix II thus shows the GDP-expenditure identity in real or quantum terms (that is, in terms of quantities valued at unit base-period prices). Line 2 shows the sum of the relative price loss terms, which must sum to zero to ensure that the GDP-expenditure identity holds in both nominal and quantum terms.

The bottom right-hand submatrix in Matrix II likewise splits deflated nominal changes in financial assets into real changes (the number of units of GDP a unit of the asset can command at the end of this year versus what it could command at the end of last year) and capital gains or losses.

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[7] Tables 1-6 in Khadr and Schmidt-Hebbel (1989) present the budget identities of the six sectors. As mentioned above, the only methodological difference between those tables and Table 1 of this paper is the distinction between average-period and end-of-period deflators in the capital gains and losses terms of the former paper.

[8] Again, the line should be read all the way across when the two portions of the matrix are put side by side.

TABLE 1

SOURCES AND USES OF FUNDS: CENTRAL GOVERNMENT
(In real terms)

ACCOUNTS	SOURCES	USES
1. Current Account		
1.1 Non-Interest	GFY_t/P_t	c_{Gt}
	TI_t/P_t	GTR_t/P_t
	$(E_t/P_t)\ NTRGO_t$	$GSUB_t/P_t$
1.2 Interest	$i_{Gt}\ GKTR_{t-1}/P_t$	$i_{3t}\ B_{Gt-1}/P_t$
	$i_{7t}\ GKPL_{t-1}/P_t$	$(E_t/P_t)\ i^*_t\ BF_{Gt-1}$
1.3 Consumption Relative Price Change		$[(P_{Ct} - P_t)/P_t]\ c_{Gt}$
2. Capital Account		
2.1 Investment		in_{Gt}
2.2 Investment Relative Price Change		$[(P_{INt} - P_t)/P]\ in_{Gt}$
2.3 Capital Grants	$(E_t/P_t)\ KTG_t$	
2.4 Real Financial Wealth Changes	$dc_{Gt} - dc_{Gt-1}$	$gktr_t - gktr_{t-1}$
	$cbs_{Gt} - cbs_{Gt-1}$	$gkpl_t - gkpl_{t-1}$
	$b_{Gt} - b_{Gt-1}$	
	$bf_{Gt} - bf_{Gt-1}$	
2.5 Real Financial Wealth Gains and Losses	$[\pi_t/(1 + \pi_t)]\ (dc_{Gt-1} +$	$[\pi_t/(1 + \pi_t)]$
	$+ cbs_{Gt-1} + b_{Gt-1} + bf_{Gt-1})$	$(gktr_{t-1} + gkpl_{t-1})$
	$[(\pi_t - \epsilon_t)/1 + \pi_t)]\ bf_{t-1G}$	

MATRIX II: REAL MACROECONOMIC AND FINANCIAL FLOWS FOR A 6-SECTOR ECONOMY
CURRENT ACCOUNT

	National Accounts	Central Government (G)	Public Enterprises and Local Government (PL)	Central Bank (CB)	Banking System (BS)	Non-Financial Private Sector (PR)	External Sector (F)
National Accounts		$c_G - mc_G$ $C_G (P_C - P)/P$ $- mc_G (P_{MC} - P)/P$				$c_{PR} - mc_{PR}$ $c_{PR} (P_C - P)/P$ $- mc_{PR} (P_{MC} - P)/P$	$xgnfs - mint_{PR}$ $xgnfs (P_X - P)/P$ $mint_{PR} (P_{MINT} - P)/P$
Central Government	(GFY + TI)/P					i_6 GKTR/P	
P. E. and L. G.	(PLFY + GSUB)/P	- GSUB/P					
Central Bank							
Banking System							
Non-Financial Private Sector	PRFY/P	GTR/P $i_3 B_G/P$	$i_8 B_{PL}/P$				(E/P) NTRPR (E/P) WREM (E/P) $i^* R_{PR}$
External Sector		(E/P) $i^* BF_G$ $mc_G (P_{MC} - P)/P$	(E/P) $i^* BF_{PL}$			(E/P) rr FK (E/P) $i^* BF_{PR}$ $mc_{PR} + mc_{PR}(P_{MC} - P)/P$	$mint_{PR}$ $mint_{PR}(P_{MINT} - P)/P$
SAVING & BORROWING							
Central Government		s_G					
Public Enterprises and Local Government			s_{PL}				
Central Bank				$s_{CB} = 0$			
Banking System					$s_{BS} = 0$		
Non-Financial Private Sector						s_{PR}	
External Sector							s_F
Total Saving		s_G	s_{PL}	$s_{CB} = 0$	$s_{BS} = 0$	s_{PR}	s_F
Total Uses	y	Total Uses	Total Uses	T. Uses = 0	T. Uses = 0	Total Uses	Total Uses

MATRIX II NOMINAL MACROECONOMIC AND FINANCIAL FLOWS FOR A 6-SECTOR ECONOMY
CAPITAL ACCOUNT

	Central Government	Public Enterprises and Local Government	Central Bank	Banking System	Non-Financial Private Sector	External Sector	Investment	Total Sources
National Accounts	$in_G - mi_G$ $in_G (P_I - P)/P$ $-mi_G(P_{MI} - P)/P$	$in_{PL} - mi_{PL}$ $in_{PL}(P_I - P)/P$ $-mi_{PL}(P_{MI} - P)/P$			$in_{PR} - mi_{PR}$ $in_{PR} (P_I - P)/P$ $mi_{PR} (P_{MI} - P)/P$		Subtot. Inv.	y 0
Central Government								Gross Income
P. E. and L. G.								Gross PL Income
Central Bank								Gross CB Income = 0
Banking System								Gross BS Income = 0
Non-Financial Private Sector								Gross PR Income
External Sector	mi_G $mi_G(P_{MI} - P)/P$	mi_{PL} $mi_{PL} (P_{MI} - P)/P$			mi_{PR} $mi_{PR} (P_{MI} - P)/P$		Import Inv.	Gross F Income
SAVINGS & BORROWING								
Central Government			ddc_G $\pi/(1 + \pi)\ dc_G$	$dcba_G$ $\pi/(1 + \pi) cba_G$	db_G $\pi/(1 + \pi) b_G$	(E/P)KTG $dbgf_G$ $(\pi-\epsilon)/(1 + \pi) bf_G$		dRL C. Bor. CLL + Saving
Public Enterprises and Local Government	$dgkpl$ $\pi/(1 + \pi)$ $gkpl$		ddc_{PL} $\pi/(1 + \pi)$ dc_{PL}	$dcba_{PL}$ $\pi\ cba_{PL}$	db_{PL} $\pi/(1 + \pi)\ b_{PL}$	dbf_{PL}	$(\pi-\epsilon)bf_{PL}$	dRL PL Bor. CLL + Saving
Central Bank				dh_{BS} $ddbba_{CB}$ $\pi\ h_{BS}$ $\pi\ dbba_{CB}$	dh_{PR} $ddbba_{CB}$ $\pi\ h_{PR}$ $\pi\ dbba_{CB}$	$dnfb_{CB}$ $(\pi-\epsilon)nfb_{CB}$		dRL CB Bor. CLL + Saving
Banking System $dnfb$			ddc^{BS}		$ddep_{PR}$ $\pi/(1 + \pi)$			
Non-Financial Private Sector	$dgktr$ $\pi/(1 + \pi)$		ddc_{PR} $\pi\ dc_{PR}$	$dcba_{PR}$ $\pi\ cba_{PR}$		dbf_{PR} $(\pi-\epsilon)bf_{PR}$ dfk $(\pi-\epsilon)fk$		dRL PR Bor. CLL + Saving
External Sector			dr_{CB} $(\pi-\epsilon)r_{CB}$	dr_{BS} $(\pi-\epsilon)r_{BS}$	dr_{PR} $\pi\ r_{PR}$			dRL F Bor. CLL + Saving
Total Saving								Total
Total Uses	dRA CLA Asset Accum	dRA CLA Asset Accum.	dRA CLA Asset Accum.	dRA CLA Asset Accum.	dRA CLA Asset Accum.	dRA CLA Asset Accum.	Total Investment	

II.3 Balance Sheets and Net Wealth Definitions

This section briefly introduces the stock balance sheets and the corresponding definitions of net wealth for each sector. Table 2 introduces the balance sheet for the central government, consistent with the corresponding budget constraint in real terms of Table 1. It defines government real wealth as the sum of financial wealth (fw) and non-financial wealth.[9] In all but the private sector, non-financial wealth consists of non-human wealth (nhw) or the valued capital stock. For the private sector, a second component of non-financial wealth is human wealth (hw).

Naturally all financial and physical capital variables which comprise net wealth should be consistent with the corresponding flows and stocks appearing in the flow real budget constraints of Tables 1 - 6. One difference which stems from the fact that balance sheets are by definition on an accrual basis is that the real cash flows of the flow budget constraints adjust the changes in real wealth components by the corresponding capital gains and losses.

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9 This Table is identical to Table 7 in Khadr and Schmidt-Hebbel (1989). The balance sheets for the remaining five sectors are in Tables 8-12 of that paper.

TABLE 2

BALANCE SHEET: CENTRAL GOVERNMENT
(In real terms, at end of period)

WEALTH COMPONENTS	ASSETS	LIABILITIES
1. Financial Wealth		
(fw_{Gt})	$gktr_t$	dc_{Gt}
	$gkpl_t$	cbs_{Gt}
		b_{Gt}
		bf_{Gt}
2. Non-Financial Wealth		
2.1 Non-Human Wealth		
(nhw_{Gt})	$(P_{KGt}/P_t)\ K_{Gt}$	
3. Net Wealth		nw_{Gt}

III. APPLICATION TO ZIMBABWE

This section presents an application of the methodological framework outlined in the preceding section for Zimbabwe for the years 1981 and 1987. The year 1987 was chosen in order to construct the most recent snapshot of resource transfers in the Zimbabwean economy permitted by data availability. 1981 was chosen as a comparison year because, as explained below, it exhibits a significantly different pattern of resource transfers among the different accounts in the economy.

Subsection III.1 outlines the consistency framework in nominal (that is, current Z$) terms for 1981 and 1987. Subsection III 2 outlines the consistency framework in real (1980 Z$) terms. As explained in the preceding section, the the methodology employed here permits (i) a split of deflated nominal expenditure components into quantity changes and relative price gains/losses, using deflators for the different components of the national accounts; and (ii) a decomposition of deflated nominal asset/liability changes into differences in real stocks and capital gains/losses on these asset/liability stocks.

Subsection III.3 presents briefly financial wealth stocks for the different accounts in the economy for the years 1980 and 1986. Notes and references on data sources appear in Appendix II at the end of the paper.

III.1 Macroeconomic and financial flows in nominal terms for 1981 and 1987

Tables 3 - 9 depict, in "T-tabular" form, the items in the nominal budget constraints for the different accounts for 1981. Tables 10 - 16 present the same information for 1987. Each set of 7 tables comprises the six sectors' T-tables and a table for the national accounts, which is a residual account once the six sectors' budget identities are satisfied. Table 3 for instance, shows the items

in identities (1) and (1') for 1981. Current account sources (uses) in Table 3 appear in identity (1) with a positive (negative) sign. Capital account sources (uses) in Table 13 appear in identity (1') with a negative (positive) sign. For convenience, central government saving appears as a "use" above the line and a "source" below the line.

Analytical insights are more easily drawn from the summary matrices. Matrix III summarizes the matrix of 1981 macroeconomic and financial flows in absolute (that is, current Z$) terms. Matrix IV presents the same information in terms of percentages of (nominal) GDP. Matrix V and Matrix VI are the counterparts of Matrix III and Matrix IV for 1987.

In comparing the structure of nominal flows across the two years, the most striking difference appears in the way that the excess of investment in the central government account and the local government and parastatals account over their respective savings is "absorbed" by an excess of private saving over private investment on the one hand versus foreign saving (i.e., a current account deficit) on the other.

In 1981, the excess of central government investment over its saving amounted to 6.36 percent of GDP. For LG & parastatals, the excess amounted to 6.95 percent. The corresponding resource transfers were an excess of private saving over private investment (1.4 percent) and a current account deficit in the balance of payments (11.91 percent). In 1987, the picture is considerably different. The excess of government investment over saving (7.74 percent of GDP) and the excess of LG & parastatal saving over investment (4.4 percent) are balanced by a much more substantial excess of private saving over investment (11.74 percent) and a negligible current account deficit (0.4 percent).

Table 3

ZIMBABWE

T-Table for the Non Financial Public Sector (Government)
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1981	1981 %		1981	1981 %
Non Interest			**Non Interest**		
Government Value Added	53.00	1.20	Government Consumption	684.00	15.43
Indirect Taxes	456.00	10.29	Govt. Transfers to PR	288.00	6.50
Direct Taxes from PR	538.00	12.14	Government Saving	-147.00	-3.32
Transfers to Govt. fr.Abr.	0.00	0.00	Subsidies	122.00	2.75
Interest			**Interest**		
Interest rec'd. from PR	0.00	0.00	Interest Payments to ROW	113.00	2.55
Interest rec'd.fr. LG&Par.	21.00	0.47	Interest Payments to PR	8.00	0.18
Total CA Gov. Sources	1068.00	24.09	Total CA Gov. Uses	1068.00	24.09

Capital Account					
	1981	1981 %		1981	1981 %
Investment/Saving			**Investment/Saving**		
Government Saving	-147.00	-3.32	Investment of Govt.	135.00	3.05
Asset Changes			**Asset Changes**		
Borrowing from CB	75.00	1.69	Inc.in direct lending to PR	3.00	0.07
Borrowing from BS	0.00	0.00	Inc. in lending to LC & Par	78.00	1.76
Borrowing from PR	155.00	3.50			
Borrowing from ROW	118.00	2.66			
Capital Grants from ROW	15.00	0.34			
Total Gov. Sources	216.00	4.87	Total Gov. Uses	216.00	4.87

Note: Lower case d denotes a first difference.

