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Monetary assets and inflation induced distortions
of the national accounts
The case of Belgium

Ken Lennan^{*}

Internal Paper



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The author is indebted to members of the "Inflation study" task force of DG II.

ABSTRACT

This paper, which forms part of a series of studies undertaken by the DG II inflation accounting task force, presents data on sectoral monetary assets and liabilities in Belgium for the period 1960-79. Published national data is adjusted where possible to give comparable data for the purpose of cross country comparisons which are presented in another study in this series. The present study analyses the structure of Belgian monetary asset and liability positions, their composition by credit instrument and bilateral credit relationships between sectors as well as commenting on developments in certain key asset and debt ratios. The net monetary position of each sector is then adjusted for depreciation of assets/liabilities due to inflation and the results, together with the implications of the adjustments in key economic ratios, such as the savings ratio and the government deficit, are commented on.

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I. INTRODUCTION

This paper forms an integral part of the work of the inflation study task force within the Directorate General for Economic and Financial Affairs.

The objective of the task force was to correct sectoral income flows for biases induced by general price inflation on the value of nominally denominated assets and liabilities of identified sectors of the economy. While data on flows in national accounts aggregates are available regularly, and are increasingly harmonised between countries, figures for stocks of financial assets and liabilities have not evolved substantially over time nor has any great convergence of definitions among countries been brought about despite significant efforts by the Statistical Office of the European Communities in this regard.

This study starts from data for financial asset/liability stocks by sector for the period 1960 to 1979 in Belgium published regularly by the Belgian National Bank (BNB) in their monthly reports and adjusts these to conform, as far as possible, to the data requirements specified in the general report by Cukierman and Mortensen (1983). For the purposes of the study we have excluded shares and, accordingly, the analysis only covers monetary assets/liabilities. The reader is referred to Appendix A for a description of the data sources used, the adjustments carried out and the classifications of sectors. Particular attention is drawn in this context to the assumptions used to separate households and enterprises, to the fact that the government sector includes the BNB and to the hypothesis used to adjust bonds from nominal to market prices.

Previous studies on the measurement of inflation biases in national accounts in Belgium are treated in Section II of the paper. Section III presents the basic asset/liability data analysing the structure and composition of assets and liabilities, bilateral credit relationships between sectors and discusses the behaviour of certain asset and debt ratios which can be regarded as having an important influence on economic behaviour. There follows, in section IV, the principal output of the study in the form of estimates of the depreciation of the net monetary asset/liability position of each sector, as well as the implications of corrections to economic aggregates for this phenomenon.

II. EXISTING STUDIES ON INFLATION ADJUSTMENT IN BELGIUM

A considerable literature has built up on the subject of inflation adjusted wealth data for Belgium principally as a result of the comprehensive yearly data published by the BNB on sectoral asset and liability holdings.

Detailed studies have been carried out by Praet (1977), Praet and Vuchelen (1979) and Praet (1980) on capital gains and the distribution of income, and a major analysis was undertaken by Kirschen et al. (1979/80) on the distribution and redistribution of income by social group. These studies are considerably more ambitious than the present exercise, including in addition to monetary assets fixed assets and share capital, as well as in the case of the latter work, the impact of changes by social group, but they do not include the breakdown of gains and losses by functional economic category required for the purposes of this study.

The conclusions of the initial study by Praet for the personal sector are the most relevant for comparison purposes with the present analysis. The conclusions of Praet's work for the personal sector were that two sub-periods existed in Belgium. He found that for the period 1953-1967 there was a net annual return (defined as the modification of the real value of wealth during the year taking account of the change in its unit value and the change in its purchasing power measured by the change in consumer prices) on total wealth (including housing, agricultural land, fixed interest securities, and currency) representing an average of 10% of national income per annum while in the second period from 1968-1975 there was a net negative return of 6% per annum. Most of the net gain over the whole period was recorded on housing and agricultural land with the net annual return on financial assets being negative in the two sub-periods, but more substantially so in the second span of years.

A more recent study by Siaens (1982) was brought to the attention of the author after the completion of the numerical calculations of this study. This paper covers the household sector solely, and finds that the national accounts significantly over record the savings ratio of households due to the loss resulting from the depreciation of financial assets caused by inflation, a finding which is confirmed in this study, although less dramatically so, given the adoption of certain adjustments to the BNB method of splitting the household and enterprise sectors. These assumptions are discussed fully in the Appendix to this paper which also raises some questions about the basic data used in the Siaens study, particularly in the most recent period 1977-1979 and in 1973.

III THE BASIC DATA

The structure of assets and liabilities

The relative importance of total financial assets (monetary assets plus shares) has grown substantially in Belgium over the nineteen years since 1960. Thus total gross financial assets as a percentage of GDP rose from 300% in 1960 to nearly 450% in 1979, the major increase occurring in the second decade studied. This reflects the greater degree of financial intermediation, with nominal monetary assets of all sectors increasing faster than GDP, but in particular those of financial intermediaries(1) and the external sector (see Appendix Table A 1). The breakdown of total liabilities showed more or less a similar development, with higher rates of increase in debts of the personal and enterprise sector being counterbalanced by a less pronounced movement of liabilities of the external sector than foreign claims on Belgian assets.

The net positions of the various sectors (for sectoral definitions see Appendix) are shown in Table 1 as a % of GDP and in Table A4 in national currency. The principal information which can be drawn from these tables is the relatively constant picture of a net asset position of households compensating for a similar liability position of private enterprises and the public sector. The average annual growth rates over the period 1960-1979 were 9,6% in the net monetary assets of households and 17,2% and 8,3% in net monetary liabilities of private enterprises and the public sector respectively. Over the two decades studied the annual average growth rates of household assets accelerated from 7,7% to 11,8%, public sector liabilities moved from 6 to 10,8% a trend which probably accelerated in 1980 and 1981 but these upward

(1) The intermediation ratio, defined as the ratio of total monetary assets of the Financial Institutions sector to the combined value of monetary assets of all sectors of the economy, rose from 35% in 1960 to 44% in 1979, with figures in brackets denoting changes in an alternative classification including public enterprises with enterprises and taking the narrower definition of general government.

Table 1

Net monetary assets or liabilities at mid year - BELGIUM(1)

percentage of GDP

	Assets			Liabilities			Unclassified
	Households	Financial Institutions	Rest of world	Private Enterprises	Public Enterprises	Government	
1961	92,2	2,6	0,8	9,0	6,3	84,4	4,2
1962	92,6	3,4	1,3	10,4	6,5	84,7	4,4
1963	92,4	4,2	3,2	11,2	6,9	85,1	3,4
1964	87,9	3,3	3,8	11,2	6,6	79,7	2,3
1965	87,5	2,7	3,2	11,8	6,4	77,3	2,1
1966	88,6	2,5	2,9	13,1	6,4	76,1	1,6
1967	89,9	2,7	2,1	15,3	6,6	74,4	1,8
1968	91,6	3,0	1,6	17,7	6,7	74,1	2,3
1969	88,3	3,7	1,0	18,0	6,6	70,3	1,9
1970	84,7	3,9	-0,7	17,8	6,8	66,0	2,7
1971	86,0	3,9	-2,4	18,6	7,0	65,3	3,5
1972	88,2	4,8	-4,0	19,6	7,1	65,4	3,1
1973	86,9	4,8	-4,8	19,6	7,0	63,4	3,1
1974	80,6	3,2	-4,0	18,1	6,7	57,5	2,5
1975	82,8	2,8	-4,1	19,2	7,1	57,6	2,3
1976	83,3	3,0	-3,8	20,5	7,2	57,5	2,6
1977	87,0	2,5	-2,8	23,6	7,1	59,6	3,6
1978	90,4	2,4	-1,1	25,8	7,0	63,0	4,1
1979	91,7	1,8	2,3	28,2	6,8	65,6	4,8

(1) Excluding shares and monetary gold. Bonds valued at market prices and BNB included with Government not Financial Institutions.

SOURCES: For sources and definitions see Appendix A.

steps in growth rates were well below the steady annual growth rate of 17% in liabilities of private enterprises which has been due to the greater reliance being placed by firms on bank rather than equity financing. A significant change in recent years has been that the external position has turned around substantially since 1975 to a position in 1979 where foreign claims on Belgian residents are significantly higher than foreign liabilities to Belgian residents, a trend which has probably been accentuated in more recent years as the supply of funds from the personal sector did not keep pace with the demand for funds emanating from private enterprises and the public sector. A notable feature of the table is the stability in nominal terms of the financial sector. This suggests that financial institutions endeavour to maintain a fixed nominal balance of assets over liabilities through time. Changes between individual years for categories have not shown substantial irregularities, except perhaps in 1975, when there was a considerable increase in asset acquisition by households and in 1978 when the growth of liabilities of firms slowed down appreciably (possibly linked to the slump in construction in that year). Too much should not be read into changes between individual years since developments have been influenced substantially by various factors e.g. timing of tax changes, cyclical behaviour of housing, interest rate differentials with the Netherlands on small deposits etc.

Nevertheless the broad picture emerging from Table 1 is that of a large net monetary asset position of households, two thirds of which financed the net monetary liabilities of the government sector and one third (but growing rapidly) providing funds for the net monetary liabilities of the enterprise sector.

Composition of monetary assets/liabilities by credit instrument

The composition of financial assets and liabilities by financial instrument is given in Table 2. The basis for the transformation from Table XII-1 of the BNB data is included as Appendix B. Household assets are mainly held in the form of money and deposits, one third in the form of bonds (which includes in this simplification "bons de caisse" of different varieties, some closer to bonds than others). The "other" category represents 20% of assets and mainly reflects reserves of insurance companies and pension funds.

