1988/1989

OECD ECONOMIC SURVEYS

BELGIUM LUXEMBOURG

OCDE
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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

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BASIC STATISTICS BELGIUM

THE LAND

Area (1 000 sq. km)	30.5	Main urban areas (1-1-1987) inhabitants:	
Agricultural area (1 000 sq. km) 1986	13.8	Brussels	973 499
Tillage (1 000 sq. km) 1986	7.2	Antwerp	919 453
		Liège	591 467
		Ghent	484 857

THE PEOPLE

Population (1-1-1987), thousands	9 865	Total labour force (1986, thousands)	4 212
Number of inhabitants per sq. km	323.2	Total dependant employment	3 043
Population, net natural increase in 1986	5 600	Agriculture	13
Net migration (1986)	256	Manufacturing and construction	952
		Other	2 079

PRODUCTION

Gross national product (1987), billions of Belgian francs	5 323.0	Gross national product by origin, at market prices (1986)	%
Gross national product per head (1987) US $	14 449	Agriculture	2.2
Gross fixed investment:		Industry	26.8
Per cent of GNP (1987)	15.9	Construction	5.1
Per head (1987) US $	2 301	Other	65.9

THE GOVERNMENT

Current government expenditure on goods and services (1987), percentage of GNP	50.6	Composition of the House of Representatives:	%
Current government revenue (1987) per cent of GNP	45.4	Socialists	34
Government debt, 31-12-1988, billions of Belgian francs	6 990	Christian-Socials	29
		Liberals	23
		Volksunie	7
		Others	7
		Last elections : 13.12.1987	

FOREIGN TRADE

Exports:		Imports:	
Main exports in 1987 per cent of total exports, SITC (BLEU):		Main imports in 1987, per cent of total imports, SITC (BLEU):	
Iron and steel products (67 + 68)	12.6	Iron and steel products (67 + 68)	6.2
Chemical products (5)	15.5	Chemical products (5)	12.0
Machinery and apparatus (71 to 77)	14.2	Machinery and apparatus (71 to 77)	17.1
Textile products (65)	7.0	Textile products (65)	3.7
Transport equipment (78 + 79)	19.1	Transport equipment (78 + 79)	16.6
		Energy (3)	10.7

THE CURRENCY

Monetary unit: Belgian franc	Currency units per US $, average of daily figures:	
	Year 1988	36.7718
	June 1989	41.4738

Note: An international comparison of certain basic statistics is given in an annex table.

BASIC STATISTICS LUXEMBOURG

THE LAND

Area (sq. km)	2 586	Major city, inhabitants:	
Agriculture area, 1987 (sq. km)	1 266	Luxembourg (April 1986)	86 200
Woodland, 1987 (sq. km)	886		

THE PEOPLE

Population (1-1-1988)	372 100	Total employment (1987, thousands)	169.6
Number of inhabitants per sq. km	144	Agriculture	6.1
Population, net natural increase in 1987	226	Industry	55.0
Net migration 1987	2 374	Services	108.6
		Dependent employees	151.4
		Employers, self-employed persons and domestic help	18.2

PRODUCTION

Gross domestic product (1987), billions of francs	223.5	Gross domestic product by origin, at	%
Gross domestic product per head, US $ (1987)	16 084	market prices (1986):	
Gross fixed investment:		Agriculture	2.6
Per cent of GDP (1987)	22.6	Industry, energy	29.6
Per head, US $ (1987)	3 631	Construction	5.6
		Other	62.2

THE GOVERNMENT

Public consumption (1987), per cent of GDP	16.7	Composition of the Chamber:	%
Current government revenue (general government)		Christian Social Party	36.7
(1987), per cent of GDP	38.6	Workers Socialist Party	30.0
Central government debt, per cent of GDP		Democratic Party	18.3
(December 31st, 1987)	8.6	Cinq-sixième Party	6.7
		GLEI (Greens)	3.3
		GAT (Greens)	3.3
		Communist Party	1.7
		Last election: 18-6-1989	

THE CURRENCY

Monetary unit: Luxembourg franc	Currency units per US $, average of daily figures:	
	Year 1988	36.7718
	June 1989	41.4738

Note: An international comparison of certain basic statistics is given in an annex table.

This Survey is based on the Secretariat's study prepared for the annual review of Belgium and Luxembourg by the Economic and Development Review Committee on 3rd July 1989.

After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 21st July 1989.

The previous survey of Belgium and Luxembourg was issued in February 1988.

BELGIUM

Introduction

Thanks to the adjustment policies pursued steadily since 1982, Belgium has been able to take advantage of the marked improvement in the international environment which has occurred over the last two years. In 1988, growth accelerated to 4.2 per cent, spurred by buoyant investment and rapidly expanding exports. Employment increased substantially, and unemployment fell. Inflation performance improved remarkably until the first half of 1988. Since then, however, as in most other countries, price increases have shown a tendency to pick up, partly reflecting transitory factors. Nonetheless, Belgium has maintained a favourable inflation differential with the rest of the OECD area of more than 2 percentage points.

Monetary policy has continued to aim at maintaining the stability of the franc within the European Monetary System. This led to a gradual tightening of the monetary stance as of mid-1988, in line with rising interest rates abroad. Significant progress was made in reducing the budget deficit in 1987, but the process of fiscal consolidation stalled in 1988, partly due to the political crisis. Many policy initiatives have been taken over the past year in a whole range of areas: a constitutional reform has transferred substantial spending responsibilities to the Regions and the Communities; a tax reform has reduced personal income tax rates and eliminated a number of horizontal inequities; a new law has been passed obligating the government and the social partners to take the necessary steps when competitiveness is threatened; the central bank's array of monetary instruments has been strengthened, and a number of measures have been taken, or are envisaged, to modernise Belgian financial markets and make them more competitive. The short-term outlook is expected to remain relatively favourable. Growth may still exceed 3 per cent in 1989, decelerating to around 2¾ per cent in 1990. After peaking in the course of this year, inflation may resume a declining trend thereafter. Unemployment should fall further, and the current-account position is likely to remain strong.

Part I of this Survey reviews Belgium's recent macroeconomic performance in the light of the adjustment policies pursued since 1982. It examines the improvements that have occurred over the last two years in the household and business sectors, the labour market, price and wage performance and the external accounts. Part II focuses on financial markets: their principal features, the reforms already taken or contemplated by the authorities, as well as the benefits that such modernisation could be expected to bring in a context of rapid integration of the European financial-services industry. In Part III, recent policy measures are described and short-term prospects presented. Finally, Part IV draws some policy conclusions.

I. The fruits of corrective policy: recent macroeconomic performance

Historical background

The early 1980s were characterised throughout the OECD area by large and rising imbalances as well as slow or stagnant growth. In Belgium, these disequilibria were even more pronounced than generally elsewhere. In the three years to 1983, real output hardly rose, and business fixed investment fell by 7¼ per cent. The unemployment rate rose markedly to nearly 13 per cent, one of the highest levels among Member countries. The general government deficit widened substantially, averaging over 12 per cent of GDP over the three years. The current external deficit peaked at 4.3 per cent of GDP in 1981. Consumer-price inflation also accelerated to a greater extent from 1979 to 1982 than elsewhere, reaching 8.7 per cent, a rate a full point higher than the OECD average.

As a small open economy, Belgium was particularly vulnerable to external shocks and changes in the international environment[1]. Morever, the country's industrial structure adapted poorly to changing world demand[2] in the wake of the two oil shocks. External competitiveness had deteriorated substantially, as labour costs had got out of line with those of its main trading partners. The policies pursued over a number of years, which had led to marked increases in subsidies to business, higher public-sector employment and massive transfer payments to households, contributed to the worsening of imbalances. Furthermore, during the 1970s, real interest rates remained very low and even negative, which allowed the household and government sectors to maintain their levels of consumption[3] through large-scale borrowing. As a result, business fixed investment, which was already severely limited by inadequate profitability, was crowded out. With an increasingly obsolete capital stock and poor external competitiveness, export market-share losses accelerated, and import penetration rose. The resulting current-account deterioration was compounded by long-term capital outflows, putting strong downward pressure on the exchange rate.

A major reorientation of policy took place as from 1982, paving the way for successful adjustment of the economy in the following years. Owing to substantial depreciation of the Belgian franc in February 1982 as well as to the de-indexation of wages, international competitiveness was restored, and business profitability started to recover. New incentives were given to households and businesses to increase purchases and issues of equity, respectively. Corporation tax was substantially reduced. In addition, measures were taken to improve the public finances. The value of welfare payments, especially family allowances and unemployment insurance benefits, was reduced in real terms. VAT rates as well as personal tax rates on property income were raised, and more social-security receipts were included in the tax base. A special levy, in the form of three cumulative "index skips", each of 2 per cent, was put in place in order to finance labour-market programmes[4]. Steps were also taken to reduce subsidies and rationalise public enterprises.

This corrective strategy, in conjunction with the strength and durability of the current OECD expansion, has yielded a remarkable improvement in Belgian economic performance. The current account moved into surplus as early as 1985, and it has exceeded 2 per cent of GDP in each of the last three years. Real GDP growth strengthened, and since the spring of 1987 it has been of the same order as that of the EC average. Business investment spending recovered substantially, outstripping developments in trading partners since 1986. The excess of the standardised unemployment rate for Belgium over that of the EC was eliminated late in 1988, and the differential has since moved in Belgium's favour. Consumer-price inflation was substantially reduced and, by 1988, was some 2½ percentage points below the OECD average. In the area of the public finances, there has been considerable effort: since 1983, the reduction in government spending excluding interest payments as a percentage of GDP has been larger than that of any other OECD country. A cut of over 6 percentage points of GDP in the general government deficit has been achieved. However, there has been virtually no progress on a cyclically-adjusted basis since 1987, and the level of the deficit remains very high.

Stronger and better-balanced growth

Household income and expenditure

In spite of a 1 percentage point decline in the personal savings ratio, private consumption growth decelerated to 1.7 per cent in 1987, negatively influenced by the virtual stagnation of real disposable income (Table 1). Total compensation of

Table 1. **Sources of growth of real private consumption**

Average annual percentage changes

	Real private consumption c	Sources			
		Employment e	Real income per employee y − e	Taxes and transfers yd − y	Savings rates c − yd
1961-1969	3.7	0.7	7.6	−4.1	−0.6
1970-1979	4.1	0.4	11.9	−8.2	0.0
1980-1983	0.4	−1.1	8.7	−7.1	−0.1
1984-1988	2.2	0.7	4.3	−3.5	+0.7
1984	1.2	0.0	7.1	−7.6	1.7
1985	2.1	0.8	5.3	−6.5	2.6
1986	3.6	1.0	4.1	−0.2	−1.4
1987	1.7	0.5	2.5	−2.4	1.1
1988	2.5	1.3	2.6	−0.6	−0.7

Note: Calculations undertaken using the following identity:
c = e + (y − e) + (yd − y) + (c − yd), where
c = growth in real private consumption;
e = growth in employment;
y = growth in real household income;
yd = growth in real household disposable income.
Source: OECD Secretariat estimates.

employees rose by only slightly more than 1 per cent, affected by slower employment growth, especially in the public sector, and only modest gains in per capita wages. Growth of self-employment income also slowed, due largely to a large fall in farmers' income (more than 9 per cent). Despite a marked increase in dividend income (nearly 24 per cent), growth in property income also moderated, reflecting declining interest rates. Current-transfer income was, however, well maintained, recording a growth rate of 5.2 per cent. Direct tax payments were moderated because of the multi-year plan of personal tax cuts adopted in 1985[5].

The 3 per cent increase in real incomes in 1988 was accompanied by a pick-up in private consumption growth and a rise in the savings ratio. Total employee compensation advanced by around 4 per cent, spurred by a rebound in employment and more rapid wage increases, reflecting the full-year impact of the 1987 wage agreements, as well as a shift in the employment structure toward full-time jobs. Self-employment income also accelerated, aided by a recovery in farm output. Declining interest rates and modest rises in dividend receipts, following the 1987 stock-market collapse, led other property income growth down. Additions to current-transfer receipts also weakened, due to declining unemployment and stringency in other social expenditures. Direct-tax and social-security payments were affected by a reduction in civil servants' solidarity contributions and the tax reduction decided upon in 1985.

The household decision about saving and spending has probably also been influenced by factors other than the evolution of income. In particular, financial variables may have played a important role. Thus, the net wealth of the household sector has been shown to have a significant influence on the consumption/saving decision in Belgium[6]. In 1988, households may have increased their savings in order to restore their wealth to levels prevailing before the 1987 stock-market crash[7]. On the other hand, the rapid increase in consumer credit over the last few years may have helped to depress savings[8]. However, recent Secretariat research[9] suggests that, contrary to developments in many other countries, consumption behaviour in Belgium is not significantly affected by changes in real interest rates[10].

In addition to financial factors, uncertainty, and especially the risk of becoming unemployed, would appear to be a key determinant of household willingness to consume or to save in Belgium, as elsewere[11]. Increases in unemployment earlier in the decade probably slowed the decline in the saving rate, while the recent downward trend in joblessness may have limited the propensity to save. Falling inflation in the 1980s, especially when unanticipated, may well have contributed to lower saving rates, in part due to induced wealth effects[12]. Finally, the substantial and growing government indebtedness may have inhibited Belgian households from consuming as a reaction to government dissaving, with a view to meeting future tax liabilities associated with rising public debt[13].

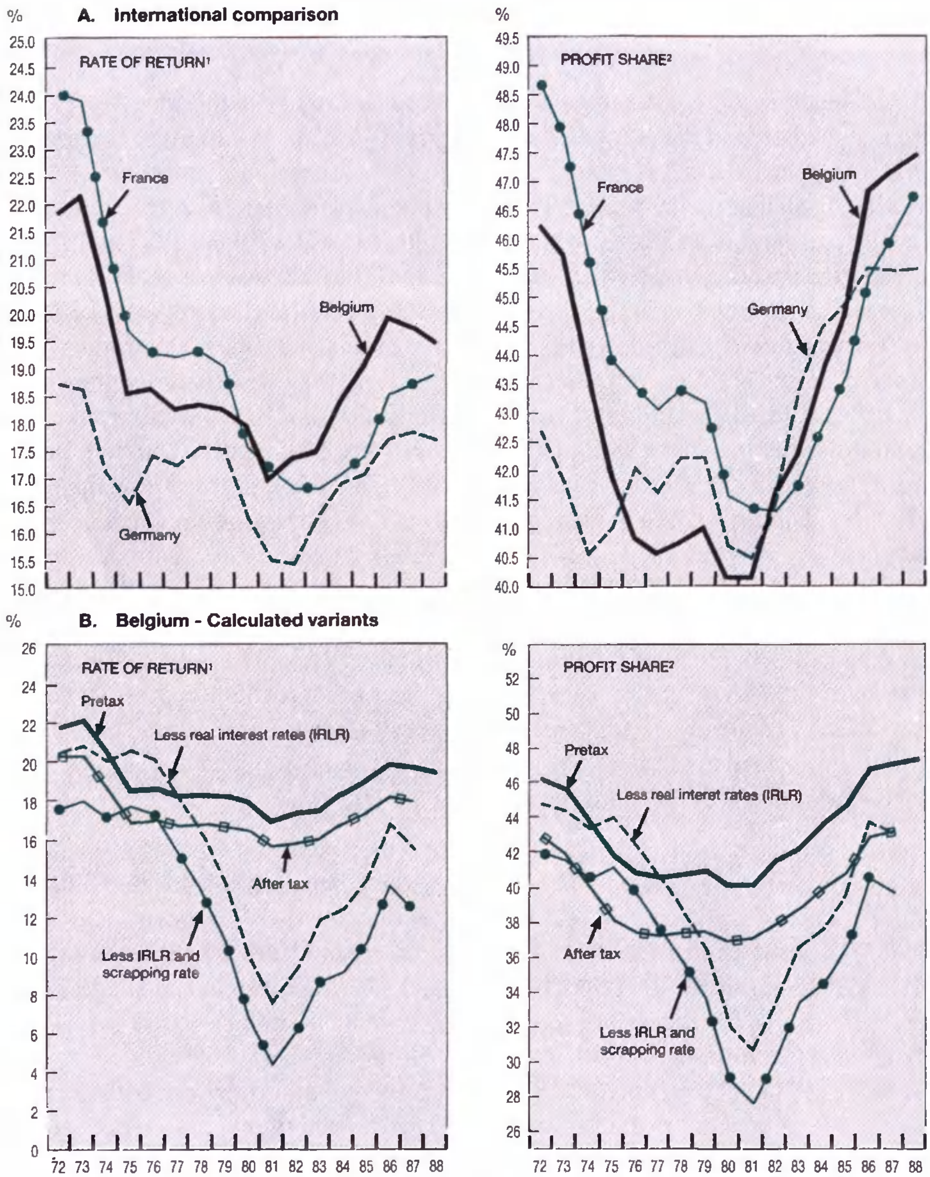
Since 1984, households have allocated a larger portion of their budgets to housing. The share of residential investment in GNP, which had declined from 6.4 per cent in 1980 to 3.1 per cent in 1984, recovered to 4.1 per cent in 1988. The upturn was particularly marked in this last year, with house-building growing by some 22 per cent, over two-thirds of which was in the single-family sector. This reflected strong activity not only in new housing construction, but also a longer-term trend, accentuated of late, to greater expenditure on maintenance and refurbishing of existing dwellings. Slowing population growth and ongoing declines in average household size probably account for only about half of the current level of house-building, the remainder being attributable to replacement needs. Beside the strength of real incomes, residential construction has been stimulated by declining mortgage interest rates (from a peak of 14½ per cent in 1982 to less than 9 per cent in 1987-1988) and a fear of renewed interest-rate increases. The recent property boom on the existing-house market, induced in part by Brussels' growing role as the political capital of Europe, may also have played a role. As a result, first-time buyers have tended to demand new houses, which themselves have risen in price. Expectations of higher prices have led to further increases in demand.

The business sector

The recovery of profitability in the business sector, evident since 1982, has continued unabated in the past few years (Diagram 1). The pre-tax rate of return on capital rose from a low of less than 11 per cent in 1981 to nearly 15 per cent in 1988[14]. While the decline in the 1970s had been more pronounced than on average in other EC countries, the rebound has also been more vigorous, especially in 1987 and 1988. There was a marked upsurge in the "pure profit rate" (i.e. the excess of profits over the real cost of borrowing), although rising real interest rates in the two years to 1988 have exerted a dampening influence. The share of profits in business value added has followed a largely parallel evolution, recovering broadly in line with developments in other EC countries. According to Banque Nationale estimates, unit profit margins have continued to increase, albeit at a slower pace since 1985. Overall profitability is probably now on a par with the level attained in 1974, although still below the peak level achieved in 1967[15]. The improvement in profitability has gone hand in hand with a restructuring of business balance sheets. While provisions for bad debt have increased, the importance of both short- and long-term debt has diminished noticeably, probably due to high real interest rates[16]. As a result, the share of equity (including bad-debt provisions) in total assets, which had fallen from over 40 per cent in the early 1970s to 26 per cent in 1981, recovered to 38 per cent in 1987. Nevertheless, in spite of a significant increase, equity issues finance only some 5 per cent of business fixed investment, the bulk of funding being provided by cash flow and new borrowing from the banking sector (see Part II).

Increased business profitability has been a major factor behind the rebound in fixed non-residential investment. The recovery, which began in earnest in 1984, has produced faster recent growth in the capital stock than in other European countries[17] (Table 2). According to Secretariat estimates, based on a simulation of the supply block for Belgium in the INTERLINK model[18], the improvement in profitability since 1982 has been responsible for an additional BF 12 billion (1980 prices) of investment expenditures, some 8½ per cent of the increase witnessed over the period 1982-1988. The principal determinant of the growth in investment expenditure has been an increase in the desired capital stock due to the expansion in the level of demand and a need for additional capacity[19]. A smaller part may also be attributed to a decline in the price of investment relative to other goods[20]. Higher levels of demand have put pressures on available capacity: while excess capacity still exists in

Diagram 1. **PROFITABILITY INDICATORS**
(Business sector)



1. Ratio of gross operating surplus (less subsidies) to value added.
2. Ratio of gross operating surplus (less subsidies) to fixed capital stock.

Source: OECD Secretariat estimates.

Table 2. **Business investment and capital-stock growth**

Average annual percentage changes

	1970-79	1979-88	1982-88	1986	1987	1988
Gross fixed capital formation						
Belgium	**1.9**	**4.4**	**5.5**	**6.1**	**9.9**	**13.2**
France	2.2	2.0	2.8	5.0	4.8	9.2
Germany	1.6	2.4	4.5	4.4	4.4	7.2
Italy	1.2	2.6	4.8	2.5	7.0	8.0
Netherlands	1.0	2.6	7.6	12.8	1.6	7.1
United Kingdom	3.1	6.0	9.6	0.3	14.5	17.2
Capital stock						
Belgium	**4.2**	**3.0**	**2.9**	**2.8**	**3.2**	**3.7**
France	4.9	2.7	2.4	2.3	2.4	2.7
Germany	4.1	2.9	2.8	2.9	2.9	3.2
Italy	3.8	2.7	2.6	2.4	2.7	3.0
Netherlands	4.4	2.7	2.8	3.2	3.1	3.3
United Kingdom	3.1	2.1	2.1	1.9	2.1	2.7

Source: OECD Secretariat estimates.

certain sectors such as textiles, steel and metal fabricating, capital constraints would appear to be binding in basic chemicals, motor vehicles and several branches related to construction. Judging from answers to business surveys, capacity expansion has probably become one of the primary motivations for manufacturing investment, especially in equipment goods, food and processing industries (Table 3)[21]. Besides manufacturing, investment has also been robust in construction, energy, trade, as well as other services rendered to households and business. More modest growth has been recorded for primary industries (including agriculture), the financial sector, transportation and communication.

Production

As in most other European countries, activity in Belgium has strengthened considerably over the last two years. Industrial production (excluding construction) picked up strongly and in the first quarter of 1989 was 4.5 per cent above its year-earlier level. The acceleration has been particularly marked in intermediate goods and consumer durables, influenced by buoyant export demand. More recently, strength has spread to capital goods and consumer non-durables. In 1988, the manufacturing sector recorded its best performance since 1976, and for the first time in many years, output grew faster in Brussels (9.6 per cent) and Wallonia (6.3 per

Table 3. Manufacturing investment by motivation

	1981	1982	1983	1984	1985	1986	1987	1988	1989[1]
A. Replacement	45	48	42	38	38	31	41	37	30
Capacity expansion	39	32	38	40	40	39	45	50	58
Other[2]	16	20	20	22	22	30	14	13	12

	1986	1987	1988	1989
B. Replacement:				
Basic materials industries	..	38	34	26
Metal working industries	..	61	55	57
Equipment goods industries	..	36	29	27
Processing industries	..	33	35	30
Food industries	..	42	36	37
Total	24	40	35	29
Capacity extension:				
Basic materials industries	..	31	30	28
Metal working industries	..	15	21	38
Equipment goods industries	..	48	52	55
Processing industries	..	60	58	67
Food industries	..	46	49	53
Total	37	39	39	42
Rationalisation and other:				
Basic materials industries	..	25	24	45
Metal working industries	..	24	25	5
Equipment goods industries	..	16	19	14
Processing industries	..	6	6	3
Food industries	..	12	14	10
Total	39	19	24	27
Memorandum item:				
EEC				
Replacement				
Total	..	27	27	24
Capacity extension				
Total	..	28	30	32
Rationalisation and other				
Total	..	45	43	44

1. Estimates.
2. Social investments, anti-pollution investments...

Sources: A. Surveys of the Banque Nationale de Belgique.
B. Commission of the European Communities, *European Economy*, Supplement B, Number 3, March 1989.

cent) than in Flanders (4.7 per cent). Back-to-back years of robust output growth were recorded in non-metallic minerals, wood and furniture, non-ferrous metals, chemicals and rubber. Steel production has virtually returned to its earlier peak of 1984. In spite of rapid investment growth, the rate of capacity utilisation in manufacturing has risen significantly from its 1986-1987 trough. The recovery of activity has been widespread, with an upturn in the construction sector and sustained output growth in market services, especially financial services whose growth rate has averaged 9¼ per cent a year during the past three years. Mild winter weather limited electricity generation but contributed to renewed output gains in agriculture.

Employment and unemployment

Labour-market conditions have improved in recent years, influenced primarily by higher levels of activity. Over the years 1985 to 1987, total employment growth, measured by the number of persons, averaged nearly 1 per cent. During this period part-time employment registered very rapid growth, averaging about 5 per cent per year. Accordingly, on a full-time equivalent basis, growth in labour inputs averaged only 0.7 per cent per year. Total employment growth accelerated slightly to 1¼ per cent in 1988. The number of part-time jobs remained fairly stable during 1988, implying a reversal of trends and relatively faster full-time job creation. In 1987, nearly a quarter of all women worked part time, and women made up seven-eighths of all part-time workers. Nevertheless, part-time jobs represented only 9 per cent of all jobs, compared with 25 per cent in the Netherlands, 22 per cent in the United Kingdom, 13 per cent in Germany and 12 per cent in France[22]. Partly reflecting these developments, male employment has fared distinctly less well than that of women. Male employment levels continued to decline, albeit moderately, until 1987 and started to rise again only in 1988. Abstracting from the special public programmes to absorb the unemployed, growth in public-sector employment has come to an end since 1985-1986. Self-employment continues to be relatively important in Belgium compared to its European neighbours; what is more, its share has been steadily increasing since 1980, in contrast to a trend decrease elsewhere. As in other OECD countries, there has been a continuing shift to the services sector[23] (especially financial services and services to business), somewhat limited by recent conjunctural strength in industry and a slow recovery in the small primary sector.