(1) $Sg=GFY+TI-GSUB+TDpr+E.NTRGO+i6.GKTR+i7.GKPE-Cg-i3.Bg-GTR-Ei.BFg$

(1') $Ig+dGKTR+dGKPE=Sg+dDCg+dCBSg+dBg+E.dBFg+E.dKTG$

Table 4

ZIMBABWE

T-Table for Local Government and Parastatals
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1981	1981 %		1981	1981 %
Non Interest			**Non Interest**		
Value Added	108.00	2.44	Local Govt.& Parast.Saving	43.00	0.97
Subsidies from Central Govt.	122.00	2.75			
Less					
Subsidies from Central Govt.	122.00	2.75			
Interest			**Interest**		
			Int. paid to Central Govt.	21.00	0.47
			Int. paid to PR	42.00	0.95
			Int. paid to ROW	2.00	0.05
Total CA LG & Par. Sources	108.00	2.44	Total CA LG & Par. Uses	108.00	2.44

Capital Account					
	1981	1981 %		1981	1981 %
Investment/Saving			**Investment/Saving**		
Saving	43.00	0.97	Investment	351.00	7.92
Asset Changes			**Asset Changes**		
Capital transfers from CG	78.00	1.76			
Borrowing from PR	181.00	4.08			
Borrowing from ROW	123.00	2.77			
Borrowing from BS	-160	-3.61			
Borrowing from Central Bank	86.00	1.94			
Total LG & Par. Sources	351.00	7.92	Total LG & Par. Uses	351.00	7.92

(2) $Spe = PEFY-GSUB+GSUB-i7.GKPE-i.E.BFpe-i8.Bpe$

(2') $Ipe = Spe+dGKPE+dBpe+E.dBFpe+dCBSpe+dDCpe$

Table 5

ZIMBABWE

T-Table for Central Bank
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Capital Account					
	1981	1981 %		1981	1981 %
Asset Changes			**Asset Changes**		
Increase in vault cash	3.00	0.07	Lending to Govt.	75.00	1.69
Increase in BS deposits	31.00	0.70	Lending to BS	4.00	0.09
Increase in Currency	41.00	0.92	Lending to PR	75.00	1.69
Increase in PR deposits	-79.00	-1.78	Lending to LG & Par.	86.00	1.94
Foreign borrowing	124.00	2.80	Accumulation of net reserves	-120.00	-2.71
Total CB Sources	120.00	2.71	Total CB Uses	120.00	2.71

• (3') dDCg+dDCbs+dDCpr+E.dRcb+dDCpe ≡ dHbs+dDBBScb+dHpr+dDBPRcb+E.dNFBcb •

Table 6

ZIMBABWE

T-Table for Banking System
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Capital Account					
	1981	1981 %		1981	1981 %
Asset Changes			Asset Changes		
Borrowing from CB	4.00	0.09	Lending to Govt.	0.00	0.00
Increase in Demand Deposits	32.00	0.72	Accumulation of Vault Cash	3.00	0.07
Increase in Quasi-Money	131.00	2.96	Accumulation of deposits at CB	31.00	0.70
Borrowing from ROW	0.00	0.00	Lending to Private Sector	298.00	6.72
			Accum. of net foreign reserves	-5.00	-0.11
			Lending to LG & Par.	-160.00	-3.61
Total BS Sources	167.00	3.77	Total BS Uses	167.00	3.77

(4') dCBSg+dHbs+dDBBScb+dCBSpr+E.dRbs+dCBSps = dDCbs+dDEPpr+dQMON+E.dNFBbs

Table 7

ZIMBABWE

T-Table for the Non-Financial Private Sector
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1981	1981 %		1981	1981 %
Non Interest			Non Interest		
Factor income	3938.00	88.88	Consumption of PR	3048.00	68.71
Transfers from Govt.	288.00	6.50	Direct Taxes	538.00	12.14
Net transfers from abroad	-92.00	-2.08	Profit remittances to ROW	79.00	1.78
Workers' remittances	81.00	1.83	Savings of PR	602.00	13.58
Interest			Interest		
Interest rec'd. from Govt.	8.00	0.18	Interest paid to Govt.	0.00	0.00
Interest on foreign assets	0.00	0.00	Interest paid to ROW	0.00	0.00
Interest rec'd. fr.LG & Par.	42.00	0.95			
Total CA Priv. Sources	4265.00	96.21	Total CA Priv. Uses	4265.00	96.21
Capital Account					
	1981	1981 %		1981	1981 %
Investment/Saving			Investment/Saving		
Savings of PR	602.00	13.58	Private Investment	540.00	12.18
Asset Changes			Asset Changes		
Borrowing from Govt.	3.00	0.07	Lending to Govt.	155.00	3.50
Borrowing from CB	75.00	1.69	Accumulation of Currency	41.00	0.92
Borrowing from BS	298.00	6.72	Deposits at CB	-79.00	-1.78
Direct foreign investment	-14.00	-0.32	Demand deposits with BS	32.00	0.72
Borrowing from ROW	37.00	0.83	Savings deposits with BS	131.00	2.96
			Accumulation of Foreign Assets	0.00	0.00
			Lending to LG & Par.	181.00	4.08
Total Priv. Sources	1001.00	22.58	Total Priv. Uses	1001.00	22.58

(5) $Spr = +PRFY+GTR+i3.Bg+E.NTRPR+E.WREM+i.E.Rpr+i8.Bpe-Cpr-i6.GKTR -TDpr-r.E.DFI-i.E.BFpr$

(5') $dBg+dHpr+dDBPRcb+dDEPpr+dQMON+E.dRpr+Ipr+dBpe = Spr+dGKTR+dDCpr +dCBSpr+E.dDFI+e.dBFpr$

Table 8

ZIMBABWE

T-Table for The Rest of the World (ROW)
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1981	1981 %		1981	1981 %
Non Interest			Non Interest		
Paym. for Govt.Consump.Imports	118.00	2.86	Payments for Exports	1097.00	24.75
Profit remittances	79.00	1.78	Net Transfers to Govt.	0.00	0.00
Paym. for PR Consump. Imports	536.00	12.09	Net transfers to PR	-92.00	-2.08
Paym. for Intermediate Imports	454.00	10.24	Workers' remittances	81.00	1.83
Paym.for Govt. Investm.Imports	41.00	0.92	Savings of ROW	528.00	11.91
Paym.for PR Investment Imports	165.00	3.72			
Paym.for LG & Par.Investm.Imp.	106.00	2.39			
			Interest		
Interest			Interest on net PR reserves	0.00	0.00
Interest rec'd. from Govt.	113.00	2.55			
Interest rec'd. from PR	0.00	0.00			
Interest rec'd. fr. LG & Par.	2.00	0.05			
Total CA ROW Sources	1614.00	36.41	Total CA ROW Uses	1614.00	36.41

Capital Account					
	1981	1981 %		1981	1981 %
Investment/Saving			Investment/Saving		
Saving of ROW	528.00	11.91			
Asset Changes			Asset Changes		
Increase in CB net reserves	-120.00	-2.71	Inc. in Govt. for.borrowing	118.00	2.66
Increase in BS net reserves	-5.00	-0.11	Inc. in CB for. borrowing	124.00	2.80
Increase in PR net reserves	0.00	0.00	Inc. in BS for. borrowing	0.00	0.00
			Inc. in PR for. reserves	37.00	0.83
			Inc. in LG & Par. borrowing	123.00	2.77
			Direct Foreign Investment	-14.00	-0.32
			Capital Grants from ROW	15.00	0.34
Total ROW Sources	403.00	9.09	Total ROW Uses	403.00	9.09

(6) $Sf = i.E.BFg+i.E.BFpe+E.Mg+r.E.DFI+i.E.BFpr+E.Mpr+E.MINT+E.Igm+E.Ipm+E.Iem-E.XGNFS-E.NTRGO-E.NTRPR-E.WREM-i.E.Rpr$

(6') $E.dBFg+E.dNFBcb+E.dNFBbs+E.dBFpr+E.dDFI+E.dBFpe+E.dKTG = Sf+E.dRcb+E.dRbs+E.dRpr$

Table 9

ZIMBABWE

T-Table for the National Accounts
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1981	1981 %		1981	1981 %
Central Govt. Consumption	684.00	15.43	Government Value Added	53.00	1.20
Private Consumption	3046.00	68.71	PR Value Added	3938.00	88.83
Central Govt. Investment	135.00	3.05	LG & Par. Value Added	108.00	2.44
Private Investment	540.00	12.18	Indirect Taxes	456.00	10.29
LG & Par. Investment	351.00	7.92	Less:		
Exports of GNFS	1097.00	24.75	Subsidies	122.00	2.75
Less:					
Central Govt.Consumption	118.00	2.66			
Priv. Consumption Imports	536.00	12.09			
Central Govt.Invest.Imports	41.00	0.92			
Priv. Investment Imports	165.00	3.72			
LG & Par. Invest. Imports	106.00	2.39			
Intermediate goods Imports	454.00	10.24			
Total NA Sources	4433.00	100.00	Total NA Uses	4433.00	100.00

(7) GDP = Cg+Cpr+Ig+Ipr+Ipe+E.(XGNFS-Mg-Mpr-Igm-Ipm-Iem-MINT)

(7') GDP = GFY+PRFY+PEFY+TI-GSUB

Table 10

ZIMBABWE

T-Table for the Non Financial Public Sector (Government)
Millions of Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	1987	1987 %		1987	1987 %
Non Interest			**Non Interest**		
Government Value Added	152.00	1.56	Government Consumption	2031.00	20.89
Indirect Taxes	1369.00	14.05	Govt. Transfers to PR	531.00	5.46
Direct Taxes from PR	1507.00	15.50	Government Saving	-402.00	-4.13
Transfers to Govt. fr.Abr.	0.00	0.00	Subsidies	350.00	3.60
Interest			**Interest**		
Interest rec'd. from PR	0.00	0.00	Interest Payments to ROW	226.00	2.32
Interest rec'd.fr. LG&Par.	62.00	0.64	Interest Payments to PR	351.00	3.61
Total CA Gov. Sources	3087.00	31.75	Total CA Gov. Uses	3087.00	31.75

Capital Account					
	1987	1987 %		1987	1987 %
Investment/Saving			**Investment/Saving**		
Government Saving	-402.00	-4.13	Investment of Govt.	351.00	3.61
Asset Changes			**Asset Changes**		
Borrowing from CB	215.00	2.21	Inc.in direct lending to PR	12.00	0.12
Borrowing from BS	-22.00	-0.23	Inc. in lending to LC & Par	319.00	3.28
Borrowing from PR	613.00	6.30			
Borrowing from ROW	158.00	1.62			
Capital Grants from ROW	120.00	1.23			
Total Gov. Sources	682.00	7.01	Total Gov. Uses	682.00	7.01

Note: Lower case d denotes a first difference.

(1) Sg=GFY+TI-GSUB+TDpr+E.NTRGO+i6.GKTR+i7.GKPE-Cg-i3.Bg-GTR-Ei.BFg

(1') Ig+dGKTR+dGKPE=Sg+dDCg+dCBSg+dBg+E.dBFg+E.dKTG

MATRIX IV
ZIMBABWE

CONSISTENCY FRAMEWORK
(As a percent of GDP)

	CURRENT ACCOUNT									CAPITAL ACCOUNT					
	1981 National Accounts %		1981 Government %		1981 Local Gov.& Parastat. %	1981 Central Bank %	1981 Banking System %	1981 Non Fin. Priv.Sect. %		1981 External Sector %		1981 Government %	1981 Local Gov.& Parastat. %	1981 Central Bank %	1981 Banking System %
National Accounts		Cg -E.Mg	15.43 2.66				Cpr -E.Mpr	68.71 12.09	E.XGNFS -E.MINT	24.75 10.24	Ig -E.Igm	3.05 0.92	Ipe -E.Iem	7.92 2.39		
Government	GFY TI	1.20 10.29		i7.GKPE	0.47		i6.GKTR TDpr	0.00 12.14	E.NTRGO	0.00						
LG & Parastatals	PEFY GSUB	2.44 -2.75	GSUB	2.75												
Central Bank																
Banking System																
Non Fin.Priv.Sect.	PRFY	88.63	GTR i3.Bg	6.50 0.18	i8.Bpe	0.95			E.NTRPR E.WREM i.E.Rpr	-2.08 1.83 0.00						
External Sector			i.E.BFg E.Mg	2.55 2.66	i.E.BFpe	0.05	r.E.DFI i.E.BFp E.Mpr	1.78 0.00 12.09	E.MINT	10.24	E.Igm	0.92	E.Iem	2.39		
SAVINGS & BORROWING																
Government			Sg	-3.32									dDCg	1.69	dCBSg	0.00
LG & Parastatals				Spe	0.97						dGKPE	1.76	dDCpe	1.94	dCBSpe	-3.61
Central Bank															dHbe dDBScb	0.07 0.70
Banking System													dDCbs	0.09		
Non Fin.Priv.Sect.							Spr	13.58			dGKTR	0.07	dDCpr	1.69	dCBSpr	6.72
External Sector									Sf	11.91			E.dRcb	-2.71	E.dRbe	-0.11
Total Saving			Sg	-3.32	Spe	0.97	Spr	13.58	Sf	11.91						
Total Uses	GDP	100.00	Total Uses	24.09	Total Uses	2.44	Total Uses	96.21	Total Uses	36.41	Asset Accum.	4.87	Asset Accum.	7.92	Asset Accum.	2 71	Asset Accum.	3.77

1981 Non Fin. Priv.Sect. $		1981 External Sector $		1981 Investment $		1981 Total Sources $
Ipr	12.18					GDP
-E.Ipm	3.72			Subtotal I	16.11	100.00
						Gross Government Income
						24.09
						Gross LG & Parastat. Income
						2.44
						Gross PR Income
						96.21
						Gross ROW Income
E.Ipm	3.72			Tot.Int.Imp	7.04	36.41
		E.dKTG	0.34			Borrowing + Saving of Govt.
dBg	3.50	E.dBFg	2.66			4.87
dBpe	4.08	E.dBFpe	2.77			Borrowing + Sav.of LG & Par.
dHpr	0.92					Borrowing + Saving of CB
dOBPRcb	-1.78	E.dNFBcb	2.80			2.71
dOEPpr	0.72					Borrowing + Saving of BS
dQHDN	2.96	E.dNFBbs	0.00			8.77
		E.dBFpr	0.83			Borrowing + Saving of PR
		E.dOFI	-0.32			22.58
E.dRpr	0.00					Borrowing + Saving of ROW
						9.09
						Total Saving
						23.14
Asset Accum.	22.58	Asset Accum.	9.09	Total Investment	23.14	

MATRIX V°
ZIMBABWE

CONSISTENCY FRAMEWORK
(Millions of Zimbabwe dollars, 1987 prices)