Supplementary information is available in the BNB accounts on holdings of shares by the household/private enterprise sector. If it is assumed that all shares held by the household/enterprise sector are in the hands of households(2), then shares represented 14,1% of total financial assets (including shares) of households in 1979, a fall from 19,8% in 1970 which in turn was down from 20,4% in 1960. This represents a significant decline in the portion of company financing provided by private risk capital and highlights the greater reliance placed by firms on financial intermediaries.

For financial intermediaries assets in the form of money, deposits and bonds have fallen in importance with loans remaining stable and international means of payments (principally other liabilities of up to one year in Belgian francs and foreign currency to the rest of the world) increasing, reflecting the greater internationalisation of banking and the growth in the eurodollar market. On the liabilities side there has been a significant fall off in short term liabilities of banks and an increase in longer term loan liabilities. This development

(2) Given the importance of holding companies in Belgium this assumption may not be appropriate but is not vital for this part of the analysis.

Table 2

Structure of monetary assets/liabilities - BELGIUM(1)

	Households			Enterprises			Financial Institutions			Public sector			Rest of world			
	1960	1970	1979	1960	1970	1979	1960	1970	1979	1960	1970	1979	1960	1970	1979	
Assets																
International means of payment	0,0	0,0	0,0	0,0	0,0	0,0	3,8	11,8	17,7	15,2	17,1	16,6	0,0	0,0	0,0	
Money and deposits	40,8	44,5	47,0	80,7	76,5	78,4	6,1	4,5	2,8	13,1	18,2	15,7	0,4	1,8	1,4	
Bonds	34,1	34,0	38,3	4,1	7,0	7,0	35,2	27,0	24,1	28,5	20,6	9,5	30,5	9,8	3,4	
Loans	0,9	0,0	0,1	8,7	3,3	4,1	53,0	55,0	54,2	15,4	10,7	24,2	68,3	87,4	94,1	
Other	24,2	21,5	14,6	6,5	13,2	10,5	1,9	1,7	1,2	27,8	33,4	34,0	0,8	1,0	1,1	
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	
Liabilities																
International means of payment	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,8	56,0	65,6	71,2
Money and deposits	0,0	0,0	0,0	0,0	0,0	0,0	43,8	40,9	34,6	23,7	20,9	15,4	0,2	0,1	0,1	
Bonds	0,1	0,0	0,0	13,1	10,9	9,5	21,2	23,3	19,5	50,1	50,0	52,1	20,0	8,1	4,2	
Loans	94,0	91,0	93,1	77,4	82,9	85,5	6,1	16,3	31,3	20,9	20,6	23,2	11,9	22,6	21,7	
Other	5,9	9,0	6,9	9,5	6,2	5,0	28,9	19,5	14,6	5,3	8,5	8,5	11,5	3,6	2,8	
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	

(1) End of year data.

SOURCES: For sources and definitions see Appendix A.

matches the findings for other countries, referenced in Mengarelli (1982), that the rising cost of nominal funds has led to economic agents managing their funds more rigorously. The fall in importance of other liabilities of banks reflects the decrease in relative importance of liabilities of insurance companies, in the form of mathematical reserves, to the personal sector.

On the assets side of the public sector the most significant category was that of "other assets", which includes liabilities to the social security system, in the form of contributions due, which in 1979 accounted for one quarter of the assets of the public sector. The fall in the share of bonds in the assets of the public sector is a reflection of the shift in importance between BNB holdings of bonds and trade bills, the latter increasing on average by nearly 50% per annum in the years 1975 to 1979. On the liabilities side some fall in the share of short term deposits (principally state debts in the form of "Fonds de tiers" which in turn are principally liabilities to the postal cheque system and certain international organisations) was recorded, while the other major categories of liabilities increased their share.

Liabilities to the external sector, although increasing in magnitude, showed a broadly similar distribution. The distribution of Belgian assets abroad showed a switch between bonds and credits, as insurance companies external assets in the form of bonds fell, and external advances of financial institutions grew.

Table 3

Intrasectoral matrix of gross monetary assets/liabilities (end 1973) - BELGIUM

'000 million BF
and % of column/row

	Households	Private Enterprises	Financial Institutions	Public Sector	Rest of world	Total Assets	
	0	,7	73,9	24,4	,9	100	
Households	0	14	1484	490	19	2007	
	0	1,9	53,9	26,9	2,7	30,7	
		,3	7,7	51,3	37,2	0	100
Private Enter.	13	30	201	146	0	392	
	3,1	4	7,3	8	0	6	
		13,6	22,5	10,2	34,1	17,9	100
Fin.Institns.	385	639	290	969	507	2838	
	91,7	85,3	10,5	53,2	71,5	43,4	
		4,1	12	20,6	22,8	33,7	100
Public Sect.	22	65	111	123	182	540	
	5,2	8,7	4	6,8	25,7	8,3	
		0	0	92,8	7,2	0	100
Rest of world	0	0	571	44	0	615	
	0	0	20,7	2,4	0	9,4	
		6,4	11,5	42,1	27,8	10,8	100
Total Liabils.	420	749	2755	1821	709	6540	
	100	100	100	100	100	100	

SOURCE: For sources, methods and definitions see Appendix A.

Bilateral credit relationships between sectors

Intra-sectoral assets and liabilities are presented in Table 3. The year chosen for the disaggregation was 1973 since an official breakdown of the household/enterprise sector has been published in BNB (1976) only for the years 1972 and 1973. It should be noted, however, that the figures presented in Table 3 are not directly comparable with the BNB published figures since a number of adjustments have been carried out to the basic data. These adjustments relate to the split of fiduciary money between households and private enterprises, the valuation of bonds at market prices rather than face value, the exclusion of monetary gold, and the transfer of the BNB to the public sector. The first adjustment has the effect of increasing public liabilities to private enterprises and reducing similar liabilities to households, the second increases assets of all sectors and liabilities of the public sector, the third reduces public sector assets and the fourth increases public sector assets/liabilities and reduces those of financial institutions. The overall impact of all these adjustments is to reduce total monetary assets/liabilities of the economy by 45,000 million BF (principally due to the third and fourth adjustments). A full discussion of the methods used to implement the necessary adjustments is contained in Appendix A and the major reasons for these adjustments are outlined in Cukierman and Mortensen (1983)

The table shows that in gross monetary liabilities (excluding shares) the principal part of liabilities of the household, private enterprise and rest of the world sectors were held with financial institutions with practically all the remainder being with the public sector (principally in the form of Treasury bills and money). Monetary assets of private enterprises show a fairly similar distribution, although the percentage held with government

Table 4
Key asset and debt ratios - BELGIUM

	Households	Enterprises	Government			Rest of World		
	Net Monetary assets of households as % of disposable income	Net monetary liabilities as % of gross operating surplus	Gross mon. assets	Gross monetary liabilities	Net monetary liabilities	Mon. assets	Monetary liabilities	Net mon. position
			% of GDP					
1961	118	158	31	116	84	16	15	1
1962	119	183	30	115	85	16	15	1
1963	119	191	30	115	85	18	15	3
1964	115	186	30	110	80	19	15	4
1965	113	195	30	107	77	19	16	3
1966	115	224	29	105	76	19	16	3
1967	118	259	29	104	74	20	18	2
1968	120	276	28	102	74	21	20	2
1969	117	274	27	98	70	23	22	1
1970	113	265	27	93	66	25	26	-1
1971	115	308	25	91	65	28	30	-2
1972	117	312	24	90	65	28	32	-4
1973	116	313	26	89	63	31	36	-5
1974	108	315	24	82	58	33	37	-4
1975	108	398	24	81	58	36	40	-4
1976	108	451	23	80	58	35	39	-4
1977	113	479	23	83	60	38	41	-3
1978	118	497	25	88	63	44	45	-1
1979	120	549	28	93	66	52	50	2

SOURCES: National accounts aggregates: EUROSTAT and national sources. Asset and liability positions: see Appendix A.

is nearly 40%. Claims of financial institutions are more widely dispersed with one third on the public sector (in the form of bonds, central bank deposits and money) the remainder taking the form of lending to private enterprises, rest-of-the-world and households. Claims of the public sector were principally on the rest-of world (principally foreign currency reserves of the BNB) and assets of the rest-of-the-world were held primarily with financial institutions.

It should be noted that in Table 3 the diagonal of the matrix would be zero if all consolidation had been carried through. Since the original subsectors in the data have not been consolidated we have not attempted to carry through consolidation to the adjusted figures. Caution is therefore required in any interpretation of gross assets and liabilities of sectors separately and only net asset positions should be used. Consolidation problems arise mainly in the case of the public sector and financial institutions but can also occur in the household and private enterprise sectors, although to a less significant extent.

Development in key monetary asset and debt ratios

The trend of certain asset and debt ratios which are relevant to analysis of economic behaviour are presented in Table 4. Net monetary assets⁽³⁾ of households have remained surprisingly

(3) Monetary assets are defined here as financial assets less equity, participation and similar claims not fixed in nominal terms.

steady over the period 1961-1979 representing just under 120% of personal disposable income. The only significant deviation from this level occurred in 1965, probably due to the boom in construction in that year, in 1970 and in the period 1973-74, after which a reconstitution of net monetary assets only appeared gradually over the period 1975-78. All these periods coincide quite closely to the aftermath of peaks in the growth rate of GDP (6,9% in 1964, 5,9 and 6,2% in 1969-1970 and 5,3 and 6,2% in 1972-73). This suggests that the illiquidity of the personal sector may have contributed to the fall back in activity although it should be noted that the greater liquidity of the personal sector in 1978 and 1979 has not provoked a return to the high growth rates experienced in the past.