In contrast to the accelerating growth of employment, the rise in the labour force has been slowing, primarily due to demographic reasons, but also to publicly-sponsored early-retirement and career-interruption schemes and lengthening of educational requirements[24]. The labour-force participation rate has remained relatively stable in Belgium for some time, as increases in female rates have been approximately offset by reductions in male rates: the number of active males has declined by 2.5 per cent over the decade to 1988, while 20.2 per cent more females are in the labour force. However, both female and male participation rates remain rather low by international standards[25]. Furthermore, labour supply is also limited by a normal work week for full-time employees which, at 38.3 hours in 1986, was shorter than those of European competitors[26]. Given recent conjunctural strength and increased flexibility in the organisation of working time[27], overtime work and resort to temporary workers have both been increasing.

While still a major concern, the unemployment problem has been easing[28], and the difference in joblessness rates between Belgium and the rest of the EC has been eliminated. Various measures of the unemployment rate give different levels, but all show a reduction of some 2.5 to 3 percentage points from the 1983-1984 peak

Table 4. **Unemployment trends across countries**

	Standardised rate of unemployment						Duration of unemployment[1]					
	1970	1973	1979	1981	1983	1988	1970	1973	1979	1981	1983	1987
Belgium	**2.1**	**2.7**	**8.2**	**10.8**	**12.1***	**9.9**	—	**51.0**	**58.0**	**52.4**	**62.8**	**71.3**
United States	4.9	4.8	5.8	7.5	9.5	5.4	2.1	3.3	4.2	6.7	13.3	8.1
Japan	1.2	1.3	2.1	2.2	2.7	2.5	—	—	16.5	13.5	15.5	17.2[2]
Germany	0.7	0.9	3.1	4.5	8.0*	7.9	8.8	8.5	19.9	16.2	28.5	32.0[2]
France	2.5	2.7	5.8	7.4	8.3	10.3	22.0	21.6	30.2	32.5	42.2	45.5
Italy	5.3	6.3	7.6	7.8	9.3	11.8	—	—	35.8	37.9	41.9	50.3[3]
United Kingdom	3.0	3.0	5.0	9.8	12.5*	8.3	17.6	26.9	24.5	21.6	36.5	42.6
Canada	5.7	5.5	7.4	7.5	11.8	7.8	—	—	3.5	4.1	9.8	10.9[2]
Netherlands	1.0	2.2	5.4	8.5	12.0*	9.5	12.2	12.8	27.1	22.0	43.7	56.3[2]

	Unemployment rate											
	Youths[4]						Females					
	1970	1973	1979	1981	1983	1987	1970	1973	1979	1981	1983	1988
Belgium	—	—	—	—	**25.6**	**24.0[5]**	**2.4**	**3.3**	**12.5**	**15.1**	**17.9**	**15.3**
United States	—	9.9	11.3	14.3	16.4	11.7	5.9	6.0	6.8	7.9	9.2	5.6
Japan	—	2.3	3.4	4.0	4.5	5.2	1.1	1.2	2.0	2.1	2.6	2.6
Germany	—	0.9	3.4	6.5	10.7	7.9	0.6	1.2	4.5	5.9	9.3	9.3
France	—	4.0	13.3	17.0	19.7	23.0	4.3	4.6	8.5	10.6	11.2	13.6[6]
Italy	—	12.6	25.6	27.4	30.5	35.5	9.4	11.4	13.1	13.4	15.2	18.6
United Kingdom	—	3.1	10.3	18.1	23.4	17.4	1.0	0.2	3.5	6.6	8.4	7.6[6]
Canada	—	10.1	12.9	13.3	19.9	13.7	5.8	6.7	8.7	8.3	11.6	8.4
Netherlands	—	2.8	8.1	—	—	—	1.0	1.8	6.7	9.1	14.0	12.4[6]

* Breaks in series in 1984.
1. Proportion of those unemployed for more than one year in total unemployment.
2. 1986.
3. 1984.
4. 15-16 to 25 age group.
5. 1988.
6. 1987.

Sources: OECD, *Economic Outlook*, *Employment Outlook* and *Quarterly Labour Force Statistics*, and data provided by the INS.

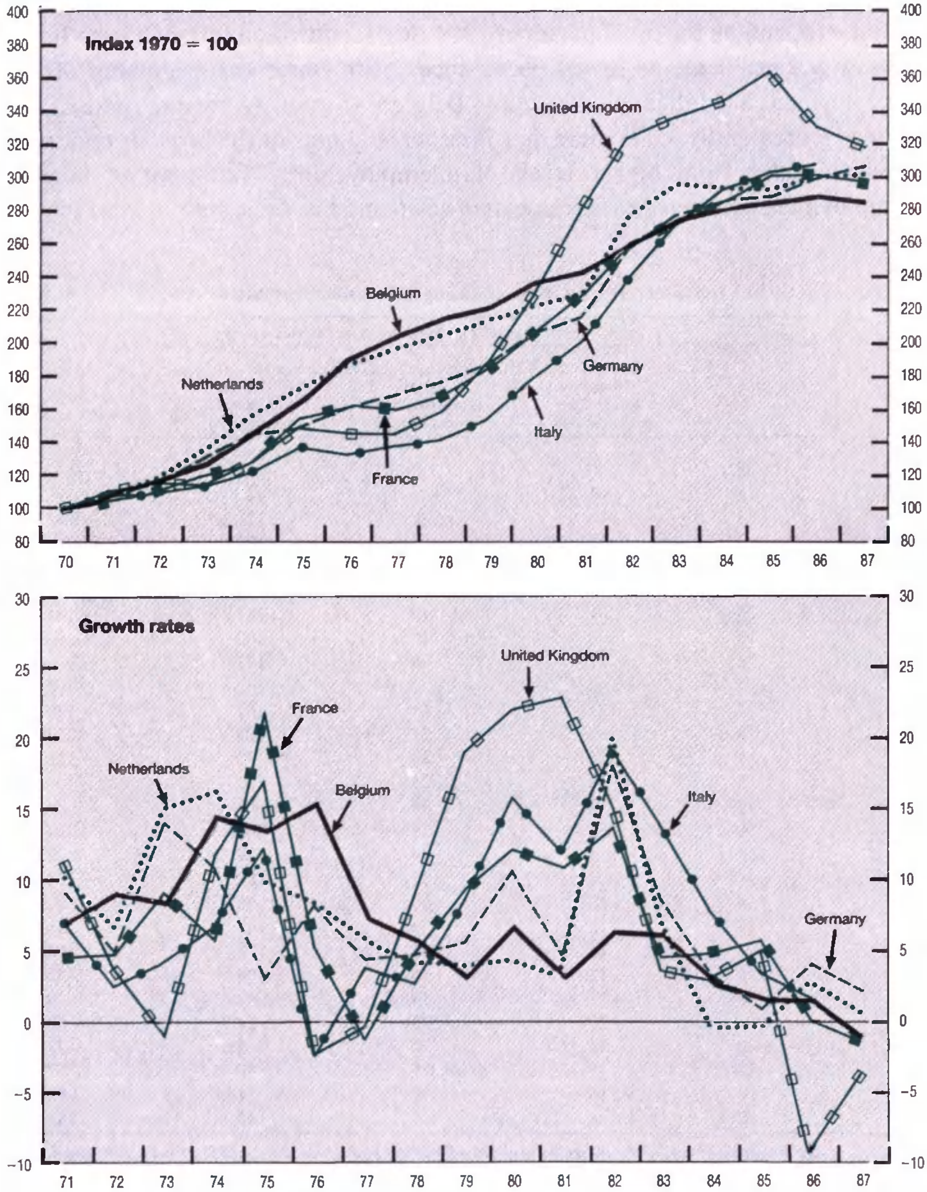
(Table 4). Lower unemployment has been the result of slower growth in the working-age population, combined with faster output growth not entirely matched by productivity increases (Table 5). Since the spring of 1987, the decline has accelerated, and by the first quarter of 1989 the standardised rate had been brought down to 9.2 per cent, its lowest level since 1980. Since the beginning of 1988, unemployment has fallen much faster in Belgium than on average in the EC. It has declined more rapidly in Flanders than in either Wallonia or the Brussels region, both of which suffer from higher levels of unemployment. The share of long-term unemployment continued to increase until 1986 and has since stabilised at that high

Table 5. **Sources of changes in unemployment**

	Change in unemployment (in thousands)				
	Actual	Due to:			
		Change in labour force participation	Change in working age population	Change in labour productivity	Change in output
1961	−28	6	−8	145	−172
1962	−14	41	−1	142	−198
1963	−13	−10	22	123	−149
1964	−7	17	27	193	−246
1965	8	−1	23	126	−141
1966	4	3	14	96	−110
1967	25	−1	10	161	−145
1968	18	3	11	160	−156
1969	−22	31	9	171	−236
1970	−17	40	1	142	−203
1971	−2	23	11	102	−139
1972	19	−7	21	208	−203
1973	4	22	28	177	−226
1974	5	30	25	107	−160
1975	78	−14	35	4	54
1976	58	0	31	246	−217
1977	33	−8	34	29	−22
1978	24	−7	32	107	−108
1979	14	38	20	36	−82
1980	18	12	4	161	−159
1981	94	14	3	23	54
1982	74	−22	46	106	−55
1983	55	−17	33	47	−8
1984	1	−26	28	82	−82
1985	−40	−16	4	5	−33
1986	−28	5	5	39	−77
1987	−12	16	−11	62	−79
1988	−42	−4	9	110	−158

Note: The change in unemployment, ΔUN, can be decomposed arithmetically into four parts according to the following formula:
$$\Delta UN = (LF/\dot{POPT}) \cdot LF(-1) + \dot{POPT} \cdot LF(-1) + (\dot{GDPV}/ET) \cdot ET(-1) - \dot{GDPV} \cdot ET(-1)$$
where LF is the total labour force, POPT is the working-age population, GDPV is constant-price gross domestic product, ET is total employment and a dot represents a percentage change.
Source: OECD Secretariat estimates.

Diagram 2. **COST OF LABOUR TO BUSINESS**[1]



1. Gross compensation of employee divided by estimated labour efficiency trend in Belgian francs.
Source: OECD Secretariat estimates.

level. With two-thirds of all unemployed without a job for over a year[29], and with only a one-in-four probability of finding a job within a year[30], long-term unemployment remains a serious problem. Some headway was made in dealing with the problem of youth unemployment, in part because of demographic factors. In the two years to March 1989, nearly 60 per cent of the decline in the number of insured unemployed took place among those under 25 years of age.

Labour-market problems were treated in detail in the 1984 *Survey*. At the macroeconomic level most emphasis was placed on the negative influence of the inadequate level of profitability. Since then, profitability has improved substantially, contributing to the recovery in employment[31]. Real-wage moderation has been achieved, and the effective cost of labour has risen less in Belgium than in European trading partners (Diagram 2). Simulations undertaken with the Secretariat's INTERLINK model suggest that the slower growth of real wages in relation to that of labour productivity has been a key factor behind the decline in the unemployment rate[32] (Table 6). There is also evidence that structural mismatches have been reduced: from 1985 to 1987 the unemployment-vacancy relationship shifted inward somewhat, in contrast to an earlier long-term deterioration[33] (Diagram 3, lower panel). That component of unemployment which is not classical nor structural in

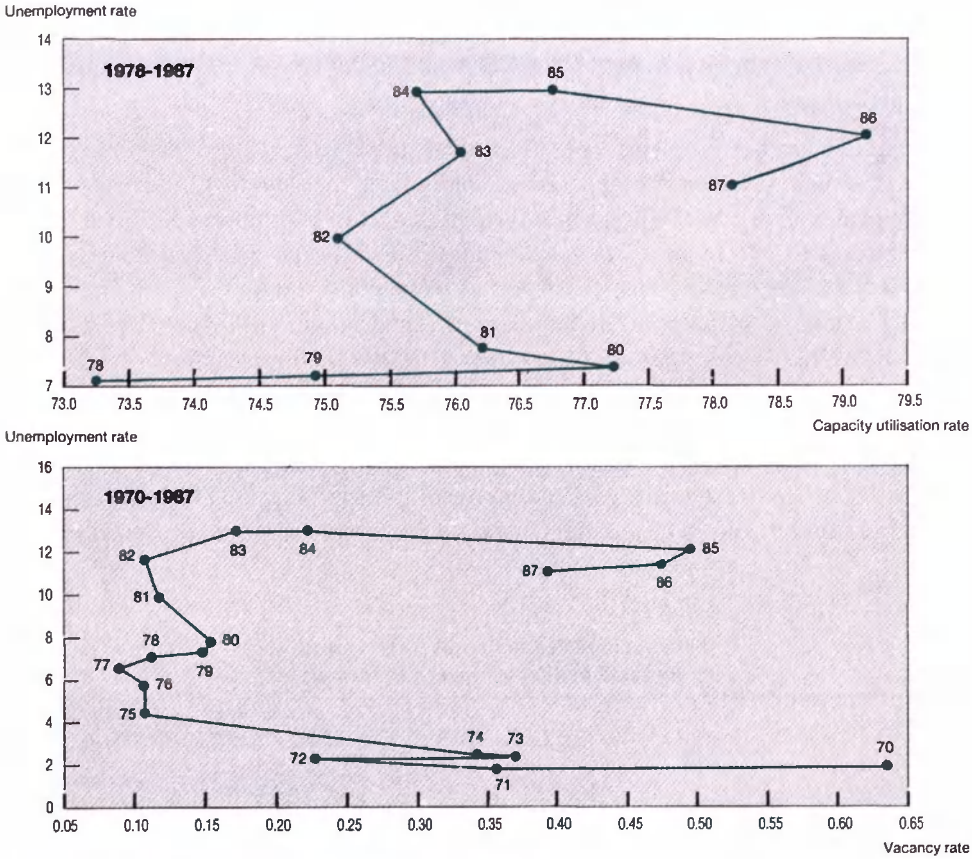
Table 6. **Simulated impact of a rise in real wages as rapid as that in labour productivity**[1]

	Difference in 1987 between the simulated level of variables and the observed level as a percentage of the latter					
	Real wages[2]	Employ-ment[2]	Unemploy-ment rate[3]	Fixed investment[2]	Real GDP	Private consumption deflator
Assumptions on which simulations were based:						
I. Fixed money supply						
A. Fixed exchange rate	3.9	−3.0	2.2	−4.7	−3.4	8.9
B. Floating exchange rate	3.6	−3.2	2.3	−5.2	−3.7	7.9
II. Fixed real long-term interest rate						
A. Fixed exchange rate	4.5	−3.5	2.5	−3.5	−3.3	9.1
B. Floating exchange rate	5.7	−3.4	2.4	−2.5	−2.4	11.5

1. The consequences of real wage growth as rapid as growth of labour productivity (business sector) from 1983 to 1987 were simulated. The wage equation in the INTERLINK model was replaced by an equation that determined the nominal wage rate from 1983 as a fixed proportion of business-sector labour productivity multiplied by the private consumption deflator. The simulations were based on the assumption that government consumption and investment as a proportion of GDP remained stable in real terms.
2. Business sector.
3. Difference in percentage points compared with the baseline level (i.e. 11.1 per cent in 1987).

Source: OECD Secretariat (simulations with the INTERLINK model).

Diagram 3. **UNEMPLOYMENT, VACANCIES AND CAPACITY UTILISATION**



Sources: OECD, *Main Economic Indicators* and *Labour Force Statistics.*

nature may not, however, be susceptible to demand stimulus, given inadequate production capacity[34] and the institutional structure of and public policy toward the Belgian labour market[35].

Public expenditure on labour-market programmes in Belgium is substantial. In 1988, it represented 4.2 per cent of GDP, surpassed only by Ireland and Denmark among 22 OECD countries[36]. Active measures to promote employment accounted for only one-quarter of this amount, most of it in the category of direct job creation and

Table 7. **Measures of social protection against unemployment in the European Community in 1987**

	Coverage ratio[1]	Replacement ratio[2]	Geometric average[3]
Belgium	**91.1**	**85.5**[4]	**88.3**
Denmark	97.2	90.3	93.7
France	67.2	60.5	63.8
Germany	61.0	87.0	72.8
Greece	47.9	51.1	49.5
Ireland	94.3	71.0	81.8
Netherlands	85.3	78.7	81.9
Portugal	22.8	67.2	39.1
Spain	39.9	68.0	52.1
United Kingdom	83.9	62.8	72.6
European Community[5]	65.8	72.2	68.9

1. Insured unemployed/registred unemployed.
2. Maximum unemployment benefits/lost earnings in after-tax terms of manufacturing workers. The ratio concerns the case of a couple with two children in which the wife is not working.
3. Square root of the product of the coverage ratio and the replacement ratio.
4. Note that the recent tax reform has had a sizeable negative effect on the replacement ratio as of 1989.
5. Except Italy and Luxembourg.

Source: Commission des Communautés Européennes, "Taux de remplacement des prestations chômage, juillet 1987", August 1988.

employment subsidies, primarily in the form of public-sector employment contracts[37]. The remainder represents income-maintenance schemes. Incentives to early retirement cost over BF 40 billion per year and covered some 133 000 workers at the end of 1988 (3.5 per cent of total employment). The largest single programme is the unemployment insurance system, one of the most generous in the EC (Table 7). Belgium is one of the only OECD countries where duration of entitlements to unemployment benefits is practically unlimited, and where the replacement ratio for many categories of recipients has increased between 1982 and 1987. Moreover, the generosity of the system poses a number of problems. For example, about half of all part-time workers (over 178 000 at the end of 1988) receive unemployment benefits amounting to some BF 16 billion per year; the recipients are overwhelmingly women (81 per cent) and mostly under 35. In certain cases the system may therefore reduce labour-supply incentives[38], especially in the case of the unemployed working part-time.

A theoretically more efficient and less costly programme is the career-interruption scheme which pays workers BF 10 500 per month (about 16 per cent of the average private-sector wage) for a period ranging from six months to five years as long as they are replaced by an insured unemployed person[39]. Overall, some

121 000 workers (3.2 per cent of the employed) are involved in one of the various publicly-supported back-to-work schemes.

Moderate wage and price inflation

Wages

Nominal wage growth decelerated substantially in the period 1982-1986/1987 during which wages were to a large extent administered. Secretariat estimates[40] suggest that the rise in unemployment contributed the most to the moderation of wage increases, although some other factors have also played a role. As actual unemployment began to exceed the rate at which wage inflation tends to accelerate (estimated at around 8½ per cent), real-wage increases fell short of labour-productivity growth, and labour's share of national income decreased. Slower productivity gains than in the 1970s has also put downward pressure on real wage growth. In addition, substantial increases in employers' social-security contribution rates, due to the "index skips", were partly borne by labour in the form of lower real-wage increases, an element of flexibility for price-taking employers. Finally, both output- and consumer-price inflation decelerated through most of the recent past, contributing importantly to wage disinflation. From 1983 to 1987, the slowdown in price increases accounted for nearly two-thirds of the deceleration in wage growth[41].

More recently, however, the process of slowing nominal- and real-wage growth appears to have come to an end (Table 9). Under the influence of improving

Table 8. **Determinants of business-sector wage restraint**

	Wage growth[1]	Annual contributions of explanatory variables						
		Constant	Consumer price inflation	"Terms of trade"	Productivity growth	Unemployment	Employers' social-security contributions	Residual
1972-1976	14.7	4.0	8.6	−0.4	3.7	−1.4	−0.1	0.4
1977-1982	7.5	4.0	6.1	−0.6	1.9	−3.4	0.1	−0.5
1983-1987	3.2	4.0	2.6	0.5	0.9	−4.8	−0.7	0.8
1983	6.3	4.0	6.0	0.3	1.4	−5.2	−0.1	−0.1
1984	5.1	4.0	3.5	−1.1	1.6	−5.2	−0.8	3.2
1985	1.7	4.0	3.1	0.3	0.2	−4.8	−1.9	0.8
1986	5.0	4.0	−0.1	3.0	1.0	−4.5	0.2	1.6
1987	−2.0	4.0	0.6	0.1	0.5	−4.4	−1.1	−1.7

1. Rates of increase are measured as logarithmic changes in the second half of each year on that of the previous year.
Source: OECD Secretariat estimates based on the wage equation described in Annex I.

Table 9. **Wages and unit labour costs**

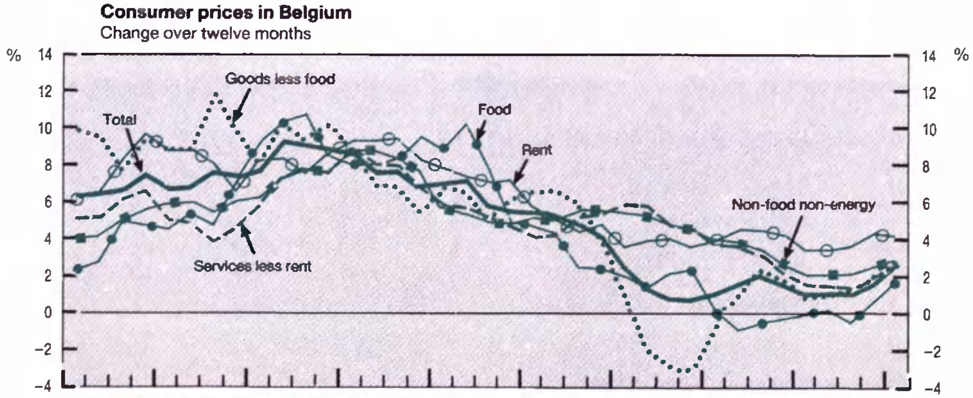
Annual percentage change

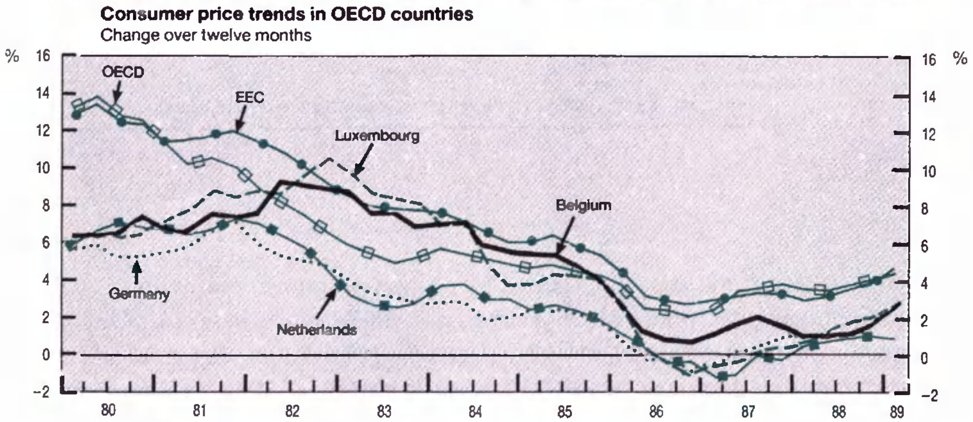
	1986	1987	1988	1988 Q4
Gross wages per employee (business sector)				
Nominal	4.7	−0.7	3.0	..
Real[1]	4.1	−2.7	1.8	..
Gross compensation per employee (business sector)				
Nominal	4.3	1.3	3.1	..
Real[1]	3.8	−0.7	1.8	..
Unit labour costs (total economy)				
Nominal	3.0	−1.0	−0.2	..
Real[2]	−0.8	−3.3	−1.3	..
Hourly wages (manufacturing sector)				
Nominal	1.8	1.2	2.1	2.8
Real[1]	1.3	−0.8	0.9	1.2
Unit labour costs (manufacturing sector)				
Nominal	−1.8	−2.2	−0.6	..
Real[2]	−5.4	−4.5	−1.7	..

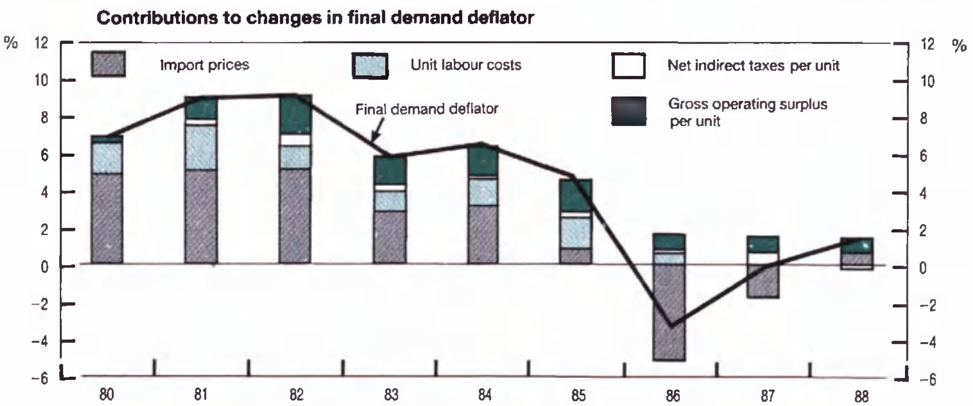
1. Deflated by the private consumption deflator except 1988 Q4 (consumer price index).
2. Deflated by the business value-added deflator.
Sources: Eurostat, *Eurostatistics*, March 1989; Institut National de Statistique and OECD Secretariat estimates.

labour-market conditions, the period of wages administered with a view to maintaining competitiveness came to an end in 1986. The last "index skip" to improve the public finances occurred at the outset of 1987. Wages began to accelerate somewhat during the course of 1987. In the early months of 1989, they were rising at an annual rate of around 3 per cent overall and as much as 6 per cent for hourly-paid metalworkers. Nonetheless, the acceleration has been more modest than that experienced by most major competitors, and real hourly wages in industry remain below their 1980 levels. Furthermore, allowing for productivity increases, unit labour costs have continued to decline, especially in the manufacturing sector. The November 1988 inter-industry labour-market accord committed employers to pay 0.18 per cent of their gross wage bill in 1989 and 1990 (over BF 2 billion per year) to assisting and retraining the long-term and less-qualified unemployed, as well as unemployed youth, plus an additional 0.10 per cent to improve the financial situation of the elderly unemployed. It also called for two increases in the minimum wage totaling BF 1 000 per month, but only for those with at least 6 months' experience with the employer. The temporary reductions in employer social-security contributions embodied in the Maribel programme (BF 15 billion per year) were rendered permanent.