	CURRENT ACCOUNT										CAPITAL ACCOUNT							
		1987 National Accounts		1987 Government		1987 Local Gov.& Parastat.	1987 Central Bank	1987 Banking System	1987 Non Fin. Priv.Sect.		1987 External Sector		1987 Government		1987 Local Gov.& Parastat.		1987 Central Bank	1987 Banking System
National Accounts			Cg -E.Mg	2031.00 277.00				Cpr -E.Mpr	5558.00 760.00	E.XONFS -E.MINT	2681.00 668.00	Ig -E.Igm	351.00 127.00	Ipe -E.Iem	653.00 229.00			
Government	QFY TI	152.00 1366.00			i7.GKPE	62.00		i6.GKTR TDpr	0.00 1507.00	E.NTRGO	0.00							
LG & Parastatals	PEFY QSUB	498.00 -350.00	QSUB	350.00														
Central Bank;																		
Banking System																		
Non Fin.Priv.Sect.	PRFY	8058.00	QTR i3.Bg	531.00 351.00	i8.Bpe	137.00				E.NTRPR E.WREM i.E.Rpr	-42.00 5.00 55.00							
External Sector			i.E.BFg E.Mg	226.00 277.00	i.E.BFpe	73.00		r.E.DFI i.E.BFp E.Mpr	98.00 0.00 760.00	E.MINT	668.00	E.Igm	127.00	E.Iem	229.00			
SAVINGS & BORROWING																		
Government			Sg	-402.00											dDCg	215.00	dCBSg	-22 00
LG & Parastatals					Spe	226.00						dGKPE	319.00		dDCpe	78.00	dCBSpe	90.00
Central Bank																	dRbe dDBBScb	-7.00 78.00
Banking System															dDCbe	83.00		
Non Fin.Priv.Sect.								Spr	1932.00			dGKTR	12.00		dDCpr	-125.00	dCBSpr	334.00
External Sector										Sf	39.00				E.dRcb	53.00	E.dRbe	8.00
Total Saving			Sg	-402.00	Spe	226.00		Spr	1932.00	Sf	39.00							
Total Uses	QDP	9724.00	Total Uses	3087.00	Total Uses	498.00		Total Uses	9095.00	Total Uses	2738.00	Asset Accum.	682.00	Asset Accum.	653.00	Asset Accum.	304.00	Asset Accum.	481.00

1987 Non Fin Priv.Sect.		1987 External Sector		1987 Investment		1987 Total Sources
Ipr	791.00					GDP
-E.Ipm	280.00		:Subtotal I	1159.00	:	9724.00
						Gross Government Income 3087.00
						Gross LQ & Parastat. Income 498.00
						Gross PR Income 9095.00
						Gross ROW Income
E.Ipm	280.00		:Tot.Int.Imp	636.00	:	2738.00
		E.dKTG	120.00			Borrowing + Saving of Govt.
dBg	613.00	E.dBFg	156.00			682.00
						Borrowing + Sav. of LQ & Par.
dBpe	51.00	E.dBFpe	-111.00			653.00
dHpr	10.00					Borrowing + Saving of CB
dDBPRcb	249.00	E.dNFBcb	-26.00			304.00
dOEPpr	85.00					Borrowing + Saving of bS
dQMON	313.00	E.dNFBbs	0.00			481.00
		E.dBFpr	-1.00			Borrowing + Saving of PR
		E.dDFI	-40.00			2112.00
						Borrowing + Saving of ROW
E.dRpr	0.00					100.00
						Total Saving 1795.00
Asset Accum.	2112.00	Asset Accum.	100.00	:Total : Investment	1795.00	:

MATRIX VI
ZIMBABWE

CONSISTENCY FRAMEWORK
(As a percent of GDP)

	CURRENT ACCOUNT										CAPITAL ACCOUNT							
	1987 National Accounts %		1987 Government %		1987 Local Gov.& Parastat. %	1987 Central Bank %	1987 Banking System %		1987 Non Fin. Priv.Sect. %		1987 External Sector %		1987 Government %		1987 Local Gov.& Parastat. %		1987 Central Bank %		1987 Banking System %
National Accounts		Cg -E.Mg	20.89 2.85				Cpr -E.Mpr	57.16 7.82	E.XGNFS -E.MINT	27.57 6.87	Ig -E.Igm	3.61 1.31	Ips -E.Iem	6 72 2.35				
Government	GFY 1.58 TI 14.05			i7.GKPE	0.64		i6.GKTR TDpr	0.00 15.50	E.NTRGD	0.00								
LG & Parastatals	PEFY 5.12 GSUB -3.60	GSUB	3.60															
Central Bank																		
Banking System																		
Non Fin.Priv.Sect.	PRFY 82.87	GTR i3.Bg	5.46 3.61	i8.Bps	1.41				E.NTRPR E.WREM i.E.Rpr	-0.43 0.05 0.57								
External Sector		i.E.BFg E.Mg	2.32 2.85	i.E.BFps	0.75		r.E.DFI i.E.BFp E.Mpr	1.01 0.00 7.82	E.MINT	6.87	E.Igm	1.31	E.Iem	2.35				
SAVINGS & BORROWING																		
Government		Sg	-4.13											dDCg	2.21	dCBSg	-0 23	
LG & Parastatals				Sps	2.32						dGKPE	3.28		dDCps	0.80	dCBSps	0.93	
Central Bank																dHbs dDBBScb	-0 07 0.80	
Banking System														dDCbs	0.85			
Non Fin.Priv.Sect.							Spr	19.87			dGKTR	0.12		dDCpr	-1.29	dCBSpr	3 43	
External Sector									Sf	0.40				E.dRcb	0 55	E.dRbs	0.08	
Total Saving		Sg	-4.13	Sps	2.32		Spr	19.87	Sf	0.40								
Total Uses	GDP 100.00	Total Uses	31.75	Total Uses	5.12		Total Uses	93.53	Total Uses	28.18	Asset Accum.	7.01	Asset Accum.	6.72	Asset Accum.	3.13	Asset Accum.	4.95

	1987 Non Fin. Priv.Sect. $		1987 External Sector $		1987 Investment $		1987 Total Sources $
Ipr	8.13			:		:	GDP
-E.Ips	2.88			:Subtotal I	11.92	:	100.00
				:		:	Gross Government Income
				:		:	31.75
				:		:	Gross LG & Parastat. Income
				:		:	5.12
				:		:	
				:		:	
				:		:	
				:		:	Gross PR Income
				:		:	
				:		:	93.53
				:		:	Gross ROW Income
				:		:	
E.Ips	2.88			:Tot.Int.Imp	6.54	:	28.16
				:		:	
		E.dKTG	1.23	:		:	Borrowing + Saving of Govt.
dBg	6.30	E.dBFg	1.62	:		:	7.01
				:		:	Borrowing + Sav.of LG & Par.
dBps	0.52	E.dBFps	-1.14	:		:	
dRpr	0.10			:		:	Borrowing + Saving of CB
dDBPRcb	2.56	E.dNFBcb	-0.27	:		:	3.13
dDEPpr	0.87			:		:	Borrowing + Saving of BS
dQHDN	3.22	E.dNFBbs	0.00	:		:	4.95
		E.dBFpr	-0.01	:		:	Borrowing + Saving of PR
		E.dDFI	-0.41	:		:	21.72
				:		:	Borrowing + Saving of ROW
E.dRpr	0.00			:		:	1.03
				:		:	Total Savings
				:		:	18.46
Asset Accum.	21.72	Asset Accum.	1.03	:Total : Investment	18.46	:	

These figures reflect a trend in government policy since the early 1980s towards controlling external indebtedness through the use of an administered system of foreign exchange allocation. The latter has increasingly restricted imports, particularly to the private sector. In turn, the shortage of imports for the private sector has repressed investment expenditure and generated "forced" saving. The growing excess of private saving over investment has fostered an increasing transfer of resources from the private to the public sector. This has in turn allowed a persistently large public sector deficit to coexist with a shrinking current account deficit in the balance of payments. In addition, however, gross domestic investment has declined from 23.15 percent of GDP in 1981 to 18.46 percent in 1987, most of which is explained by lower private sector investment. This decline in private investment accounts partly for the paucity of Zimbabwe's growth performance since independence.

The financial flows (changes in financial assets and liabilities) associated with these resource transfers are shown in the bottom right-hand portion of the summary matrices. In 1981 (see Matrix IV), the overall central government borrowing requirement was 8.19 percent of GDP. Credit from the monetary system (1.69 percent) was relatively modest, and the bigger share came from an increase in borrowing from the private sector (3.5 percent) and an increase in foreign borrowing (2.66 percent). Aside from dissaving and investment, these borrowings covered capital transfers by the central government, mainly LT loans to parastatals (1.76 percent of GDP).

In 1987 (Matrix VI), the overall borrowing requirement of the central government amounted to 11.14 percent of GDP. The striking change in its composition vis-a-vis 1981 is the much larger share taken up by borrowing from the private sector (6.3 percent of GDP) and smaller share by foreign borrowing (1.62

percent). The larger overall borrowing requirement also reflects in part larger capital transfers to LG & parastatals (3.28 percent). In both years, the limited reliance on credit from the monetary system explains how inflation has been contained despite large government deficits.[10]

For LG & parastatals, the overall borrowing requirement was 6.95 percent of GDP in 1981. Substantial reliance on foreign borrowing (2.77 percent) and borrowing from the private sector (4.08 percent), as well as LT loans from the central government, offset the reduction in credit from the monetary system (1.67 percent). However, in 1987 the composition of the overall borrowing requirement (4.4 percent of GDP) was significantly different. In particular, there was a decrease in foreign borrowing amounting to 1.14% of GDP. Although this was offset by an increase in credit from the monetary system (1.73 percent), the bulk of the borrowing requirement was provided by capital transfers from the central government (3.28 percent). As indicated above, an important source of finance for central government capital expenditures in 1987 was borrowing from the private sector.

For the central bank, a significant decline in foreign reserves (2.71 percent of GDP) and significant net foreign borrowing (2.8 percent) served mainly to offset an expansion of credit to the central government (1.69 percent), to LG & parastatals (1.94 percent) and to the private sector (1.69 percent). High-powered money grew by some 1 percent of GDP, and private sector deposits at the central bank appear to have declined by 1.78 percent of GDP. Again, the principal difference between 1981 and 1987 arises in foreign asset/liability changes.

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[10] The reader is referred to Chhibber et al. (1989) for a recent study of the inflationary process in Zimbabwe.

In 1987, there was an accumulation of foreign reserves (0.55 percent of GDP) and a modest decline in foreign borrowing (0.27 percent). There was also a significant increase in credit to the central government (2.21 percent). These flows were largely offset by a decline in credit to the private sector (1.29 percent) and an increase in private sector deposits at the central bank (2.56 percent). High-powered money did not grow appreciably.

For the banking sector, a large increase in loans and advances to the private sector ((6.72 percent of GDP) was offset mainly by a decline in credit to LG & parastatals (3.61 percent) and an increase in demand deposits (0.72 percent) and especially quasi-money (2.96 percent of GDP). In 1987, a modest increase in credit to parastatals (0.93 percent of GDP) and a more significant increase in credit to the private sector (3.43 percent) was offset by a modest increase in demand deposits (0.87 percent of GDP), credit from the central bank (0.85 percent) and an increase in quasi-money (3.22 percent of GDP).

In 1981, private sector saving (13.58 percent of GDP) marginally exceeded its investment (12.18 percent). The private sector also received some credit from the central bank (1.69 percent of GDP) and more substantially from the banking system (6.72 percent). These sources were used mainly to increase the private sector's holdings of public sector debt (7.58 percent of GDP) and quasi-money (2.96 percent). In 1987, the excess of private saving (19.87% of GDP) over investment (8.13 percent) was much larger, but advances from the banking system were smaller (3.43 percent of GDP) and there was a decline in credit from the central bank of 1.29 percent of GDP. The principal asset acquisitions of the private sector in 1987 were public debt (6.82 percent of GDP), quasi-money (3.22 percent) and deposits at the central bank (2.56 percent).

Finally, in 1981 the large current account deficit in the balance of pay-

ments (11.91 percent of GDP) was reflected in the significant loss in foreign reserves by the central bank (2.71 percent of GDP) and the increase in external indebtedness, mainly by LG & parastatals (2.77 percent) and the central bank (2.8 percent). This contrasts sharply with the situation in 1987, when the negligible current account deficit (0.4 percent of GDP), the modest reserve accumulation by the central bank (0.55 percent of GDP) and the decline in the foreign indebtedness of parastatals (1.14 percent) were financed mainly by international aid grants (1.23 percent) and an increase in foreign borrowing by the central government.

III.2 Macroeconomic and financial flows in real (1980 Z$) terms for 1981 and 1987

Tables 17 - 23 present the 1981 flows in real (that is, 1980 Z$) terms. They are the counterparts of Tables 3 - 9, for nominal flows. Tables 24 - 30, for 1987, are the counterparts of Tables 10 - 16.

The structure of real flows in 1987 can be compared with that in 1981 using the summary flow-of-funds/social accounting matrices. In particular, Matrix VIII and Matrix X reproduce Matrix II for 1981 and 1987, respectively, where for each year flows are expressed as percentages of that year's real (1980 Z$) GDP.