As far as enterprises are concerned, the ratio of net monetary liabilities to gross operating surplus has grown sharply over the period from 158% to 548% with declines being registered only in the years 1964 and 1970. The rapid rise in this ratio can primarily be ascribed to the decline in the importance of risk capital in the financing of firms with bank finance playing a much more important part than in the past, but it must also be regarded as an indicator of the more difficult financial position of companies, particularly in the late seventies. The disturbances in 1964 and 1970 are quite closely related to periods in which gross fixed investment and stockbuilding had grown very rapidly. As finance became tight, the return on investment less clear and interest rates high, enterprises began to build up assets on deposit of less than one year with financial institutions and postpone investment plans.

Net monetary liabilities of the general government as a percentage of GDP fell progressively from a peak of 85% of GDP in 1963 to a low point of 57% in 1974 after which it rose steadily to a level of 66% of GDP in 1979 (and to higher levels since then).

Movements have tended to be more or less in the same direction on both the assets and liabilities side. The major increases in general government liabilities in the 1977-79 period were recorded in the Treasury subsector (50%) and in the "other public sector" (i.e. public sector less Treasury, BNB, trading bodies and social security) which rose by 40%. These increases in liabilities took the form mainly of short term financing in the former case (Bills of up to one year) and long term borrowing from public financial intermediaries in the latter case.

The figures for the rest of the world sector show that the net positive monetary assets of the external sector during the sixties were reversed following the strong current account performance of the BLEU in the early seventies (when surpluses averaged 3% of GDP) only to be eroded by the deteriorating balance of payments position from 1975. By 1979 net monetary assets of the overseas sector had again become positive and this situation is likely to have continued into 1980 and 1981.

IV. ESTIMATES OF THE DEPRECIATION OF NET MONETARY ASSET/LIABILITY POSITIONS

Methods and results

The estimation of the depreciation of net monetary claims of the various sectors studied was carried out on the basis of the methodology set out in the general report on the study. It is appropriate to underline again that these estimates include only depreciation of monetary claims. The inclusion of real assets (property and land) can significantly alter the analysis as has been shown in Praet's work (1977) for the household sector. It

Table 5
Depreciation of net monetary assets due to inflation - BELGIUM

	Assets			Liabilities				% of GDP		p.m. Consumer Deflator % change
	H	FI	T	PE	GE	G	W	T	U	
1961	2,5	0,1	2,6	0,2	0,2	2,3	0,0	2,6	0,0	2,7
1962	0,8	0,0	0,8	0,1	0,1	0,8	0,0	0,9	-0,1	0,9
1963	6,5	0,3	6,8	0,8	0,5	6,0	-0,2	7,0	-0,2	7,0
1964	3,5	0,1	3,6	0,4	0,3	3,2	-0,2	3,6	0,0	4,0
1965	4,0	0,1	4,1	0,5	0,3	3,6	-0,1	4,3	-0,2	4,6
1966	2,7	0,1	2,8	0,4	0,2	2,4	-0,1	2,9	-0,1	3,1
1967	2,6	0,1	2,7	0,4	0,2	2,2	-0,1	2,7	0,0	2,9
1968	2,7	0,1	2,8	0,5	0,2	2,2	0,0	2,8	0,0	2,9
1969	3,0	0,1	3,1	0,6	0,2	2,4	0,0	3,2	-0,1	3,4
1970	2,6	0,1	2,7	0,6	0,2	2,0	0,0	2,9	-0,2	3,1
1971	4,4	0,2	4,6	0,9	0,4	3,3	0,1	4,7	-0,1	5,1
1972	5,7	0,3	6,0	1,3	0,5	4,2	0,3	6,3	-0,3	0,5
1973	4,7	0,3	5,0	1,1	0,4	3,4	0,3	5,2	-0,2	5,4
1974	12,5	0,5	13,0	2,8	1,0	8,9	0,6	13,3	-0,3	15,5
1975	8,9	0,3	9,2	2,1	0,8	6,2	0,4	9,4	-0,2	10,7
1976	5,4	0,2	5,6	1,3	0,5	3,7	0,2	5,7	-0,1	6,5
1977	5,4	0,2	5,6	1,5	0,4	3,7	0,2	5,8	-0,2	6,2
1978	3,3	0,1	3,4	0,9	0,2	2,3	0,0	3,4	0,0	3,6
1979	3,7	0,1	3,8	1,1	0,3	2,6	-0,1	3,9	-0,1	4,0

KEY: H = Households, FI = Financial Institutions, T = Total, PE = Private Enterprises, G = Government, GE = Public Enterprises, W = Rest of world, U = Unclassified.

SOURCES: For sources, methods and definitions see Appendix A.

is also important to stress that the depreciation of monetary assets/liabilities, as calculated, does not represent inflation gains/losses, since compensation may already be included in nominal interest rates. This problem is the subject of another study in this series (Cukierman-Lennan-Papadia (CLP) (1983)) where the depreciation of monetary assets due to inflation is broken down into expected and unexpected components for five countries including Belgium.

To calculate depreciations of net monetary assets/liabilities of a sector due to inflation in year t , the average of its net monetary position at the beginning (end of year $t-1$) and end of year t has been multiplied by the inflation rate for that year and the resulting amount in Belgian francs is expressed as a percentage of nominal GDP at current prices in Table 5 for the years 1961 to 1979. The inflation rate used for year t is the rate of inflation in the course of the year (i.e. index at end t divided by index at end $t-1$). Since no end year figures exist for the consumer price deflator, the most appropriate index, we have used the consumer price index as an indicator of changes through the year and applied these changes to the average annual consumer price deflator to produce a synthetic end year deflator which is shown in the last column of Table 5.

The magnitude of depreciation in monetary assets as a % of GDP are most important for the household sector with the counterpart being principally a depreciation of liabilities of government and, to a considerably smaller extent, enterprises. As can be seen from the table, the phenomenon was most important in 1974 and 1975 due to the double digit rates of inflation recorded in both years. Although the public sector has seen its liabilities depreciate by 3,8% per annum, of perhaps greater interest is the steady rise in

Table 6
Adjustment of significant ratios for depreciation of net monetary assets/liabilities

%

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Households																			
Saving as % of disposable income																			
Unadjusted	12,6	14,2	12,7	15,5	17,3	16,8	17,1	16,2	17,0	20,0	19,8	20,4	19,4	20,3	20,1	20,9	19,5	19,4	17,9
Adjusted	9,7	13,3	4,7	11,4	12,8	13,7	14,1	13,2	13,5	17,1	14,8	13,8	14,0	4,3	9,7	14,9	13,4	15,8	13,8
Enterprises																			
Gross savings as % of gross domestic capital formation(1)																			
Unadjusted	86,3	78,9	83,5	80,4	83,7	70,9	71,8	80,1	74,1	72,5	64,7	77,3	74,0	59,4	62,3	65,7	73,3	75,4	65,2
Adjusted	90,0	80,2	94,7	86,4	91,2	75,8	77,2	86,6	81,0	78,4	74,8	92,9	86,5	88,4	88,8	84,9	95,1	88,9	79,5
Government																			
Net lending(+) or borrowing (-) as % of GDP																			
Unadjusted	-1,8	-1,8	-2,8	-1,5	-2,3	-1,7	-2,0	-3,2	-2,5	-2,6	-3,7	-4,8	-4,2	-3,1	-5,5	-6,1	-6,4	-6,8	-7,5
Adjusted	0,4	-1,0	3,2	1,7	1,2	0,7	0,2	-1,1	-0,1	-0,5	-0,4	-0,5	-0,7	5,8	0,7	-2,4	-2,7	-4,5	-4,9
Interest payments by government as % of GDP																			
Unadjusted	3,1	2,9	3,0	3,0	2,9	2,9	3,0	3,1	3,3	3,4	3,4	3,0	3,4	3,6	3,6	3,8	4,2	4,6	5,2
Adjusted	0,9	2,2	-2,9	-0,2	-0,6	0,6	0,9	1,0	0,9	1,4	0,0	-0,9	-0,1	-5,4	-2,5	0,1	0,5	2,3	2,6
Rest of world																			
Current balance as a % of GDP (- = deficit, + = surplus)																			
Unadjusted	0,2	0,7	-0,5	0,2	0,6	-0,1	1,2	1,4	1,8	3,2	2,2	3,9	2,8	1,5	0,5	0,2	-0,7	-0,7	-1,8
Adjusted	0,2	0,7	-0,3	0,4	0,7	0,0	1,3	1,4	1,8	3,2	2,1	3,6	2,5	0,9	0,1	0,0	-0,9	-0,7	-1,7

(1) Fixed capital formation plus changes in stocks.

SOURCES: EUROSTAT and national sources. Adjustment methods are described in Appendix A.