Diagram 4. **INFLATION DEVELOPMENTS**







Sources: National Bank of Belgium, *1988 Report*; OECD, *Main Economic Indicators* and Secretariat estimates.

Prices

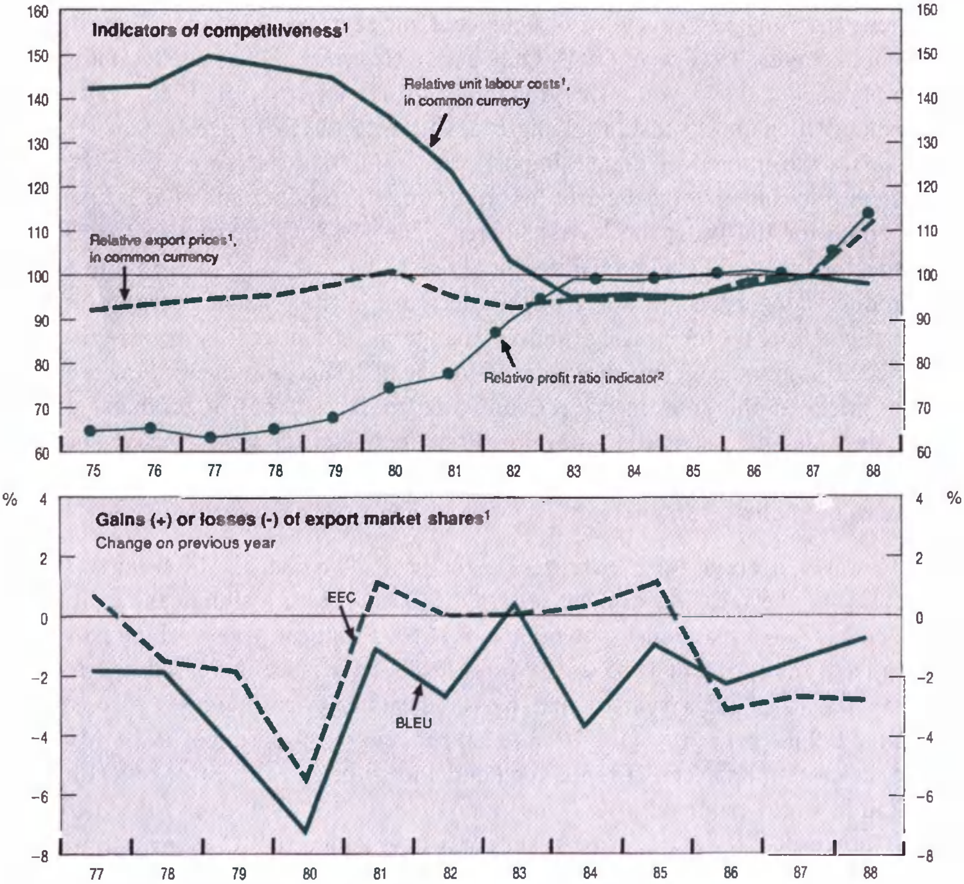
As indicated by various price measures, inflation was substantially reduced in the six years to 1988. Most of the decline occurred in the period 1982 to 1986, with consumer-price increases being brought down by 7.4 percentage points to 1.3 per cent (Diagram 4). According to Banque Nationale estimates, over 80 per cent of the decrease in the growth of the final demand deflator during the period can be attributed to rapidly decelerating import prices (particularly of energy products), the rest being accounted for by developments (per unit of output) in the gross operating surplus, labour costs and net indirect taxes. In 1987, there was a small rebound in some measures of inflation due to a number of factors: oil prices showed a renewed rise, and the full-year effects of a significant indirect tax increase on residential housing in August 1986 were felt[42]. Only partly offsetting these negative influences was a significant slowdown in the growth of unit labour costs. In 1988, continuing wage moderation and a substantial improvement in productivity performance[43] more than offset the impact of higher import prices; inflation measured by either the consumer price index or the deflator for gross domestic production fell to 1.2 per cent on average for the year, the lowest figures since 1962. Compared to the OECD average, the favourable inflation differential reached a peak of 2.6 percentage points. By product category, there was a further decrease in the price of energy products, especially of fuel oil for heating, and no change in food prices. Price increases for other goods remained on a declining trend for the fifth successive year. However, the rise in prices at the consumer level continued to exceed that of producer prices, implying widening distribution margins. Price increases for services have shown a tendency to diminish further, reflecting principally the lack of any important increases in public tariffs.

However, average price increases for the year 1988 conceal different trends in the course of the year. As in most other OECD countries, a significant pick-up in inflation has taken place since the middle of 1988. Producer prices, which had been falling from the spring of 1985 until March 1988, have since increased at a 6.6 per cent annual rate. On a year-to-year basis, consumer-price increases rose from a trough of 0.9 per cent in August 1988 to 3.0 per cent in the spring of 1989. Much of that acceleration has been in rents, food and energy prices, the latter reflecting the rebound in world crude oil prices since late 1988. In addition, excise-tax increases which form part of the tax reform package may have added about 0.4 per cent to price inflation at the beginning of 1989. As a result, as of May 1989, Belgium's favourable inflation differential with the rest of the OECD had been reduced to 2.3 percentage points.

Maintenance of a strong current-account position

The combination of the 1982 devaluation and wage restraint led to improved competitiveness, as measured by costs in manufacturing industry (Diagram 5). Although some degree of caution is needed in interpreting their findings, studies by the Secretariat (Annex II) suggest that labour costs in Belgium have been reduced

Diagram 5. **COMPETITIVENESS INDICATORS AND EXPORT PERFORMANCE**



1. In manufacturing industry.
2. Ratio of relative export prices to relative labour costs in manufacturing industry.
Source: OECD Secretariat estimates.

Table 10. **Indicators of relative labour cost levels in manufacturing**

Percentage differentials[1]

	Belgium	Germany	France	Netherlands	United Kingdom	Italy	United States	Japan
Average 1977-1981	47	14	–20	11	0	–24	–2	7
Average 1983-1987	5	16	–12	–6	2	–23	11	5

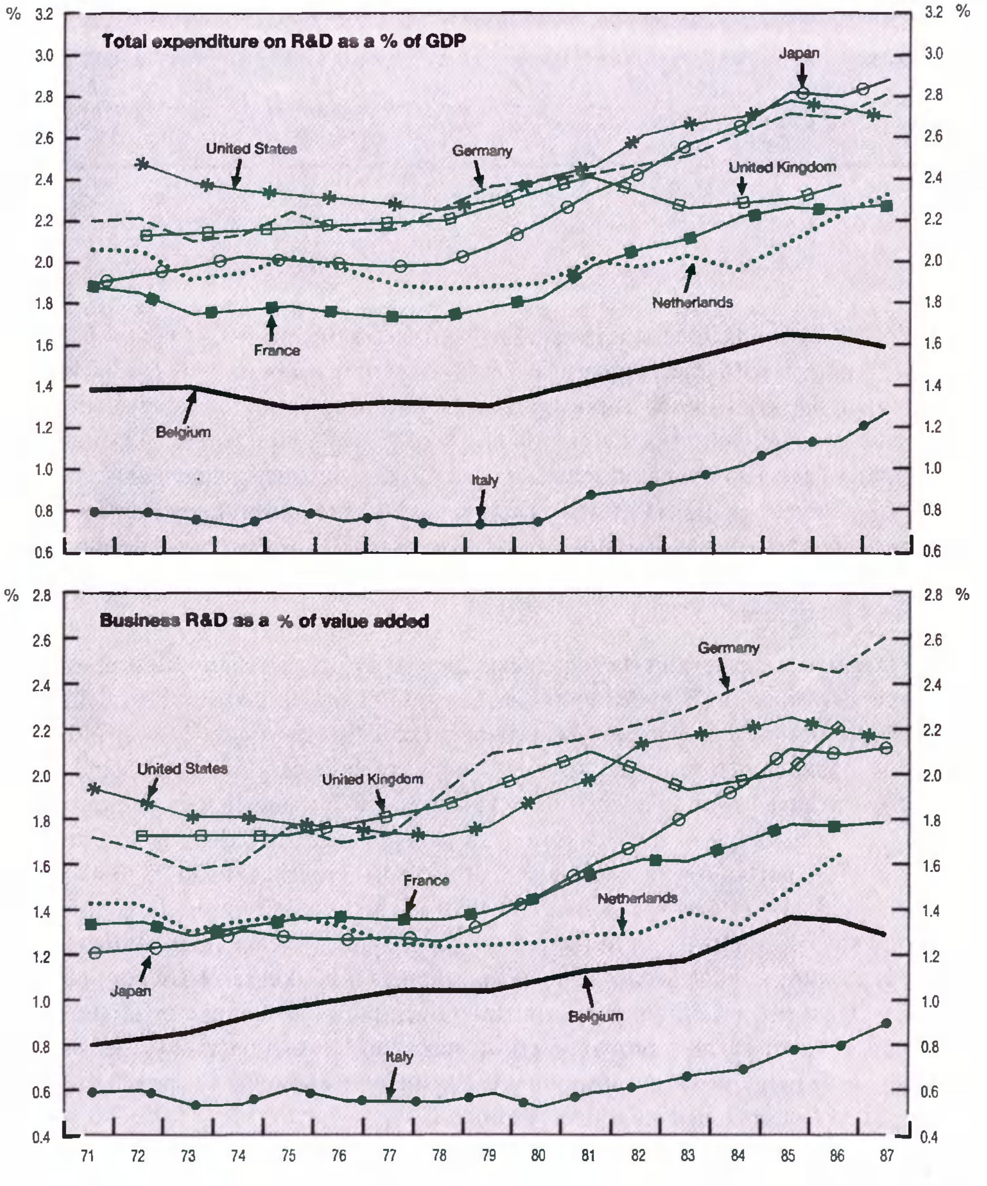
1. Cost differentials relative to the average for main competitor countries.
Source: OECD Secretariat estimates.

since 1983 to a level close to that prevailing in main trading partners (Table 10). That trend, together with the recovery in corporate profit margins and the pickup in investment, has contributed importantly to the improvement in the supply conditions and cost competitiveness of Belgian industry in recent years. Since 1983, resident companies have also increased their outward direct investment, which has probably served to encourage export growth. Despite such improvements, another indicator used in Belgium to measure competitiveness (see Part III), research and development effort in relation to output, still appears to be inferior to that of most of its trading partners (Diagram 6).

The losses in export market share experienced by Belgian manufacturers almost continuously since 1977 tended to diminish beginning in 1986. Since then, Belgium's export performance has proved better than the EEC average (Diagram 5). The measures taken to restore the competitiveness of industrial exports would seem therefore to have begun to bear fruit. In 1986 and 1987, domestic demand also grew more slowly in Belgium than in European partner countries, thereby limiting the growth of imports. All in all, the export/import coverage ratio in real terms deteriorated less on average in Belgium than in the other Community countries[44]. Despite some uncertainty as to the price-volume split of recent trade statistics, the ratio is thought to have improved in 1988, whereas it is likely to have continued to worsen in the other Community countries. Given no major change in the terms of trade, the trade surplus probably grew; according to estimates by the Banque Nationale de Belgique, on a transactions basis (including commission processing) it is believed to have reached some BF 112 billion.

After declining slightly, the BLEU current account surplus rose again in 1988 to BF 115 billion, or 2.0 per cent of GDP. This was attributable to an increase in the surplus on visible trade and commission processing. The deficit on transfers widened

Diagram 6. **SPENDING ON R&D**



Source: OECD, *Main Science and Technology Indicators.*

on the other hand by approximately BF 10 billion, mainly because of the payment of Belgium's contribution in respect of the "fourth resource" of the European Community budget. The surplus on services fell slightly as a result of increased outflows in the area of tourism, expenditure on foreign travel having probably risen in line with the growth of households' real disposable income. Investment income and other trade in services, which includes transport, freight and insurance costs, as well as the expenditure of European institutions in the BLEU in all generated much the same surplus as in 1987.

In 1988, for the second consecutive year, and despite a far from negligible increase, net capital outflows only partially offset the current account surplus. Official financing flows by general government thus continued to show a surplus (BF 3 billion), albeit one appreciably smaller than in 1987 (BF 46 billion) (Table 11). These outcomes made it possible to maintain the level of the exchange

Table 11. **BLEU balance of payments**

BF billion

	1981	1982	1983	1984	1985	1986	1987	1988[1]
1. Transactions in goods and services	−108	−54	+37	+49	+83	+182	+163	+180
of which:								
Merchandise	−152	−132	−63	−48	−11	+51	+34	+112
Commission processing	+42	+54	+59	+59	+56	+78	+55	
Transport	+15	+23	+24	+18	+21	+20	+34	n.a.
Travel	−47	−28	−19	−17	−23	−32	−35	n.a.
Investment income	−3	−10	−9	−4	−8	+5	+14	n.a.
Other	+37	+39	+45	+41	+48	+60	+61	n.a.
2. Transfers	−48	−56	−59	−51	−42	−43	−56	−65
3. Current balance (1 + 2)	−156	−110	−22	−2	+41	+139	+107	+115
4. Private non-financial sector capital transactions[2]	−200	−87	−98	−19	−49	−108	−16	−77
5. Capital transactions, in foreign currency, by resident credit institutions[2]	+35	−79	0	−66	−32	−71	−46	−20
6. Other	+2	−5	−33	0	0	−11	+1	−15
7. Total (3 + 4 + 5 + 6)	−319	−281	−153	−87	−40	−51	+46	+3
8. Financing								
Official capital transactions in foreign currency[3]	−223	−243	−131	−154	−32	−58	−35	−22
BNB's foreign exchange reserves[4]	−96	−38	−22	+67	−8	+7	+81	+25

1. Estimates.
2. Plus sign: inflows; minus sign: outflows.
3. Plus sign: outflows; minus sign: inflows.
4. Plus sign: increase; minus sign: decrease.
Source: Banque Nationale de Belgique.

rate, while increasing the foreign-exchange reserves of the Banque Nationale de Belgique (by more than BF 100 billion over two years) and reducing the Belgian Government's borrowing in foreign currencies.

Capital transactions by the private non-financial sector have been to a large extent responsible for the fluctuations in capital movements. The reduction in foreign-exchange risk probably prompted resident investors to look for more advantageous investments in foreign currencies: after having remained consistently in surplus since 1984, the balance on short-term transactions showed a deficit of BF 88 billion for the first ten months of 1988 (Table 12). Also, net long-term outflows by residents grew as a result of the steady increase in outward direct investment by Belgian enterprises and residents' investment in foreign bonds. It is important in this connection to note the increasing role being played by mutual funds in the purchase of securities. Their development would seem to have accentuated the competition that Belgian securities are meeting from foreign bonds (see Part II). All

Table 12. **Capital transactions of the private non-financial sector**

BF billion

	1982	1983	1984	1985	1986	1987	First ten months 1987	First ten months 1988
1. Net commercial claims on foreigners[1]	–4	–29	–2	–16	–1	–12	+2	n.a.
2. Non-residents' transactions[2]	+45	+41	+68	+79	+26	+201	+170	+249
of which:								
Mainly short-term	–38	–36	+23	–15	–59	+53	+48	+87
Mainly long-term	+83	+77	+45	+94	+85	+148	+122	+162
of which:								
Securities	–1	+10	+11	+25	+45	+52	+46	+38
Direct investment and other related transactions	+85	+67	+34	+69	+40	+96	+76	+124
3. Residents' transactions[3]	–129	–110	–85	–112	–133	–205	–160	–340
of which:								
Mainly short-term	–73	–1	+39	+26	+86	+18	+4	–88
Mainly long-term	–56	–109	–124	–138	–219	–223	–164	–252
of which:								
Securities	–57	–89	–107	–119	–138	–115	–84	–147
Direct investment and other related transactions	+1	–20	–17	–19	–81	–108	–80	–105
4. Total	–87	–98	–19	–49	–108	–14	n.a.	n.a.

1. Plus sign: decrease; minus sign: increase.
2. Plus sign: increase in non-residents' net assets; minus sign: decrease.
3. Plus sign: decrease in residents' net assets; minus sign: increase.
Source: Banque Nationale de Belgique.

Table 13. **Short-term interest rates: three-month Euro-rates**

	1981	1982	1983	1984	1985	1986	1987	1988
Belgium	**15.23**	**14.06**	**10.55**	**11.35**	**9.57**	**8.08**	**7.08**	**6.75**
Germany	11.73	8.55	5.52	5.78	5.31	4.59	4.02	4.28
France	18.04	19.58	16.52	12.68	10.69	9.36	8.56	8.02
Italy	23.43	22.38	18.61	15.90	13.99	13.02	11.09	11.00
United Kingdom	13.94	12.28	10.13	9.95	12.22	10.95	9.72	10.34
Netherlands	11.60	8.38	5.65	6.16	6.37	5.63	5.31	4.76
Partner countries' average	14.88	13.41	10.46	9.27	8.70	7.71	6.89	6.84
Belgium's differential with its partners	0.35	0.65	0.09	2.08	0.87	0.37	0.19	−0.09

Source: Banque Nationale de Belgique.

in all, compared with the corresponding period in 1987, capital outflows by residents more than doubled during the first ten months of 1988 to BF 340 billion. Capital inflows occasioned by non-residents' transactions also increased in 1988 but, in contrast with 1987, were not sufficient to offset the outflows due to transactions by residents. Inward direct investment in Belgium, which had already risen appreciably in 1987, again rose sharply in 1988 with, in particular, the purchase by a French bank of control of the Société Générale de Belgique. In addition, the increase in non-residents' short-term deposits with BLEU credit institutions persisted through the first ten months of 1988, despite the narrowing of the interest-rate differential between the Belgian franc and the major European currencies (Table 13).

II. The modernisation of financial markets

The main financial flows in the Belgian economy are dominated by the public sector's large borrowing requirements and the scale of international capital transactions. This helps to explain the distinctive features of the Belgian financial system: domestically, bank intermediation has remained the main channel through which saving and investment are matched; externally, financial institutions are highly internationalised. On account of increased international competition, especially in the light of the single European capital market, and the reduction in the public deficit, the Belgian financial system is currently going through a transitional phase, during which it must become more efficient and adopt an appropriate international specialisation. This chapter consists of five parts: the first describes the major financial flows in the 1980s. The second examines the role of the various financial intermediaries in the financing of the economy. The third assesses how effective the financial system is. The fourth considers the reforms needed to promote the future expansion of the Brussels financial market, as some of the measures to modernise the capital markets were introduced only very recently, and many others are still required. The final part analyses the macroeconomic impact of the modernisation of financial markets.

Major financial flows in the 1980s

From 1976 to 1984, the financial situation was characterised by the shortfall of national savings relative to investment, the counterpart of which was reflected in a deficit on current external account. This was ascribable to the very steep increase in the general government borrowing requirement up to the early 1980s, and to the decline in corporate profits (Table 14). While the private sector's lending capacity remained stable from 1982, the efforts to cut the public deficit, which was still very high, had the opposite effect, with national saving exceeding investment from 1985.

Table 14. Accounts of the main institutional sectors

As percentage of GNP

	1980	1981	1982	1983	1984	1985	1986	1987	1988[1]
1. Households									
Gross saving	14.7	15.4	13.3	14.5	13.1	11.2	12.0	11.0	11.3
(as percentage of disposable income)	(18.8)	(19.0)	(16.7)	(18.0)	(16.6)	(14.4)	(15.5)	(14.4)	(15.0)
Gross capital formation	7.9	5.1	4.6	4.5	4.3	4.4	4.6	4.9	5.6
Net lending capacity[2]	7.0	10.4	8.7	10.0	8.8	6.9	7.4	6.1	5.7
2. Enterprises									
Gross saving	6.8	6.6	7.3	8.0	8.7	9.7	10.8	11.2	11.9
Gross capital formation	9.5	8.4	8.8	7.5	8.9	7.8	7.7	9.2	10.1
Net lending capacity[2]	0.1	1.8	1.7	4.0	2.3	4.9	5.4	4.2	3.4
3. Private sector									
Net lending capacity[2]	7.1	12.2	10.4	14.0	11.1	11.8	12.8	10.4	9.4
4. Government									
Gross saving	–4.3	–8.2	–7.0	–7.8	–6.0	–5.8	–6.4	–4.9	–4.5
Gross capital formation	4.1	4.1	3.8	3.4	3.0	2.5	2.2	2.0	1.9
Net borrowing (–)[2]	–11.5	–16.2	–14.3	–15.0	–11.9	–11.7	–11.1	–9.5	–8.4
5. Total economy									
Net borrowing requirement (–) or lending capacity[2]	–4.4	–3.9	–3.8	–1.0	–0.8	0.1	1.7	0.8	0.7

1. Estimates.
2. Banque Nationale de Belgique definition. Net lending capacity is equal to gross saving plus net capital transfers less gross capital formation.

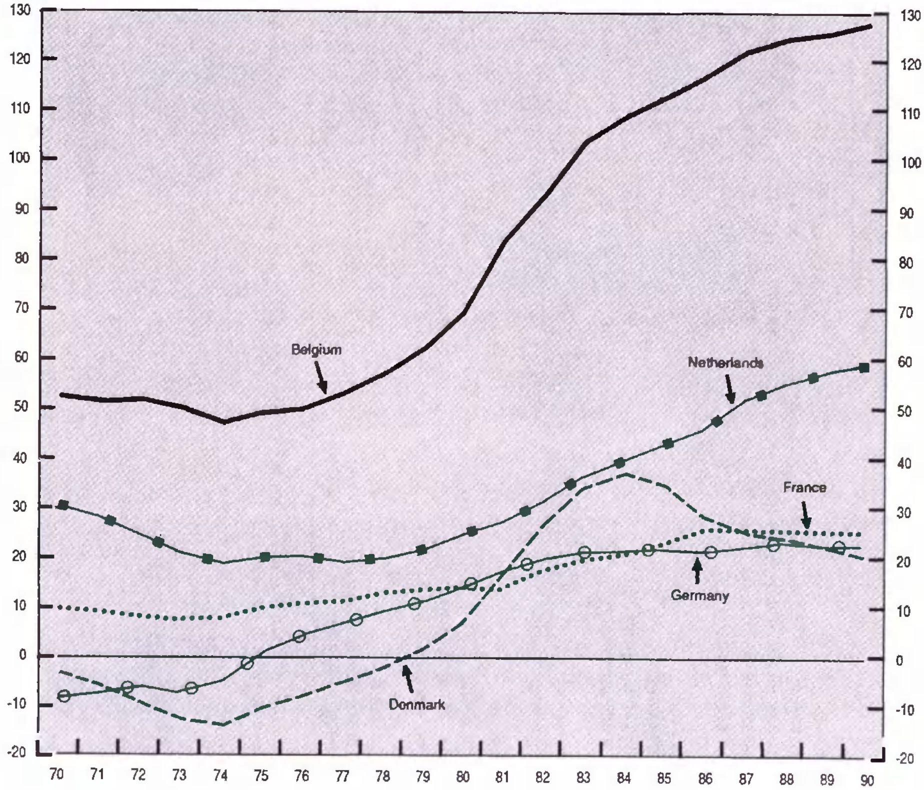
Source: Banque Nationale de Belgique.

This return to a surplus position on the current account was accompanied by net outflows of private long-term capital.

A still considerable public deficit

After peaking in 1981 at 13.2 per cent of GDP (on a national accounts basis), the general government borrowing requirement fell steadily from 1983 to nearly 7 per

Diagram 7. **INTERNATIONAL COMPARISON OF PUBLIC DEBT**[1]
(as a percentage of GNP / GDP)



1. End of period.
Source: OECD Secretariat estimates.

Table 15. **Means of financing the Treasury deficit**

New financing

	In foreign currency	In Belgian francs					Grand total
		Maturity of less than or equal to one year			Maturity of more than one year	Total	
		Provided by the Banque Nationale de Belgique[1]	Other	Total			
	(a)	*(b)*	*(c)*	*(d) = (b) + (c)*	*(e)*	*(f) = (d) + (e)*	*(g) = (a) + (f)*
1970	−47.9	−9.8	75.2	65.4	82.5	147.9	100
1975	−1.4	1.9	13.9	15.8	85.6	101.4	100
1980	31.2	8.3	37.1	45.4	23.4	68.8	100
1981	47.1	15.9	31.1	47.0	5.9	52.9	100
1982	43.2	6.2	38.3	44.5	12.3	56.8	100
1983	25.5	1.4	14.6	16.0	58.5	74.5	100
1984	30.9	2.4	19.6	22.0	47.1	69.1	100
1985	6.1	−3.2	14.1	10.9	83.0	93.9	100
1986	13.3	4.9	49.7	54.6	32.1	86.7	100
1987	7.4	−19.0	43.4	24.4	68.2	92.6	100
1988	5.3	−4.8	12.1	7.3	87.4	94.7	100

1. Changes in the portfolio of Belgian public debt instruments of the Banque Nationale de Belgique and in the stock of treasury certificates which the Fonds des Rentes finances through the special aid of the Banque.