In terms of the pattern of resource transfers, the inferences drawn by comparing 1987 with 1981 in real percentage of GDP terms are of course no different from those drawn in the preceding subsection, except that deflated nominal investment is now be split up into a quantity change term and a relative price loss term. For example, in 1981 central government dissaving was 3.32 percent of GDP and investment 3.04 percent. In quantity terms, however, central government investment amounted to 3.2 percent of GDP. The 0.16 percent residual

Table 17

ZIMBABWE

T-Table for the Non Financial Public Sector (Government)
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources	Real 1981	Real 1981 %	Uses	Real 1981	Real 1981 %
Current Account					
Non Interest			Non Interest		
Government Value Added	47.87	1.20	Government Consumption	622.00	15.53
Indirect Taxes	411.87	10.29	Govt. Transfers to PR	260.13	6.50
Direct Taxes from PR	485.94	12.14	Government Saving	-132.77	-3.32
Transfers to Govt. fr.Abr.	0.00	0.00	Subsidies	110.19	2.75
Interest			Interest		
Interest rec'd. from PR	0.00	0.00	Interest Payments to ROW	102.06	2.55
Interest rec'd.fr. LG&Par.	18.97	0.47	Interest Payments to PR	7.23	0.18
Total CA Gov. Sources	964.65	24.09	Total CA Gov. Uses	968.84	24.20
Relative Price Losses			Relative Price Losses		
			Government Consumption	-4.19	-0.10
Capital Account					
1. Investment/Saving			1. Investment/Saving		
Government Saving	-132.77	-3.32	Investment of Govt.	125.00	3.12
2. Relative Price Losses			2. Relative Price Losses		
			Investment of Govt.	-3.06	-0.08
3. Real Asset Changes			3. Real Asset Changes		
Borrowing from CB	55.94	1.40	Inc.in direct lend.to PR	-72.77	-1.82
Borrowing from BS	-41.71	-1.04	Inc.in lend.to LC & Par.	67.55	1.69
Borrowing from PR	55.61	1.39			
Borrowing from ROW	95.70	2.39			
Capital Grants from ROW	13.55	0.34			
Tot.G.Real Asset Chg.	179.09	4.47	Totl.Gov.Real Asset Chg.	-5.23	-0.13
Total Gov. Sources	46.32	1.16	Total Gov. Uses	116.71	2.91
4. Capital Gains/Losses			4. Capital Gains/Losses		
Borrowing from CB	11.81	0.29	Inc.in direct lend.to PR	75.48	1.89
Borrowing from BS	41.71	1.04	Inc.in lend.to LC & Par.	2.90	0.07
Borrowing from PR	84.39	2.11			
Borrowing from ROW	10.88	0.27			
Capital Grants from ROW	0.00	0.00			
Tot. G.Cap.Gains or Losses	148.78	3.72	Tot.Gv.Cap.Gains or Losses	78.39	1.96

Note: Lower case d denotes a first difference.
(1) Sg=GFY+TI-GSUB+TDpr+E.NTRGO+i6.GKTR+i7.GKPE-Cg-i3.Bg-GTR-i.E.BFg
(1') Ig+dGKTR+dGKPE=Sg+dDCg+dCBSg+dBg+E.dBFg+E.dKTG

Table 18

ZIMBABWE

T-Table for Local Government and Parastatals
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	Real 1981	Real 1981 %		Real 1981	Real 1981 %
Non Interest			Non Interest		
Value Added	97.55	2.44	Local Govt.& Parast.Saving	38.84	0.97
Subsidies from Central Govt.	110.19	2.75			
Less					
Subsidies from Central Govt.	110.19	2.75			
Interest			Interest		
			Int. paid to Central Govt.	18.97	0.47
			Int. paid to PR	37.94	0.96
			Int. paid to ROW	1.81	0.05
Total CA LG & Par. Sources	97.55	2.44	Total CA LG & Par. Uses	97.55	2.44
Capital Account					
	Real 1981	Real 1981 %		Real 1981	Real 1981 %
1. Investment/Saving			1. Investment/Saving		
Saving	38.84	0.97	Investment	325.00	8.12
2. Relative Price Losses			2. Relative Price Losses		
			Investment	-7.97	-0.20
3. Real Asset Changes			3. Real Asset Changes		
Capital transfers from CG	67.55	1.69			
Borrowing from PR	112.68	2.81			
Borrowing from ROW	108.76	2.72			
Borrowing from BS	-177.23	-4.43			
Borrowing fr.Central Bank	72.94	1.82			
Tot.LG Real Asset Changes	184.70	4.61			
Total LG & Par. Sources	223.54	5.58	Total LG & Par. Uses	317.03	7.92
4. Capital Gains/Losses			4. Capital Gains/Losses		
Capital transfers from CG	2.90	0.07			
Borrowing from PR	50.81	1.27			
Borrowing from ROW	2.33	0.06			
Borrowing from BS	32.71	0.82			
Borrowing fr.Central Bank	4.74	0.12			
Total LG Cap.Gains or Losses	93.49	2.34			

(2) Spe = PEFY-GSUB+GSUB-i7.GKPE-i.E.BFpe-i8.Bpe

(2') Ipe = Spe+dGKPE+dBpe+E.dBFpe+dCBSpe+dDCpe

Table 19

ZIMBABWE

T-Table for Central Bank
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources			Uses		
Capital Account					
	Real 1981	Real 1981 %		Real 1981	Real 1981 %
Real Asset Changes			**Real Asset Changes**		
Increase in vault cash	-0.39	-0.01	Lending to Govt.	55.94	1.40
Increase in BS deposits	22.97	0.57	Lending to BS	-9.06	-0.23
Increase in Currency	21.84	0.55	Lending to PR	67.74	1.69
Increase in PR deposits	-74.65	-1.86	Lending to LG & Par.	72.94	1.82
Foreign borrowing	107.65	2.69	Accum. of net reserves	-112.03	-2.80
Total CB Asset Changes	77.42	1.93	Total CB R Asset Changes	75.62	1.89
Capital Gains/Losses			**Capital Gains/Losses**		
Increase in vault cash	3.10	0.08	Lending to Govt.	11.81	0.29
Increase in BS deposits	5.03	0.13	Lending to BS	12.68	0.32
Increase in Currency	15.19	0.38	Lending to PR	0.00	0.00
Increase in PR deposits	3.29	0.08	Lending to LG & Par.	4.74	0.12
Foreign borrowing	4.35	0.11	Accum. of net reserves	3.64	0.09
Tot.CB Cap.Gains or Losses	30.96	0.77	Tot.C Cap. Gains or Losses	32.87	0.82
Total CB Sources	108.39	2.71	Total CB Uses	108.39	2.71

(3') dDCg+dDCbs+dDCpr+E.dRcb+dDCpe = dHbs+dDBBScb+dHpr+dDBPRcb+E.dNFBcb

Table 20

ZIMBABWE

T-Table for Banking System
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources | Uses

Capital Account

	Real 1981	Real 1981 %		Real 1981	Real 1981 %
Real Asset Changes			**Real Asset Changes**		
Borrowing from CB	-9.06	-0.23	Lending to Govt.	-41.71	-1.04
Inc. in Demand Deposits	-16.00	-0.40	Accumulation of Vault Cash	-0.39	-0.01
Increase in Quasi-Money	57.16	1.43	Accum. of deposits at CB	22.97	0.57
Borrowing from ROW	-2.70	-0.07	Lending to Private Sector	225.03	5.62
			Accu....of net forgn. reserves	-5.07	-0.13
			Lending to LG & Par.	-177.23	-4.43
Total BS Asset Changes	29.40	0.73	Total BS R Asset Changes	23.61	0.59
Capital Gains/Losses			**Capital Gains/Losses**		
Borrowing from CB	12.68	0.32	Lending to Govt.	41.71	1.04
Inc. in Demand Deposits	44.90	1.12	Accumulation of Vault Cash	3.10	0.08
Increase in Quasi-Money	61.16	1.53	Accum. of deposits at CB	5.03	0.13
Borrowing from ROW	2.70	0.07	Lending to Private Sector	44.13	1.10
			Ac um.of net forgn. reserves	0.55	0.01
			Lending to LG & Par.	32.71	0.82
Tot.BS Cap.Gains or Losses	121.44	3.03	Tot.B Cap.Gains or Losses	127.23	3.18
Total BS Sources	150.84	3.77	Total BS Uses	150.84	3.77

(4') dCBSg+dHbs+dDBBScb+dCBSpr+E.dRbs+dCBSps = dDCbs+dDEPpr+dQMON+E.dNFBbs

Table 21

ZIMBABWE

T-Table for the Non-Financial Private Sector
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources — Current Account

	Real 1981	Real 1981 %
Non Interest		
Factor income	3556.90	88.83
Transfers from Govt.	260.13	6.50
Net transfers from abroad	-83.10	-2.08
Workers' remittances	73.16	1.83
Interest		
Interest rec'd. from Govt.	7.23	0.18
Interest on foreign assets	0.00	0.00
Interest rec'd. fr.LG & Par.	37.94	0.95
Total CA Priv. Sources	3852.26	96.21
Relative Price Losses		

Uses — Current Account

	Real 1981	Real 1981 %
Non Interest		
Consumption of PR	2769.00	69.16
Direct Taxes	485.94	12.14
Profit remittances to ROW	71.35	1.78
Savings of PR	543.74	13.58
Interest		
Interest paid to Govt.	0.00	0.00
Interest paid to ROW	0.00	0.00
Total CA Priv. Uses	3870.03	96.65
Relative Price Losses		
Consumption of PR	-17.77	-0.44

Sources — Capital Account

	Real 1981	Real 1981 %
1. Investment/Saving		
Savings of PR	343.74	13.58
2. Relative Price Losses		
3. Real Asset Changes		
Borrowing from Govt.	-72.77	-1.82
Borrowing from CB	67.74	1.69
Borrowing from BS	225.03	5.62
Borrowing from ROW	33.42	0.83
Direct foreign investment	-118.61	-2.96
Tot.PR Real Asset Changes	134.81	3.37
Total Priv. Sources	678.55	16.95
4. Capital Gains/Losses		
Borrowing from Govt.	75.48	1.89
Borrowing from CB	0.00	0.00
Borrowing from BS	44.13	1.10
Borrowing from ROW	0.00	0.00
Direct foreign investment	105.97	2.65
Tot.PR Cap.Gains or Losses	225.58	5.63

Uses — Capital Account

	Real 1981	Real 1981 %
1. Investment/Saving		
Private Investment	500.00	12.49
2. Relative Price Losses		
Private Investment	-12.26	-0.31
3. Real Asset Changes		
Lending to Govt.	55.61	1.39
Accumulation of Currency	21.84	0.55
Deposits at CB	-74.65	-1.86
Demand deposits with BS	-16.00	-0.40
Savings deposits with BS	57.16	1.43
Accum. of Foreign Assets	0.00	0.00
Lending to LG & Par.	112.68	2.81
Tot.P Real Asset Changes	156.65	3.91
Total Priv. Uses	644.39	16.09
4. Capital Gains/Losses		
Lending to Govt.	84.39	2.11
Accumulation of Currency	15.19	0.38
Deposits at CB	3.29	0.08
Demand deposits with BS	44.90	1.12
Savings deposits with BS	61.16	1.53
Accum. of Foreign Assets	0.00	0.00
Lending to LG & Par.	50.81	1.27
Total P Cap.Gains or Losses	259.74	6.49

(5) Spr = +PRFY+GTR+i3.Bg+E.NTRPR+E.WREM+i.E.Rpr+i8.Bpe-Cpr-i6.GKTR
-TDpr-r.E.DFI-i.E.BFpr

(5') dBg+dHpr+dDBPRcb+dDEPpr+dQMON+E.dRpr+Ipr+dBpe = Spr+dGKTR+dDCpr
+dCBSpr+E.dDFI+e.dBFpr

Table 22

ZIMBABWE

T-Table for The Rest of the World (ROW)
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources	Real 1981	Real 1981 %	Uses	Real 1981	Real 1981 %
Current Account					
Non Interest			**Non Interest**		
Paym. for Govt.Consump.Imports	111.00	2.77	Payments for Exports	992.00	24.78
Profit remittances	71.35	1.78	Net Transfers to Govt.	0.00	0.00
Paym. for PR Consump. Imports	508.00	12.69	Net transfers to PR	-83.10	-2.08
Paym. for Intermediate Imports	418.00	10.44	Workers' remittances	73.16	1.83
Paym.for Govt. Investm.Imports	38.00	0.95	Savings of ROW	476.90	11.91
Paym.for PR Investment Imports	155.00	3.87			
Paym.for LG & Par.Investm.Imp.	99.00	2.47			
Interest			**Interest**		
Interest rec'd. from Govt.	102.06	2.55	Interest on net PR reserves	0.00	0.00
Interest rec'd. from PR	0.00	0.00			
Interest rec'd. fr. LG & Par.	1.81	0.05			
Total CA ROW Sources	1504.23	37.57	Total CA ROW Uses	1458.97	36.44
Relative Price Losses			**Relative Price Losses**		
Paym. for Govt.Consump.Imports	-4.42	-0.11	Payments for Exports	-1.16	-0.03
Paym. for PR Consump. Imports	-23.87	-0.60			
Paym. for Intermediate Imports	-7.94	-0.20			
Paym.for Govt. Investm.Imports	-0.97	-0.02			
Paym.for PR Investment Imports	-5.97	-0.15			
Paym.for LG & Par.Investm.Imp.	-3.26	-0.08			
Total ROW Rel. Price Losses	-46.42	-1.16			
Capital Account					
	Real 1981	Real 1981 %		Real 1981	Real 1981 %
1. Investment/Saving			**1. Investment/Saving**		
Saving of ROW	476.90	11.91			
2. Relative Price Losses			**2. Relative Price Losses**		
3. Real Asset Changes			**3. Real Asset Changes**		
Increase in CB net reserves	-112.03	-2.80	Inc.in Gov.for.borrowing	95.70	2.39
Increase in BS net reserves	-5.07	-0.13	Inc. in CB for.borrowing	107.65	2.69
Increase in PR net reserves	0.00	0.00	Inc. in BS for.borrowing	-2.70	-0.07
			Inc. in PR for. reserves	33.42	0.83
			Inc.in LG &Par.borrowing	108.76	2.72
			Direct Foreign Invest.	-118.61	-2.96
			Capital Grants from ROW	13.55	0.34
Tot. ROW Real Asset Changes	-117.10	-2.92	Tot. RW Real Asset Changes	237.77	5.94
Total ROW Sources	359.81	8.99	Total ROW Uses	237.77	5.94
4. Capital Gains/Losses			**4. Capital Gains/Losses**		
Increase in CB net reserves	3.64	0.09	Inc.in Gov.for.borrowing	10.88	0.27
Increase in BS net reserves	0.55	0.01	Inc. in CB for.borrowing	4.35	0.11
Increase in PR net reserves	0.00	0.00	Inc. in BS for.borrowing	2.70	0.07
			Inc. in PR for. reserves	0.00	0.00
			Inc.in LG &Par.borrowing	2.33	0.06
			Direct Foreign Invest.	105.97	2.65
			Capital Grants from ROW	0.00	0.00
Tot. ROW Gains or Losses	4.19	0.10	Total RW Gains or Losses	126.23	3.15

(6) $Sf = i.E.BFg+i.E.BFpe+E.Mg+r.E.DFI+i.E.BFpr+E.Mpr+E.MINT+E.Igm+E.Ipm+E.Iem-E.XGNFS-E.NTRGO-E.NTRPR-E.WREM-i.E.Rpr$

(6') $E.dBFg+E.dNFBcb+E.dNFBbs+E.dBFpr+E.dDFI+E.dBFpe+E.dKTG = Sf+E.dRcb+E.dRbs+E.dRpr$