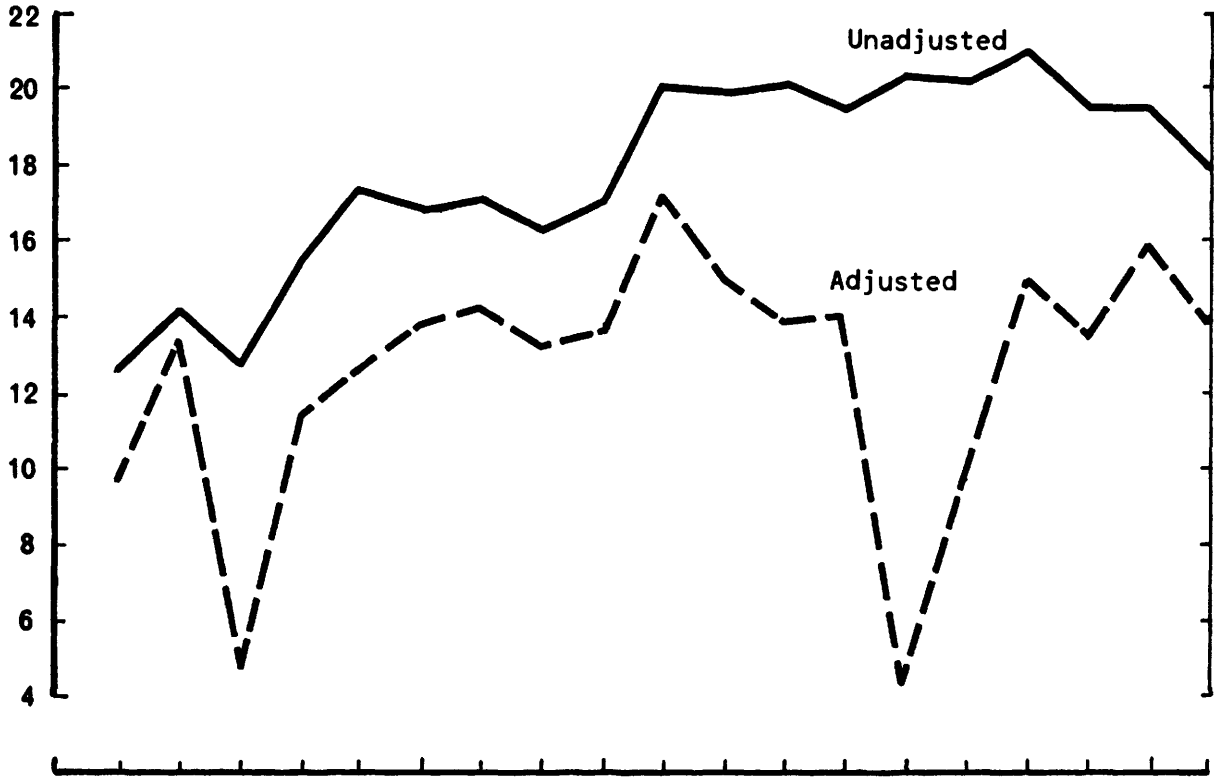
the depreciation of the enterprise sector in the seventies, when this had risen to about one third of the "gains" of the public sector. The rest of the world saw a small depreciation of its assets in the first decade studied and in 1979, while for the rest of the seventies it was a net beneficiary, with depreciation of its liabilities of up to 0,6% of GDP in 1974.

Adjustment of significant ratios for inflation induced depreciations of monetary assets and liabilities

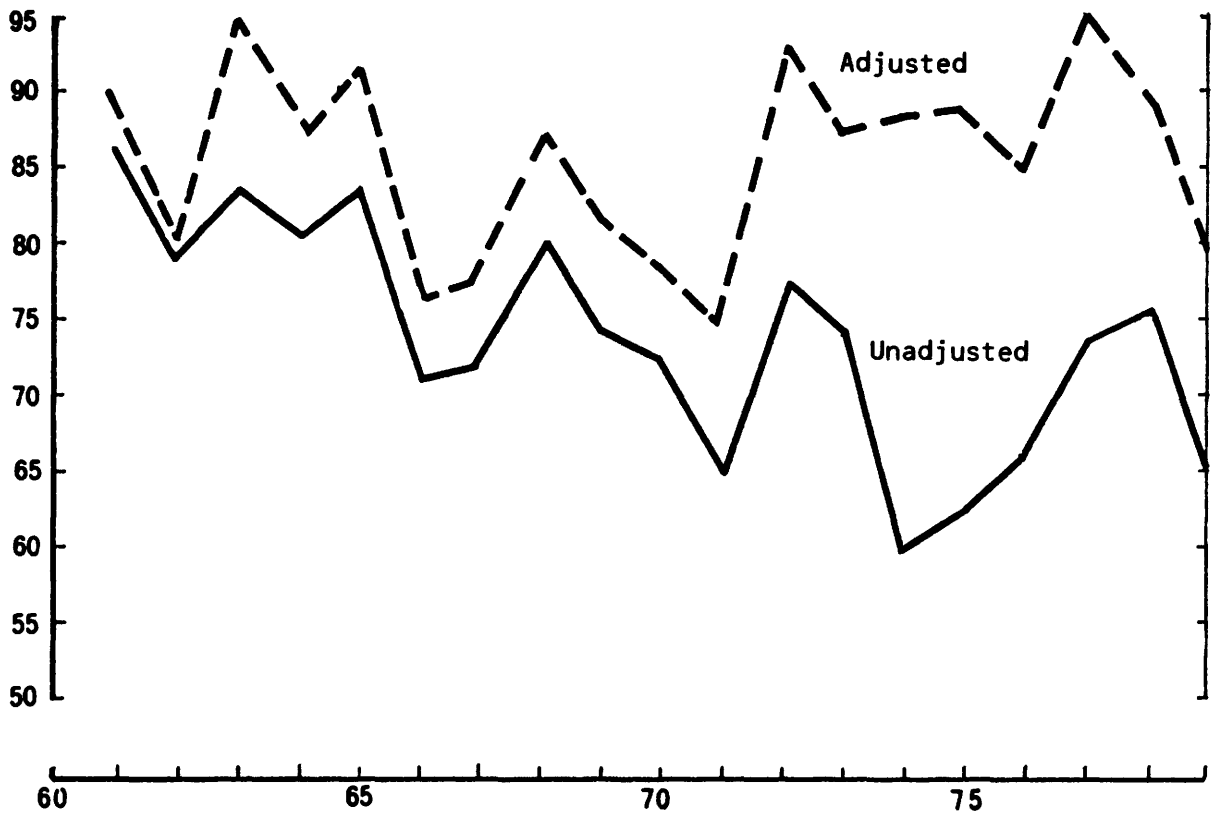
Following the methodology of Cukierman and Mortensen (1983) a number of sectoral ratios have been adjusted to reflect the depreciations in monetary assets and liabilities. The results are presented in Table 6.

For the household sector a feature, which has been the subject of numerous commentaries and analyses, has been the upward movement in the household savings ratio in the seventies. The unadjusted ratio contained in the table is that of gross savings of households and private non profit institutions serving households as a percentage of their gross disposable income (Eurostat 1981). This ratio peaked in 1976 after the step jump recorded in the early seventies from an average of around 15% in the sixties. The adjusted savings ratio, calculated as gross savings less the depreciation due to inflation on net monetary assets as a percentage of gross disposable income also less the inflation adjustment, does not show the substantial upward shift recorded in the unadjusted ratio in the seventies (see Graph 1). It does however show large swings from year to year as movements in inflation rates eroded the real value of assets held by the personal sector. The difference in levels of the two ratios is quite significant and this shows that in 1979 4,1% of the disposable income of households was needed to reconstitute the initial real value of their net monetary assets. There is no substantial evidence

Graph 1 : Savings of households as a % of disposable income



Graph 2 : Gross savings of enterprises as a % of total investment



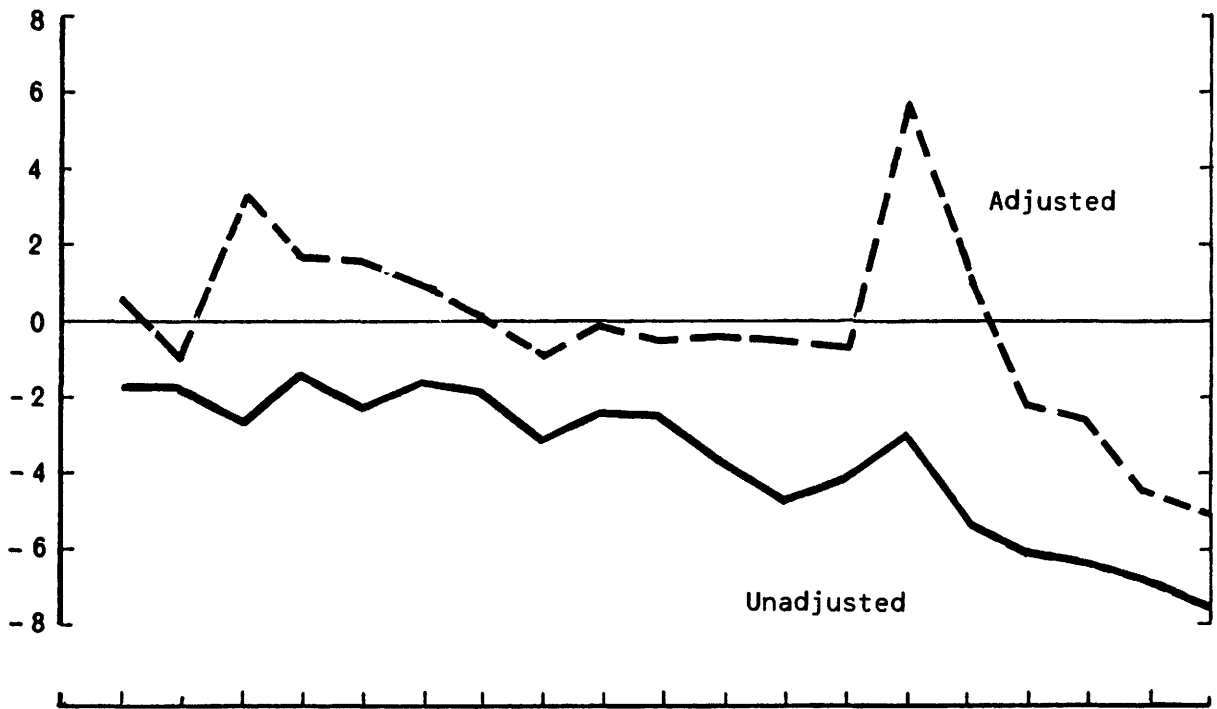
Source : Table 6

in the adjusted series of any major structural shift in the savings ratio in recent years except perhaps for the unexplained upward movement in one year, 1970. We must conclude that the rise in the traditionally defined savings ratio does not mean that the personal sector has changed its savings function over the period but that the upward movement is more likely to be the result of definitional problems in the national accounts, which do not take adequate account of the impact of inflation on the value of the households sector net monetary assets. It should again be stressed that the figures here do not say anything about income redistribution via inflation since inflation may have been correctly anticipated and completely compensated for through payments of nominal interest which are recorded in the national accounts. The study by Siaens (1982) suggests that, for Belgium, no financial instrument over the last nine years has furnished a net of tax positive return. However this does not solve the national accounts measurement problem outlined above, nor does it admit a situation where a negative return was correctly anticipated by holders of financial instruments.