Sources: Banque Nationale de Belgique, Ministry of Finance.

cent in 1988. Despite this improvement, the deficit is still much higher than that of most of Belgium's trading partners. The net debt of general government, which had already represented 84 per cent of GDP in 1981, continued to grow, rising to almost 125 per cent in 1988, the highest ratio of all the OECD countries except for Ireland (Diagram 7). The means of financing the public debt changed during the 1980s. Since 1985, the relative share of new Treasury foreign-currency-denominated issues has fallen sharply (Table 15). This partly reflects recourse to other means of financing made possible by the emergence of a surplus on current account. By helping to firm the Belgian franc, the improvement in foreign trade made it less necessary to maintain or to rebuild large foreign-exchange reserves for the purpose of defending the franc. There has been a decline in monetary creation of all types in relative terms since 1983. The proportion of the Treasury deficit covered by domestic saving thus rose from over 11 per cent in 1980 to 50 per cent in 1988. Thus, despite the overall reduction in the central government deficit, the relative share of government issues in the domestic capital market has decreased only slightly.

A broadly stable lending capacity of the private sector

Households' lending capacity has declined gradually over the past fifteen years. Their savings ratio, which was one of the highest among the OECD countries at the start of the 1970s, fell by over 6 points between 1976 and 1985, mainly on account of the slowdown in the growth of real disposable income. Despite more marked disinflation and the increase in value of stock-market assets, the saving ratio has levelled off since 1985 owing to the more rapid growth of disposable income in recent years. Households' lending capacity has nonetheless continued to decrease (Table 14, *op. cit.*) following the pick-up in residential investment. Business-sector lending capacity, which had already been positive since 1979, increased sharply from 1983, outstripping investment as profits were rebuilt; the self-financing ratio for gross fixed investment rose to nearly 120 per cent in 1988, compared with only slightly over 70 per cent in 1980 (Table 16). Against a background of high real interest rates, rising stock-market prices and capital restructuring of major companies in anticipation of the single European market, financial investments by non-financial enterprises increased markedly. The share of financial assets in their balance sheets rose from 16 per cent in 1980 to nearly 25 per cent in 1987. The Banque Nationale de Belgique has estimated, on the basis of a sample of major enterprises, that the ratio of financial earnings to revenue from sales of goods and services nearly doubled between 1980 and 1987.

Increasing net private capital outflows

All told, the lending capacity of the private sector (households and business) has remained stable. Since 1985 it has exceeded the general government borrowing requirement; the surplus of saving over national investment has been partly reflected in the increasing outflows of private long-term capital. Although the BLEU balance on private long-term capital flows was already negative in 1982, capital outflows have accelerated considerably in recent years (Table 12, *op. cit.*). The rapid expansion of Luxembourg mutual funds has been a major factor in this development (Table 17). Able to diversify their portfolios and thus to minimise exchange-rate risks, these institutions have increasingly proposed financial investments denominated in foreign currencies, offering attractive yields and the tax advantages available to such collective investment schemes. ECU-denominated investments, which had been preferred by Belgian residents up to 1985 because they involved only a slight exchange-rate risk, have therefore lost ground increasingly to investments denominated in dollars or in other high-yielding currencies (Diagram 8). Lastly, outward

Table 16. **Self-financing ratio and the growth of business financial investment**[1]

	1980	1981	1982	1983	1984	1985	1986	1987	1988[2]
Self-financing ratio[3]	72	79	83	107	98	124	141	121	118
Operating assets[4] as a percentage of total assets	83.8	84.5	84.1	82.5	82.6	81.3	78.6	75.4	n.a.
Financial assets[5] as a percentage of total assets	16.2	15.5	15.9	17.5	17.4	18.7	21.4	24.6	n.a.

1. Non-financial enterprises.
2. Estimates.
3. Gross saving as a percentage of gross fixed investment.
4. Set-up costs, tangible and intangible fixed assets, stocks, trade accounts receivable, current assets, accruals.
5. Financial assets, other receivables, liquid investments.

Source: Banque Nationale de Belgique.

Table 17. **Growth of financial investment via mutual funds**[1]

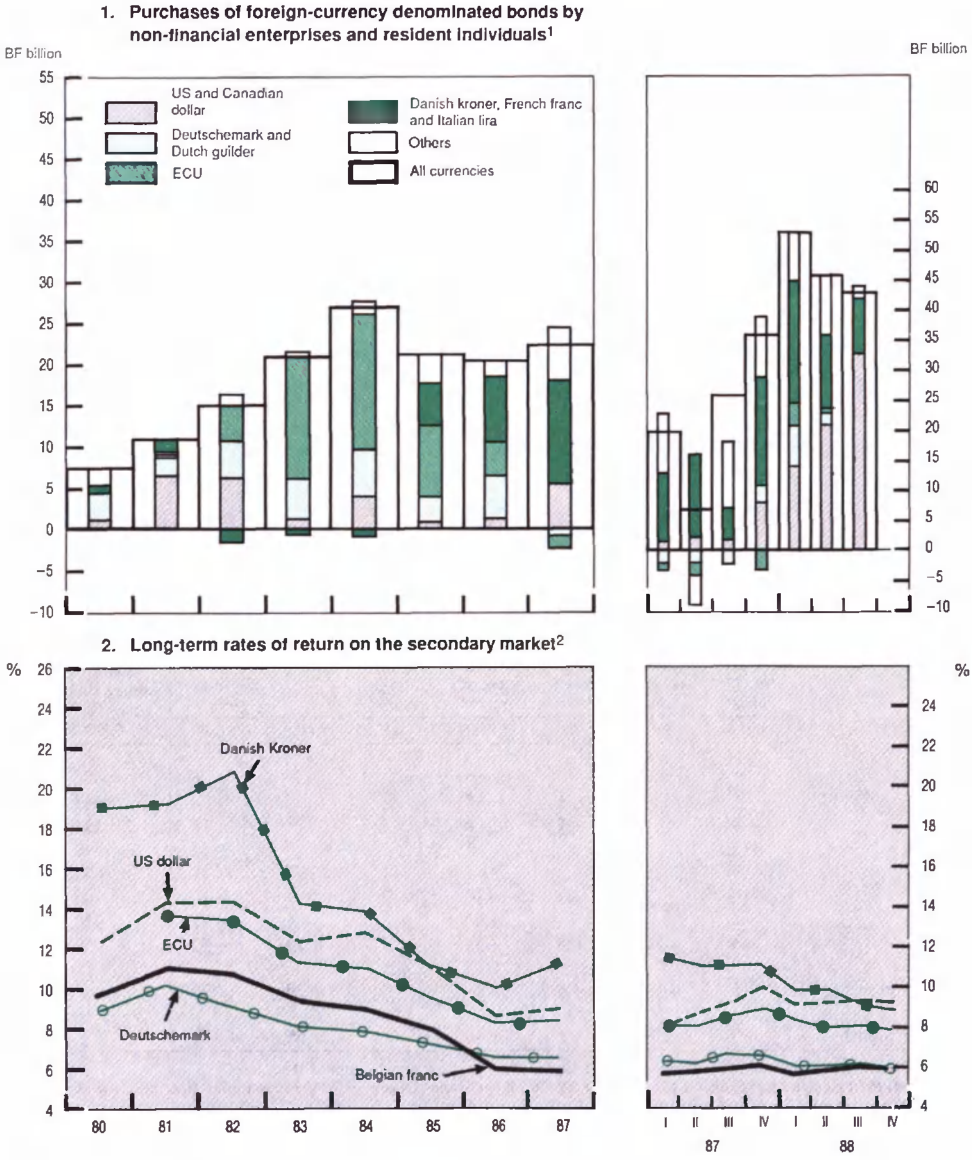
BF billion

	A.R. No. 15 Funds[2] (a)	Pension savings schemes[3] (b)	Other Belgian funds (c)	Luxembourg funds[4] (d)	Other foreign funds[4] (e)	Mutual Funds[4, 5] (f)	Total (g)	Asset formation of households and non-financial enterprises
1980	..	..	..	−6	..	..	−6	486
1981	..	..	+1	−5	..	..	−4	643
1982	+9	..	+1	−4	..	..	+6	591
1983	+13	..	+2	−1	..	..	+15	748
1984	+19	..	..	+1	−1	..	+19	602
1985	+19	..	+3	+10	−2	..	+30	799
1986	−4	..	+5	+40	−3	+4	+42	910
1987	−4	+24[6]	+5	+38	..	+29	+92	958
1987 9 months	−1	+15[6]	+6	+30	..	+20	+70	..
1988 9 months	−6	+4	+1	+46	..	+55	+100	..

1. Collective investment institutions licensed by the Commission bancaire, which supplied the figures.
2. Funds licensed under Royal Decree No. 15 of 9th March 1982 providing incentives for the subscription to or purchase of shares in Belgian companies.
3. Pension-savings schemes in the form of a collective savings account set up under the Royal Decree of 22nd December 1986.
4. Mutual funds authorised by the Finance Ministry to make public issues in Belgium.
5. Luxembourg-incorporated open-end investment companies.
6. Including subscriptions received before 14th February, which exceptionally entitled subscribers to personal income tax deductions for the previous year.

Source: Banque Nationale de Belgique.

Diagram 8. **FOREIGN-CURRENCY BREAKDOWN OF INVESTMENT PORTFOLIOS AND RATE OF RETURN ON FOREIGN-DENOMINATED SECURITIES**



1. Annual data are expressed on a quarterly basis.
2. The rate on Belgian franc-denominated bonds is obtained after deducting withholding tax at 20 % up to 1983 and at 25 % thereafter; no withholding tax has been deducted from the rates on other bonds.

Source : National Bank of Belgium, *1988 Report*.

direct investment has also increased markedly, owing to the improvement in business finances.

The leading role of bank intermediation in the financing of the economy

In Belgium there are three major categories of financial intermediaries:

- Banks, all of which are private. The three largest are the Générale de Banque, the Banque Bruxelles Lambert and the Kredietbank; their activities are diversified, and often oriented toward international transactions;
- Savings banks, which are also private. They specialise in taking in domestic savings and providing loans to Belgian customers;
- Public credit institutions, of which there are six. The main ones are the Crédit Communal, the Caisse Générale d'Epargne et de Retraite and the Société Nationale de Crédit à l'Industrie. Originally created to provide funds on advantageous terms to specific sectors (*inter alia* to housing), they are now tending to become less specialised.

Whereas in other countries the degree of intermediation by banks and other credit institutions has declined considerably since the end of the 1970s following the wave of financial innovations[45], in Belgium it has remained fairly stable. While Luxembourg mutual funds have rapidly expanded their activities in Belgium for tax reasons, Belgian funds have lagged considerably behind (Table 18). They have not yet managed to challenge the traditional financial-intermediation role of the banks

Table 18. **International comparison of the importance of mutual funds**

End 1987

	ECU billion	As a percentage of total
Belgium	3	1
France	150	44
Germany	64	19
Italy	39	11
Luxembourg	25	7
United Kingdom	52	15
Other	10	4
Total	343	100

Source: Association Belge des Banques, *Rapport annuel 1988.*

and other credit institutions, which continue to play a leading role in the domestic financing of the economy.

In 1988 financial institutions held about 63 per cent of total public debt, about the same proportion as in 1977. Their share of claims on the private sector also changed little over the same period, fluctuating around 89 per cent. The share of private-sector financial assets held in banks, savings banks and credit institutions fell only slightly, from 78.7 per cent in 1977[46] to 76.5 per cent in 1986. The banks are playing an increasingly important role in the process of financial intermediation (Table 19). The relative share of commercial and savings banks in lending to the private sector increased from 53 per cent in 1969-1970 to nearly 68 per cent in 1987, at the expense of lending by public credit institutions; likewise, their share of private-sector financial assets increased over the same period from 53 per cent to nearly 60 per cent.

Table 19. **Market shares of the various financial intermediaries**

	As a percentage of lending to households and non-financial enterprises			As a percentage of assets of households and non-financial enterprises held by financial intermediaries		
	Commercial banks	Savings banks	Six PCIs	Commercial banks	Savings banks	Six PCIs
Average 1969-1970	38.6	14.4	47.0	38.3	15.2	46.5
Average 1979-1980	47.9	16.3	35.8	39.9	17.4	42.7
1981	49.3	15.7	35.0	39.3	17.7	43.0
1982	49.7	15.6	34.7	39.4	17.6	43.0
1983	50.1	16.0	33.9	39.7	18.3	42.0
1984	50.8	15.8	33.4	39.1	18.7	42.2
1985	51.1	15.7	33.2	39.5	18.6	41.9
1986	51.8	16.0	32.2	39.7	19.0	41.3
1987	51.8	15.9	32.3	40.1	19.3	40.6

Source: Commission on "Public credit institutions: 1992", January 1989.

In Belgium the public plays only a limited role in the market for Treasury debt. First, the primary market in short-term securities, consisting mainly of Treasury certificates, is reserved for Belgian and Luxembourg financial intermediaries (banks, savings banks and public credit institutions). The secondary market is relatively inactive; furthermore, that which does exist has been open only to a few insurance companies and pension funds and only since 1987. Second, most bond issues are underwritten by a consortium of about 70 commercial and savings banks and

Table 20. **Structure of Treasury debt by holder**

	Private enterprises and individuals	Public institutions	Foreigners	Mainly monetary institutions *of which:*			Other financial institutions[2]	Other and adjustments	Total
				Total	Deposit banks	Assets of individuals held at OCP[1]			
	1	2	3	4	5	6	7	8	9
1966	26.0	3.1	8.6	40.4	20.2	9.7	20.9	1.0	100.0
1967	26.9	2.7	7.5	39.4	21.4	8.7	22.8	0.7	100.0
1968	25.9	3.2	7.6	40.7	20.3	9.6	21.4	1.2	100.0
1969	26.1	3.1	7.4	42.5	21.9	8.8	20.5	0.4	100.0
1970	26.3	2.9	7.0	41.2	21.4	9.2	21.9	0.6	100.0
1971	26.9	3.5	3.6	41.1	23.4	8.9	24.1	0.8	100.0
1972	25.4	4.2	2.6	42.1	25.6	9.3	25.3	0.4	100.0
1973	24.8	4.2	2.5	42.3	28.1	8.3	25.7	0.5	100.0
1974	24.9	3.6	1.7	42.2	28.6	8.0	27.5	0.1	100.0
1975	24.0	3.5	1.3	41.5	28.7	7.5	29.6	0.1	100.0
1976	24.4	3.2	1.8	42.0	28.4	7.2	28.5	0.1	100.0
1977	25.4	2.9	1.4	39.0	25.5	6.5	31.3	..	100.0
1978	26.0	4.6	4.2	37.1	25.2	5.9	28.1	..	100.0
1979	26.5	6.8	4.8	36.1	25.9	4.9	25.8	..	100.0
1980	23.6	6.6	10.1	36.6	27.7	4.3	23.1	..	100.0
1981	20.6	8.7	14.1	34.2	27.1	3.6	22.4	..	100.0
1982	17.7	8.0	17.3	33.2	27.4	2.8	23.8	..	100.0
1983	15.9	6.9	18.3	34.9	30.1	2.3	24.0	..	100.0
1984	14.5	6.9	19.6	32.7	28.9	1.6	26.2	..	100.0
1985	13.5	5.5	18.1	33.0	29.2	1.7	29.9	..	100.0
1986	12.4	5.7	18.5	32.4	28.8	1.7	31.0	..	100.0
1987	12.2	3.9	19.0	31.6	28.3	1.5	33.3	..	100.0

1. Postal cheques office.
2. Savings banks, mortgage companies, financing companies, life insurance and industrial accident insurance institutions, pension funds and public financial credit intermediaries.

Source: Ministry of Finance.

subscribed to directly by public credit institutions and the "Fonds des Rentes", a body managed jointly by the Central Bank and the Ministry of Finance. The banks' share of public debt rose from 21 per cent in 1970 to nearly 30 per cent in 1985 (Table 20). About 80 per cent of all trading in long-term government securities occurs between institutional investors in the over-the-counter market.

There are no institutional impediments to individuals purchasing government bonds in the official secondary market. However, the share of Treasury debt held by firms and households fell steadily from the late 1970s (26 per cent in 1979) to less than 15 per cent in 1985 (Table 20). This coincided with the very rapid growth of public debt after 1978. The decline was thus partly ascribable to the reluctance of the non-financial private sector, which was intent rather on portfolio diversification, to hold an increasingly large share of its assets in the form of public debt. As a result, the authorities were obliged to increase their foreign-currency borrowing beginning in 1977.

Moderate recourse by enterprises to direct external financing

While the pick-up in corporate saving as a result of improved profits allowed non-financial enterprises to reduce the relative share of debt on their balance sheets, since 1983 external financing has grown more quickly in the form of debt than equity (Table 21). On account of the pick-up in gross fixed investment and expectations of a rise in long-term interest rates in 1986 and 1987, long-term bank borrowing grew strongly. In addition, tax considerations seem to influence to a large extent the means of financing that firms choose. For example, in 1983 there was a sharp increase in share issues on account of the favourable tax treatment temporarily accorded to this

Table 21. **Non-financial enterprises' means of external financing**

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Debt ratio									
(debt as % of debt plus equity)	73.0	74.1	71.7	69.4	67.3	65.8	64.1	63.5	n.a.
Sources of external financing									
(flows in BF billion)									
Shares[1]	2	..	17	44	17	13	22	29	46
Bonds	11	29	27	33	–4	–21	–13	–25	–18
Investment credit	35	–1	7	14	42	35	64	122	130
Other discounts, advances									
or acceptances	44	56	–14	6	–10	61	39	23	164
Miscellaneous	71	82	80	58	32	72	31	69	137

1. Public share issues only.
Source: Banque Nationale de Belgique.

type of financing (by the "Cooreman-Declerq" Royal Decrees of 1982). Subsequently, equity financing became fairly marginal once again. The Banque Nationale de Belgique estimates that, under the existing tax system, an enterprise needs to show a profit of BF 233 in order to distribute BF 100 in dividends to shareholders. In contrast, if it borrows funds, it needs a profit of only BF 133 in order to pay BF 100 in interest to the lender. This distortion results from the fact that dividends are taxed twice, being liable to both corporation tax and withholding tax on investment income.

Also, enterprises issue very few bonds, given the importance of government issues in this form. As investors are little interested in private bond issues, given the small volumes involved, placement costs on private issues are almost twice as high as those on government bonds. Compared with other countries, the share of Belgian productive investment financed by corporate share and bond issues is, all told, quite modest. Lastly, it should be noted that, in contrast with other countries, no market for commercial paper (short-term claims issued directly by enterprises) has come into existence. This is due to the relatively small size of Belgian companies, but also to the fact that the banks compete keenly for loans and therefore offer attractive terms. Straight fixed-term loans are being increasingly offered to large enterprises at rates close to those in the money market: the difference between the interest rate on such loans and the interbank rate, which was more than ⅜ of a point up to 1984, has now narrowed to only ⅛ of a point.

The growth of bank credit to consumers

Relative to their disposable income, households' indebtedness (mortgages and consumer credit) is not very high compared with that in other OECD countries

Table 22. **Households' debt ratio**[1]

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
Belgium	**0.25**	**0.26**	**0.37**	**0.35**	**0.34**	**0.33**	**0.32**	**0.32**	**0.33**	**0.36**
United States	0.72	0.71	0.81	0.79	0.78	0.81	0.83	0.90	0.94	0.97
Japan	0.60	0.62	0.76	0.79	0.82	0.85	0.88	0.90	0.90	n.a.
Germany	0.08	0.09	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.17
France	n.a.	n.a.	0.62	0.59	0.58	0.58	0.57	0.59	0.62	0.68
United Kingdom	n.a.	0.55	0.57	0.60	0.66	0.73	0.79	0.86	0.94	1.04
Italy	n.a.	0.09	0.07	0.07	0.07	0.07	0.07	0.08	0.09	0.10
Canada	0.82	0.81	0.87	0.80	0.73	0.73	0.69	0.74	0.77	n.a.

1. Ratio of total liabilities to households' disposable income.
Sources: OECD Secretariat estimates and Banque Nationale de Belgique.

(Table 22). After rising rapidly in the mid-1970s as a result of decelerating real income growth in the wake of the 1975 recession, the debt ratio fell during the first half of the 1980s. With the improvement in households' creditworthiness, it rose again rapidly from 1986. Bank lending has contributed importantly to the marked acceleration in consumer credit. While the relative share of vendors' direct financing has decreased, the banks' share of consumer borrowing rose to 60 per cent in 1988, compared with only 35 per cent in 1970. The fact that the banks are making a greater effort to offer consumer credit on more attractive terms may reflect a gradual switch to private customers at a time when the borrowing requirements of the public sector are declining.

An internationalised and cartelised financial sector

While the rapid growth of foreign-currency investment through Luxembourg open-end investment companies has in part taken place without their intermediation, Belgian banks are nonetheless active in international financial markets. The internationalisation of the financial sector was made possible by the virtual absence of controls on capital movements and encouraged by the existence of tax breaks for foreign establishments setting up in Belgium. But although international competition is keen, financial institutions face less competition on the domestic market, or at least the amount of competition varies a great deal across sectors.

Banks exposed to international competition

There are no restrictions on capital movements in Belgium. Admittedly, there is a two-tier foreign-exchange market – an official one, through which all current account transactions must be conducted and in which the exchange rate is determined by the mechanisms of the EMS, and a second one for private capital movements, in which the rate is set freely. Although this two-tier system may have served a purpose in the past, as in 1981, by alleviating exchange rate crises, since 1984 permission to switch from one market to another has been granted more and more frequently, and the "free" and "official" exchange rates are now virtually identical. In this connection, it should be noted that, with an eye to the liberalisation of capital movements, the Belgian and Luxembourg authorities have undertaken to abolish the two-tier market by the end of 1992. The banking sector has thus been able to expand its international activities more or less unimpeded. Its foreign assets as a share of total assets increased from 36.8 per cent in 1970 to 57.1 per cent in 1987 (Table 23). At

Table 23. **The banking sector's foreign-currency assets and liabilities**[1]

In percentage

	Assets			Liabilities		
	1970	1980	1987	1970	1980	1987
Belgium A	**36.8**	**52.7**	**57.1**	**42.9**	**63.3**	**70.8**
Australia B[4]	0.6	0.6	4.7	*	1.0	9.7
Austria A	10.7	23.0	27.7	9.9	26.5	28.7
Canada C	19.8	21.0	19.4	14.3	24.5	26.1
Denmark A	6.7	24.8	39.4	7.0	24.0	38.3
Finland A	3.9	10.0	20.5	5.7	6.5	33.8
France A	12.8	32.0	25.5[7]	14.8	28.9	24.7[7]
Germany G	8.8	9.7	14.0	5.6	8.2	7.8
Greece D	3.5	6.2	6.2	4.7	20.9	24.7
Iceland E	1.0	3.7	3.4	2.7	18.9	21.9
Ireland A[5]	27.6	45.6	15.1	27.2	48.3	26.1
Italy D	11.8	9.4	11.1	11.8	13.5	15.7
Japan A	3.7	4.3	8.6	3.1	7.3	14.6
Luxembourg G	**83.9**	**96.7**	**97.3**	**57.3**	**89.8**	**85.6**
Netherlands A	40.8	33.0	35.0	39.0	33.9	32.5
New Zealand F	6.2	7.3	7.2	n.a.	2.6	7.1
Norway A	7.4	2.1	9.9	5.5	9.1	22.8
Portugal E	5.6	9.5	7.5	1.0	25.3	1.2
Spain A	3.9	7.2	8.0	4.1	12.8	9.6
Sweden A	8.4	9.6	13.8[8]	5.6	15.0	25.7[8]
Switzerland A	n.a.	34.7	34.0	n.a.	25.1	23.8
Turkey A	6.6	4.3	9.4	n.a.	0.6	21.7
United Kingdom A[3]	n.a.	64.7	63.3	n.a.	67.5	65.1
United States A[2]	1.4	13.3	9.0	4.9	11.8	10.0
OECD average[6]	10.9	18.6	19.6	11.7	22.0	24.4

1. A = Deposit banks; B = Merchant banks and savings banks; C = Chartered banks; D = Commercial banks; E = Commercial banks and savings banks; F = Merchant banks; G = All banking institutions.
2. Some foreign assets and liabilities of commercial banks have since 1984 been posted net rather than gross as was previously the case.
3. Since March 1983 the coverage has been widened to include 43 new banks.
4. Since December 1984, excluding the Australian dollar position of non-residents.
5. Figures prior to December 1982 include banks' foreign branches.
6. Excluding Luxembourg as well as countries for which no data are available.
7. 1985 figures.
8. 1986 figures.

Source: IMF, *International Financial Statistics.*

the same time, non-residents' claims on the banks represented 70.8 per cent of banks' liabilities in 1988, compared with only 42.9 per cent in 1970. These figures make the Belgian banking sector one of the most internationalised in the OECD area, behind only Luxembourg and the United Kingdom. Belgium occupies a particularly strong position in Eurocurrency deposits, holding 9.3 per cent of the European market in 1988, less than the United Kingdom (44.1 per cent) and France (13.4 per cent), but more than Luxembourg (8.7 per cent), the Netherlands (4.5 per cent) and Germany (2.7 per cent). Belgian banks have been particularly active in promoting the use of the ECU for private transactions: in 1988 their assets and liabilities denominated in ECUs represented 19.2 and 17.7 per cent, respectively, of the total held by banks monitored by the BIS.