Table 23

ZIMBABWE

T-Table for the National Accounts
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources			Uses		
Current Account					
	Real 1981	Real 1981 %		Real 1981	Real 1981 %
Central Govt. Consumption	622.00	15.53	Government Value Added	47.87	1.20
Private Consumption	2769.00	69.16	PR Value Added	3556.90	88.83
Central Govt. Investment	125.00	3.12	LG & Par. Value Added	97.55	2.44
Private Investment	500.00	12.49	Indirect Taxes	411.87	10.29
LG & Par. Investment	325.00	8.12	Less:		
Exports of GNFS	992.00	24.78	Subsidies	110.19	2.75
Less:					
Central Govt.Consumption	111.00	2.77			
Priv. Consumption Imports	508.00	12.69			
Central Govt.Invest.Imports	38.00	0.95			
Priv. Investment Imports	155.00	3.87			
LG & Par. Invest. Imports	99.00	2.47			
Intermediate goods Imports	418.00	10.44			
Total NA Sources	4004.00	100.00	Total NA Uses	4004.00	100.00
Relative Price Losses			Relative Price Losses		
Central Govt. Consumption	-4.19	-0.10			
Private Consumption	-17.77	-0.44			
Central Govt. Investment	-3.06	-0.08			
Private Investment	-12.26	-0.31			
LG & Par. Investment	-7.97	-0.20			
Exports of GNFS	-1.16	-0.03			
Less:					
Central Govt.Consumption	-4.42	-0.11			
Priv. Consumption Imports	-23.87	-0.60			
Central Govt.Invest.Imports	-0.97	-0.02			
Priv. Investment Imports	-5.97	-0.15			
LG & Par. Invest. Imports	-3.26	-0.08			
Intermediate goods Imports	-7.94	-0.20			
Total NA Rel. Price Losses	-0.00	-0.00			

(7) GDP = Cg+Cpr+Ig+Ipr+Ipe+E.(XGNFS-Mg-Mpr-Igm-Ipm-Iem-MINT)

(7') GDP = GFY+PRFY+PEFY+TI-GSUB

Table 24

ZIMBABWE

T-Table for the Non Financial Public Sector (Government)
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources	Real 1987	Real 1987 %	Uses	Real 1987	Real 1987 %
Current Account					
Non Interest			**Non Interest**		
Government Value Added	67.01	1.56	Government Consumption	725.00	16.91
Indirect Taxes	602.23	14.05	Govt. Transfers to PR	234.10	5.46
Direct Taxes from PR	664.39	15.50	Government Saving	-177.23	-4.13
Transfers to Govt. fr.Abr.	0.00	0.00	Subsidies	154.30	3.60
Interest			**Interest**		
Interest rec'd. from PR	0.00	0.00	Interest Payments to ROW	99.64	2.32
Interest rec'd.fr. LC&Par.	27.33	0.64	Interest Payments to PR	154.74	3.61
Total CA Gov. Sources	1360.96	31.75	Total CA Gov. Uses	1190.68	27.77
Relative Price Losses			**Relative Price Losses**		
			Government Consumption	170.40	3.97
Capital Account					
1. Investment/Saving			**1. Investment/Saving**		
Government Saving	-177.23	-4.13	Investment of Govt.	125.00	2.92
2. Relative Price Losses			**2. Relative Price Losses**		
			Investment of Govt.	29.74	0.69
3. Real Asset Changes			**3. Real Asset Changes**		
Borrowing from CB	90.94	2.12	Inc.in direct lend.to PR	-13.56	-0.32
Borrowing from BS	-35.86	-0.84	Inc.in lend.to LC & Par.	77.99	1.82
Borrowing from PR	183.08	4.27			
Borrowing from ROW	-29.11	-0.68			
Capital Grants from ROW	52.90	1.23			
Tot.G.Real Asset Chg.	261.96	6.11	Totl.Gov.Real Asset Chg.	64.44	1.50
Total Gov. Sources	84.73	1.98	Total Gov. Uses	219.18	5.11
4. Capital Gains/Losses			**4. Capital Gains/Losses**		
Borrowing from CB	3.84	0.09	Inc.in direct lend.to PR	18.85	0.44
Borrowing from BS	26.16	0.61	Inc.in lend.to LC & Par.	62.64	1.46
Borrowing from PR	87.17	2.03			
Borrowing from ROW	98.77	2.30			
Capital Grants from ROW	0.00	0.00			
Tot. G.Cap.Gains or Losses	215.95	5.04	Tot.Gv.Cap.Gains or Losses	81.49	1.90

Note: Lower case d denotes a first difference.
(1) $Sg=GFY+TI-GSUB+TDpr+E.NTRGO+i6.GKTR+i7.GKPE-Cg-i3.Bg-GTR-i.E.BFg$
(1') $Ig+dGKTR+dGKPE=Sg+dDCg+dCBSg+dBg+E.dBFg+E.dKTG$

Table 25

ZIMBABWE

T-Table for Local Government and Parastatals
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources	Real 1987	Real 1987 %	Uses	Real 1987	Real 1987 %
Current Account					
Non Interest			Non Interest		
Value Added	219.55	5.12	Local Govt.& Parast.Saving	99.64	2.32
Subsidies from Central Govt.	154.30	3.60			
Less					
Subsidies from Central Govt.	154.30	3.60			
Interest			Interest		
			Int. paid to Central Govt.	27.33	0.64
			Int. paid to PR	60.40	1.41
			Int. paid to ROW	32.18	0.75
Total CA LG & Par. Sources	219.55	5.12	Total CA LG & Par. Uses	219.55	5.12
Capital Account					
1. Investment/Saving			1. Investment/Saving		
Saving	99.64	2.32	Investment	232.00	5.41
2. Relative Price Losses			2. Relative Price Losses		
			Investment	55.89	1.30
3. Real Asset Changes			3. Real Asset Changes		
Capital transfers from CG	77.99	1.82			
Borrowing from PR	-49.10	-1.15			
Borrowing from ROW	-139.97	-3.27			
Borrowing from BS	19.24	0.45			
Borrowing fr.Central Bank	20.14	0.47			
Tot.LG Real Asset Changes	-71.70	-1.67			
Total LG & Par. Sources	27.94	0.65	Total LG & Par. Uses	287.89	6.72
4. Capital Gains/Losses			4. Capital Gains/Losses		
Capital transfers from CG	62.64	1.46			
Borrowing from PR	71.59	1.67			
Borrowing from ROW	91.04	2.12			
Borrowing from BS	20.44	0.48			
Borrowing fr.Central Bank	14.25	0.33			
Total LG Cap.Gains or Losses	259.95	6.06			

(2) Spe = PEFY-GSUB+GSUB-i7.GKPE-i.E.BFpe-i8.Bpe

(2') Ipe = Spe+dGKPE+dBpe+E.dBFpe+dCBSpe+dDCpe

Table 26

ZIMBABWE

T-Table for Central Bank
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources			Uses		
Capital Account					
	Real 1987	Real 1987 %		Real 1987	Real 1987 %
Real Asset Changes			**Real Asset Changes**		
Increase in vault cash	-5.34	-0.12	Lending to Govt.	90.94	2.12
Increase in BS deposits	27.20	0.63	Lending to BS	26.40	0.62
Increase in Currency	-11.47	-0.27	Lending to PR	-63.13	-1.47
Increase in PR deposits	103.17	2.41	Lending to LQ & Par.	20.14	0.47
Foreign borrowing	-15.86	-0.37	Accum. of net reserves	10.48	0.24
Total CB Asset Changes	97.70	2.28	Total CB R Asset Changes	84.82	1.98
Capital Gains/Losses			**Capital Gains/Losses**		
Increase in vault cash	2.26	0.05	Lending to Govt.	3.84	0.09
Increase in BS deposits	7.19	0.17	Lending to BS	10.20	0.24
Increase in Currency	15.88	0.37	Lending to PR	8.02	0.19
Increase in PR deposits	6.60	0.15	Lending to LQ & Par.	14.25	0.33
Foreign borrowing	4.40	0.10	Accum. of net reserves	12.88	0.30
Tot.CB Cap.Gains or Losses	36.33	0.85	Tot.C Cap. Gains or Losses	49.20	1.15
Total CB Sources	134.02	3.13	Total CB Uses	134.02	3.13

(3') dDCg+dDCbs+dDCpr+E.dRcb+dDCpe = dHbs+dDBBScb+dHpr+dDBPRcb+E.dNFBcb

Table 27

ZIMBABWE

T-Table for Banking System
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources			Uses		
Capital Account					
	Real 1987	Real 1987 %		Real 1987	Real 1987 %
Real Asset Changes			**Real Asset Changes**		
Borrowing from CB	26.40	0.62	Lending to Govt.	-35.86	-0.84
Inc. in Demand Deposits	2.70	0.06	Accumulation of Vault Cash	-5.34	-0.12
Increase in Quasi-Money	80.74	1.88	Accum. of deposits at CB	27.20	0.63
Borrowing from ROW	-5.29	-0.12	Lending to Private Sector	90.67	2.11
			Accum.of net forgn. reserves	3.53	0.08
			Lending to LG & Par.	19.24	0.45
Total BS Asset Changes	104.55	2.44	Total BS R Asset Changes	99.43	2.32
Capital Gains/Losses			**Capital Gains/Losses**		
Borrowing from CB	10.20	0.24	Lending to Govt.	28.16	0.61
Inc. in Demand Deposits	34.77	0.81	Accumulation of Vault Cash	2.26	0.05
Increase in Quasi-Money	57.25	1.34	Accum. of deposits at CB	7.19	0.17
Borrowing from ROW	5.29	0.12	Lending to Private Sector	56.58	1.32
			Accum.of net forgn. reserves	0.00	0.00
			Lending to LG & Par.	20.44	0.48
Tot.BS Cap.Gains or Losses	107.50	2.51	Tot.B Cap.Gains or Losses	112.62	2.63
Total BS Sources	212.06	4.95	Total BS Uses	212.06	4.95

(4') dCBSg+dHbs+dDBBScb+dCBSpr+E.dRbs+dCBSpe = dDCbs+dDEPpr+dQMON+E.dNFBbs

Table 28

ZIMBABWE

T-Table for the Non-Financial Private Sector
Millions of 1980 Zimbabwe dollars, and as % of GDP

Current Account

Sources	Real 1987	Real 1987 %	Uses	Real 1987	Real 1987 %
Non Interest			**Non Interest**		
Factor income	3552.51	82.87	Consumption of PR	1986.00	46.33
Transfers from Govt.	234.10	5.46	Direct Taxes	664.39	15.50
Net transfers from abroad	-18.52	-0.43	Profit remittances to ROW	43.21	1.01
Workers' remittances	2.20	0.05	Savings of PR	851.76	19.87
Interest			**Interest**		
Interest rec'd. from Govt.	154.74	3.61	Interest paid to Govt.	0.00	0.00
Interest on foreign assets	24.25	0.57	Interest paid to ROW	0.00	0.00
Interest rec'd. fr.LG & Par.	60.40	1.41			
Total CA Priv. Sources	4009.69	93.53	Total CA Priv. Uses	3545.35	82.70
Relative Price Losses			**Relative Price Losses**		
			Consumption of PR	464.34	10.83

Capital Account

	Real 1987	Real 1987 %		Real 1987	Real 1987 %
1. Investment/Saving			**1. Investment/Saving**		
Savings of PR	851.76	19.87	Private Investment	282.00	6.58
2. Relative Price Losses			**2. Relative Price Losses**		
			Private Investment	66.73	1.56
3. Real Asset Changes			**3. Real Asset Changes**		
Borrowing from Govt.	-13.56	-0.32	Lending to Govt.	183.08	4.27
Borrowing from CB	-63.13	-1.47	Accumulation of Currency	-11.47	-0.27
Borrowing from BS	90.67	2.11	Deposits at CB	103.17	2.41
Borrowing from ROW	-4.62	-0.11	Demand deposits with BS	2.70	0.06
Direct foreign investment	-345.21	-8.05	Savings deposits with BS	80.74	1.88
			Accum. of Foreign Assets	-24.44	-0.57
			Lending to LG & Par.	-49.10	-1.15
Tot.PR Real Asset Changes	-335.85	-7.83	Tot.P Real Asset Changes	284.69	6.64
Total Priv. Sources	515.90	12.03	Total Priv. Uses	633.41	14.78
4. Capital Gains/Losses			**4. Capital Gains/Losses**		
Borrowing from Govt.	18.85	0.44	Lending to Govt.	87.17	2.03
Borrowing from CB	8.02	0.19	Accumulation of Currency	15.88	0.37
Borrowing from BS	56.58	1.32	Deposits at CB	6.60	0.15
Borrowing from ROW	4.18	0.10	Demand deposits with BS	34.77	0.81
Direct foreign investment	327.58	7.64	Savings deposits with BS	57.25	1.34
			Accum. of Foreign Assets	24.44	0.57
			Lending to LG & Par.	71.59	1.67
Tot.PR Cap.Gains or Losses	415.21	9.69	Total P Cap.Gains or Losses	297.70	6.94

(5) Spr = +PRFY+GTR+i3.Bg+E.NTRPR+E.WREM+i.E.Rpr+i8.Bpe-Cpr-i6.GKTR
-TDpr-r.E.DFI-i.E.BFpr

(5') dBg+dHpr+dDBPRcb+dDEPpr+dQMQN+E.dRpr+Ipr+dBpe = Spr+dGKTR+dDCpr
+dCBSpr+E.dDFI+e.dBFpr

Table 29

ZIMBABWE

T-Table for The Rest of the World (ROW)
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources — Current Account

	Real 1987	Real 1987 %
Non Interest		
Paym. for Govt.Consump.Imports	90.00	2.10
Profit remittances	43.21	1.01
Paym. for PR Consump. Imports	242.00	5.64
Paym. for Intermediate Imports	153.00	3.57
Paym.for Govt. Investm.Imports	48.00	1.12
Paym.for PR Investment Imports	105.00	2.45
Paym.for LG & Par.Investm.Imp.	86.00	2.01
Interest		
Interest rec'd. from Govt.	99.64	2.32
Interest rec'd. from PR	0.00	0.00
Interest rec'd. fr. LG & Par.	32.18	0.75
Total CA ROW Sources	**899.02**	**20.97**
Relative Price Losses		
Paym. for Govt.Consump.Imports	32.12	0.75
Paym. for PR Consump. Imports	93.06	2.17
Paym. for Intermediate Imports	141.50	3.30
Paym.for Govt. Investm.Imports	7.99	0.19
Paym.for PR Investment Imports	18.44	0.43
Paym.for LG & Par.Investm.Imp.	14.96	0.35
Total ROW Rel. Price Losses	**308.07**	**7.19**

Uses — Current Account

	Real 1987	Real 1987 %
Non Interest		
Payments for Exports	1661.00	38.75
Net Transfers to Govt.	0.00	0.00
Net transfers to PR	-18.52	-0.43
Workers' remittances	2.20	0.05
Savings of ROW	17.19	0.40
Interest		
Interest on net PR reserves	24.25	0.57
Total CA ROW Uses	**1686.13**	**39.33**
Relative Price Losses		
Payments for Exports	-479.03	-11.17