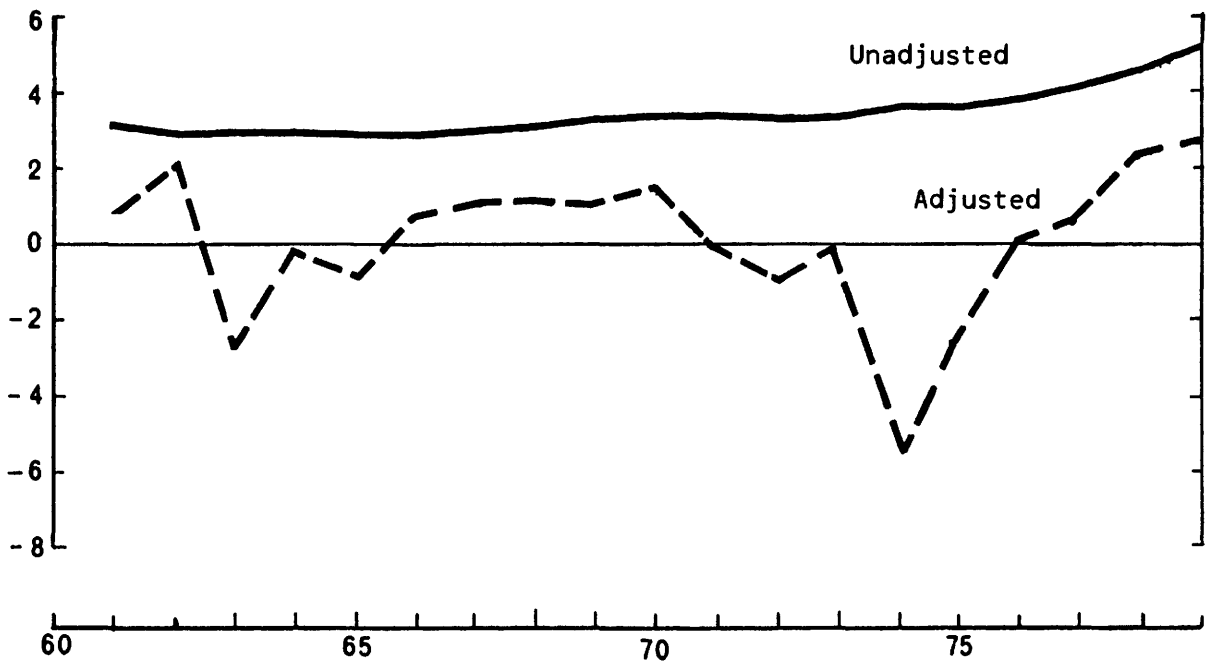
For enterprises the unadjusted ratio taken between gross savings and total investment (including stockbuilding), which represents the extent to which investment is financed by own resources, fell noticeably in the seventies (see Graph 2). However the adjusted ratio, defined as savings plus the depreciation of net liabilities in proportion to gross investment, was considerably more stable over the two decades, indicating a stable relationship between investment and gross saving, a factor emphasised by Meyer and Kuh (1957).

The government sector's net lending or borrowing as a percentage of GDP on both an unadjusted and an adjusted basis is shown in Graph 3. Comparing the two series we find that, as expected

Graph 3 : Net lending (+) or borrowing (-) of government as a % of GDP



Graph 4 : Interest payments as a % of GDP



Source : Table 6

due to the net debtor position of this sector, the adjusted government deficit was significantly lower over the whole period. The gap between the two series was particularly pronounced in the first half of the seventies. In the years 1975 and 1976 the adjusted deficit increased very rapidly as inflation rates decelerated and deficits grew. Since then the adjusted deficit has increased in parallel with unadjusted figures and data for 1980 and 1981 is likely to show a continuation of this trend. This underlines the budgetary constraints facing Belgian policy makers which have led to various measures to increase revenue and reduce expenditure in 1982.

In the second series of ratios for the government sector (Graph 4), interest payments are shown on an unadjusted and an adjusted basis (i.e. corrected for the inflation induced depreciation of net monetary liabilities). These show a pattern fairly similar to the net lending figures. However, the negative figures recorded in 1963-1965, 1971 and 1976 suggest that the inflation tax was quite significant in these years as a result of a combination of factors: long term nature of debt, low inflation expectations and a failure of nominal interest rates to adjust to inflation expectations. (On the latter two topics see Cukierman, Lennan and Papadia (1983)).

It should be noted that the figures in the table reflect the government adjusted deficit excluding public enterprises since these are included in the national accounts flows in the enterprise sector. The public enterprise subsector built up a considerable net liability position in the period 1973 to 1975 but no substantial increase was recorded since then. However, even though sectors are defined on the same basis, the acquisition of financial assets other than monetary assets and valuation adjustments mean that there is not necessarily an exact correspondence between the general government deficit and the change in the stock of monetary debt over the period.

Table 7
Budget balance of general government according to different concepts - BELGIUM

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Net lending (+) or borrowing (-)																			
1) Unadjusted (DF1)	-1.8	-1.8	-2.8	-1.5	-2.3	-1.7	-2.0	-3.2	-2.5	-2.6	-3.7	-4.8	-4.2	-3.1	-5.5	-6.1	-6.4	-6.8	-7.5
2) Adjusted for inflation induced depreciation of net mon. assets	0.4	-1.0	3.2	1.7	1.2	0.7	0.2	-1.1	-0.1	-0.5	-0.4	-0.5	-0.7	5.8	0.7	-2.4	-2.7	-4.5	-4.9
3) Adjusted for inflation induced deprec. & excluding mon. base (DF2)	-0.1	-1.2	1.7	0.9	0.4	0.1	-0.3	-1.6	-0.7	-1.0	-1.1	-1.4	-1.6	3.7	-0.6	-3.2	-3.4	-4.9	-5.4
4) DF2 less the change in mon. base (DF3)	1.1	0.0	2.9	2.4	1.5	0.9	0.1	-1.2	-0.5	-0.8	-0.4	0.1	0.4	4.7	-0.2	-2.6	-2.6	-4.0	-4.8
Memo items																			
5) Depreciation of net mon. liabilities	2.2	0.8	6.0	3.2	3.5	2.4	2.2	2.1	2.4	2.1	3.3	4.3	3.5	8.9	6.2	3.7	3.7	2.3	2.6
of which:																			
non mon. base	1.6	0.6	4.5	2.4	2.6	1.8	1.7	1.6	1.8	1.6	2.6	3.4	2.7	6.8	4.9	2.9	3.0	1.9	2.1
other	0.6	0.2	1.5	0.8	0.9	0.6	0.5	0.5	0.6	0.5	0.7	0.9	0.8	2.1	1.3	0.8	0.7	0.4	0.5
6) Change in mon. base	1.2	1.2	1.2	1.5	1.1	0.8	0.4	0.4	0.2	0.2	0.7	1.5	2.0	1.0	0.4	0.6	0.8	0.9	0.6

SOURCES: National accounts data from EUROSTAT and national sources. Also see Appendix A.

For the overseas sector there is no significant difference between the movement in the two series since the overall net monetary asset position is small relative to GDP. It should however be noted that the procedures adopted in this study for the conversion of foreign currency assets and liabilities into domestic currency at current exchange rates are not entirely correct (see Taylor and Threadgold (1979) Appendix I but also Cukierman and Mortensen (1983) pps 48-49 for arguments as to why the bias is likely to be small).

Supplementary data on budget financing

Further adjustments are carried out in Table 7 to present various alternative concepts of the government deficit (for a theoretical treatment see Cukierman and Mortensen (1983) pps 19-25). The qualifications mentioned in the previous section of the study should however be borne in mind when interpreting these figures (i.e. stock/flow consistency, monetary to financial asset switching etc.).

The deficit concept DF2 is net borrowing adjusted for the inflation induced depreciation of net monetary assets excluding the monetary base. This definition gives a measure of potential inflationary pressures in the absence of cyclical changes in borrowing and on the assumption that there is a zero return on public investment. The results suggest that any major inflationary impact of the government deficit was restricted to the years 1967 to 1973 and more importantly from 1976 to 1979, although in the latter period cyclical correction would undoubtedly moderate the recent high deficits substantially.

The third deficit concept DF3 subtracts the increase in base money from one year to the next from the previous measure in order to obtain an indicator of the extent to which the general government sector has to call on savings to finance its deficit. This series identifies two periods when the problem of crowding out may have been significant. These were in the period 1968 to 1970 and again to more marked degree 1976 to 1979.

CONCLUSIONS

During the period considered, 1960-1979, the importance of total monetary assets has grown substantially with gross monetary assets of all sectors increasing faster than GDP. The largest increase was in the portfolio of financial institutions as intermediation grew rapidly. As far as net monetary assets are concerned, a relatively constant picture emerges of a large net monetary asset position of households, two thirds of which was the counterpart of the net monetary liabilities of government and one third (but growing sharply) that of the enterprise sector. The steep annual growth rate of net monetary liabilities of enterprises shows the greater reliance being put by firms on bank rather than equity financing.

On the composition of monetary assets, it is found that short term assets and liabilities have been diminishing in importance as the rising cost of nominal funds has led to economic agents managing their funds more rigorously. On a bilateral credit basis, monetary liabilities are principally to financial institutions although the public sector has a relatively important liability position vis-à-vis households.

An analysis of movements in certain monetary asset and debt ratios which are considered relevant to economic behaviour shows that net monetary assets of households have remained quite stable

over the whole period, although some evidence exists of illiquidity after peaks of growth of GDP. For enterprises, net monetary liabilities grew very sharply during the period covered and only in 1964 and 1970 were declines recorded, when firms have built up their short term monetary deposits as investment plans were postponed.