The internationalisation of the financial sector can also be gauged from the number of foreign banks that have set up in Belgium. At the end of 1988, out of a total of 86 banks operating in Belgium, 61 were foreign, accounting for half of the sector's assets, one-fifth of deposits, and 25 per cent and 40 per cent, respectively, of the sector's outstanding stock of domestic and foreign loans. The high proportion of foreign-denominated transactions, noted earlier, is partly ascribable to the large number of foreign banks. Non-European institutions – which make up half of the foreign banks in Belgium – and particularly those from Japan and the United States, rate Brussels highly as a financial centre that offers easy access to European financial markets. The favourable tax treatment of profits accruing from the activities of foreign subsidiaries – the "Quotité Forfaitaire d'Impôt Etranger (QFIE)"[47] – has also helped. At the same time, Belgian banks have also expanded internationally. This has been facilitated by their relatively high degree of concentration, which gives them the financial capability and standing that they need in order to face the full force of international competition. Although no Belgian bank ranks among the 50 largest banks in the world, the four largest banks accounted for 77 per cent of all domestic deposits in 1987. The four largest savings banks – out of a total of 32 – held 71.3 per cent of deposits. The three largest commercial banks and the three largest savings banks accounted for 46.8 per cent and 66.3 per cent of the assets in their respective sectors.

Varying degrees of domestic competition

The banks seem to be exposed to less competition in domestic than in international markets. Although there are no credit controls, and only a few interest rates are regulated, some segments of domestic credit are protected markets. In this connection, it is significant that European banks have expanded much less rapidly in Belgium than non-European banks which are much less interested in retail banking. This phenomenon – which is not specific to Belgium – could be explained by the fact that it costs a great deal to set up a banking network from scratch and also by the fact that in some cases European banks have preferred not to compete with one another in their respective domestic markets ("mutual forbearance").

A distinction needs to be made between the private long-term credit market, the market in government securities and the market in short-term credit to the private sector. The rates applied by the public institutions specialised in long-term credit serve, after mutual agreement and specific adjustments, as a benchmark for the other financial intermediaries. Even more important, a large part of the primary market in government bonds is virtually a captive market for the financial institutions, which form a consortium to take up bond issues. During the most critical periods for the financing of the public debt, the existence of a cartel has certainly had its advantages for the authorities: certainty that the issue will be fully subscribed and ease of bargaining, as shown by the rescheduling agreement in respect of part of the public debt concluded in 1986 and updated in 1988. On the other hand, the fact that the buyers are organised in a cartel has not helped to reduce the cost of financing the public deficit, even if it is true that the relative share of the loans whose terms are set by the consortium in total domestic lending is now tending to decline, on account of the reduction in the government borrowing requirement. For example, the rate of commission on government bond issues was, until recently, 1.6 per cent, a relatively high rate which was then reduced to 1.35 per cent.

Financial intermediaries seem to compete fairly keenly on the terms of short-term credit and standard services to individuals and enterprises. Lending rates are set increasingly with reference to the interbank rate (Table 24). The very dense

Table 24. **Bank lending to enterprises, individuals, foreign customers and governments, according to the method of setting rates**

Method of setting rates	Proportion of total year-end loans outstanding (in percentage)					
	Loans to enterprises, individuals and foreign customers[1]				All loans, including Belgian government	
	BF		BF and foreign currency			
	1973	1983	1973	1983	1973	1983
1. With reference to target ranges (standard short-term bank credit)	72.3	44.9	55.0	21.3	35.9	14.0
2. With reference to interbank rates (foreign-denominated loans, fixed-term loans, Treasury certificates, certificates of the "Fonds des Rentes")	3.8	18.1	26.8	61.2	20.3	55.4
3. By negotiation with the government (medium and long-term government loan issues)	—	—	—	—	32.0	19.1
4. By imposition (investment credit, particularly subsidised, mortgages, ceiling rates on consumer credit)	23.9	37.0	18.2	17.5	11.8	11.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

1. Including foreign governments.
Source: Association Belge des Banques.

Table 25. **Rate of interest on sight deposits in EEC Member countries**

Country	Applied rate	Special conditions
Belgium	**0.50**	**Minimum balance**
Denmark	0.50	No minimum balance
France	0	
Germany	0.25 to 0.50	No minimum balance
Greece	12 to 15	Minimum balance of Dr. 5 million. Recent liberalisation of interest rates on sight deposits
Ireland	7 to 7.75	Minimum balance depending on how long sums have been kept in account
Italy	5 to 10	Minimum balance of L 10 million. Conditions similar to those for time deposits
Luxembourg	0.50	No minimum balance
Netherlands	1.50	No minimum balance
Portugal	1 to 9	No minimum balance. Rates of interest on sight deposits recently decontrolled.
Spain	0.1 to 11	No minimum balance (on balance of Ptas 500 000, average interest rate of 8 to 9%). Ceiling of Ptas 10 million
United Kingdom	4.8 to 6.3	Minimum balance depending on how long sums have been kept in account.

Source: Cahiers Français: *Monnaie et finance*. La Documentation française, October-December 1988.

branch network encourages domestic banks to compete on loan terms, although it may have dissuaded foreign competitors from setting up in Belgium. The spread between the Belgian banks' short-term lending rates and the interbank rate is fairly small[48]. Furthermore, according to a study carried out on behalf of the European Commission[49], given that Belgian banking services are already fairly efficient, their price can be expected to fall only slightly following the integration of European financial markets. However, it should be noted that, on account of the restrictions on entry to the short-term government securities market, the yield on government securities is the same as, or even higher than, that on interbank deposits *of the same maturity*. This is abnormal; it is tantamount to an implicit subsidy from the public sector to the private sector and partly explains why the banks' short-term lending rate to enterprises is so close to the interbank rate. Furthermore, the interest rate on sight deposits is lower, for example, than that in the Netherlands or the United Kingdom (Table 25).

Table 26. **International comparison of banks' profitability and solvency**

Country	Interest margin (as a percentage of balance sheet)				Gross earnings (as a percentage of balance sheet)				Operating costs (as a percentage of balance sheet)			
	1980/82	1983/85	1986	1987	1980/82	1983/85	1986	1987	1980/82	1983/85	1986	1987
Belgium	**1.87**	**1.58**	**1.62**	**1.49**	**2.31**	**2.04**	**2.18**	**2.04**	**1.73**	**1.40**	**1.42**	**1.39**
Austria	1.23	1.18	1.20	—	1.51	1.39	1.45	—	1.15	1.05	1.06	—
Canada	—	—	2.63	2.75	—	—	3.39	3.65	—	—	2.05	2.15
Denmark	3.63	3.12	2.63	—	5.56	6.61	2.16	—	3.20	2.73	2.13	—
France	2.78	2.58	2.72	2.43	3.30	3.02	3.18	2.93	2.22	2.08	2.12	1.96
Germany	2.14	2.56	2.58	2.30	3.00	3.51	3.67	3.28	2.05	2.19	2.31	2.25
Greece	2.13	1.64	1.27	0.68	3.59	3.24	3.05	2.84	2.53	2.50	2.29	2.22
Italy	3.33	3.08	3.32	3.20	4.53	4.33	4.78	4.42	2.82	2.98	3.05	3.10
Japan	1.53	1.35	1.27	1.20	1.79	1.64	1.58	1.60	1.31	1.12	1.02	0.97
Luxembourg	0.95	1.20	1.13	1.03	1.19	1.45	1.44	1.28	0.37	0.40	0.44	0.45
Norway	3.38	3.18	2.84	—	4.65	4.71	4.46	—	3.41	3.18	2.90	—
Sweden	2.06	2.15	2.62	—	2.95	3.13	3.98	—	1.91	1.92	2.20	—
Switzerland	1.29	1.37	1.37	1.30	2.41	2.57	2.71	2.67	1.40	1.39	1.46	1.49
United Kingdom	3.54	3.12	3.17	3.14	4.98	4.83	4.97	5.07	3.56	3.25	3.24	3.32
United States	3.10	3.32	3.34	3.36	4.06	4.49	4.76	4.82	2.78	3.05	3.18	3.27

Country	After-tax profits (as a percentage of balance sheet)				After-tax profits (as a percentage of equity)				Equity (as a percentage of balance sheet)			
	1980/82	1983/85	1986	1987	1980/82	1983/85	1986	1987	1980/82	1983/85	1986	1987
Belgium	**0.19**	**0.21**	**0.27**	**0.22**	**7.18**	**7.78**	**9.00**	**7.31**	**2.48**	**2.51**	**2.87**	**2.93**
Austria	0.05	0.05	0.07	—	1.99	2.28	2.65	—	2.28	2.23	2.61	—
Canada	—	0.55	0.54	—	—	12.19	10.19	—	3.60	4.44	5.20	—
Denmark	0.81	1.62	−0.34	—	8.41	14.62	−3.73	—	9.19	8.96	8.62	—
France	0.25	0.18	0.24	0.29	8.48	7.27	8.37	10.53	2.69	2.39	2.71	2.55
Germany	0.22	0.32	0.38	0.29	5.15	7.16	7.74	5.87	3.99	4.07	4.58	4.76
Greece	0.51	0.34	0.40	0.31	12.15	10.39	16.55	14.07	4.00	2.91	2.23	2.03
Italy	0.30	0.39	0.58	0.45	8.13	7.32	9.37	6.68	3.17	4.54	5.39	6.19
Japan	0.21	0.22	0.24	0.27	8.04	9.35	9.94	10.27	2.42	2.31	2.29	2.48
Luxembourg	0.15	0.15	0.18	0.19	4.78	4.38	5.08	5.34	3.00	3.32	3.48	3.37
Norway	0.49	0.64	0.52	—	10.50	13.14	9.97	—	4.40	4.85	4.76	3.83
Sweden	0.22	0.22	0.28	—	14.60	15.89	19.20	—	1.27	1.27	1.29	—
Switzerland	0.46	0.49	0.53	0.49	7.04	7.87	8.15	7.54	6.14	5.93	6.25	6.33
United Kingdom	0.75	0.51	0.76	−0.01	13.77	11.27	13.88	−0.10	4.92	4.26	5.23	5.37
United States	0.75	0.66	0.59	0.12	12.34	10.49	9.60	1.99	5.83	6.12	6.19	6.04

Source: OECD, *Financial Statistics.*

An unsatisfactory balance-sheet situation

The Belgian banking sector is characterised by a comparatively low rate of return and insufficient equity capital. By and large, the ratio of interest spreads to assets is fairly low and, as in most other countries, declining. Revenue from off-balance sheet activities is growing, but not enough to offset the relative contraction of banking revenue (Table 26). Since bank income[50] as a percentage of total assets is well below the average for other countries, the rate of return on total assets is comparatively low. Operating costs are increased further by over-manning. The number of branches is excessive compared with the number of customers[51], especially when one takes into account the expansion of electronic banking, in which Belgian banks have had a significant lead in many respects[52]. Average wage costs in the financial sector (Table 27) also seem higher than in Belgium's closest competitors, particularly the Netherlands and Germany, although this difference may be offset in part by a higher level of bank income per employee. It is possible that high marginal personal income tax rates may have helped to raise pre-tax wages.

Table 27. **International comparison of average wage costs in the banking sector**[1]

Belgium = 100

Belgium	**100.00**
Denmark	48.37
France	78.37
Germany	61.05
Italy	109.19
Luxembourg	97.84
Netherlands	69.41
Switzerland	73.80
United Kingdom	78.30
European average (excluding Belgium)	76.98

1. 1986. Wage levels have been converted using purchasing-power-parity exchange rates.
Sources: OECD Secretariat estimates and Association Belge des Banques.

Also, the low level of profits relative to the size of banks' total assets merely reflects an insufficiency of equity capital, as it is currently defined. The ratio of equity to total assets is still lower than in most of Belgium's trading partners, although it has improved since 1982, when it reached a low point. Calculated on the basis of equity capital alone, the banks' rate of return is closer to the European average. Measured by the ratio of equity capital to only those liabilities that are regarded as "risky" (i.e. total liabilities less loans to governments and Belgian banks), at end-1986 their *solvency* ratio was below the EEC average (excluding Greece): by 26 per cent for equity capital in the strict sense (capital and reserves) and 11 per cent for equity capital in the broad sense (capital, reserves and long-term subordinated loans)[53]. This can probably be explained by the fact that bank profits are perhaps still not large enough to improve their self-financing significantly, or to attract new shareholders, and that the advantageous tax treatment received by borrowed funds acts as a disincentive to equity capital. However, the balance-sheet situation is not uniform across the various financial sub-sectors. In terms of profitability and capitalisation, the savings banks outperform the commercial banks and, especially, the public credit institutions.

Development of the Brussels financial market

Prior to 1989 no far-reaching reform of financial markets had been undertaken. However, with a view to the Single European Market of 1992, the new government, formed in May 1988, recently began to study a package of measures to further the development and efficiency of the country's financial markets. The future of Brussels as a financial centre depends without doubt, in part, on the maintenance of good macroeconomic performance and further consolidation of the public finances, but it depends as well on the success of the effort to modernise the financial markets. This implies opening up markets to new operators, promoting new financial instruments, restructuring the public credit institutions and lowering taxes on saving.

Opening up the market to new operators

Modernising the stock exchange will necessitate a strengthening of the brokerage system. Since December 1988 stockbrokers have been authorised to set up as "sociétés de bourse", stock-exchange companies, and, under a new bill still at the drafting stage, credit institutions and insurance companies will gradually be allowed to acquire a stake in their capital. Starting in 1992, such companies may be created from scratch. Even if commissions are not yet freely negotiable, rates are likely to become degressive. Ultimately, they should ideally be set by market forces. Ceilings might be imposed on the tax on stock-exchange transactions. An Act on advertising and transparency rules for stock-exchange transactions was passed in February 1989. It stipulates that whenever equity exceeding 5 per cent of voting capital is acquired, the company concerned must be duly notified and bring this information to public knowledge. Although it is not the government's intention to challenge the bank consortium, the desegmentation of financial markets would also seem to require the opening up of government securities markets more widely. On the assumption that the public deficit will continue to decline, the authorities will increasingly have to be in a position to distance themselves from the bank consortium. Since, from 1st October 1989, under the European Directive, mutual funds approved in one Member State are free to be marketed in other Member States, it should prove easier to finance the Treasury borrowing requirement more directly with greater public involvement, as is the case in many partner countries. Consideration also needs to be given to changing procedures on refunding withholding tax (from which non-residents are exempt), so as to expand and enhance the appeal of the secondary long-term bond market.

Promoting new financial instruments and developing banking services

In many countries, the quest for more effective financial instruments has accelerated financial innovation. In Belgium, by contrast, the range of financial instruments is still not very broad nor readily accessible, for one thing because of the limited issue of debt securities by the corporate sector and the comparatively small number of different types of public debt instruments utilised. Whereas the Treasury employs sophisticated practices and financial instruments in issuing foreign-currency securities (Euro-commercial paper, Euro-medium-term notes, swap panel, etc.), domestically debt management has not altered very much. The proportion of short-term debt appears high. The concern not to compete with credit institutions' loan issues may have been one factor in the authorities' decision to refrain from issuing medium-term securities. Current long bonds (of eight years maturity) have little appeal. The authorities have just introduced bonds (so-called "linear bonds"), similar to the French "obligations assimilables du Trésor" which, because they are issued by tender at short and regular intervals and have several standard features (rate, maturity, etc.), makes them easier to auction, enhances their liquidity and keeps down costs.

The foreseeable development of Belgian franc-denominated mutual funds and the need to revive secondary markets would argue for the desirability of creating a financial-futures market. Securities become more attractive if investors can hedge, for instance, against changes in interest rates. With this in view, it is planned to strengthen the regulatory functions of the Fonds des Rentes. Securitisation of mortgage loans, while not necessarily making these less costly since they are already quite cheap[54], would at least allow banks to lighten their balance-sheets and increase their capitalisation. Venture-capital financing should also be improved; while venture-capital investment funds do already exist, the decision to allow banks to take a stake in industrial and commercial enterprises should incidentally help to promote the development of the venture-capital market.

The Brussels financial market should nonetheless not necessarily seek to supply the whole range of products on offer in the larger international financial markets. Rather, Belgian financial institutions should try to complement the activities of those in other medium-sized markets such as Amsterdam and Luxembourg, identifying the areas in which their advantages lie and therefore most appropriate for specialisation (foreign-currency expertise, financial telecommunications, etc.). Here, Brussels' financial management and advisory services should be exploited to the full. This poses the problem of a more appropriate price structure for banking services; the fact that some services are free (cheque books[55] and current-account transactions, in particular) may inhibit the development of others.

Restructuring the public credit institutions

As has been seen, public credit institutions (PCIs) are losing market share because of the declining role of their special financing channels as the walls between financial markets continue to come down. The authorities are planning to divide the public credit institutions into two broad competing categories. While not relinquishing their public institution status, which the government is anxious to preserve, they need not only to be fortified to meet European competition, but also to compete more among themselves[56]. Even if they will still be called upon to perform certain tasks for the public good (e.g. aid to low-cost housing), the PCIs look set to become less and less specialised. The basis of competition between private institutions (banks and savings banks) and public credit institutions will also need to be harmonised, with the latter being made subject to the same prudential control as banks. The government guarantee of their foreign-currency loan issues and of their interbank claims is also likely to be abolished. Consideration is also being given to the blanket removal of all public guarantees on their deposits. At all events, from now on the PCIs will no longer be able to use this as a selling point in advertising their services.

Lowering taxes on saving

With the Single European Market of 1992 in prospect, the strengthening of Brussels as a financial market place raises the question of harmonising the tax

Table 28. **Withholding tax: a cross-country comparison**

Beginning of 1989

	Dividends	Bond interest		Interest on deposits	
		Residents	Non-residents	Residents	Non-residents
Belgium	**25**	**25**	**0**	**25**	**0**
Denmark	30	(A)	0	(A)	0
France	25	(A) or (B)	0	(A) or (B)	0
Germany	25	10	10	10	10
Greece	42-50	0	0	0	0
Ireland	0	35*	35*	35	0
Italy	32.4	12.5	12.5	30	30
Luxembourg	0	0	0	0	0
Netherlands	25	(A)	0	(A)	0
Portugal	12	25	25	20	0
Spain	20	20*	20*	20	20
United Kingdom	0	25*	25*	25	0

(A) Tax authorities automatically notified by banks.
(B) Option between payment of withholding tax (at rates differing according to type of security) or tax liability at the marginal personal income tax rate.
* With exceptions.
Sources: European Community and OECD Secretariat estimates.

treatment of saving. Overall personal income tax pressure in Belgium is one of the highest in the OECD area. But there are special provisions applying to the taxation of investment income. In recognition of the practical impossibility of containing the growing tax avoidance and evasion generated by the taxation of income from resident-held securities, it was decided in 1984 that withholding tax on financial earnings would be "forfaitaire", that is would give entitlement to full discharge; at the same time, the rate of withholding tax was raised from 20 to 25 per cent. Thus, today, Belgium occupies a midway position in Europe (Table 28): while the tax treatment of residents' savings is more favourable than in France, for instance, where withholding tax varies between 25 and 45 per cent, it is less favourable than in Luxembourg and Germany where withholding tax is low or even nil.

In the absence of controls on capital movements, these international tax disparities would appear to have led to a partial exodus of Belgian savings to foreign financial markets, as well as to higher pre-tax domestic interest rates in order to maintain parity with respect to post-tax yields. Belgium would stand to gain from harmonisation of tax treatment, since the greater financial investment opportunities afforded by the Single European Market could otherwise drain off Belgian savings to an even greater extent, thereby depriving the Brussels financial market of its natural base for future development. Cutting the withholding tax rate would nonetheless mean a loss in tax receipts[57]; for example, “précompte mobilier” payments by individuals[58] accounted for 5.3 per cent of current tax receipts in 1988.

The economic spinoffs from the modernisation of financial markets

Increased specialisation in financial services

The share of the financial sector in total employment – 5 per cent in 1970 – rose to 8.8 per cent by 1987. In comparison with the levels observed in other countries, these shares imply that Belgium now ranks among the countries with a major financial market (Table 29). In 1988, value added by financial intermediaries was already more than 6 per cent of total GDP, a high percentage compared with the other European countries. By consolidating Belgium’s growing specialisation in the financial-services sector, modernisation of the Brussels financial market could thus help create jobs and generate additional income.

Table 29. **Relative share of financial services in total employment: an international comparison**

	1970	1975	1987
Belgium	**5.03**	**5.91**	**8.80**
France	5.26	6.34	8.63
Germany	4.20	5.28	6.81
Italy	n.a.	2.15[1]	3.85
Netherlands	n.a.	7.50	11.06
United Kingdom	4.98	6.56	10.45

1. 1977.
Source: OECD, *Labour Force Statistics.*

Reducing the cost of the public debt

The enhanced efficiency of the financial system that increased domestic competition is expected to bring should help to reduce the cost of the public debt. Lower banking costs and the progressive opening-up of government securities markets to non-financial agents and to foreign financial institutions may be expected to lower interest rates on government bond issues. In view of the magnitude of the public-debt-interest burden – close to 11 per cent of GDP – the budget savings that would accrue therefrom could be quite substantial[59]. The longer average maturity of the public debt that might result from diversifying its financing could also reduce the considerable volume of loans that have regularly to be raised, so making public debt management less vulnerable to cyclical swings.

The conduct of monetary policy in the new financial environment

In a highly open economy, which experiences large-scale capital movements and is firmly embedded in the European Monetary System, the monetary authorities are primarily pursuing an interest-rate policy dictated by exchange-rate developments, without any particular monetary-aggregate growth targets. Thus, the increase in instability of the monetary aggregates resulting from financial innovation is not, in itself, hampering the conduct of monetary policy. However, the effectiveness of the central bank's instruments for intervening on the money market is liable to be affected by some financial market changes. The rate on Treasury certificates (short-term Treasury bills) is the official rate on the interbank market, and it is the central bank that has the power to set it. A reduction of short-term loans in public debt financing might mean that Treasury certificates no longer occupy such an important place in bank portfolios[60]. Last, the prospect of creating financial-futures and options markets, for hedging against the risks of interest rate changes, could reduce the influence of interest-rate changes on operators' behaviour.

On the other hand, the increased depth and desegmentation of financial markets, as well as the greater openness of the money market to non-banks will have the effect of broadening the means by which changes in official rates are diffused through the market and of increasing the efficacy of monetary policy. At the same time, since modernising domestic financial markets could encourage residents to keep more of their assets in Belgian francs, less central bank pressure on interest rates would be needed to stabilise the exchange rate. Moreover, the new statutes of the Banque Nationale de Belgique adopted in December 1988 permit more active use to be made of compulsory reserve ratios.

III. Recent economic policy and short-term prospects

At its formation in May 1988, the current coalition government enunciated a wide range of policy goals: *i)* increase employment and lower unemployment; *ii)* reduce the budget deficit via a "dual target" strategy; *iii)* reform the system of taxation with a view to reducing the tax wedge on labour, that is the gap between the cost of labour to employers and net take-home pay; *iv)* maintain national competitiveness; *v)* increase public support for research and development; *vi)* modernise Belgium's financial markets; *vii)* begin to prepare for the EEC internal market of 1992; and *viii)* reform the constitution in order to render Belgium a more federal state by transferring certain responsibilities to the Regions and the Communities. A year later certain of these goals have been accomplished; on others a degree of progress is evident; and, for a few, achievements have been disappointing.

The constitutional reform

On 8th August 1988 legislation was passed which transferred substantially greater powers to the three Communities (Flemish-speaking, French-speaking and German-speaking), as well as to the Regions (Flanders, Wallonia and, thenceforth, Brussels). This represented the second stage of a three-stage reform process begun in August 1980, when cultural and certain social policy functions were handed over to the Communities, and responsibilities relating to communications, employment, energy, housing, the environment, science, the economy, local government oversight and regional development were given to the Regions[61]. The 1988 reform added education to the list of Community responsibilities (although it should be remembered that there were previously separate Flemish and French education ministries in the national administration) and road and maritime transport, local government financing and heavy industry restructuring to that of the Regions. Overall, the expenditures involved represent some BF 670 billion (32.1 per cent of the Treasury's 1989 budget) compared to the BF 177 billion which had previously been under

Regional and Community control. The overwhelming majority of the increase for the Communities is to cover the education sphere. The Regions have been allocated additional expenditures representing BF 170 billion, bringing their total to BF 235 billion (Flanders BF 121 billion, Wallonia BF 87 billion, Brussels BF 26 billion).

Prior to the reform, the Regions and Communities had been financed through a dual system of appropriations and rebates of certain taxes. The Regional rebates were based on the location of tax payments. With respect to the appropriations to the Communities, the Flemish Community was allocated 55 per cent and the French 45 per cent of the Community total. Regional allocations were distributed on the basis of population, land area and personal income tax payments. The new system has six features: first, transfers are calculated in the first year on the basis of expenditure earmarked in the budget for the reference year (1989) for each Region and Community, although these are free to allocate these resources as they wish; second, rather than transferring any of the central government debt, and in order to ensure that all levels of government share in the fiscal consolidation effort, the Regions and Communities are to be forced to borrow immediately in order to pre-finance the share of transfers that in principle covers capital expenditure and 14.3 per cent of current expenditure[62]; third, during the eleven-year transition period, all transfers are to increase only in line with inflation; fourth, the Regions and Communities are empowered to borrow and to raise or lower personal tax rates, as well as Regional taxes, although some oversight powers rest with the national authorities[63]; fifth, the breakdown between the Regions and Communities of intergovernmental transfers is to be gradually brought into line with that applying to personal income taxes over the transition period, except in the case of education funding where the allocation criterion is the number of students; sixth, a "solidarity" transfer is to be introduced to assist Regions where average personal income tax receipts per head are below the the national average.