Sources — Capital Account

	Real 1987	Real 1987 %
1. Investment/Saving		
Saving of ROW	17.19	0.40
2. Relative Price Losses		
3. Real Asset Changes		
Increase in CB net reserves	10.48	0.24
Increase in BS net reserves	3.53	0.08
Increase in PR net reserves	-24.44	-0.57
Tot. ROW Real Asset Changes	**-10.43**	**-0.24**
Total ROW Sources	**6.77**	**0.16**
4. Capital Gains/Losses		
Increase in CB net reserves	12.88	0.30
Increase in BS net reserves	0.00	0.00
Increase in PR net reserves	24.44	0.57
Tot. ROW Gains or Losses	**37.32**	**0.87**

Uses — Capital Account

	Real 1987	Real 1987 %
1. Investment/Saving		
2. Relative Price Losses		
3. Real Asset Changes		
Inc.in Gov.for.borrowing	-29.11	-0.68
Inc. in CB for.borrowing	-15.86	-0.37
Inc. in BS for.borrowing	-5.29	-0.12
Inc. in PR for. reserves	-4.62	-0.11
Inc.in LG &Par.borrowing	-139.97	-3.27
Direct Foreign Invest.	-345.21	-8.05
Capital Grants from ROW	52.90	1.23
Tot. RW Real Asset Changes	**-487.16**	**-11.36**
Total ROW Uses	**-487.16**	**-11.36**
4. Capital Gains/Losses		
Inc.in Gov.for.borrowing	98.77	2.30
Inc. in CB for.borrowing	4.40	0.10
Inc. in BS for.borrowing	5.29	0.12
Inc. in PR for. reserves	4.18	0.10
Inc.in LG &Par.borrowing	91.04	2.12
Direct Foreign Invest.	327.58	7.64
Capital Grants from ROW	0.00	0.00
Total RW Gains or Losses	**531.25**	**12.39**

(6) $Sf = i.E.BFg+i.E.BFpe+E.Mg+r.E.DFI+i.E.BFpr+E.Mpr+E.MINT+E.Igm+E.Ipm+E.Iem-E.XGNFS-E.NTRGO-E.NTRPR-E.WREM-i.E.Rpr$

(6') $E.dBFg+E.dNFBcb+E.dNFBbs+E.dBFpr+E.dDFI+E.dBFpe+E.dKTG = Sf+E.dRcb+E.dRbs+E.dRpr$

Table 30

ZIMBABWE

T-Table for the National Accounts
Millions of 1980 Zimbabwe dollars, and as % of GDP

Sources | Uses

Current Account

	Real 1987	Real 1987 %		Real 1987	Real 1987 %
Central Govt. Consumption	725.00	16.91	Government Value Added	67.01	1.56
Private Consumption	1986.00	46.33	PR Value Added	3552.51	82.87
Central Govt. Investment	125.00	2.92	LG & Par. Value Added	219.55	5.12
Private Investment	282.00	6.58	Indirect Taxes	602.23	14.05
LG & Par. Investment	232.00	5.41	Less:		
Exports of GNFS	1661.00	38.75	Subsidies	154.30	3.60
Less:					
Central Govt.Consumption	90.00	2.10			
Priv. Consumption Imports	242.00	5.64			
Central Govt.Invest.Imports	48.00	1.12			
Priv. Investment Imports	105.00	2.45			
LG & Par. Invest. Imports	86.00	2.01			
Intermediate goods Imports	153.00	3.57			
Total NA Sources	4287.00	100.00	Total NA Uses	4287.00	100.00
Relative Price Losses			Relative Price Losses		
Central Govt. Consumption	170.40	3.97			
Private Consumption	464.34	10.83			
Central Govt. Investment	29.74	0.69			
Private Investment	66.73	1.56			
LG & Par. Investment	55.89	1.30			
Exports of GNFS	-479.03	-11.17			
Less:					
Central Govt.Consumption	32.12	0.75			
Priv. Consumption Imports	93.06	2.17			
Central Govt.Invest.Imports	7.99	0.19			
Priv. Investment Imports	18.44	0.43			
LG & Par. Invest. Imports	14.96	0.35			
Intermediate goods Imports	141.50	3.30			
Total NA Rel. Price Losses	0.00	0.00			

(7) GDP = Cg+Cpr+Ig+Ipr+Ipe+E.(XGNFS-Mg-Mpr-Igm-Ipm-Iem-MINT)

(7') GDP = GFY+PRFY+PEFY+TI-GSUB

MATRIX VII
ZIMBABWE

CONSISTENCY FRAMEWORK
(Millions of Zimbabwe dollars, 1980 prices)

	CURRENT ACCOUNT										CAPITAL ACCOUNT				
	National Accounts Real 1981		Government Real 1981		Local Gov.& Parastat. Real 1981	Central Bank Real 1981	Banking System Real 1981	Non Fin. Priv.Sect. Real 1981		External Sector Real 1981		Government Real 1981	Gains/Losses Government Real 1981	Local Gov.& Parastat. Real 1981
National Accounts		RCg -RE.Mg	622.00 111.00				RCpr -RE.Mpr	2769.00 508.00	RXDNFS -RMINT	992.00 418.00	RIg -RE.Igm	125.00 38.00	RIpe -RE.Iem	325.00 99.00
Real Gains or Losses		Z100 -Z108	-4.19 -4.42				Z101 -Z107	-17.77 -23.87	Z105 -Z110	-1.16 -7.94	Z102 -Z108	-3.06 -0.97	Z104 -Z155	-7.97 -3.26
Government	GFY 47.87 TI 411.87			i7.GKPE	18.97		i6.GKTR TDpr	0.00 485.94	E.NTRGD	0.00				
LG & Parastatals	PEFY 97.55 GSUB -110.19	GSUB	110.19											
Central Bank														
Banking System														
Non Fin.Priv.Sect.	PRFY 3556.90	GTR i3.Bg	260.13 7.2>	i8.Bpe	37.94				E.NTRPR E.WREM i.E.Rpr	-83.10 73.16 0.00				
External Sector		i.E.BFg E.Mg	102.06 108.58	i.E.BFpe	1.81		r.E.DFI i.E.BFp E.Mpr	71.35 0.00 484.13	E.MINT	410.06	E.Igm	37.03	E.Iem	95.74
SAVINGS & BORROWING														
Government		Sg	-132.77											
LG & Parastatals				Spe	38.84						Z163	67.55 Z162	2.90	
Central Bank														
Banking System														
Non Fin.Priv.Sect.							Spr	543.74			Z165	-72.77 Z164	75.48	
External Sector									Sf	476.90				
Total Saving		Sg	-132.77	Spe	38.84		Spr	543.74	Sf	476.90				
Total Uses	GDP 4004.00	Total Uses	964.65	Total Uses	97.55		Total Uses	3852.28	Total Uses	1457.81	Asset Accum.	116.71	Gains Losses 78.39	Asset Accum. 317.03

Gains/Losses Loc.Gov&Par. Real 1981		Central Bank Real 1981		Gains/Losses Central Bank Real 1981		Banking System Real 1981		Gains/Losses Bank.Syst. Real 1981		Non Fin. Priv.Sect. Real 1981		Gains/Losses N.F.Pr.Sect. Real 1981		External Sector Real 1981		Gains/Losses Ext.Sect. Real 1981	
									RIpr	500.00							
									-RE.Ip	155.00							Total I
									Z103	-12.26							
									-Z109	-5.97							
									E.Ipa	149.03							Tot.Int.Imp
													Z144	13.55			
	Z112	55.94	Z111	11.81	Z114	-41.71	Z113	41.71	Z116	55.61	Z115	84.39	Z142	95.70	Z143	0.00	
															Z141	10.88	
	Z118	72.94	Z117	4.74	Z120	-177.23	Z119	32.71	Z122	112.68	Z121	50.81	Z146	108.76	Z145	2.33	
					Z124	-0.39	Z123	3.10	Z128	21.84	Z127	15.19					
					Z126	22.97	Z125	5.03	Z130	-74.65	Z129	3.29	Z148	107.65	Z147	4.35	
									Z134	-16.00	Z133	44.90					
	Z132	-9.06	Z131	12.68					Z136	57.16	Z135	61.16	Z150	-2.70	Z149	2.70	
													Z152	33.42			
	Z138	67.74	Z137	0.00	Z140	225.03	Z139	44.13					Z154	-118.61	Z151	0 00	
															Z153	105.97	
	Z157	-112.03	Z156	3.64	Z159	-5.07	Z158	0.55	Z161	0.00	Z160	0.00					
	Asset Accum.	75.52	Gains Losses	32.87	Asset Accum.	23.61	Gains Losses	127.23	Asset Accum	844.39	Gains Losses	259.74	Asset Accum.	237.77	Gains Losses	126.23	Total Investment

Investment Real 1981	Total Sources Real 1981
	GDP
926.71	4004.00
	Total Gains or Losses
	-0.00
	Gross Government Income
	984.65
	Gross LQ & Parastat. Income
	97.55
	Gross PR Income
	3852.26
	Gross ROW Income
281.81	1457.81
	Borrowing + Saving of Govt.
	195.10
	Borrowing + Sav. of LQ & Par.
	317.03
	Borrowing + Saving of CB
	108.39
	Borrowing + Saving of BS
	150.84
	Borrowing + Saving of PR
	904.13
	Borrowing + Saving of ROW
	364.00
	Total Saving
	926.71
926.71	

MATRIX VIII
ZIMBABWE

CONSISTENCY FRAMEWORK (As a percent of GDP)

	CURRENT ACCOUNT										CAPITAL ACCOUNT				
	National Accounts 1981 %		Government 1981 %		Local Gov.& Parastat. 1981 %	Central Bank 1981 %	Banking System 1981 %	Non Fin. Priv.Sect. 1981 %		External Sector 1981 %	Government 1981 %	Gains/Losses Government 1981 %	Local Gov.& Parastat. 1981 %
National Accounts		RCg -RE.Mg	15.53 2.77				RCpr -RE.Mpr	69.16 12.69	RXGNFS -RMINT	24.78 10.44	RIg	3.12	RIpe	8.12
											-RE.Igm	0.95	-RE.Iem	2.47
Real Gains or Losses		Z100 -Z106	-0.10 -0.11				Z101 -Z107	-0.44 -0.60	Z105 -Z110	-0.03 -0.20	Z102 -Z108	-0.08 -0.02	Z104 -Z155	-0.20 -0.08
Government	GFY TI	1.20 10.29		17.GXPE	0.47		i6.GXTR TDpr	0.00 12.14	E.NTRGG	0.00				
LG & Parastatals	PEFY GSUB	2.44 -2.75	GSUB	2.75										
Central Bank														
Banking System														
Non Fin.Priv.Sect.	PRFY	88.83	GTR i3.Bg	6.50 0.18 i8.Bpe	0.95				E.NTRPR E.WREM i.E.Rpr	-2.08 1.83 0.00				
External Sector			i.E.BFg E.Mg	2.55 2 %6 i.E.BFpe	0.05		r.E.DFI i.E.BFp E.Mpr	1.78 0.00 12.09	E.MINT	10.24	E.Igm	0.92	E.Iem	2.39
SAVINGS & BORROWING														
Government			Sg	-3.32										
LG & Parastatals				Spe	0.97						Z163	1.69 Z162	0.07	
Central Bank														
Banking System														
Non Fin.Priv.Sect.							Spr	13.58			Z165	-1.82 Z164	1.89	
External Sector									Sf	11.91				
Total Saving			Sg	-3.32 Spe	0.97		Spr	13.58 Sf		11.91				
Total Uses	GDP	100.00 Total Uses		24.09 Total Uses	2.44		Total Uses	96.21 Total Uses		36.41	Asset Accum.	2.91 Gains Losses	1.96 Asset Accum.	7.92

Gains/Losses Loc.Gov&Per. 1981 %	Central Bank 1981 %	Gains/Losses Central Bank 1981 %	Banking System 1981 %	Gains/Losses Bank.Syst. 1981 %	Non Fin. Priv.Sect. 1981 %	Gains/Losses Non Fin. Priv.Sect. 1981 %	External Sector 1981 %	Gains/Losses External Sector 1981 %	
				RIpr	12.49				
				-RE.Ip	8.87				:Total I
				Z103	-0.31				
				-Z109	-0.15				
				E.Ips	8.72				:Tot.Int.Imp
						Z144	0.34		
	Z112	1.40	Z114	-1.04	Z116	1.39	Z142	2.39	Z143 0.00
		Z111	0.29	Z113	1.04	Z115	2.11	Z141	0.27
	Z118	1.82	Z120	-4.48	Z122	2.61	Z146	2.72	
		Z117	0.12	Z119	0.82	Z121	1.27	Z145	0.06
			Z124	-0.01	Z128	0.55			
				Z123	0.08	Z127	0.38		
			Z126	0.67	Z130	-1.86	Z148	2.69	
				Z125	0.13	Z129	0.08	Z147	0.11
					Z134	-0.40			
	Z132	-0.23				Z133	1.12		
		Z131	0.32		Z136	1.43	Z150	-.07	
						Z135	1.53	Z149	0.07
						Z152	0.83		
	Z138	1.69	Z140	5.62				Z151	0.00
		Z137	0.00	Z139	1.10		Z154	-2.96	
								Z153	2.65
	Z157	-2.80	Z159	-0.13	Z161	0.00			
		Z156	0.09	Z158	0.01	Z160	0.00		
	Asset Accum.	Gains Losses	Asset Accum.	Gains Losses	Asset Accum	Gains Losses	Asset Accum.	Gains Losses	:Total Investment
		1.09	0.82	0.59	3.18	16.09	6.49	5.94	3.15

Investment 1981 %	Total Sources 1981 %
	GDP
23.14	100.00
	Total Gains or Losses
	-0.00
	Gross Government Income
	24.09
	Gross LG & Parastat. Income
	2.44
	Gross PR Income
	96.21
	Gross ROW Income
7.04	36.41
	Borrowing + Saving of Govt.
	4.87
	Borrowing + Sav.of LG & Par.
	7.92
	Borrowing + Saving of CB
	2.71
	Borrowing + Saving of BS
	3.77
	Borrowing + Saving of PR
	22.58
	Borrowing + Saving of ROW
	9.09
	Total Saving
	23.14
23.14	

MATRIX IX
ZIMBABWE

CONSISTENCY FRAMEWORK
(Millions of Zimbabwe dollars, 1980 prices)