When adjustments are carried out to the basic series for each sector, to account for the depreciation of asset positions due to inflation, it is found that depreciation of assets is most important for the household sector with the counterpart being a depreciation in the liabilities of government and, to a smaller extent, enterprises. Figures for the savings ratio of households adjusted for the depreciation of monetary assets show that the major upward shift observed in the savings ratio in recent years can mainly be attributed to the reconstitution of real asset positions. The ratio between gross savings of enterprises and adjusted or unadjusted total investment is more stable over the two decades and does not show the decline recorded in the unadjusted ratio in the seventies. The adjustment of the government deficit to reflect the depreciation of liabilities gives a significantly lower deficit, particularly in the first half of the seventies, but since then there has been a rapid rise in the adjusted figure. Other government deficit measures studied suggest that any major inflationary impact of the government deficit was restricted to the years 1967 to 1973 and from 1976 to 1979, while problems of crowding out may have been significant in the period 1968 to 1970 and 1976 to 1979.

APPENDIX A

Sources and definitions

Detailed figures for stocks of assets and liabilities at the end of each year for Belgium have been published in the bulletin of the BNB since 1957 (Table XII-1a). These tables show the current and capital operations of the following sectors: 1. Households/firms, 2. public bodies, 3. Exchequer, 4. other public sector, 5. Social security, 6. rest of world, 7. monetary institutions, 8. "fond des rentes", 9. savings banks, 10. life assurance companies, 11. public non-monetary lending institutions. The asset and liability tables indicate the method by which sectors in financial surplus lend their funds to deficit sectors, indicating the creditor sector, the debtor and the nature of asset or liability. For each sub-category net lending is implied.

In general, the sector "private enterprises and individuals" has a positive asset balance. Financial institutions have a small positive balance of monetary assets in addition to their investment in fixed assets and shares. All other sectors have a negative balance during most of the period covered.

Except for the period 1969-1972 where revised figures were furnished directly by the BNB, the basic statistics are those published in successive issues of the monthly bulletin of that institution. For detailed information on the methods used to collect and compile the basic figures, a detailed breakdown of where various institutions are classified and the reasons for this grouping, together with the problems caused by the conventions adopted, in particular insofar as the rest of the world is concerned, see BNB(1963) pps. 122-162. In this study we use the term "government" to signify data for sectors 3 to 5 in the basic statistics plus the BNB itself

and the term "financial institutions" to cover sectors 7 to 11 less the BNB. There are arguments for including life assurance companies and pension funds with the personal sector for some countries, but in the Belgian case this is not appropriate, since interest on life assurance is treated in the same way as bank interest in the flow accounts, see INS (1963), p.103. The rest of world sector here is directly equivalent to sector 6 and our household sector plus the private enterprise sector is the same as sector 1.

Separation of households and enterprises

Except for 1972 and 1973, figures for the household and private enterprise sector have not been broken down into their constituent parts in the original BNB data for statistical reasons (c.f. BNB(1963), p.129). However these two economic agents have not only very different financial behaviour, but also the household sector in total always runs a financial surplus while the private enterprise sector has a financial deficit. In BNB(1976) a rough disaggregation has been made for the years 1972 and 1973 of households and private enterprises. The methods described there, with one exception regarding the treatment of 'fiduciary money', were applied to data for the years 1970-1979 in order to construct separate figures for the missing years. For previous years the hypothesis was taken that individual assets and liabilities were split in the same proportion as in 1970 and by adding up all these individual assets and liabilities, estimates were arrived at for the years 1960-1969. The treatment of 'fiduciary money' adopted follows that of Praet(1977) who, on the basis of a survey on wealth and savings of households with high incomes which found that money holdings of these households was on average 26000BF in 1965-66 (46% of the stock of fiduciary money) decided to "fix arbitrarily at 50% the share of households in total notes issued" rather than allocate the total to households as is done in the BNB(1976) study. On account of the lack of more recent

statistical information on this subject, and on the basis of the figures for other countries studied in the group, we adopted Praet's hypothesis on the split of fiduciary money.

Conversion of bonds from nominal to market values

The CM(1983) study discusses the requirement of taking bonds at market prices rather than nominal values. The basic data is at nominal values because "detailed figures are only available on this basis while there is only fragmentary information at market prices" (BNB(1963), p.135). We limited the extent of our adjustment to tradable bonds and again adopted the procedure used by Praet (1977), p.258 for conversion from nominal to market value. Praet produced an index for the valuation of bonds by deducting the average nominal rate of interest on securities from the "stock exchange return". The average nominal rate of interest was calculated by firstly building up a figure for base year public debt, on the basis of Table XVI 3a of the BNB monthly bulletin. Table XVI 2 was used to estimate the amount of public debt issued during each year. The average nominal rate of interest for the year was calculated on the basis of individual loans issued and their interest rate. New loans issued during the year and debt outstanding were used to weight previous average nominal rates and the current year nominal rate to produce a current year average nominal rate. Figures for the average return on bonds were constructed on the basis of the INS monthly report table "Cours de quelques fonds publics". This interpretation of Praet's procedure gave results which were quite close to his for the test year 1976 (i.e. RE=6% as against 5.7% and RI=7.7% as against 7.8%). Accordingly the same procedure was used for the years 1977 to 1979. Praet's index with the additional data for 1977 to 1979 is given in Table A2 and it shows a general stability over the long period, although with significant movements in several years. Table A 2 also gives the magnitude of the resulting adjustments to asset/liability figures by sector for other analyses which may not require this adjustment. It will be noted that the adjustments are only important for assets of households and financial institutions and liabilities of general government.

Reclassification of the BNB and data on base money

Total assets and liabilities of the BNB were taken from Table XIII 2a of the BNB monthly bulletin. These were deducted from assets/liabilities of financial institutions and added to general government. Gold reserves of the BNB were deducted from government assets and the rest of the world liabilities for the methodological reasons set out in CM (1983). Base money was defined as BNB fiduciary liabilities and the monetary reserve. No adjustment was made for the consolidation of the BNB in the flow accounts (i.e. net lending of government) since the net change in financial assets of the BNB (available for 1972 to 1976 from EUROSTAT(1981) Table 4.6) has been nowhere more than 0.5% of net lending of general government and since the magnitude of the adjustment item between the balancing item of the capital account and the balancing item of the financial account is not available for any year from this source.

Supplementary tables

Tables A3 and A4 present complete runs of data, for end year and mid year, of assets and liabilities of each sector on the basis of the adjustments mentioned above. These may be useful to other researchers in this area.

Reconciliation of data with that produced by Siaens(1982)

Tables A5 and A6 show the attempts made to reconcile our data for households with that produced by Siaens (1982). In Table A5 we show the figures for net assets of households calculated by Siaens, the BNB and the figures in this study with adjustments excluded and included. The figures produced by Siaens (column 1) should correspond to the figures arrived at in this study excluding all adjustments (column 3). However there are significant discrepancies in most

years. It has not been possible to reconcile these differences from the data available. It should be noted nevertheless that our interpretation of the method used in BNB(1976) gives estimates which are closer to the results produced by the BNB for 1972 and 1973. Given the differences in the basic data the figures for depreciation of net monetary assets, shown in Table A6, are quite far apart. It should be noted that in this comparison we have used the consumer price deflator, the rate of growth of which over the whole period was about 10% lower than the consumer price index used by Siaens, and that our figures here are based on average year data rather than end year.

Table A 1a

**Assets, liabilities and net position of each sector as a % of GDP,
year average - BELGIUM**

	H			PE			GE			PS		
	A	L	B	A	L	B	A	L	B	A	L	B
1961	111,1	18,9	92,2	22,0	31,1	-9,0	2,8	9,1	-6,3	34,0	124,7	-90,7
1962	112,0	19,5	92,5	22,0	32,4	-10,4	2,9	9,4	-6,5	32,9	124,1	-91,2
1963	112,8	20,4	92,4	21,8	33,0	-11,2	2,8	9,7	-6,9	32,9	125,0	-92,0
1964	108,6	20,7	87,9	21,2	32,3	-11,2	2,6	9,1	-6,6	32,8	119,0	-86,2
1965	108,4	20,9	87,5	21,4	33,2	-11,8	2,4	8,8	-6,4	31,9	115,5	-83,7
1966	109,8	21,2	88,6	21,6	34,7	-13,1	2,4	8,8	-6,4	31,6	114,1	-82,5
1967	111,8	21,9	89,9	21,3	36,7	-15,3	2,4	9,0	-6,6	31,7	112,8	-81,0
1968	114,2	22,6	91,6	20,9	38,6	-17,7	2,5	9,2	-6,7	30,7	111,5	-80,8
1969	110,4	22,1	88,3	20,8	38,8	-17,9	2,5	9,1	-6,6	29,7	106,6	-76,9
1970	106,4	21,7	84,7	20,8	38,6	-17,8	2,5	9,2	-6,8	29,1	101,8	-72,8
1971	108,0	21,9	86,0	20,6	39,2	-18,6	2,5	9,5	-7,0	27,7	100,1	-72,3
1972	110,1	21,9	88,2	20,2	39,8	-19,6	2,5	9,6	-7,1	26,9	99,4	-72,5
1973	109,1	22,2	86,9	20,5	40,1	-19,6	2,5	9,5	-7,0	28,0	98,4	-70,4
1974	102,7	22,1	80,6	20,4	38,5	-18,1	2,4	9,1	-6,7	26,8	91,0	-64,2
1975	105,8	23,0	82,8	20,5	39,6	-19,2	2,4	9,6	-7,1	26,0	90,7	-64,7
1976	105,9	22,6	83,3	20,0	40,5	-20,5	2,4	9,6	-7,2	25,0	89,7	-64,6
1977	110,0	23,0	87,0	19,5	43,1	-23,6	2,4	9,5	-7,1	25,8	92,6	-66,8
1978	115,0	24,7	90,4	18,8	44,7	-25,8	2,5	9,5	-7,0	27,6	97,6	-70,0
1979	117,9	26,2	91,7	19,0	47,2	-28,2	2,7	9,5	-6,8	30,4	102,9	-72,4

Key: H = households, PE = private enterprises, GE = public enterprises,
PS = public sector (Government + GE + BNB), W = rest of world,
EO = errors and omissions, T = total, A = assets, L = liabilities,
B = net position.