Fiscal policy

The effect of the constitutional reform on fiscal policy-making in the short and long term is fairly difficult to gauge. While the application of the "dual-target strategy" (see below) at the level of the national government should imply the necessary amount of improvement of the public finances at that level of government, a great deal of uncertainty surrounds the future behaviour of the Communities and the Regions. With such a large amount of expenditure under their control, small changes in their behaviour can be very influential[64]. However, it should be noted that during the transition period, transfers to the Regions and Communities will not change in real terms, in line with the first target of the coalition government accord. The question which arises pertains to the future spending decisions of these levels of government who, not being subordinate authorities, have a substantial degree of autonomy vis-à-vis the national government. In this regard, based on past evidence, Regional and Community governments have shown themselves to be no more spendthrift than has the central government. And, in fact, in their initial budgets after the reform, both Wallonia and Brussels appear to have gone some way in terms of fiscal consolidation by cutting current expenditures by some 2 per cent. However, expenditure on education, the responsability of the Communities, has been showing signs of excessive growth. There is a certain risk of duplication of services and a possible loss of scale economies in their provision. A higher risk premium could also be required by the market on Regional and Community debt.

Another principal accomplishment was the tax reform legislated on 7th December 1988, after nearly three years of preparation. Its aims were sixfold; *i)* reduce taxes on earned income; *ii)* eliminate those earning no more than the "minimex" (guaranteed annual income)[65] from the tax rolls; *iii)* end the "marriage tax" implicit in the existing system; *iv)* take better into account the family dimension to taxation; *v)* move toward harmonisation of taxation within the EC in preparation for 1992; and *vi)* avoid any increase in the budgetary deficit. BF 91 billion of personal income tax reductions were granted covering a wide range of changes, including an overhaul in the treatment of one-earner couples (BF 29 billion), a modification of the treatment of two-earner couples (BF 37 billion), an increase in the standard deduction (BF 16 billion), more generous exemptions for dependents and childcare (BF 7 billion) and a reduction in both the number of rates as well as their levels (BF 3 billion)[66]. On the other side of the ledger, revenues were raised by a variety of base-broadening moves in the personal and corporate tax laws, as well as by increased excise taxes (BF 35 billion, including an induced increase in VAT of BF 5 billion) to be introduced gradually over the period to 1992, in line with the harmonisation of EC member countries' indirect tax systems[67].

The effects of the tax reform are difficult to quantify precisely. The Bureau du Plan, using their Hermes model, concludes that while domestic demand (especially private consumption and housing investment) will be stimulated, there will be an offset in terms of the real net foreign balance, and real output will be unaffected. Prices will increase by 1¼ per cent by 1993; unemployment will rise very slightly; and the general government deficit, after diminishing slightly in 1989, will deteriorate cumulatively by 0.45 per cent of GDP by 1993. However, others have found, for example, less of a price-level increase, an output rise and no effect on the public deficit[68]. Most taxpayers will enjoy cuts of 3 percentage points in their average tax rates, but for the top decile the reduction will be over 5 points[69]. Increasing excise taxes does have a slightly progressive element, however. Overall, the major accomplishments of the reform are the elimination of the marriage tax and the inequities regarding non-working spouses, the reduction in the top marginal rate and the moves to broaden the tax base. However, the personal income tax burden will remain relatively high, with an average rate of nearly 25 per cent and an average marginal rate of 45 per cent. In addition, the revenue neutrality of the reform is conditional on better tax collection yielding BF 7 billion in additional receipts.

Whereas the general government deficit fell by more than 2 percentage points of GDP in 1987 (Table 30), thanks primarily to the 1986 Val Duchesse plan, fiscal consolidation stalled in 1988, because of the political crisis[70]. Although real output growth doubled, net borrowing on a national accounts basis[71] probably increased somewhat, mainly due to central government operations[72] (Table 31). Revenue growth again failed to keep pace with that of income, and the ratio of revenues to GNP fell to 47.1 per cent from 48.0 per cent in 1987 (Table 32). This was due to a number of factors such as a reduction in municipal taxes and corporate tax deductions associated with the upsurge in fixed investment. Expenditure growth in all major categories except subsidies to business was also restrained, with notable declines in the granting of credit and provision of equity by the central government (–0.8 per cent)[73], in current purchases of goods and services (–0.6 per cent) and in

Table 30. **General government balance**

In percentage of GDP

	Actual balance (level)	Change in:				
		Actual balance	Cyclically-adjusted balance with trend growth of:		Cyclically-adjusted primary balance with trend growth of:	
			1¾%	2¼%	1¾%	2¼%
1981	–13.2	–3.9	–1.9	–1.6	–0.4	–0.1
1982	–11.3	1.9	2.0	2.3	3.2	3.5
1983	–11.7	–0.4	0.5	0.8	0.7	0.9
1984	–9.5	2.2	1.8	2.1	2.3	2.5
1985	–8.9	0.6	1.1	1.3	1.7	1.9
1986	–9.0	–0.1	–0.3	–0.1	0.2	0.4
1987	–7.2	1.8	1.5	1.7	1.0	1.2
1988	–7.0	0.2	–1.2	–0.9	–1.3	–1.0
1989	–6.6	0.5	–0.5	–0.1	0.2	0.5
1990	–6.1	0.5	–0.1	0.2	0.1	0.4

Source: OECD Secretariat estimates.

Table 31. **Central government budgetary situation**

In billion of BF

	1986	1987	1988			1989		
	Final	Final	Initial	Contrôle budgétaire	Final	Initial	Contrôle budgétaire[1]	Contrôle budgétaire (national only)
Receipts	1 408.3	1 452.8	1 494.9	1 491.9	1 505.5	1 563.6	1 598.8	1 037.0
Expenditures	1 956.2	1 911.0	1 896.2	1 928.5	1 901.6	1 963.3	1 997.3	1 409.6
Budget balance	−547.9	−458.2	−401.3	−436.6	−396.1	−399.7	−398.5	−372.6
Treasury operations	−4.3	+6.9	−20.3	−20.3	−20.3	−3.5	−10.0	−10.0
Net financial balance - national	−552.2	−451.2	−421.6	−456.9	−416.4	−403.2	−408.5	−382.6
Net financial balance - regions and communities	−3.3	+20.8	+16.6	+16.6	−17.5	0	0	n.a.
Net financial balance	−555.5	−430.5	−405.0	−440.3	−433.9	−403.2	−408.5	−382.6
As a percentage of GNP	11.0	8.1	7.3	8.0	7.8	7.0	7.0	6.6
Net financial balance including debt rescheduling operations	−561.5	−463.6	−438.0	−473.3	−469.1	−452.2	−457.5	−431.6
As a percentage of GNP	11.1	8.7	7.9	8.6	8.4	7.9	7.9	7.4

1. Excluding the BF 3.1 billion net gain from the constitutional reform.

Sources: "Finances publiques en 1988: une année de pause dans l'assainissement ?", *Aperçu économique trimestriel*, ministère des Affaires Economiques, 1/1989 and OECD Secretariat estimates.

Table 32. **Evolution of government accounts**

In percentage of GNP

	1973	1978	1983	1984	1985	1986	1987	1988
Revenues								
Direct taxes:								
Central	12.0	16.5	17.1	17.3	17.5	16.8	16.6	16.1
Total	13.3	18.0	18.7	19.2	19.2	18.7	18.4	17.8
Indirect taxes:								
Central	11.6	12.2	12.6	12.2	12.0	11.6	12.1	12.1
Total	12.0	12.5	13.0	12.6	12.4	12.0	12.5	12.5
Social-security contributions:								
Central	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5
Total	11.8	12.9	14.0	14.9	15.3	15.3	15.5	15.2
Total revenues:								
Central	24.5	29.9	31.6	31.6	31.3	30.1	30.1	29.6
Local	4.1	5.1	5.5	5.9	5.8	5.7	5.4	4.9
Social Security	15.3	19.3	22.3	22.3	21.4	21.2	20.3	20.3
Total	38.5	45.0	48.0	49.0	49.1	47.9	48.0	47.1
Expenditures								
Goods and services:								
Central	11.0	12.8	12.8	12.3	12.3	11.9	11.5	11.1
Local	2.2	2.6	3.0	2.8	2.6	2.6	2.5	2.4
Total	14.0	16.4	16.8	16.1	16.0	15.5	15.0	14.4
Interest payments:								
Central	2.6	3.5	8.0	8.6	9.4	10.0	9.6	9.4
Total	3.3	4.5	9.4	9.9	10.7	11.2	10.6	10.3
Labour market expenditures:								
Central	0.1	0.3	0.4	0.5	0.6	0.7	0.7	0.6
Social Security	0.7	2.4	4.0	3.9	3.7	3.6	3.5	3.3
Total	0.8	2.7	4.5	4.6	4.5	4.5	4.3	4.1
Subsidies to business:								
Central	2.7	3.2	3.2	3.2	2.9	2.7	2.4	2.5
Total	2.8	3.3	3.4	3.3	3.0	2.8	2.4	2.6
Current transfers to individuals:								
Central	2.0	2.3	2.5	2.6	2.6	2.5	2.4	2.4
Social Security	12.8	15.7	16.7	16.3	16.0	15.7	15.8	15.4
Total	15.2	18.6	19.8	19.5	19.1	18.6	18.8	18.3
Current transfers to the rest of the world:								
Central	1.3	1.2	1.5	1.3	1.3	1.4	1.6	1.6
Total	1.3	1.2	1.5	1.3	1.3	1.4	1.6	1.6
Current transfers to other levels of government:								
Central	5.1	8.8	10.9	10.3	8.9	8.7	7.4	7.4
Local	−1.7	−2.3	−2.5	−2.7	−2.6	−2.7	−2.4	−2.1
Social Security	−3.4	−6.5	−8.4	−7.6	−6.3	−6.0	−5.0	−5.3
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total current expenditures:								
Central	24.7	31.9	39.1	38.4	37.7	37.4	35.0	34.5
Local	3.5	4.5	5.5	5.3	5.1	5.0	4.7	4.5
Social Security	14.3	19.1	21.8	21.3	20.7	20.3	20.3	19.7
Total	37.4	46.7	55.5	54.7	54.6	54.0	52.6	51.3

Table 32 *(Continued)*

	1973	1978	1983	1984	1985	1986	1987	1988
Fixed investment:								
Central	2.5	2.4	2.4	2.1	1.8	1.5	1.2	1.1
Local	1.2	1.3	1.0	0.8	0.7	0.6	0.8	0.8
Total	3.7	3.6	3.4	3.0	2.5	2.2	2.0	1.9
Total capital expenditures:								
Central	4.8	5.1	6.9	5.8	5.9	4.8	4.4	3.6
Local	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0
Total	6.0	6.2	7.5	6.2	6.2	5.1	4.8	4.1
Net lending:								
Central	−5.0	−7.1	−14.4	−12.7	−12.3	−12.0	−9.3	−8.5
Local	−0.9	−0.9	−1.1	−0.2	−0.1	—	−0.2	−0.4
Social Security	1.0	0.2	0.4	1.0	0.7	0.9	—	0.6
Total	−4.9	−7.9	−15.0	−11.9	−11.7	−11.1	−9.4	−8.4
Net lending excluding granting of credit and provision of equity (national accounts basis):								
Central	−4.3	−5.9	−11.3	−10.5	−9.7	−10.0	−7.2	−7.2
Total	−4.1	−6.6	−11.9	−9.7	−9.1	−9.1	−7.3	−7.1

Source: Banque Nationale de Belgique.

social-security transfers to individuals (–0.4 per cent). Military hardware purchases fell 22 per cent. The increment in the general government wage bill was modest, of the order of 1 per cent, as there was no indexation of public-sector salaries until November 1988. Social-security expenditures were also limited by delayed effects of the "index skips", as well as reduced numbers of unemployed. Although interest payments did not fall as in 1987, their increase was moderated by lower short rates as well as the pursuit of more active management of foreign-currency debt[74]. The Regions and Communities ran up a sizeable deficit in 1988 (17.5 billion), their second largest since they came into existence. Overall, it is entirely owing to past decisions (index skips and reduced aid to national sectors and to public housing) and exogenous events (a healthy conjuncture with lower short-term interest rates) that the general government deficit was not higher in 1988 than in 1987[75].

In the initial budget for 1989, presented in September 1988, the deficit was projected to be BF 403.2 billion, equal to 7 per cent of GNP (or BF 452.2 billion, including off-budget interest payments). A number of new measures were proposed. Social-security transfers to the poorest members of the population were increased by BF 5.6 billion. An additional allocation of BF 1.2 billion was made to put an extra 3 000 to 4 000 people into special work programmes. Spending on foreign aid and research and development were each increased by BF 0.4 billion. Finally, government investment was raised by BF 8 billion, but with off-budget financing. In order to achieve the central government deficit target of 7 per cent of GNP, BF 77.5 billion in savings had to be effected. An employer social-security contribution rate of 3½ per cent was imposed on group life-insurance and pension-fund contributions in order to minimise the differential tax treatment of individual and group pension schemes. Net property income was raised by BF 4.9 billion (including BF 3.1 billion through reductions of subsidies to the railroad and the post office), and spending cuts were made in a wide range of areas[76]. In addition, a second debt-rescheduling operation was undertaken, implying some BF 28 billion less in budgetary interest payments in 1989[77]. The amount of interest liabilities put off-budget in the years from 1986 to 1990 is BF 134 billion. The true saving in interest payments up to 1993 is only some BF 2.5 billion. Rescheduling operations have accordingly made the process of budgetary consolidation appear more substantial than it really was.

However, by early 1989 it became apparent that certain revisions would be required in order to achieve the 7 per cent deficit target. The macroeconomic assumptions for 1989 were revised upwards in the "contrôle budgétaire" completed in March[78]. An additional BF 35.3 billion in revenues were expected, two-thirds of which due to faster growth in GNP than initially projected. However, BF 48.4 billion extra expenditures were budgeted of which BF 17.1 billion for increased interest payments. The authorities decided to make sufficient savings (BF 14.4 billion) to bring the deficit down to 6.9 per cent of GNP[79]. These involved, among other things, cuts in subsidies and capital expenditures, asset sales, and savings on the social-security account. According to Secretariat estimates, while the *general* government deficit on a national accounts basis will decline by 0.6 per cent of GDP/GNP in 1989, it will actually expand by between 0.1 and 0.5 per cent on a cyclically-adjusted basis, depending on the assumption of trend growth retained (Table 33). However, excluding interest payments from the calculations, the primary cyclically-adjusted balance will improve by some 0.2 to 0.5 per cent of GDP.

As part of the agreement underlying the foundation of the coalition government, the authorities have adopted a "dual target" strategy for 1990 and beyond. The first target is to prevent non-interest expenditure from growing faster than inflation; the second is to prevent the central-government deficit from rising in nominal terms. The first should theoretically be binding to a greater extent when the economy is expanding, while the second should be more constraining in the context of a less robust conjuncture. The short-term goal is to end the so-called "snow-ball effect", through which the government is forced to borrow to pay its interest liabilities and the debt-to-GDP ratio increases explosively. In order to overcome this effect a surplus

Table 33. The "snow-ball" effect of general government debt

	Net lending as a per cent of GDP										Beginning of period net debt/GDP (in per cent)
	Total			Excluding interest payments			Required to stabilise debt/GDP	Further effort needed			
	National accounts	Including credit extension and equity provision	Also including statistical discrepancy[1]	National accounts	Including credit extension and equity provision	Also including statistical discrepancy[1]		National accounts	Including credit extension and equity provision	Also including statistical discrepancy[1]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) = (7) – (4)	(9) = (7) – (5)	(10) = (7) – (6)	(11)
1980	–9.2	–11.5	–11.3	–3.2	–5.5	–5.3	0.8	4.0	6.3	6.1	57.4
1981	–13.2	–16.0	–15.9	–5.4	–8.2	–8.1	4.3	9.6	12.4	12.3	66.8
1982	–11.3	–14.1	–14.6	–2.2	–4.9	–5.5	1.4	3.6	6.3	6.9	76.8
1983	–11.7	–14.7	–14.1	–2.4	–5.4	–4.8	3.1	5.5	8.5	7.9	87.4
1984	–9.5	–11.7	–11.2	0.3	–1.9	–1.4	1.8	1.6	3.8	3.2	96.5
1985	–8.9	–11.5	–11.8	1.7	–0.9	–1.2	2.9	1.2	3.8	4.1	101.8
1986	–9.0	–10.9	–11.3	2.1	0.2	–0.2	4.4	2.2	4.2	4.6	106.6
1987	–7.2	–9.3	–9.6	3.3	1.3	1.0	5.3	2.0	4.1	4.4	112.3
1988	–7.0	–8.3	–8.7	3.2	1.9	1.5	3.3	0.1	1.4	1.8	115.4
1989	–6.6	–7.9	–8.2	4.2	2.9	2.6	3.1	–1.2	0.2	0.5	117.3
1990	–6.1	–7.7	–8.0	4.8	3.3	2.9	4.0	–0.8	0.8	1.1	119.2

1. Difference between the sum of the net financial deficits of central and local governments and the social-security system and the national accounts definition of net lending. In recent years this has been negative, largely because the government has been buying back debt in the secondary market whose coupon exceeds current interest rates, implying a price in excess of face value. Such costs do not appear in the national accounts.

Note: The ratio of net lending excluding interest payments required to stabilise the debt-to-GDP ratio at its year-earlier level is given by $S = D \cdot (i - G)/(1 + G)$ where D is the beginning-of-year net debt-to-GDP ratio, i is the implicit average interest rate on government debt and G is the growth rate of nominal output.

Source: OECD Secretariat estimates and projections.

excluding interest payments must be achieved. Its required size is a positive function of the level of indebtedness in relation to that of output and of the implicit interest rate on the debt and a negative function of the growth rate of nominal output[80].

Several analyses have recently been carried out to assess the time-horizon over which debt could stabilise[81]. The significant sensitivity of their results to their macroeconomic assumptions should be noted. In summary, they show that even with zero growth in real primary expenditure (the first "target"), the *central government's* debt would be unlikely to stabilise in relation to GDP before the mid-1990s. A 1.5 per cent p.a. fall in such expenditure in the years 1990-1992[82] would be required in order to end the "snow-ball" effect by 1992-1993. However, at the general government level[83], more pertinent from a macroeconomic viewpoint, Secretariat estimates (Table 33) suggest that, after narrowing substantially in the three years to 1984, the gap between the debt-stabilising and the actual level of the primary surplus widened again until 1987. Since then, there has again been a significant reduction. Excluding the extension of credit and provision of equity, the "snow-ball" effect appears to have already been eliminated. Including that item, after a temporary near-stabilisation in 1989[84], the debt/GDP ratio would resume its climb in 1990 under the weight of higher interest payments, slower income growth and a BF 20 billion increase in credit needed to reimburse maturing public-housing debt. Overall, it is the OECD's view, based on its projections (presented in Table 35), that a further effort of some 1 per cent of GDP (about BF 60 billion) will be necessary if the general government debt-to-GDP ratio is to be stabilised in 1990.

No matter when the "snow-ball" effect is overcome, there will remain an over-riding need for continuing budgetary stringency for a number of reasons. First, while the net debt-to-GDP ratio will have stabilised, it will nevertheless be at a very high level: in the region of 120 per cent, second only to Ireland in the OECD. While only a small portion of the debt is held abroad, obviating the resource transfer problem, such public indebtedness is nevertheless extremely burdensome[85]. For example, the public finances are very sensitive to interest-rate increases, such as have occurred in early 1989. Given its small size and its objective of exchange-rate stability, Belgium is all the more vulnerable, since interest rates are largely determined abroad. Overall, the various levels of government pay out some 22 per cent of their total expenditure (11 per cent of GDP) in the form of interest payments. Second, the share of general government in the economy[86], which reflects, in part, social expenditure and particularly transfers per person which are relatively high in comparison with per capita income (Table 34), necessitates a substantial degree of tax pressure[87]. Thus, direct and indirect taxes amount to 29 per cent of GDP and 43 per cent when social-security contributions are included. The top marginal rate of

Table 34. **Social expenditures in 1986**[1]

1985 US dollars per person[2]

	Old age transfers per person aged 65 and over	Survivors and disability transfers per person aged from 15 to 64	Unemployment transfers per person unemployed	Temporary sickness transfers per person employed	Family transfers per person aged less than 15	Total transfers per person	Education expenditures per person	Health expenditures per person	Total social expenditures per person	GDP per person[3] (OECD = 100)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Belgium	**3 218 (15)**	**185 (18)**	**8 155 (4)**	**198 (8)**	**1 505 (2)**	**1 417 (7)**	**776 (3)**	**611 (10)**	**2 770 (7)**	**87 (14)**
United States	6 423 (3)	1 154 (1)	1 960 (15)	56 (16)	305 (14)	1 760 (4)	925 (1)	768 (6)	3 377 (4)	134 (1)
Japan	4 494 (8)	224 (14)	3 269 (12)	42 (18)	773 (6)	830 (16)	514 (14)	609 (11)	1 910 (15)	95 (7)
Germany	3 638 (12)	501 (5)	4 917 (7)	206 (7)	590 (10)	1 240 (10)	557 (11)	785 (4)	2 515 (10)	98 (6)
France	8 201 (1)	333 (10)	7 303 (5)	297 (5)	1 524 (1)	2 201 (1)	654 (8)	790 (3)	3 645 (2)	94 (8)
Italy	7 426 (2)	510 (4)	1 428 (17)	146 (11)	358 (13)	1 700 (5)	556 (12)	364 (16)	2 621 (8)	89 (13)
United Kingdom	3 652 (11)	217 (16)	3 040 (13)	73 (13)	986 (5)	1 093 (12)	544 (13)	570 (13)	2 207 (13)	90 (12)
Canada	5 375 (5)	227 (13)	10 397 (1)	16 (19)	384 (12)	1 455 (6)	881 (2)	1 011 (1)	3 348 (5)	125 (2)
Australia	3 392 (14)	341 (9)	4 203 (10)	47 (17)	618 (9)	903 (13)	700 (6)	653 (9)	2 265 (12)	92 (10)
Austria	3 912 (9)	592 (3)	4 459 (9)	97 (12)	1 181 (3)	1 268 (9)	450 (15)	560 (14)	2 327 (11)	86 (15)
Finland	3 601 (13)	279 (11)	1 885 (16)	227 (6)	410 (11)	890 (14)	646 (9)	591 (12)	2 074 (14)	93 (9)
Greece	..	..	933 (18)	65 (14)	131 (18)	703 (18)	194 (17)	214 (18)	1 111 (18)	48 (18)
Ireland	2 171 (17)	200 (17)	3 824 (11)	346 (4)	253 (15)	815 (17)	416 (16)	457 (15)	1 688 (16)	54 (17)
Netherlands	5 222 (6)	762 (2)	8 451 (2)	529 (2)	1 006 (4)	2 060 (2)	629 (10)	764 (7)	3 440 (3)	91 (11)
Norway	3 705 (10)	462 (7)	4 545 (8)	420 (3)	645 (8)	1 271 (8)	721 (5)	783 (5)	2 775 (6)	115 (4)
Portugal	1 607 (18)	229 (12)	405 (19)	63 (15)	170 (17)	425 (19)	..	200 (19)	611 (19)	45 (19)
Spain	2 539 (16)	414 (8)	2 632 (14)	188 (9)	46 (19)	855 (15)	121 (18)	350 (17)	1 309 (17)	62 (16)
Sweden	4 859 (7)	465 (6)	6 725 (6)	773 (1)	733 (7)	1 889 (3)	677 (7)	995 (2)	3 557 (1)	101 (5)
Switzerland	5 935 (4)	224 (14)	8 389 (3)	184 (10)	199 (16)	1 143 (11)	765 (4)	745 (8)	2 565 (9)	117 (3)
OECD[4]	4 409	407	4 575	209	622	1 259	596	622	2 427	100

1. Or latest available year (1984 or 1985).
2. Translated at purchasing-power-parity exchange rates of 1985. Rank in parentheses.
3. Using 1986 prices and PPPs.
4. Unweighted average of the above countries.

Source: OECD Secretariat estimates.

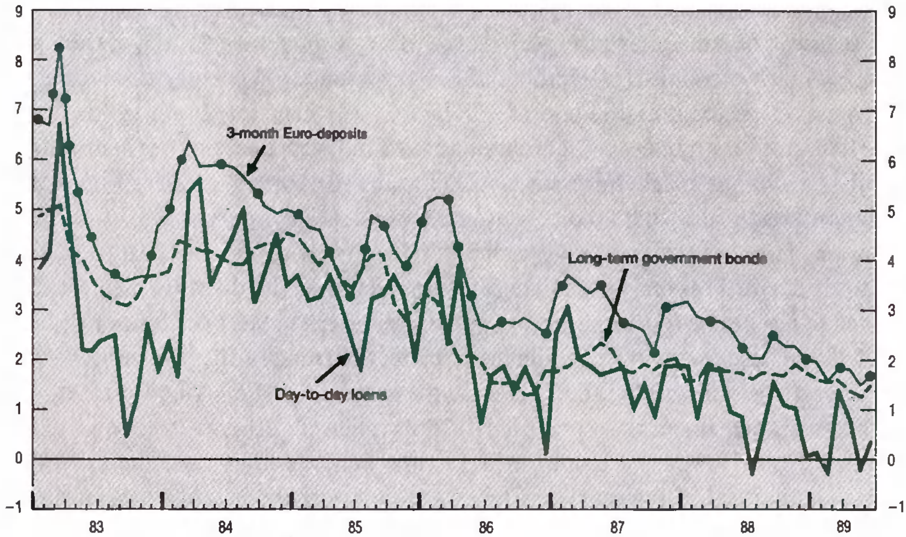
personal income tax of 59 per cent (including local taxes), sixth highest among OECD countries, and a corporate tax rate of 43 per cent generate distortions with notable implications for competitiveness. Finally, there will be a number of unavoidable extra demands on the budget in the future. As part of an agreement to harmonise the taxation of interest income in the EC[88], Belgium will almost certainly have to lower its withholding tax on interest income from its current rate of 25 per cent. Tentative work has been done at the Banque Nationale as well as the Bureau du Plan and the Ministry of Finance to estimate the budgetary cost of a reduction in the withholding tax rate[89]. Under the most favourable assumptions, cutting the withholding tax rate to 15 per cent in line with the initial Scrivener proposals would cost the Belgian treasury BF 14-15 billion per year. However, depending on the assumptions retained, that estimate could easily be trebled, representing as much as 1 per cent of GDP in lost revenues[90].