	CURRENT ACCOUNT										CAPITAL ACCOUNT				
	National Accounts Real 1987		Government Real 1987		Local Gov.& Parastat. Real 1987	Central Bank Real 1987	Banking System Real 1987	Non Fin. Priv.Sect. Real 1987		External Sector Real 1987		Government Real 1987	Gains/Losses Government Real 1987	Local Gov.& Parastat. Real 1987
National Accounts		RCg -RE.Mg	725.00 90.00				RCpr -RE.Mpr	1988.00 242.00	RXGNFS -RMINT	1681.00 153.00	RIg -RE.Igm	125.00 48.00	RIpe -RE.Iem	232.00 86.00
Real Gains or Losses		Z100 -Z106	170.40 82.12				Z101 -Z107	464.34 93.06	Z105 -Z110	-479.03 141.50	Z102 -Z108	29.74 7.99	Z104 -Z155	55.89 14.96
Government	GFY 67.01 TI 602.23			i7.GKPE	27.33		i6.GKTR TDpr	0.00 664.39	E.NTRGO	0.00				
LG & Parastatals	PEFY 219.55 GSUB -154.30	GSUB	154.30											
Central Bank														
Banking System														
Non Fin.Priv.Sect.	PRFY 3552.51	QTR i3.Bg	234.10 154.74	i8.Bpe	60.40				E.NTRPR E.WREM i.E.Rpr	-18.52 2.20 24.25				
External Sector		i.E.BFg E.Mg	99.64 122.12	i.E.BFpe	32.18		r.E.DFI i.E.BFp E.Mpr	43.21 0.00 335.06	E.MINT	294.50	E.Igm	55.99	E.Iem	100.96
SAVINGS & BORROWING														
Government		Sg	-177.23											
LG & Parastatals				Spe	99.64						Z163	77.99 Z162	62.64	
Central Bank														
Banking System														
Non Fin.Priv.Sect.							Spr	851.78			Z165	-13.56 Z164	18.85	
External Sector									Sf	17.19				
Total Saving		Sg	-177.23	Spe	99.64		Spr	851.78	Sf	17.19				
Total Uses	GDP 4287.00	Total Uses	1360.96	Total Uses	219.55		Total Uses	4009.89	Total Uses	1207.10	Asset Accum.	219.18	Gains Losses 81.49	Asset Accum. 287.89

Gains/Losses Loc.Gov&Par. Real 1987		Central Bank Real 1987		Gains/Losses Central Bank Real 1987		Banking System Real 1987		Gains/Losses Bank.Syst. Real 1987		Non Fin. Priv.Sect. Real 1987		Gains/Losses N.F.Pr.Sect. Real 1987		External Sector Real 1987		Gains/Losses Ext.Sect. Real 1987	
									RIpr	282.00							Total I
									-RE.Ip	105.00							
									Z103	68.73							
									-Z109	18.44							
									E.Ipa	123.44							Tot.Int.Imp
													Z144	52.90			
	Z112	90.94			Z114	-35.86			Z116	183.08			Z142	-29.11	Z143	0.00	
			Z111	3.84			Z113	26.16			Z115	87.17			Z141	98.77	
	Z118	20.14			Z120	19.24			Z122	-49.10			Z146	-139.97			
			Z117	14.25			Z119	20.44			Z121	71.50			Z145	91.04	
					Z124	-5.34			Z128	-11.47							
							Z123	2.26			Z127	15.88					
					Z126	27.20			Z130	103.17			Z148	-15.86			
							Z125	7.19			Z129	6.60			Z147	4.40	
									Z134	2.70							
	Z132	26.40									Z133	34.77					
			Z131	10.20					Z136	80.74			Z150	-5.29			
											Z135	57.25			Z149	5.29	
													Z152	-4.62			
	Z138	-83.13			Z140	90.67									Z151	4.18	
			Z137	8.02			Z139	56.58					Z154	-345.21			
															Z153	327.58	
	Z157	10.48			Z159	3.53			Z161	-24.44							
			Z156	12.58			Z158	0.00			Z160	24.44					
	Asset Accum.	84.82	Gains Losses	49.20	Asset Accum.	99.43	Gains Losses	112.62	Asset Accum	633.41	Gains Losses	297.70	Asset Accum.	-487.16	Gains Losses	531.25	Total Investment

Investment Real 1987	Total Sources Real 1987
	GDP
791.36	4287.00
	Total Gains or Losses
	0.00
	Gross Government Income
	1360.96
	Gross LG & Parastat. Income
	219.55
	Gross PR Income
	4009.69
	Gross ROW Income
280.39	1207.10
	Borrowing + Saving of Govt.
	300.67
	Borrowing + Sav. of LG & Par.
	287.99
	Borrowing + Saving of CB
	134.02
	Borrowing + Saving of BS
	712.06
	Borrowing + Saving of PR
	931.11
	Borrowing + Saving of ROW
	44.09
	Total Saving
	791.36
791.36	

MATRIX X
ZIMBABWE

CONSISTENCY FRAMEWORK (As a percent of GDP)

	CURRENT ACCOUNT									CAPITAL ACCOUNT				
	National Accounts 1987 %	Government 1987 %	Local Gov.& Parastat. 1987 %	Central Bank 1987 %	Banking System 1987 %	Non Fin. Priv.Sect. 1987 %	External Sector 1987 %			Government 1987 %	Gains/Losses Government 1987 %	Local Gov.& Parastat. 1987 %		
National Accounts		RCg 16.91 -RE.Mg 2.10			RCpr -RE.Mpr	46.33 RXGNFS 5.64 -RNINT	30.75 3.57		RIg -RE.Igm	2.92 1.12	RIpe -RE.Iem	5.41 2.01		
Real Gains or Losses		Z100 3.97 -Z106 0.75			Z101 -Z107	10.83 Z105 2.17 -Z110	-11.17 3.30		Z102 -Z108	0.69 0.19	Z104 -Z155	1.30 0.35		
Government	QFY 1.56 TI 14.06	i7.QKPE	0.64		i6.QKTR TDpr	0.00 15.50 E.NTRQD	0.00							
LG & Parastatals	PEFY 5.12 GSUB -3.60 GSUB	3.60												
Central Bank														
Banking System														
Non Fin.Priv.Sect.	PRFY 82.87 i3.Bg	GTR 5.46 3.61 i8.Bpe	1.41			E.NTRPR E.MREM i.E.Rpr	-0.43 0.05 0.57							
External Sector		i.E.BFg 2.32 E.Mg 2.85 i.E.BFpe	0.75		r.E.DFI i.E.BFp E.Mpr	1.01 0.00 7.82 E.MINT	8.87		E.Igm	1.31	E.Iem	2.35		
SAVINGS & BORROWING														
Government		Sg -4.13												
LG & Parastatals		Spe	2.32						Z163	1.82 Z162	1.46			
Central Bank														
Banking System														
Non Fin.Priv.Sect.					Spr	19.87			Z165	-0.32 Z164	0.44			
External Sector						Sf	0.40							
Total Saving		Sg -4.13	Spe 2.32		Spr	19.87	Sf 0.40							
Total Uses	GDP 100.00	Total Uses 31.75	Total Uses 5.12		Total Uses	93.53	Total Uses 28.16		Asset Accum.	Gains 5.11	Losses 1.90	Asset Accum.	6.72	

Gains/Losses Loc.Gov&Par. 1987 %	Central Bank 1987 %	Gains/Losses Central Bank 1987 %	Banking Syatem 1987 %	Gains/Losses Bank.Syst. 1987 %	Non Fin. Priv.Sect. 1987 %	Gains/Losses Non Fin. Priv.Sect. 1987 %	External Sector 1987 %	Gains/Losses External Sector 1987 %	
				RIpr	6.58				
				-RE.Ip	2.45				:Total I
				Z103	1.56				
				-Z109	0.43				
				E.Ips	2.66				:Tot.Int.Imp
						Z144	1.23		
	Z112	2.12	Z114	-0.84	Z116	4.27	Z142	-0.68	Z143 0.00
		Z111	0.09	Z113	0.61	Z115	2.03	Z141	2.30
	Z118	0.47	Z120	0.45	Z122	-1.15	Z146	-3.27	
		Z117	0.33	Z119	0.48	Z121	1.67	Z145	2.12
			Z124	-0.12	Z128	-0.27			
				Z123	0.05	Z127	0.37		
			Z126	0.63	Z130	2.41	Z148	-0.37	
				Z125	0.17	Z129	0.15	Z147	0.10
					Z134	0.06			
	Z132	0.62				Z133	0.81		
		Z131	0.24		Z136	1.88	Z150	-0.12	
						Z135	1.34	Z149	0 12
						Z152	-0.11		
	Z138	-1.47	Z140	2.11				Z151	0.10
		Z137	0.19	Z139	1.32		Z154	-8.05	
								Z153	7.64
	Z157	0.24	Z159	0.08	Z16.	-0.57			
		Z156	0.30	Z158	0.00	Z160	0.57		
	Asset	Gains	Asset	Gains	Asset	Gains	Asset	Gains	:Total
	Accum.	1.98 Losses	1.15 Accum.	2.32 Losses	2.63 Accum	14.78 Losses	6.94 Accum.	-11.36 Losses	12.39 : Investment

Investment 1987 $	Total Sources 1987 $
	GDP
18.46	100.00
	Total Gains or Losses
	0.00
	Gross Government Income
	81.75
	Gross LG & Parastat. Income
	5.12
	Gross FR Income
	93.53
	Gross ROW Income
6.54	28.16
	Borrowing + Saving of Govt.
	7.01
	Borrowing + Sav.of LG & Par.
	6.72
	Borrowing + Saving of CB
	3.13
	Borrowing + Saving of BS
	4.95
	Borrowing + Saving of FR
	21.72
	Borrowing + Saving of ROW
	1.03
	Total Saving
	18.46
18.46	

represents a relative price gain (i.e, a negative loss) attributable to the fact that the deflator for investment goods on average rose less rapidly than the GDP deflator between 1980 and 1981. A similar observation holds for the investment of LG & parastatals and for private sector investment. For 1987, however, the opposite applies. For example, investment expenditure by the central government amounts to 3.61 percent of GDP, but the quantity change amounts to 2.99 percent. The difference of 0.62 percent represents a relative price loss due to an increase in the investment deflator relative to the GDP deflator between 1980 and 1987.

It is also instructive to examine the decomposition of deflated changes in holdings of financial assets and liabilities associated with the transfer of resources into a change in real stocks and a capital loss/gain component. Consider for example the capital account for the central government in 1981 (see Table 27 and Matrix VIII). Aside from its investment and dissaving, the central government transfered 1.76 percent of GDP to LG & parastatals in the form of long-term loans. This transfer can be divided up into a real change in stocks (that is, units of 1981 GDP commanded by the end 1981 stock of outstanding loans to LG & parastatals in 1980 prices less units of 1980 GDP commanded by the end 1980 stock) amounting to 1.66 percent, and a capital loss term of 0.10 percent. This capital loss term represents an "involuntary" capital transfer from the central government to parastatals, and is directly attributable to the erosion in the value of the parastatals' debt to the government that occurs due to inflation between the end of 1980 and 1981.

III.3 Balance Sheets and Real Wealth for 1980 and 1986

Tables 31 - 36 present the balance sheets and net wealth definitions for each sector in 1980 Zimbabwean dollars, where stock values are end 1980 and end 1986 values. The financial asset and liability holdings are consistent with the changes in real stocks reflected by Tables 17 - 30 of the preceding sub-section. A lack of data for physical and human wealth variables precluded a calculation of sector net wealth at this stage.

The asset/liability composition for both the central bank and the banking system exhibits considerable stability. From the external sector balance sheet, it can be noted that there has been an increase in external indebtedness, although this has been contained. However, the liabilities of the parastatal sector vis-a-vis the central government and the external sector have increased considerably. This raises the question of whether, from the central government's viewpoint, the asset is a non-performing one.

TABLE 31

BALANCE SHEET: CENTRAL GOVERNMENT
(1980 Zimbabwe Dollars, at end of period)

WEALTH COMPONENTS	ASSETS			LIABILITIES		
1. Financial Wealth		1980	1986		1980	1986
(fw_{Gt})	$gktr_t$	780	218	dc_{Gt}	122	44
	$gkpl_t$	30	723	cbs_{Gt}	431	302
				b_{Gt}	872	1007
				bf_{Gt}	415	1073
2. Non-Financial Wealth						
2.1 Non-Human Wealth						
(nhw_{Gt})	$(P_{KGt}/P_t)\ K_{Gt}$					
3. Net Wealth				nw_{Gt}		

TABLE 32

BALANCE SHEET: PUBLIC ENTERPRISES AND LOCAL GOVERNMENT
(Millions of 1980 Zimbabwe Dollars, at end of period)

WEALTH COMPONENTS	ASSETS	LIABILITIES	1980	1986
1. Financial Wealth (fw_{PLt})		$gkpl_t$	30	723
		b_{PLt}	525	827
		dc_{PLt}	49	165
		cbs_{PLt}	338	236
		bf_{Plt}	89	989
2. Non-Financial Wealth				
2.1 Non-Human Wealth (nhw_{PLt})	$(P_{KPLt}/P_t)\ K_{PLt}$			
3. Net Wealth		nw_{PLt}		

TABLE 33

BALANCE SHEET: CENTRAL BANK
(Millions of 1980 Zimbabwe Dollars, at end of period)

WEALTH COMPONENTS	ASSETS			LIABILITIES		
1. Financial Wealth		1980	1986		1980	1986
(fw_{CBt})	dc_{Gt}	122	44	h_{BSt}	32	26
	dc_{PLt}	49	165	h_{PRt}	157	183
	dc_{BSt}	131	118	$dbbs_{CBt}$	52	83
	r_{CBt}	139	140	$dbbr_{CBt}$	34	76
				nfb_{CBt}	166	99
2. Non-Financial Wealth						
2.1 Non-Human Wealth (nhw_{Cbt})	0					
3. Net Wealth				$nw_{CBt} = 0$		

TABLE 34

BALANCE SHEET: BANKING SECTOR
(Millions of 1980 Zimbabwe Dollars, at end of period)

WEALTH COMPONENTS	ASSETS			LIABILITIES		
		1980	1986		1980	1986
1. Financial Wealth (fw_{BSt})	h_{BSt}	32	26	dc_{BSt}	131	118
	$dbbs_{CBt}$	52	83	dep_{PRt}	464	402
	cbs_{Gt}	431	302	$qmon_t$	632	661
	cbs_{PLt}	338	236	nfb_{BSt}	103	119
	cbs_{PRt}	456	653			
	r_{BSt}	21	0			
2. Non-Financial Wealth						
2.1 Non-Human Wealth (nhw_{BSt})	0					
3. Net Wealth				$nw_{BSt} = 0$		

TABLE 35

BALANCE SHEET: NON-FINANCIAL PRIVATE SECTOR
(Millions of 1980 Zimbabwe Dollars, at end of period)

WEALTH COMPONENTS	ASSETS			LIABILITIES		
1. Financial Wealth		1980	1986		1980	1986
(fw_{PRt})	h_{PRt}	157	183	$gktr_t$	780	218
	$dprcb_t$	34	76	dc_{PRt}	0	93
	dep_{PRt}	464	402	cbs_{PRt}	456	653
	$qmon_t$	632	661	fk_t	4043	3558
	b_{Gt}	872	1007	bf_{PRt}	0	45
	r_{PRt}	0	265			
2. Non-Financial Wealth						
2.1 Non-Human Wealth (nhw_{PRt})	$(P_{KPRt}/P_t)\ K_{PRt}$					
2.2 Human Wealth	hw_t					
3. Net Wealth				nw_{PRt}		

TABLE 36

BALANCE SHEET: EXTERNAL SECTOR

(Millions of Zimbabwe Dollars, at end of period)

WEALTH COMPONENTS	ASSETS			LIABILTITIES		
1. Financial Wealth		1980	1986		1980	1986
(FW_{Ft})	fl_t	4043	3558	r_{CBt}	139	140
	bf_{Gt}	415	1073	r_{BSt}	21	0
	bf_{PLt}	89	989	r_{PRt}	0	265
	bf_{PRt}	0	45			
	nfb_{CBt}	166	99			
	nfb_{BSt}	103	119			
2. Non-Financial Wealth						
2.1 Non-Human Wealth						
(nhw_{Ft})	0					
3. Net Wealth				nw_{Ft}		

IV. CONCLUDING REMARKS

The methodology developed by Khadr and Schmidt-Hebbel (1989) provides a comprehensive specification of flow and stock budget constraints in nominal and real terms. These relationships are integrated into a summary macroeconomic consistency framework that is suitable for application to developing countries with reasonably well-developed data bases.