Source: BNB data with adjustments outlined in Appendix A.

Table A 1b

Assets, liabilities and net position of each sector as a % of GDP, year average - BELGIUM

	W			FI			EO			T	
	A	L	B	A	L	B	A	L	B	A	L
1961	15,8	15,0	,8	105,0	102,4	2,6	6,3	2,1	4,2	294,2	294,2
1962	16,0	14,7	1,3	109,4	106,0	3,4	6,8	2,4	4,4	299,1	299,1
1963	18,0	14,7	3,2	112,3	108,1	4,2	6,7	3,3	3,4	304,5	304,5
1964	19,2	15,3	3,8	109,7	106,4	3,3	6,1	3,7	2,3	297,5	297,5
1965	18,8	15,6	3,2	110,6	107,9	2,7	5,8	3,7	2,1	297,0	297,0
1966	19,2	16,4	2,9	114,7	112,2	2,5	5,8	4,2	1,6	302,8	302,8
1967	20,1	18,1	2,1	119,9	117,2	2,7	6,3	4,5	1,8	311,2	311,2
1968	21,2	19,6	1,6	127,4	124,4	3,0	6,9	4,6	2,3	321,3	321,3
1969	22,7	21,7	1,0	128,8	125,1	3,7	6,7	4,8	1,9	319,0	319,0
1970	25,4	26,2	-,7	130,2	126,4	3,9	6,8	4,1	2,7	318,8	318,8
1971	27,5	29,9	-2,4	137,8	133,9	3,9	7,3	3,9	3,5	328,8	328,8
1972	28,2	32,1	-3,9	144,4	139,6	4,8	7,1	4,1	3,1	337,0	337,0
1973	31,0	35,8	-4,8	149,6	144,8	4,8	7,5	4,4	3,1	345,6	345,6
1974	33,4	37,4	-4,0	147,6	144,4	3,2	7,5	5,0	2,5	338,4	338,4
1975	35,7	39,7	-4,1	153,6	150,8	2,8	7,7	5,4	2,3	349,2	349,2
1976	34,9	38,7	-3,7	154,0	151,0	3,0	7,9	5,3	2,6	347,7	347,7
1977	37,7	40,4	-2,8	161,4	158,9	2,5	8,9	5,3	3,6	363,3	363,3
1978	43,5	44,6	-1,1	170,8	168,4	2,4	9,6	5,4	4,1	385,4	385,4
1979	51,9	49,6	2,3	181,6	179,8	18	11,4	6,6	4,8	412,3	412,3

Key: H = households, PE = private enterprises, GE = public enterprises, PS = public sector (Government + GE + BNB), W = rest of world, EO = errors and omissions, T = total, A = assets, L = liabilities, B = net position.

Source: BNB data with adjustments outlined in Appendix A.

Table A 2

Conversion of bonds from face value to market prices - BELGIUM

Index 1952=100. (F.V.xIndex = M.P)		Magnitude of adjustment to arrive at market price ('000 M BF)						
		<u>Assets</u>	H	PE	PS	W	FI	T
1952	100	1960	4,1	,1	,2	,3	3	7,7
1953	102	1961	-,6	0	0	0	-,6	-1,2
1954	104,7	1962	6,3	,3	,3	,7	6,8	14,6
1955	106,4	1963	8,4	,4	,5	,8	9,5	19,7
1956	106,4	1964	4,9	,3	,3	,4	5,3	11,3
1957	95,5	1965	7,4	,4	,3	,7	8,5	17,3
1958	104,4	1966	6,2	,4	,4	,5	5,9	13,6
1959	106,1	1967	9,3	,4	,6	,7	9	20,6
1960	102,8	1968	13	,8	,7	,8	14	30,3
1961	99,6	1969	8,7	,5	,5	,4	9,4	19,6
1962	104,3	1970	8,5	,7	,5	,3	10,5	20,7
1963	105,6	1971	18,8	1,6	1,1	,6	24	46,1
1964	103,1	1972	27,8	2,6	1,9	,7	47,2	80,4
1965	104,3	1973	22	2,2	1,6	,4	42,1	68,3
1966	103,3	1974	6,6	,7	,5	,1	12,9	20,8
1967	104,7	1975	24,2	2,8	1,1	,2	49,9	78,8
1968	106,3	1976	19,7	2,1	1,3	,1	37,5	60,7
1969	103,8	1977	18,8	2	1,2	,4	34,4	56,8
1970	103,7	1978	23,4	2	1	,5	41,4	69,2
1971	107,5	1979	0	0	0	0	0	0
1972	110,1							
1973	107,5	<u>Liabilities</u>						
1974	102,1	1960	0	,5	6,1	,4	0	7,7
1975	107,2	1961	0	-,1	-1,1	-,1	0	-1,2
1976	105	1962	0	1	12,9	,7	0	14,6
1977	104,1	1963	0	1,5	17,3	,9	0	19,7
1978	104,4	1964	0	,9	9,9	,5	0	11,3
1979	100	1965	0	1,4	14,7	,7	0	17,3
		1966	0	1,2	11,8	,6	0	13,6
		1967	0	1,7	18,1	,8	0	20,6
		1968	0	2,5	26,5	1,3	0	30,3
		1969	0	1,8	17	,8	0	19,6
		1970	0	2	17,6	1,1	0	20,7
		1971	0	4,6	37,9	3	0	46,1
		1972	0	8,2	67,1	5,1	0	80,4
		1973	0	6,9	56,3	5,1	0	68,3
		1974	0	2,1	17	1,6	0	20,8
		1975	0	8,9	65,3	4,6	0	78,8
		1976	0	6,9	50,9	2,9	0	60,7
		1977	0	6,3	48	2,4	0	56,8
		1978	0	7	59,3	2,9	0	69,2
		1979	0	0	0	0	0	0

SOURCE: Index 1952-1976: Praet(1977). Later figures calculated as described in this Appendix. Key: F.V. = Face value, M.P. = Market prices, other abbreviations as in Table A1.

Table A 3a Assets, Liabilities and net position of each sector, end year,
in '000MBF - BELGIUM

	H			PE			GE			PS		
	A	L	B	A	L	B	A	L	B	A	L	B
1960	636,7	106,8	529,9	126,2	174,3	-48,1	15,7	52,9	-37,2	192,5	720,7	-528,2
1961	679,6	117,6	562,0	134,7	193,8	-59,1	17,7	54,9	-37,2	210,3	757,1	-546,8
1962	740,5	129,5	611,0	143,9	217,1	-73,2	19,0	64,5	-45,5	207,2	816,2	-609,0
1963	796,1	148,0	648,1	153,8	233,0	-79,2	19,2	67,8	-48,6	241,4	886,4	-645,0
1964	859,7	167,1	692,6	169,0	260,3	-91,3	20,0	71,6	-51,6	258,8	928,9	-670,1
1965	940,3	180,0	760,3	186,6	291,4	-104,8	20,4	74,4	-54,0	269,9	989,1	-719,2
1966	1019,2	198,1	821,1	199,6	328,5	-128,9	22,1	82,4	-60,3	293,9	1047,0	-753,1
1967	1116,5	220,5	896,0	208,1	372,2	-164,1	23,8	90,0	-66,2	312,6	1108,0	-795,4
1968	1218,5	241,4	977,1	219,4	416,9	-197,5	26,5	97,7	-71,2	315,8	1172,8	-857,0
1969	1285,1	260,1	1025,0	253,0	462,6	-209,6	30,7	109,3	-78,6	357,1	1245,3	-888,2
1970	1401,2	288,1	1113,1	272,3	512,4	-240,1	31,7	123,6	-91,9	376,2	1324,7	-948,4
1971	1583,1	318,6	1264,5	297,2	571,6	-274,4	37,0	138,7	-101,7	389,8	1441,1	-1051,3
1972	1821,3	359,2	1462,1	326,1	658,6	-332,5	41,4	158,1	-116,7	442,1	1631,1	-1189,0
1973	2007,0	419,9	1587,1	394,3	748,9	-354,6	46,5	175,1	-128,6	539,1	1821,8	-1282,7
1974	2218,9	489,4	1729,5	443,7	834,3	-390,6	50,2	197,2	-147,0	563,1	1920,5	-1357,4
1975	2587,5	556,1	2031,4	485,9	965,6	-479,7	60,3	236,7	-176,4	618,0	2198,3	-1580,3
1976	2861,5	607,4	2254,1	541,1	1117,1	-576,0	64,1	256,9	-192,8	668,7	2414,1	-1745,4
1977	3259,3	672,6	2586,7	546,4	1282,1	-735,7	70,5	273,8	-203,3	766,7	2735,8	-1969,1
1978	3612,2	800,7	2811,5	578,8	1387,1	-808,3	81,1	296,0	-214,9	880,5	3092,0	-2211,5
1979	3900,6	867,9	3032,7	632,2	1623,0	-990,8	88,3	307,8	-219,5	1057,8	3461,6	-2403,8

For Key to abbreviations and source see Table A 1

Table A 3b Assets, liabilities and net position of each sector, end year,
in '000MBF - BELGIUM