Other demands are likely to emanate from environmental concerns which are growing worldwide and will undoubtedly be addressed in an international context. But most important are the pension and health care implications of an ageing population. Between 1985 and 2000 the pure ageing effect could raise real health care expenses by 0.6 per cent per year[91]. While in the medium term the State's old-age pension burden will, in fact, lighten, as it has done since 1983[92], after the turn of the century, as for other OECD countries, the share of pension expenditure in national income will begin to rise quite rapidly. Under the influence of the baby-boom generation, the ratio of those of pensionable age to the working-age population is indeed projected to increase from 22 per cent (both in 1980 and in 1990) to 36 per cent by 2040[93]. All these factors underscore the need for very strict and sustained control of public expenditures in non-priority areas.

Monetary policy

Belgium's monetary policy has continued to aim at maintaining external equilibrium via stability of the franc within the European Monetary System. However, it has also been called upon to achieve domestic goals, as the weakness of public finances has made fiscal policy unavailable for domestic stabilisation purposes. The authorities have aimed at fostering market confidence in order both to replenish gradually the nation's foreign-exchange reserves and to lower interest-rate differentials with the stronger EMS currencies, in particular the Deutschemark. Owing to a prudent policy stance and the improvement in economic fundamentals, these goals have been to a large extent achieved. Net official assets have increased and, despite

Diagram 9. **BELGIAN-GERMAN INTEREST-RATE DIFFERENTIALS**



Sources: OECD, *Financial Statistics Monthly* and National Bank of Belgium.

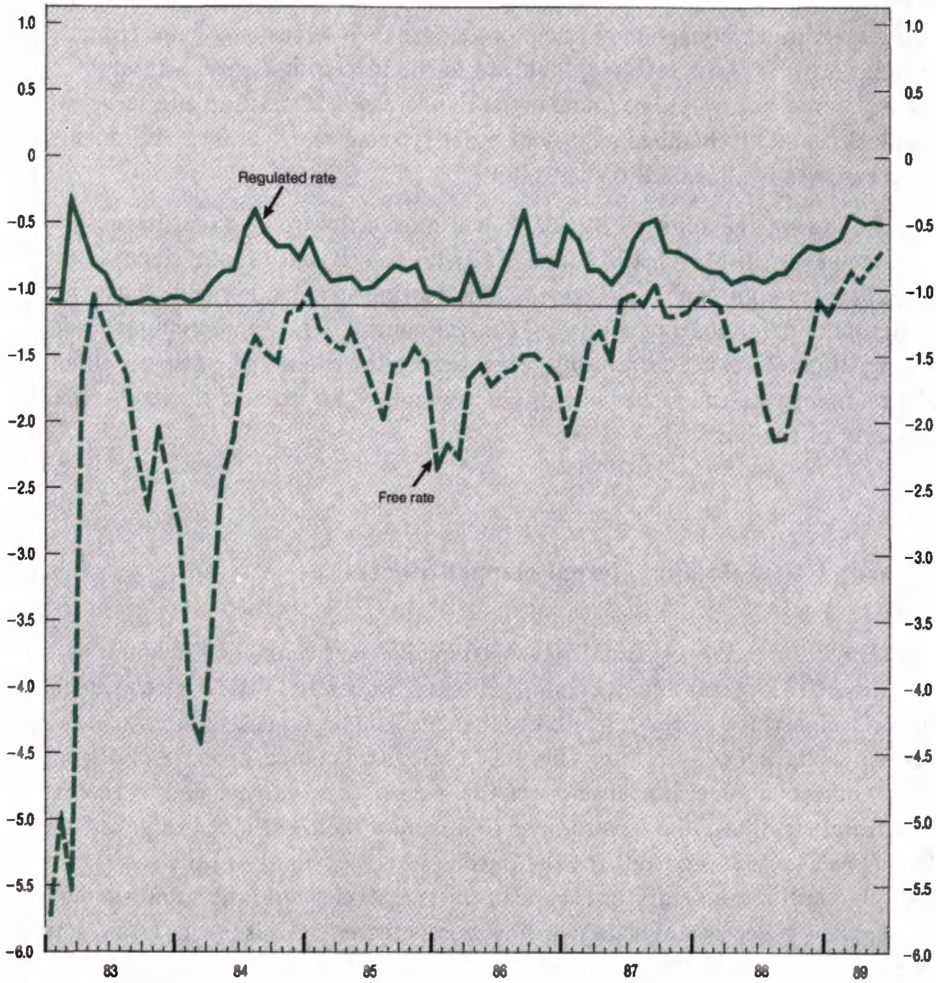
substantial fluctuations, the interest-rate differential with Germany has declined considerably (Diagram 9).

However, since late 1986 progress in reducing the interest-rate differential has been slow, especially on long-term rates, and the question arises as to what factors determine Belgian interest rates[94]. Relationships for short- and long-term rates on public instruments and short-term rates on private debt described in Annex III point to four major influences. Not surprisingly, the corresponding foreign rate, here proxied by the German rate, and the relative rates of inflation in the two countries are significant factors. In addition, an important role may be attributed to the state of the Belgian current account. But perhaps most significant, especially for the public debt instruments, is the influence of the general government net borrowing position. In the long run, every percentage point of borrowing relative to GDP is estimated to raise Belgian rates by 0.35 to 0.55 points. These tentative calculations suggest that eliminating the early 1989 long-term differential with respect to Germany would require more than a halving of the government deficit in relation to GDP from its 1988 level of some 7 per cent.

Belgian money-market rates have moved broadly in accordance with changes in interest rates abroad. During the period of worldwide monetary easing, in the wake of the stock-market collapse of October 1987, three-month Treasury certificate rates fell from 6.75 per cent at the end of 1987 to 6.1 per cent in March 1988. As from July 1988, gradual monetary tightening abroad induced by rising fears of inflation, as well as exchange-market pressures[95] (Diagram 10), forced a series of increases in Belgian interest rates which took them to 8.6 per cent in June 1989. This movement in market rates was supported by changes in official rates. The latter remained constantly above Treasury certificate rates: for example, the discount rate which had declined to 6.5 per cent in June 1988 was raised in steps to 9.25 per cent at the end of June 1989. These moves were sufficient to bring the franc in the first half of 1989 to its strongest position within the EMS since the summer of 1987. Deposit rates, which had been stable since the spring of 1986, followed other rates downward in February 1988. However, except for large time deposits, they have not as yet been adjusted in line with rising market rates. As in many other countries, long-term rates have not been very sensitive to developments in short-term rates. From January to September 1988, government bond rates hovered around 7.7 per cent. They have since risen to a peak of near 8.5 per cent in March 1989, followed by a slight easing thereafter. As a result, the yield curve, which had steepened in 1987 and the first half of 1988, has flattened since. In a context of ongoing long-term private capital outflows, the Belgian yield curve remains flatter than in most other OECD countries, as the authorities equilibrate the demand and supply of foreign currency by acting on money-market rates alone, long-term rates being largely determined by those abroad. As regards monetary aggregates, M2 growth slowed from 10.5 per cent in 1987 to 8.1 per cent in the year ending in the third quarter of 1988.

An important law was passed on 23rd December 1988, putting into effect a number of reforms in the monetary policy domain. First, it rendered permanent the existence of the central bank which had previously required periodic legislation to prolong its existence. Second, it removed all reference to gold in defining the franc: *de facto* the currency had not been gold-backed for many years. Third, it legalised a reform in the implementation of monetary policy[96], designed to give the Banque Nationale greater control over monetary and credit conditions; thenceforth, the Central Bank would be allowed to institute a system of required reserves for financial intermediaries[97]. This had earlier been possible but limited to temporary use for conjunctural reasons. The legislation sets maximum requirements of 8 per cent on sight deposits and other sources of domestic-currency working capital, 4½ per cent on

Diagram 10. **THE FRANC IN THE EUROPEAN MONETARY SYSTEM**[1]



1. Percentage deviation from the centre of the snake. Accordingly, the maximum permissible deviation for the regulated rate is 1.125 per cent in either direction, as indicated by the two horizontal lines. The line for the free rate, which is under no such constraint, has been traced by resorting to observations on the percentage difference of the free from the regulated rate.

Sources: OECD Secretariat estimates and IMF, *International Financial Statistics.*

other deposits up to one year and 2 per cent for those greater than one year. The Bank has announced that at present it does not intend to implement such requirements. Fourth, the law removed the uncertainty surrounding the destiny of capital gains realised on transactions in gold held in the Bank's reserves: any gains from possible future portfolio shifts involving gold would be placed in a special reserve account whose counterpart would be found in the Bank's assets in the form of reserves which it can independently manage as it does other types of reserves. The net income from such reserves is allocated to the State.

Following the reform, the Bank has moved toward a more market-oriented balance sheet: in March 1989 it sold 127 tonnes of gold (about 10 per cent of its stock) for foreign exchange, which should bring it more into line with the asset structure of neighbouring countries' central banks[98]. The annual interest income of nearly BF 5 billion (at current interest rates) on the capital gain (BF 55 billion) will revert directly to the Government, but the entire proceeds of the sale remain the property of the Bank.

Measures to maintain external competitiveness

Having a relatively small and extremely open economy, Belgium is highly sensitive to the international economic climate. Since it has little control over changes in its foreign-trade prices[99], its ability to control domestic costs is a critical factor in securing external equilibrium. The Act to safeguard competitiveness of 6th January 1989, reflects a general awareness of the need to take due account of the external constraint. It allows the government to abandon the tight incomes policy pursued from 1982 to 1986 and returns the burden of responsibility to the social partners, though it still retains sufficient scope for intervention should the situation require it. The policy objective of safeguarding competitiveness has been given statutory recognition and must henceforth be adhered to in collective bargaining by management and union organisations represented on the Conseil Central de l'Economie (CCE). This Act mandates the CCE to conduct periodic reviews[100] of the country's competitive position. The appraisal criteria include five types of variables: export performance, wage costs, financial costs, energy costs and two structural determinants: the trend of gross fixed business investment and R & D expenditure as a percentage of GDP. These criteria are expressed in relative terms, i.e. by comparison with the situation of Belgium's main trading partners (Germany, France, United Kingdom, Italy, Netherlands, United States and Japan). Competitiveness is considered to be threatened if there is deterioration in export performance and at least one of the other criteria.

Should the country's competitive position appear to be under threat, the social partners are invited to take action within one month, by way of collective agreements, to restore competitiveness or to recommend to the government measures to this end that fall within its remit. It is for the government to appraise the effectiveness of the competitiveness safeguards adopted. It may request the authorisation of Parliament, through a straight vote of confidence, for major measures to restore competitiveness, without having to go through the normal legislative procedure: curbs on incomes; measures to ease the tax burden and financial costs of the business sector; investment and R&D incentives. The Act confirms a *de facto* situation observable in wage negotiations in recent years. It does nonetheless constitute a significant step forward in seeking to ensure that Belgian cost increases do not run substantially ahead of those of its main trading partners, as they did during the mid-1970s.

Other planned reforms

Besides financial-market changes dealt with in Part II, the authorities have a long list of reforms they wish to pursue in the near term. Further tax reform is awaited in the area of corporate taxation, with a view to further broadening the tax base and lowering the rate. A reform of the current law regarding competition policy, which dates back to 1960, is also being prepared, in line with European Community provisions. Based on an EC directive, non-military procurement is to be opened up to foreign competition. That change could raise Belgian output and the current surplus, while lowering prices and the government deficit. The government also intends to reform the management of public corporations in order to increase their autonomy and flexibility and eventually reduce their need for state subsidies[101]. Legislative change is also proposed in the area of consumer borrowing and indebtedness. Finally, a roundtable discussion of the health system among the social partners recently took place in order to attempt to deal with its chronic financial deficit and revise the 1963 law which sets out the mode of its funding. While some parties to the discussion favour a complete overhaul of the system, the majority feel that improved financing procedures would be largely sufficient to overcome the present difficulties[102]. The government's position is that there should be a re-arrangement of some social-security contributions and state subsidies based on demographic factors, as well as, possibly, changes in the reimbursement system for medical expenses.

Short-term prospects

The Belgian economy entered 1989 with considerable momentum. According to VAT declarations, in the first quarter of the year the volume of retail sales and the value of investment were 5.5 and 18.7 per cent above year-earlier levels, respectively. The index of industrial production (excluding construction) and residential building permits were 4½ and 7½ per cent above year-earlier levels, respectively. All measures of unemployment rate showed more than a full percentage point decline, especially for men. However, signs of slowing in the North American economy have begun to emerge. In nearly all countries, short-term interest rates are substantially higher than during 1988, and some limited evidence of deceleration in the growth of activity in Belgium has also appeared. The Banque Nationale synthetic index of activity fell from November to February, although it rebounded thereafter.

Buoyed by faster growth in compensation of employees (in the wake of accelerating wage and salary increases), as well as continuing personal tax reductions (a result of recent tax reform), disposable income may expand by 5¾ per cent in 1989 (compared with 4½ per cent in 1988). With a pick-up in consumer-price inflation to about 3 per cent and a slight decline in the savings rate, real private consumption growth may accelerate somewhat to 2¾ per cent in 1989. The fall in the savings ratio toward 12 per cent, would result from a further reduction in unemployment and increased wealth. Although remaining the most dynamic component of domestic demand[103], fixed investment is projected to grow at a slower pace: public projects are being cut back due to financial stringency, and higher interest rates should negatively influence demand, especially for housing; permits data are already reflecting this.

Despite efforts to restrain public spending, government consumption is likely to continue to edge upward in real terms. With both export and import volumes of goods and services rising at rates in the 6 to 7 per cent range, the foreign sector should exert a neutral influence on activity. Overall, real GDP growth may decline from the 4 per cent range in 1988 to 3¼ per cent in 1989 and 2¾ per cent in 1990, very much in line with the OECD average (Table 35). Employment increases could taper off in line with decelerating output growth, although the usual cyclical slowdown in labour productivity is likely to be limited by the continuation of significant capital-deepening investment and the embodiment of up-to-date technology. Unemployment may continue to decrease, albeit at a slower pace.

Inflation is projected to accelerate temporarily in 1989. Import prices of goods and services may rise by around 5½ per cent, compared to 2½ per cent in 1988, reflecting higher oil and non-oil commodity prices, increases in foreign prices of

Table 35. **Short-term projection**

Average annual percentage changes (1980 prices)

	1988	1989	1990
Private consumption	2.5	2.8	2.8
Public consumption	0.3	0.2	0.5
Gross fixed investment	13.7	8.2	4.3
Final domestic demand	4.1	3.4	2.7
Stockbuilding[1]	−0.0	0.1	0.0
Total domestic demand	4.1	3.5	2.7
Exports of goods and services	8.9	6.5	6.1
Imports of goods and services	8.7	6.8	6.1
Foreign balance[1]	0.2	−0.1	0.0
GDP at constant prices	4.2	3.3	2.7
GDP price deflator	1.2	2.7	2.6
GDP at current prices	5.5	6.1	5.3
Consumer price deflator	1.2	3.0	2.6
Industrial production	5.4	3.9	3.2
Breakdown of gross fixed investment			
Public sector	−0.0	−4.0	−2.5
Private sector residential	22.4	6.0	3.5
Private non-residential	13.1	10.6	5.3
Total employment	1.3	0.9	0.6
Unemployment rate	10.0	9.4	9.0
Current balance ($US billions)	3.1	2.7	2.8

1. Contribution to growth of GDP.
Source: OECD, *Economic Outlook*, No. 45, 1989.

manufactures and the higher value of the dollar. With no further impetus from such transitory influences, the rise in import prices may slow to less than 3 per cent in 1990. On the domestic side, excise tax increases may contribute about half a percentage point to consumer-price inflation in both 1989 and 1990. Such increases, which started to take effect at the beginning of 1989 (cigarettes, alcohol, gasoline) are programmed to recur both at mid-year (cigarettes) and again in 1990. Overall, consumer-price increases may not exceed significantly the 3 per cent rate recorded in the year to the second quarter of 1989, before resuming a gently declining trend later in the year and in 1990. Most of the energy-price increases should have been

Table 36. **Comparison of projections for Belgium in 1989**

Annual percentage changes

Organisation:	OECD	International Monetary Fund	Banque Nationale de Belgique	European Commission	Ministère des Affaires Economiques	Bureau du Plan	Kredietbank	Fédération des Entreprises de Belgique	IRES (Louvain)	DULBEA (Bruxelles)
Date of preparation:	(6/89)	(4/89)	(3/89)	(6/89)	(5/89)	(6/89)	(6/89)	(3/89)	(6/89)	(6/89)
A. Real expenditures										
Private consumption	2.8	2.8	2.8	2.7	2.5	2.6	2.6	2.8	2.3	3.0
Public consumption	0.2	0.7	0.7	0.3	0.4	0.5	0.7	n.a.	0.6	1.0
Gross fixed capital formation	8.2	7.6	7.6	10.5	9.9	6.8	10.5	7.4	10.5	8.0
Total domestic demand	3.5	3.4	3.4	3.8	3.6	3.3	3.8	n.a.	3.6	n.a.
Exports of goods and services	6.5	8.2	8.2	6.9	5.3	6.3	5.7	n.a.	5.9	5.5
Imports of goods and services	6.8	8.7	8.7	7.5	5.5	6.3	6.4	n.a.	6.3	6.0
Gross national product	3.3[1]	3.1	3.1	3.6	3.5	3.3	3.4	3.1	3.3	2.7
B. Price inflation										
Private consumption	3.0	2.7	2.7	3.0	3.0	3.0	2.8	n.a.	2.8	3.0
Terms of trade	−0.7	0.4	−0.3	−0.7	−0.5	−0.3	−0.2	n.a.	−0.8	−1.5
Gross national product	2.7[1]	2.8	2.8	2.9	2.7	2.9	3.0	2.6	2.2	2.5
C. Values										
Gross national product	6.1[1]	n.a.	6.0	6.5	6.4	6.3	6.5	5.7	5.6	5.3
General government net lending as percentage of GNP	−6.6[1]	n.a.	n.a.	−6.2	−6.0	−6.5	n.a.	n.a.	n.a.	n.a.

1. Gross domestic product.

absorbed, and food should cease to contribute to mounting inflation as it did in 1988-1989, due to the North American drought and the after-effects of the EC dairy herd reduction programme on meat prices. Most importantly, real wage increases should continue to be restrained, given that market conditions are still favourable for the social partners to remain moderate (the unemployment rate will remain high and still exceed the rate at which wage inflation tends to accelerate; see Annex I). As a result, profit margins should continue to widen. The rise in the GDP deflator may remain in the 2½ to 2¾ per cent range in both 1989 and 1990.

The BLEU current-account surplus is projected to remain substantial. The trade balance may deteriorate somewhat in 1989, due to less favourable developments in the terms of trade: given the technical assumption that the average OECD import price of oil reached $16/barrel in the first half of 1989, the price of imported energy could rise 20 per cent in 1989, while imported raw material prices are projected to increase by 13 per cent. Imported food prices could rise by about 9 per cent. On the other hand, increases in prices of traded manufactures may lie in the 4 per cent range, only slightly higher than in 1988. With improved external competitiveness, losses of export market shares may come to an end. Export volumes of manufactures may therefore grow in line with markets, decelerating from around 10½ per cent in 1988 to some 8 per cent in 1989 and 7 per cent in 1990. Import volume growth should also slow, along with real domestic demand. On services account, a continuing deterioration on tourism may be offset by higher investment income, due to increased interest rates and a return of the BLEU to net creditor status. Little further deterioration on net transfers is expected, because of the reduction in liabilities to the EC, associated with the "fourth resource" instituted in 1988 and reduced costs of the Common Agricultural Policy. Overall, the current-account surplus is projected to decline from $3.1 billion (2.0 per cent of GDP) in 1988 to $2.7 billion (1.8 per cent of GDP) in 1989. It may stabilise at that share of GDP in 1990, implying a small increase in dollar terms.

Following the projected pattern of German rates, short-term interest rates are expected to peak in the second half of 1989, at half a point above their average level for the first semester. With the easing of inflationary pressures, rates could subsequently resume a downward trend. Long-term rates may change rather less because of reduced incremental demand for mortgage funds, for financing of business fixed investment and for funding of the budget deficit. Based on policies announced by May 1989, the general government net borrowing requirement could fall from 7.0 per cent in 1988 to 6.6 per cent in 1989 and 6.1 per cent in 1990. Once adjusted for the strength of activity, the deficit may actually continue to widen, as it did in 1988. However, this deterioration would be entirely attributable to interest payments: on a primary basis, the cyclically-adjusted surplus could increase. It would appear that the end to the "snow-ball" effect, almost achieved in 1989, will prove more distant, unless either nominal income grows faster, interest rates fall more substantially than projected, or fiscal policy is tightened further.

In March 1989, the bank also introduced a new system of credits to financial institutions in order to renew contacts with them and extend its sphere of influence, especially over very short-term rates. These institutions make little use in fact of the Bank's discount facility because of the importance of Treasury certificates – bearing traditionally lower rates than the discount rate – in their portfolios. They are now invited to participate in tenders for fixed-term advances using government paper as collateral and in repurchasing agreements in respect of commercial paper.

Conclusions

Contrary to fears expressed during the last examination of Belgium by the EDR Committee, some eighteen months ago, economic performance in 1988 was exceptionally good. Real GDP growth in Belgium was among the highest (4.2 per cent) in the OECD area and the inflation rate among the lowest (1.2 per cent). Productive investment and employment rose substantially, contributing to a strengthening in the supply conditions of the economy and a reduction in unemployment. In spite of faster growth than elsewhere in Europe, the current external position remained strong, reflecting healthy external competitiveness. Only in the area of public finances was the outcome disappointing, although not out of line with initial government objectives. Whereas, as a result of a sharp fall in government spending excluding interest payments, substantial progress had been made in the five years to 1987 in reducing the structural budget deficit, 1988 was a year of lost opportunities, mainly because of the long political stalemate. The small decline in the general government deficit was entirely due to higher-than-expected revenues in the wake of more robust growth; in fact, the cyclically-adjusted budget balance would seem to have deteriorated markedly. The already extremely high net-debt/GDP ratio rose further to around 120 per cent of GDP, the second highest rate, after Ireland, in the OECD area.

Viewed in a medium-term perspective, the turnaround in Belgium's economic situation during the 1980s has been impressive in many respects. Many of the severe imbalances that plagued the country at the beginning of the decade have been successfully corrected, and, by a number of measures of economic performance (growth, inflation, external accounts), Belgium has now joined the front-runner league. On two points, however, the situation is still unsatisfactory. The public debt, already running at a record level, is continuing to rise, fuelled by an excessive budget deficit. Also, as in other European countries, the rate of unemployment is still too high, with a large proportion of the unemployed out of work for more than a year.

As in other small open economies, highly sensitive to the international environment, the progressive improvement in world economic conditions over the last few years has clearly had a favourable impact. But without steady adherence to the coherent adjustment policies embarked upon by the authorities in the early 1980s, full advantage could not have been taken of these more favourable external circumstances. The corrective strategy has essentially relied on fiscal consolidation, a move towards a hard-currency policy within the EMS, wage restraint and structural reforms. These policies should continue to bear fruit. Barring any unforeseen marked deterioration in the external environment, the short-term outlook for the Belgian economy should remain satisfactory, with only a limited slowdown in growth, a further decline in unemployment, successful control of recently-rising inflationary pressures and maintenance of a strong current-account position. Looking into the 1990s, much will depend on the country's ability to adapt successfully to the new competitive environment created by the move towards the single European market. To meet this challenge, remaining macroeconomic imbalances will have to be progressively removed, existing rigidities on goods, labour and financial markets eased and efficiency increased. The adjustment process must therefore continue, calling for a more determined approach to fiscal consolidation, an appropriate monetary policy and a steady pursuit of wide-ranging structural reform.

The most urgent task is to move more boldly in reducing the budget deficit. Not much progress in reducing the structural budget deficit excluding interest payments is expected to be made this year, as additional windfall revenues will be absorbed by expenditure overruns. The accord of the present coalition government introduced a "dual target" strategy, to be applied as of 1990, which calls for no increase in either non-interest expenditure in real terms or in the nominal deficit of the central government. To regain the initiative and strengthen the credibility of their commitment to fiscal responsibility, the authorities should be rigorous in applying this dual target at the level of the national government; this may require substantial public spending cuts. While, to this point, Community and Regional budgetary management has been relatively orthodox, the new financial arrangements introduced by the Constitutional reform have conferred greater importance on their behaviour and have introduced a greater element of uncertainty. The Communities and Regions must therefore exercise fiscal discipline that is compatible with the dual target mechanism governing the national government's budgetary operations. The strict application of these new budgetary procedures may be expected, in a favourable economic setting, to arrest the "snow-ball" effect, i.e. stabilise the general government debt/GDP ratio, perhaps as early as 1990. But the budget consolidation efforts will have to continue for some years after that, so as to reduce the public debt to reasonable proportions.