The application to Zimbabwe in this paper illustrates the potential usefulness of the framework for (i) data organization and consistency checks; (ii) gaining sharper insights about the historical structure of resource transfers within the economy and vis-a-vis the rest of the world; (iii) financial programming and short- to medium-term macroeconomic projections; (iv) tracing through and analyzing the effects for different "agents" of capital gains and losses conferred by inflation and nominal exchange rate changes; and (v) providing a skeletal accounting frame for subsequent behavior specification and model-building efforts.[11]

Possible future extensions of both the methodology and the country application, subject to a careful assessment of the costs and benefit of each extension, would encompass:

(i) The inclusion of current account transactions and equity for both the central bank and the banking sector.

(ii) A disaggregation of the non-financial private sector into firms and households (which would permit an explicit treatment of labor and stock

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[11] In this context, careful budget constraint specification also yields a number of restrictions on the parameters of the model, which it is important to observe. The most obvious such restriction (for the private sector) is that the marginal propensity to consume, the marginal propensity to save, and the marginal tax rate on income should sum to unity.

market related variables), and further disaggregation of the latter group into wage earners and non-wage earners (to capture consumption pattern differences).

(iii) A derivation of consolidated public sector budgets in flow and stock terms. This would be useful in identifying fiscal stance and the impact of the consolidated public sector borrowing constraint on financial markets and macro variables in general, and in addressing issues associated with the sustainability of public sector deficits.

(iv) An explicit link between investment and physical capital accumulation.

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APPENDIX I: Nomenclature for the Flow Budget Constraints

Identities (1) - (6') below reproduce their counterparts in the text in symbol form.

(1) $S_G \equiv GFY + TI + TD_{PR} + E\ NTRGO - C_G - GTR - GSUB + i_6\ GKTR + i7\ GKPL - i_3\ B_G - i^*\ BF_G$

(1') $S_G \equiv IN_G + GdKTR + GdKPL - dDC_G - dCBS_G - dB_G - E\ dBF_G - E\ KTG$

(2) $S_{PL} \equiv PLFY + GSUB - GSUB - i_7\ GKPL - i_8\ B_{PL} - E\ i^*\ BF_{PL}$

(2') $S_{PL} \equiv IN_{PL} - dGKPL - dB_{PL} - dDC_{PL} - dCBS_{PL} - E\ dBF_{PL}$

(3') $S_{CB} \equiv dCBS_G + dCBS_{PL} + dDC_{BS} + E\ dR_{CB} - dH_{BS} - dDBBS_{CB} - dH_{PR} - dDBPR_{CB} - E\ dNFBCB$

(4') $SBS = dCBS_G + dCBS_{PL} + dH_{BS} + dDBBS_{CB} + dCBS_{PR} + E\ dR_{BS} - dDCBS - dDEP_{PR} - dQMON - E\ dNFB_{BS}$

(5) $S_{PR} \equiv PRFY + GTR + E\ NTRPR + E\ WREM - C_{PR} - TD_{PR} - E\ rr\ FK + i_3\ B_G + i_8\ B_{PL} + E\ i^*\ R_{PR} - i_6\ GKTR - E\ i^*\ BF_{PR}$

(5') $S_{PR} \equiv IN_{PR} + dH_{PR} + dDBPR_{CB} + dDEPPR + dQMON + dB_G + dB_{PL} + E\ dR_{PR} - dGKTR - dDC_{PR} - dCBS_{PR} - E\ dFK - E\ dBF_{PR}$

(6) $S_F = - E\ (XGNFS - MINT_{PR} - MC_G - MI_{PR} - MI_G - M_{PL}) - E\ (NTRGO + NTRPR + WREM) + E\ rr\ FK + E\ i^*\ (BF_G + BF_{PL} + BF_{PR} - R_{PR})$

(6') $S_F \equiv E\ KTG + E\ dFK + E\ (dBFG + dBF_{PL} + dBFPR + dNFB_{CB} + dNFB_{BS}) - E\ (dR_{CB} + dR_{BS} + dR_{PR})$

All variables have a time-period index attached to them, which has been suppressed. The lower case "d" denotes a difference operator. Thus, for a stock variable X, $dX = X_t - X_{t-1}$. Other variables are defined as follows: FY is gross factor income, TI is indirect taxes, NTR is net foreign transfers, C is consumption expenditure, GTR is government transfers to PR, GSUB is government subsidies to PR channeled via PL, GKTR is government loans to PR, GKPL is government loans to PL, B is government bonds or domestic debt, BF is foreign bonds or foreign debt, S is saving, IN is gross investment expenditure, DC is domestic credit of CB, CBS is credit of the BS, R is foreign reserves and asset holdings, H is base money, DB is deposits at the CB, NFB is net foreign debt of financial institutions, DEP is PR deposits at BS, QMON is quasi-money held by PR, WREM is workers' remittances from abroad to PR, FK is the foreign-owned capital stock, XGNFS is exports of goods and non-factor services, MINT is imports

of intermediate goods, 4MC is consumer goods imports, and MI is capital goods imports (all imports of goods and non-factor services).

Price variables are denoted as follows: E is the nominal exchange rate (which premultiplies all variables defined in nominal foreign currency units), i_j is the nominal interest rate associated with asset/liability j, i^* is the nominal foreign interest rate, and rr is the nominal rate of profit on foreign-owned capital.

APPENDIX II: Notes on Data Sources, Calculations and Simplifying Assumptions

As a general principle, primary sources of data, particularly for the capital account flows (that is, the bottom right-hand portion of the summary matrix) were the fiscal accounts and the balance of payments accounts. The aggregate expenditure components were taken from the national accounts. Other capital account items which could not be calculated residually were estimated from stock balance sheets for the Reserve Bank of Zimbabwe and a consolidated stock balance sheet for accepting houses, discount houses and commercial banks (the banking system). More detailed notes on sources appear below.

VARIABLE	SOURCE
1) Current Account	
GDP	NA data.
GFY	FA data: estimated from Financial Statements 1987 and 1988. For 1981, the ratio of GFY to total non-tax revenue is assumed to be the same as for 1987.
TI	FA data: customs + excise + sales + other taxes.
GSUB	FA data: subsidies to public enterprises.
PEFY	FA (Public Enterprise) data: estimated as operating results + depreciation + interest payments.
PRFY	calculated residually as: GDP-GFY-PEFY-TI+GSUB.
Cg	FA data: wages & salaries + goods & services.
Ig	FA data: CG capital expenditure - capital transfers.
Ipe	FA (Public Enterprise) data.
Ipr	calculated residually as: Total I (NA data) - Ig - Ipe.
E.XGNFS	BOP data.
E.MINT	calculated as alpha x total imports of GNFS (BOP data), where alpha = intermediate good imports (EXT data)/total imports of GNFS (EXT data).
E.(Igm+Ipm+Iem)	calculated as beta x total imports of GNFS (BOP data), where beta = machinery/transport imports (EXT data)/total imports of GNFS (EXT data).
E.Igm	calculated as gamma x E.(Igm+Ipm+Iem), where gamma = Ig/(Ig+Ipr+Ipe).
E.(Mg+Mpr)	calculation analogous to that for E.(Igm+Ipm+Iem).
E.Mg	E.Igm.

Cpr	calculated residually as: GDP-Cg-Ig-Ipr-Ipe-E.(XGNFS-Mg-Mpr -MINT-Igm-Ipm-Iem).
GTR	FA data: transfer payments less pension contributions, etc.
i3.Bg	FA data: internal interest payments.
i.E.BFg	FA data: external interest payments.
i6.GKTR	estimated at 0 for both 1981 and 1987.
i7.GKPE	A data: "guesstimate".
TDpr	FA data: income tax.
E.NTRGO	estimated at 0 for both 1981 and 1987.
Sg	calculated using identity (1).
i.E.BFpe	DRS data.
i8.Bpe	calculated residually as total interest payments of LG and Es (FA Public Enterprise data) - i7.GKPE - i.E.BFpe.
Spe	calculated using identity (2).
r.E.DFI	BOP data: profit remittances to ROW
i.E.BFpr	total interest paid to ROW (BOP data) - i.E.BFg - i.E.BFpe.
E.NTRPR	BOP data: transfers to ROW.
i.E.Rpr	BOP data: interest paid to Zimbabwe by ROW.
E.WREM	data: net factor income aside from interest payments and direct investment income.
Spr	calculated using identity (5).
Sf	" (6).

2) Capital Account

dGKPE	FA data: net LT lending to plus "investments" in parastatals (from Financial Statements 1987 and 1988).
dGKTR	FA data: total capital transfers minus dGKPE.
dDCg	RBBAL data: first difference of central government liabilities held by the Reserve Bank.
dCBSg	calculated as: total borrowing from the monetary system (FA data) - dDCg.
dBg	FA data: bonds + borrowing from the non-banking sector.
E.dBFg	FA data: borrowing from ROW.
E.dKTG	FA data: international aid grants.
dDCpe	estimated from RBBAL data.
dCBSpe	calculated residually as overall public borrowing from the monetary system (FA data) - dDCg - dCBSg - dDCpe.
dBpe	FA data: non-monetary domestic borrowing by public sector less dBg.
E.dNFBcb	RBBAL data: first difference of loans from ROW.
E.dNFBbs	estimated at 0.
E.dDFI	BOP data: direct foreign investment.
E.dBFpe	FA data: external borrowing by public sector less dBFg.
E.dRbs	BSBAL data: first difference of external reserves.
E.dRpr	estimated at 0.
E.dRcb	calculated as: position above the line + net IMF flows - E.dRbs - E.dRpr.
E.dBFpr	calculated as residual in the Balance of Payments.
dDEPpr	BSBAL data: first difference in stock.
dQMON	BSBAL data: first difference in stock.
dHbs	BSBAL data: first difference in stock.

dHpr	calculated as: first difference in stock of total notes and coins in circulation (RBBAL data) - dHbs.
dDCbs	estimated from BSBAL.
dDCpr	estimated from RBBAL as the residual change in assets.
dDBBScb	estimated from BSBAL.
dDBPRcb	calculated residually.
dCBSpr	calculated residually.[12]

3) Stocks

GKPE	For 1986, estimate from Financial Statements 1987 and 1988 (LT loans to plus "investments" in parastatals). For 1980, estimated at 10x the annual flow.
GKTR	For 1986, residual "investments" and LT loans. For 1980, estimated at 10x the annual flow.
DCg	RBBAL data: central government liabilities held by the Reserve Bank.
CBSg	BSBAL data.
Bg	Outstanding domestic central govt. debt (Quarterly Review) less DCg less CBSg.
E.BFg	Central govt. external debt (Quarterly Review).
DCpe	estimated from RBBAL data.
CBSpe	estimated from BSBAL data.
E.NFBcb	estimate from RBBAL data.
E.NFBbs	estimate from BSBAL data.
E.DFI	Estimate of foreign-owned private capital from capital stock series provided by the Country team.
E.BFpr	External debt data: NPPG MLT external debt.
E.Rbs	BSBAL data: external reserves.
E.Rpr	For 1980, estimated at 0. For 1986, estimated from interest receipts assuming a 10% net rate of return on foreign assets.
E.Rcb	RBBAL data.
DEPpr	estimated from BSBAL data.
QMON	estimated from BSBAL data.
Hbs	BSBAL data.
Hpr	calculated as: stock of total notes and coins in circulation (RBBAL data) - Hbs.
DCbs	estimated from BSBAL.
DCpr	estimated from RBBAL as residual assets.
DBBScb	estimated from RBBAL.
DBPRcb	estimated from RBBAL.
CBSpr	estimated from BSBAL.

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[12] By way of illustration, the discrepancy between the value for dCBSpr that emerges in the residual calculation and that which is obtained from BSBAL data amounts to some Z$251, or 2.6% of nominal GDP in 1987. Errors in other residual calculations for both 1987 and 1981 are typically of much smaller orders of magnitude.

Sources:

NA = National Accounts.
FA = Fiscal Accounts, converted from (June to June) fiscal to calendar year by taking the arithmetic mean of two consecutive fiscal years.
BOP = Balance of Payments. All US$ data converted at average 1987 exchange rate of 1.66 Z$ = 1 US$ and 0.69 Z$ = 1US$ for 1981.
EXT = External Trade.
RBBAL = (Stock) Balance Sheet of the RBZ from the Quarterly Economic Review.
BSBAL = (Stock) Balance Sheet of the banking system (consolidation of commercial banks, accepting houses and discount houses) from the Quarterly Economic Review.

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