	W			FI			EO			T
	A	L	B	A	L	B	A	L	B	A/L
1960	90,7	83,0	7,7	586,2	567,9	18,3	34,7	14,3	20,4	1667,0
1961	96,5	94,2	2,3	658,2	645,7	12,5	40,0	10,9	29,1	1819,3
1962	106,2	91,7	14,5	727,9	697,4	30,5	45,9	19,7	26,2	1971,6
1963	138,5	109,0	29,5	801,9	775,1	26,8	45,7	25,9	19,8	2177,4
1964	154,0	124,9	29,1	871,4	847,6	23,8	47,1	31,2	15,9	2360,0
1965	158,0	134,2	23,8	965,1	944,0	21,1	49,5	30,7	18,8	2569,4
1966	185,0	157,8	27,2	1081,4	1058,0	23,4	54,8	44,5	10,3	2833,9
1967	199,7	187,6	12,1	1209,8	1181,6	28,2	65,1	41,9	23,2	3111,8
1968	234,3	212,9	21,4	1394,1	1361,5	32,6	76,5	53,1	23,4	3458,6
1969	279,6	278,3	1,3	1528,2	1476,1	52,1	75,2	55,8	19,4	3778,2
1970	362,3	381,9	-19,6	1759,5	1713,3	46,2	96,7	47,8	48,9	4268,2
1971	396,6	443,2	-46,6	2048,4	1987,3	61,1	105,8	59,1	46,7	4820,9
1972	474,8	550,2	-75,4	2414,6	2328,7	85,9	115,1	66,2	48,9	5594,0
1973	613,2	704,7	-91,5	2836,5	2754,9	81,6	147,0	86,9	60,1	6537,1
1974	759,8	833,4	-73,6	3234,6	3186,2	48,4	163,2	119,5	43,7	7383,3
1975	859,7	970,5	-110,8	3742,1	3661,5	80,6	186,3	127,5	58,8	8479,5
1976	937,7	1019,6	-81,9	4178,5	4105,8	72,7	220,6	144,1	76,5	9408,1
1977	1157,4	1228,6	-71,2	4801,6	4735,4	66,2	272,1	149,0	123,1	10803,5
1978	1442,4	1436,4	6,0	5403,5	5324,8	78,7	299,3	175,7	123,6	12216,7
1979	1864,4	1721,8	142,6	6164,6	6129,8	34,8	429,9	245,4	184,5	14049,5

For key to abbreviations and source see Table A 1

Table A 4a Assets, liabilities and net position of each sector, year average,
in OOMBf - BELGIUM

	H			PE			GE			PS		
	A	L	B	A	L	B	A	L	B	A	L	B
1961	658,1	112,2	545,9	130,4	184,0	-53,6	16,7	53,9	-37,2	201,4	738,9	-537,5
1962	710,0	123,6	586,5	139,3	205,4	-66,1	18,3	59,7	-41,3	208,7	786,6	-577,9
1963	768,3	138,7	629,5	148,8	225,0	-76,2	19,1	66,1	-47,1	224,3	851,3	-627,0
1964	827,9	157,5	670,3	161,4	246,6	-85,2	19,6	69,7	-50,1	250,1	907,6	-657,5
1965	900,0	173,5	726,4	177,8	275,8	-98,0	20,2	73,0	-52,8	264,3	959,0	-694,6
1966	979,7	189,0	790,7	193,1	309,9	-116,8	21,3	78,4	-57,1	281,9	1018,0	-736,2
1967	1067,8	209,3	858,5	203,8	350,3	-146,5	22,9	86,2	-63,2	303,2	1077,5	-774,2
1968	1167,5	230,9	936,5	213,7	394,5	-180,8	25,1	93,8	-68,7	314,2	1140,4	-826,2
1969	1251,8	250,7	1001,0	236,2	439,7	-203,5	28,6	103,5	-74,9	336,4	1209,1	-872,6
1970	1343,1	274,1	1069,0	262,6	487,5	-224,8	31,2	116,4	-85,2	366,7	1285,0	-918,3
1971	1492,1	303,4	1188,8	284,7	542,0	-257,2	34,3	131,1	-96,8	383,0	1382,9	-999,9
1972	1702,2	338,9	1363,3	311,6	615,1	-303,4	39,2	148,4	-109,2	415,9	1536,0	-1120,2
1973	1914,1	389,5	1524,6	360,2	703,7	-343,5	43,9	166,6	-122,7	490,6	1726,4	-1235,8
1974	2112,9	454,6	1658,3	419,0	791,6	-372,6	48,3	186,1	-137,8	551,1	1871,1	-1320,0
1975	2403,2	522,7	1880,4	464,8	899,9	-435,1	55,2	216,9	-161,7	590,5	2059,4	-1468,8
1976	2724,5	581,7	2142,7	513,5	1041,3	-527,8	62,2	246,8	-184,6	643,3	2306,2	-1662,9
1977	3060,4	640,0	2420,4	543,7	1199,6	-655,8	67,3	265,3	-198,0	717,7	2574,9	-1857,2
1978	3435,7	736,6	2699,1	562,6	1334,6	-772,0	75,8	284,9	-209,1	823,6	2913,9	-2090,3
1979	3756,4	834,3	2922,1	605,5	1505,1	-899,6	84,7	301,9	-217,2	969,1	3276,8	-2307,6

For key to abbreviations and source see Table A 1

Table A 4b Assets, liabilities and net position of each sector, year average,
in OOO MBF - BELGIUM

	W			FI			EO			T
	A	L	B	A	L	B	A	L	B	A/L
1961	93,6	88,6	5,0	622,2	606,8	15,4	37,4	12,6	24,8	1743,1
1962	101,3	92,9	8,4	693,0	671,5	21,5	43,0	15,3	27,7	1895,4
1963	122,3	100,3	22,0	764,9	736,2	28,6	45,8	22,8	23,0	2074,5
1964	146,2	116,9	29,3	836,6	811,3	25,3	46,4	28,6	17,8	2268,7
1965	156,0	129,5	26,4	918,2	895,8	22,4	48,3	30,9	17,4	2464,7
1966	171,5	146,0	25,5	1023,2	1001,0	22,2	52,2	37,6	14,6	2701,6
1967	192,3	172,7	19,6	1145,6	1119,8	25,8	60,0	43,2	16,8	2972,8
1968	217,0	200,2	16,7	1301,9	1271,5	30,4	70,8	47,5	23,3	3285,2
1969	256,9	245,6	11,3	1461,1	1418,8	42,3	75,9	54,4	21,4	3618,4
1970	320,9	330,1	-9,2	1643,8	1594,7	49,1	86,0	51,8	34,1	4023,2
1971	379,4	412,5	-33,1	1903,9	1850,3	53,7	101,3	53,5	47,8	4544,6
1972	435,7	496,7	-61,0	2231,5	2158,0	73,5	110,5	62,7	47,8	5207,4
1973	544,0	627,4	-83,4	2625,5	2541,8	83,7	131,1	76,6	54,5	6065,6
1974	686,5	769,0	-82,6	3035,5	2970,5	65,0	155,1	103,2	51,9	6960,2
1975	809,7	901,9	-92,2	3488,3	3423,8	64,5	174,8	123,5	51,3	7931,4
1976	898,7	995,0	-96,3	3960,3	3883,7	76,6	203,5	135,8	67,6	8943,8
1977	1047,5	1124,1	-76,5	4490,0	4420,6	69,4	246,4	146,6	99,8	10105,4
1978	1299,9	1332,5	-32,6	5102,5	5030,1	72,4	285,7	162,4	123,3	11510,1
1979	1653,4	1579,1	74,3	5784,1	5727,3	56,7	364,6	210,6	154,0	13133,1

For key to abbreviations and sources see Table A 1

Table A5

Data on net asset position of households

'000M BF

	Siaens (1982) Table II Column b	BNB (1976)	Lennan (1983)		
			Unadjusted	Adjusted for fiduciary money of enterprises and bonds at market prices	
				end year	year average
1972	1595	1543	1544	1462	1363
1973	1828	1692	1680	1587	1525
1974	1771	--	1847	1729	1658
1975	2046	--	2149	2031	1880
1976	2665	--	2384	2254	2143
1977	2996	--	2731	2587	2420
1978	3315	--	2961	2811	2699
1979	3660	--	3209	3033	2922
1980	3950	--	--	--	--

Table A6

Depreciation of net assets of households

'000M BF

	Siaens (1982) Table II Column d	Lennan (1983)	
		Unadjusted	Adjusted
		Year average	
1972	102	89	94
1973	135	82	88
1974	278	257	274
1975	242	201	214
1976	202	139	147
1977	189	150	167
1978	127	97	102
1979	188	116	124
1980	296	--	--

Appendix B

Classification of liabilities by financial instrument

Table XII-1	Table 2
Acceptances, trade and other bills	Loans
Current account liabilities and advances	Loans
Bonds	Bonds
Other loans for one year or more	Loans
Miscellaneous	Other
Bills of less than one year	Loans
Marketable bonds	Bonds
Non-marketable bonds	Bonds
"Fond de tiers"	Money and deposits
Money at call (belgian francs)	Money and deposits
Social security reserves	Other
Other liabilities of up to one year to monetary authorities	Means of international payment
Money	Money and deposits
Other liabilities to the rest of the world	Loans
Other deposits in foreign currency of up to one year	Money and deposits
Other deposits in pass books or deposit books	Money and deposits
Other deposits of up to one year	Money and deposits
Liabilities not elsewhere included	Loans
Deposits of more than one year	Money and deposits
Deposit receipts of up to one year	Bonds
Deposit receipts and bonds of more than one year	Bonds
Mathematical reserves	Other
Marketable deposit receipts of up to one year	Bonds
Non-marketable deposit receipts of up to one year	Bonds
Marketable deposit receipts and bonds of more than one year	Bonds
Non-marketable deposit receipts and bonds of more than one year	Bonds

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