Besides restoring greater flexibility of the budget and reducing its vulnerability to interest-rate shocks, fiscal restraint would add credibility to the move towards a hard-currency policy, as would an early abolition of the dual-exchange-rate market. Given the strength of the external position, the success achieved so far in the fight against inflation and the gradual closing of the interest-rate differential between Belgium and its principal trading partners, an explicit commitment to a strong exchange-rate policy within the EMS is an increasingly attractive option which would have clear benefits in terms of limiting inflation expectations and increasing the credibility of the authorities. However, for such a policy to be pursued over the medium term without imposing an excessive burden on interest rates, real growth and employment, cost competitiveness will have to be rigorously maintained. In this respect, the new law on competitiveness is a welcome initiative. This innovative measure should have the effect of raising the social partners' awareness of the importance of this issue, while at the same time providing useful corrective procedures for adjusting costs and prices in Belgium, were they to move out of line with those in main trading partners. In a context of free capital movements, the recent broadening of the Central bank instruments of monetary control and the measures taken or contemplated to strengthen Belgian financial markets appear consistent with the policy aim of achieving greater exchange-rate stability.

Financial markets indeed need to be restructured and strengthened in order to meet successfully the challenges of the single European capital market and, more generally, global integration of the financial-services industry. Interbank competition will increase, and mutual funds in particular are set to gain in prominence. The prospective decline in the government borrowing requirement associated with stepped-up consolidation efforts will also call for more market-oriented debt management and less reliance on the underwriting consortium of banks, a trend which will be reinforced by the introduction of new financial instruments. With both competition and financial risks increasing, the credit institutions will have to improve their creditworthiness so as to meet internationally-accepted balance-sheet norms. In this context, the recently-announced reform aimed at restructuring public credit institutions should increase their efficiency and promote more competition in the sector. The decision to authorise and encourage the creation of "stock-exchange companies" should contribute to the modernisation of the Brussels financial market-place. These various measures have to be seen in the light of the government's ambitious objective of setting up a competitive and well-balanced financial centre. To this end, there remains however substantial progress to be made in order to render the government-securities market more accessible to non-bank agents and to non-residents, as well as in the area of taxation. Whatever harmonisation measures may ultimately be adopted within the Community, there is little doubt, in particular, that the withholding tax on interest and dividend income must be lowered to levels more in line with those prevailing in other European countries, with a view to preventing migration of capital and activity abroad, reducing interest rates, facilitating debt management and curtailing investment in tax-avoidance schemes.

The problem of minimising allocative distortions stemming from the current taxation of income on financial assets must be viewed in the broader context of carrying forward the process of tax reform. The changes to the personal income tax system approved in December 1988 were already an important accomplishment, as the significant lowering of marginal tax rates and the new tax treatment of couples should have a favourable effect on work incentives. As contemplated by the authorities, further tax reform in the area of corporate taxation would also be desirable, with a view to lowering the rate and broadening the tax base. Given the budgetary implications of these various measures, it would be advisable to devise a revenue-neutral overhaul of both investment-income and corporation taxation that would increase equity and efficiency, while reducing distortions to investment decisions. In the longer run, when the public-finance position has been improved, marginal rates of personal income taxation, which are among the highest in the OECD area, could be lowered.

It would also appear worthwhile to reconsider traditional labour-market policies. In this area Belgium offers a wide range of both active and passive programmes to provide social protection and limit the rise in unemployment. While some success has been achieved in meeting these objectives, the mechanisms involved appear relatively inefficient and expensive, as suggested for example by the high cost of the unemployment-insurance system (over 3 per cent of GDP). The fact that there is virtually no time limit on unemployment insurance may have a disincentive effect on labour supply in some cases. The problem is particularly acute in the case of the system of unemployment benefits for the part-time unemployed. In the previous context of high and rising unemployment, there might have been strong justification for pursuing social-welfare-oriented labour-market policies to such an extent. Today, however, as the economy operates closer to potential and remaining budget deficits are increasingly of a structural nature, these reasons have become less compelling. Fresh thought should therefore be given to switching from passive programmes to protect real-income levels and encourage withdrawal from the labour force to more active schemes aimed at increasing incentives to work, enhancing labour mobility and providing workers with required skills. In this context, greater emphasis on training and upgrading of human capital in both the public and the private sectors would be desirable.

Structural reforms should also extend to other areas. In this context, it is important that a number of measures envisaged by the authorities be rapidly implemented. They relate among other things to competition policy where there is a need to review the current legislation, which dates back to 1960, in line with European Community provisions. Opening government procurement to foreign competition would also have beneficial effects on prices, output and the budget deficit. There is also no doubt that the autonomy and flexibility of management of public corporations needs to be increased, with a view to raising their efficiency and reducing their reliance on state subsidies. Finally, it is to be hoped that the round-table discussion on the health system, recently held among the social partners, will provide solutions to the problem of its chronic deficit without adding to imbalances or rigidities.

In summary, owing to the wide-ranging adjustment strategy followed since the early 1980s and a better international environment, Belgium has come a long way in eliminating domestic and external imbalances, thereby laying the basis for sustained non-inflationary growth in the medium term. As a result, the country is now relatively well placed to take advantage of the opportunities created by the perspective of the single European market. To meet this challenge successfully, the adjustments achieved so far must be consolidated and carried further. The most urgent remaining task for policy is to make further inroads into the fiscal deficit. Because of its negative implications for economic performance, the rising debt-to-GDP ratio must be rapidly stabilised and then reversed. But fiscal adjustment will also have to be complemented by continued structural reforms to improve the functioning of markets, thereby making the economy more flexible and efficient. The authorities must be commended for many of the policy initiatives recently taken in this area, but in spite of progress achieved so far, much remains to be done, necessitating determined action on a broad front.

Notes and references

1. For an examination of Belgium's openness relative to that of other European trading partners see Banque Nationale de Belgique, *L'évolution structurelle de l'économie belge*, 1988.
2. See Banque Nationale de Belgique, *op. cit.* and R. Savage, "Structures productives et performance économiques: une relecture "dualiste" de la crise belge", *Bulletin de l'IRES*, 129, December 1988.
3. For the government this is also true of the response to the second oil-price shock: in both 1975 and 1981 the evolution of Belgian government spending as a per cent of GNP diverged from that of similar small, northern European countries. See Banque Nationale de Belgique, *op. cit.*, p. 19.
4. In effect, a special levy on labour income in the form of a so-called "index skip" of 2 per cent in each of 1984, 1985 and 1986 was put in place in order to assist the public finances. The "index skips" were cumulative. They were consolidated into a single levy of 5.85 per cent on 1st January 1987.
5. These changes include tax bracket indexation, increases in the basic deduction, rate reductions and a more generous treatment of couples' earned incomes.
6. The latest version of the Bureau du Plan Model, Maribel II, has a household financial wealth term whose long-run multiplier is over 0.2. P. Weiserbs ("Structure des revenus et évolution du taux d'épargne", IRES, Service de conjoncture, 1986) finds a short-run elasticity of 0.05 on real financial wealth. Similarly, unpublished work by the Banque Nationale finds significant effects emanating both from changes as well as accelerations of share prices, with a long-run elasticity of 0.07.
7. Similarly, the decline in the savings ratio from 1981 to 1985 appears to have been, in no small part, attributable to rising equity prices.
8. Since 1984, consumer credit has grown by 13 per cent per year in real terms. Excluding mortgage debt, household liabilities now represent some 6 per cent of disposable income compared to 3.8 per cent in 1970.
9. T. Egebo, "Private consumption equations for eleven smaller OECD countries", ESD Working Paper, 1989, forthcoming.
10. The effect is also rather weak in the Maribel II model and missing entirely from the Hermes model.
11. See Egebo, *op. cit.*

12. See A. Dean, M. Durand, J. Fallon and P. L. Hoeller, "Saving trends and behaviour in OECD countries", ESD Working Paper, No. 67, June 1989.

13. G. Nicoletti ("A cross-country analysis of private consumption, inflation and the 'Debt neutrality hypothesis'", *OECD Economic Studies 11*, Autumn 1988, pp. 43-87) found this effect to be especially strong for Belgium and Italy, the two countries in his sample with the highest level of government debt in relation to GDP. Egebo, *op. cit.*, on the other hand, using a less sophisticated approach, was unable to unearth a "tax-discounting" effect. An alternative interpretation of the relationship between public debt and household savings would attribute changes in the latter to the higher levels of interest receipts by households from the government with a possibly lower propensity to consume out of such income.

14. The net profit rate on equity, which had been negative to the tune of 1.4 per cent in 1981, bounced back to 9.3 per cent in 1987.

15. This estimate is based on the assumption that the self-employed earn the same average wage as dependent employees.

16. While inflation fell from 5¼ per cent in 1984 to less than 2 per cent in 1987, the implicit interest rate on corporate debt fell only half as much (from 12.0 per cent to 10.4 per cent).

17. High rates of scrapping have prevented even greater reacceleration in capital-stock growth.

18. See R. Torres, P. Jarrett and W. Suyker, "Supply blocks for the small countries in INTERLINK", ESD Working Paper, 1989, forthcoming. The results presented there show an estimated elasticity of substitution of capital for labour of nearly 0.5 for Belgium, similar to that of the other countries examined.

19. As a result of the well-known accelerator mechanism, the investment share of value added is notably procyclical; in the private sector, it is now nearing levels last seen in the early seventies. A. Marfouk ("Liens entre investissement et degré d'utilisation des capacités de production : le cas de la Belgique", *Cahiers économiques de Bruxelles*, 121, 1989, pp. 3-32) has recently demonstrated the importance of capacity utilisation in the determination of manufacturing investment in Belgium, as well as the superiority of a survey-based measure.

20. See R. Savage, *op.cit.* Note that wage moderation has prevented an even more rapid substitution of capital for labour in the eighties. Some of the strength of investment in 1988 might have been due to changes in the tax treatment of investment in 1989, which are expected to cost business an additional BF 8 billion in tax payments. However, previous changes in the tax laws pertaining to corporations would not appear to have been of fundamental importance in determining the pattern of investment growth over time. Also, given the continued strength of business fixed investment early in 1989, it would not appear that the impact of the tax reform has been substantial.

21. Surveys indicate that among manufacturers, more respondents currently report the existence of insufficient capacity than at any time since 1974.

22. OECD, *Employment Outlook*, September 1988, p. 21.

23. See OECD, *Economic Outlook*, No. 45, 1989. However, the trend rate of growth in Belgian employment – notably in the services sector – since 1977 has been quite weak compared with its European neighbours.

24. In 1986, among the fifteen countries for which data are available, only the Netherlands had a higher proportion of youths in education than Belgium (OECD, *Employment Outlook*, September 1988, p. 55). There had been a definite increase since 1983, when the school-leaving age was raised to 18, with only a half-time requirement after the age of 16.

25. Among twenty-two OECD countries, in 1985-1987 Belgium's female labour-force participation rate ranked fifteenth (OECD, *Employment Outlook*, September 1988, p. 131). Eurostat data show that in 1986 Belgian men had the lowest participation rates among the twelve members of the European Community; the contrast was especially sharp for youths and those over fifty. In addition, the gap between Belgian and average European rates has been widening for both sexes in the 1980s.

26. In 1984, the average European industrial worker worked 14 per cent more hours per year than his Belgian counterpart.

27. Belgium's legislation on flexible working time, passed in March 1987, is among the most liberal in Europe.

28. It is unclear to what extent this improvement reflects more than cyclical influences. For example, the wage equation described in Annex I is statistically stable: there is therefore no indication that the *equilibrium* rate of unemployment has declined. Nevertheless, C. Detwatripont ("Industry wage flexibility and employment in the EEC", *Cahiers Economiques de Bruxelles*, 120, 4, 1988, pp. 457-482) concludes that wage flexibility has increased over time in Belgium, perhaps due to greater decentralisation of wage bargaining.

29. In 1986, the proportion of those unemployed for a year or more was 65.4 per cent for men and 71.6 per cent for women (OECD, *Employment Outlook*, September 1988, p. 146). Females made up 62 per cent of the long-term unemployed and the prime-aged 60 per cent (OECD, *Measures to assist the long-term unemployed*, 1988, p. 15). The first share is the highest, and the second stands behind only that of the Netherlands among the fifteen countries considered.

30. This was the lowest probability of any of the six EC countries considered in 1983-1984; the simple average was about 0.4 (OECD, *Measures to assist the long-term unemployed*, 1988, p. 27).

31. Secretariat estimates suggest that employment decisions in Belgium are significantly influenced by profitability. R. Torres, P. Jarrett and W. Suyker, *op. cit.*, show a long-run partial elasticity of employment with respect to profitability of 0.12. The effect is more significant than for any other small country model. On that basis, changes in profitability observed from 1982 to 1987 would ultimately raise employment by nearly 1¼ per cent.

32. F. Mehta and H.R. Sneesens ("A discussion of Belgian unemployment based on an aggregate disequilibrium model: an update", paper presented to the Conference on European Unemployment, Chelwood Gate, Sussex, May 1988) find that the classical

share of total unemployment (excluding long-term unemployment) in 1985 was 40 per cent. The Bureau du Plan's work ("Maribel II", unpublished paper, 13th December 1988) implies a peak share of classical unemployment of nearly half in 1984, falling to only about a tenth in 1989.

33. It should be noted that the vacancy series is a relatively poor measure to the extent that it relies to a great extent on jobs available in the public sector. Mehta and Sneesens, *op. cit.*, also note that their estimate of the structural rate of unemployment declined from 4.4 per cent to 2.9 per cent if data for the years 1983-1985 are included. The Bureau du Plan, *op. cit.*, estimates the rate to be 4.8 per cent.

34. Mehta and Sneesens, *op. cit.*, find capital-shortage unemployment to have represented a significant proportion of the labour force in 1985. The Bureau du Plan also believes the number to have been substantial at that point but to have declined sharply because of the recent investment boom.

35. The wage equation presented in Annex I implies a NAWRU of 8.4 per cent, between the corresponding estimate of 9.3 per cent by Mehta and Sneesens, *op. cit.*, and that of 6.8 per cent by P. Jeanfils ("Structure du coût salarial, emploi et nature du chômage : une analyse de déséquilibre", *Cahiers Economiques de Bruxelles*, 119, 3, 1988, pp. 333-370).

36. See OECD, *Employment Outlook*, 1989.

37. For further details on Belgium's employment policy see "Les politiques actives de l'emploi", *Revue du travail*, 89, August-September 1988, pp. 847-884.

38. In 1986, 40 per cent of Belgium's unemployed were married women, the highest among all fourteen OECD countries considered. The next highest was France at 28 per cent, while the EEC average was 21 per cent. In addition, an extraordinarily high proportion (64 per cent) of these women had been unemployed for more than two years. See tables 1.9 and 1.11 of OECD, *Employment Outlook*, 1989.

39. It appears that the programme is being used primarily by women for various reasons, notably to take time off in order to raise a family. It covers some 30 000 workers, slightly more than half of which are in the public sector. For public sector workers the scheme is a right, whereas in the private sector it was only recommended in the November, 1988 inter-industry wage accord.

40. The respective contribution of each of the main factors which have influenced wage developments during the period is shown in Table 8. The estimates were derived from an econometric equation based on a modified Phillips-curve specification of the wage-formation process which is described in Annex I.

41. As shown in Annex I, Belgian wages are much more sensitive to output prices than to consumer prices, or, stated alternatively, while indexation to consumer prices is an institutional fact, the "terms of trade" play a dominant role. This enhances labour-market flexibility by cushioning profitability in the event of an unfavourable terms-of-trade shock, especially prevalent for small open economies.

42. The VAT rate was raised from 6 to 17 per cent.

43. At 3.2 per cent, labour productivity growth in the business sector surpassed that of Belgium's principal European trading partners. However, over the five-year period to 1988, the Belgian outcome was less impressive: at an average rate of 1.8 per cent, it figured well behind Italy (2.6 per cent), France (2.5 per cent) and Germany (2.3 per cent), but ahead of the United Kingdom (1.5 per cent) and the Netherlands (1.4 per cent).

44. On a customs basis, the EEC countries' export/import coverage ratio in real terms declined in 1986 and 1987 by 4.4 and 3.6 per cent, while for the BLEU it fell by only 2.4 and 1.4 per cent respectively.

45. The Banque Nationale de Belgique estimates that the share of financial intermediaries' assets and liabilities in respect of non-financial domestic sectors in the total assets and liabilities of all domestic sectors increased from 33 per cent in 1970 to 33.6 per cent in 1987 (note that a share of 50 per cent would indicate a rate of intermediation of 100 per cent).

46. See P. Reding, "The Belgian experience in money and capital markets; recent developments", paper presented at a conference organised by the OECD and the Capital Market Board of Turkey, Bursa, 1987.

47. The aim of the "quotité forfaitaire d'impôt étranger" is to ensure that Belgian residents are not taxed twice on interest that they receive from abroad. It applies only if the interest has already been taxed in the country of origin. The "QFIE" is equivalent to 15 per cent of the foreign income after deduction of the tax paid in the source country. It is credited on a flat-rate basis to the recipient's tax liability. In principle, it applies to both individuals and companies, but in practice it is used mainly by banks and financial institutions. As from the 1990 tax year, the "QFIE" will be included in the tax base.

48. In 1988 the rate on fixed-term advances to companies was 6.9 per cent, while the three-month interbank rate was 6.7 per cent.

49. See EEC, "The Economics of 1992", *European Economy*, No. 35, March 1988.

50. Bank income is defined as the sum of spreads and off-balance-sheet revenue (commissions, etc.).

51. According to the BIS, in 1983 there was one branch for every 968 inhabitants, compared with 1 524 in France, 1 541 in Germany, 2 283 in the United Kingdom and 4 398 in Italy.

52. Belgian banks have participated actively in the domestic introduction of SWIFT (Society for Worldwide Interbank Financial Telecommunications), RINET (Reinsurance and Insurance Network), Euroclear, EPSS (European Payment Systems Services) and Eurocheque, and in the installation of automatic teller machines (ATMs) and point-of-sale (POS) networks.

53. Source: Association Belge des Banques, *Rentabilité et solvabilité : un défi pour les banques*, Aspects et documents 77, 1988, p. 56.

54. According to the Banque Nationale de Belgique, the difference between long-term deposit rates and the mortgage rate is less than 1 point against 2 points, for example, in France.

55. According to the Ministère des Affaires Economiques, in order to be justified, charging for cheques requires that the costs and other charges be made more transparent. Therefore, approval was not given to the Caisse Générale d'Epargne et de Retraite which had recently lodged an application for authorisation to charge for the use of cheques.

56. The PCIs would not in fact be grouped according to specialisation but according to the range of activities that each can contribute to.

57. See the section on fiscal policy in chapter III for further discussion.

58. Since the withholding tax is "forfaitaire" only for individuals, the loss of tax receipts deriving from its reduction would affect personal income tax receipts alone.

59. On Banque Nationale de Belgique estimates, a 1 point cut in interest rates would currently give a budget saving of BF 25 billion in the following year alone.

60. This is the reason for which the Belgian authorities have instituted a new tendering system for the supply of credit to financial institutions. This system was applied for the first time on 15th March 1989 (see the section on monetary policy in chapter III).

61. For details of the 1980 constitutional reform, see P. Moureaux (ed.), *Réformes institutionnelles : les lois d'août 80*, Ed. Biblio, n.d.

62. Every year, the national government is to pay 85.7 per cent of the yearly instalments that the other levels of government would have had to pay had they borrowed the amount of such disbursements. For 1989, however, this method is replaced by a 2 per cent cut in appropriation transfers, excluding those for education.

63. Since the 1980 reforms, these levels of government have had the power to borrow and tax in their own right, but in fact they have made little use of it. Under the new system, the Minister of Finance must approve all foreign currency borrowing; and in case of a structural tendency towards deterioration in the public finances, or threats to the economic and monetary union, borrowing may be limited for up to two years. Regional and Community borrowing will not be guaranteed by the Treasury.

64. For example, an additional 1 per cent of spending growth on their behalf delays the date at which the overall debt/GDP ratio is stabilised by some two years.

65. The "minimum de moyens d'existence" dates back to 1974. It is financed equally by the State and the Communes. Recipients must be willing to work, if able. Individuals receive the equivalent of about $5 000/year, couples about $6 650, and payments are indexed to the consumer price index. There are about 50 000 recipients of this assistance, 0.6 per cent of the total adult population.

66. While the lowest rate was increased from 23.9 to 25 per cent, the top rate was reduced from 72 to 55 per cent. The number of rates was cut from 13 to 7. The standard deduction was increased from BF 126 000 to BF 165 000 for unattached individuals, and from BF 173 000 for single-income couples and BF 252 000 for dual-income couples to BF 260 000 for all couples. For further details see "La réforme fiscale", 60. *Notes économiques*, numéro spécial 44, Banque Paribas Belgique, 1988.

67. Personal taxes are to be raised by BF 22 billion by reducing the generosity of or eliminating deductions for expenses relating to motor vehicles, clothing, restaurants,

investments, interest payments and general employment. Corporate tax revenues will be boosted by BF 19 billion. Most importantly, the investment deduction will change from a fixed rate of 9 per cent to a rate of 3 per cent plus the lagged rate of inflation, the sum constrained to be within the range of 5 to 12 per cent. In addition, there is to be a new tax of 9¼ per cent on insurance-company profit-sharing payments to policy-holders. Additional revenues are also expected from higher non-resident taxes, greater dividend receipts, increased stamp duties and an improvement in tax collection (the last estimated to be worth BF 7 billion).

68. See E. Pollefliet, "Quelques simulations alternatives relatives à la diminution des pressions fiscales et parafiscales (1988-1990)" *Aperçu économique trimestriel*, Ministère des Affaires Economiques, 2, 1987, pp. 81-116.

69. See M. Frank, P. Jeanfils and B. Thiry, "La réforme de 1988 relative à l'impôt sur le revenu et aux droits d'accises", *Cahiers Economiques de Bruxelles*, 121, 1988, pp. 69-115.

70. Due to the fall of the coalition government at the end of 1987, no budget for 1988 was finalised until the summer of 1988.

71. This excludes the granting of credit and provision of equity.

72. Various payments were apparently delayed from 1987 into 1988. In addition, the BF 38 billion deterioration in the accounts of the Regions and Communities has little significance: for administrative reasons, certain rebates were delayed.

73. Subsidisation of public-housing-authority loans was cut back, as was assistance to nationalised sectors.

74. Less of the financing of the cash needs of the Treasury has been in foreign currency in the last few years than typical in the past, with the result that the foreign-currency share of the stock of outstanding debt has fallen from 22 per cent at the end of 1984 to 17 per cent at the end of 1988. Over two-thirds of that debt is denominated in Swiss francs and Deutschemarks. There was also a remarkable shift in the term structure in 1988, with a lengthening of the average maturity of the debt. While the share of the stock held in short-term maturities fell from 37.0 to 34.3 per cent during 1988, in flow terms the short-term share fell from 29.8 in 1987 to 2.1 per cent in 1988.

75. Accordingly, it would appear that Belgium's improvement was less than that of the EEC (excluding Greece, Portugal and Spain). See National Bank of Belgium, *Report 1988*, Table II.25.

76. BF 1.6 billion in pay and pensions, BF 4.0 billion in other purchases of goods and services, BF 1.4 billion in subsidies to business, BF 4.4 billion in transfers to households (mostly to hospitals), BF 16.9 billion in transfers to the social-security system, BF 4.7 billion in transfers to local authorities, BF 0.6 billion in official transfers abroad and BF 1.3 billion in capital transactions.

77. The first rescheduling was agreed to on 3rd August 1986. All interest on consolidated (long-term) debt of the State and the Fonds des Routes in excess of a rate of 8 per cent was converted into eight-year treasury bills called "emprunts de régularisation". On 2nd August 1988 the second such operation reduced the rate to 7¾ per cent. A

conservative estimate of the flow of off-budget financing is the difference between the net balance to be financed by the Treasury and the central government net borrowing requirement: this has averaged BF 57 billion in the 1980s. Other such practices include delayed payments of civil service salaries (e.g. December 1984), bonds with the initial coupon payable 15 rather than the usual 12 months after the date of issue (for example, the issue of October, 1984) and resorting to off-budget entities (such as the Régie des Postes, the Régie des Transports Maritimes or the Société Nationale pour la Restructuration des Secteurs Nationaux) which undertake desired spending through direct borrowing, so that the budgetary burden will be felt only when interest is paid or the loan reimbursed. According to certain estimates, at the end of 1984 such off-budget debt amounted to BF 478 billion, or about 11 per cent of central government debt.

78. The original 1989 Budget assumptions were for real-output growth of 1.8 per cent, inflation of 2.3 per cent and short-term interest rates averaging 6¾ per cent. These were revised to 3.1, 2.6 and 8.3 per cent, respectively.

79. Overall, although the target for the Treasury's borrowing requirement in relation to GNP has been lowered slightly, in absolute terms it has been allowed to increase by BF 2.2 billion, compared to initial estimates.

80. Assuming that the interest rate exceeds the nominal growth rate, the primary surplus (S) as a percent of GDP/GNP in period t required to stabilise the debt-to-GDP/GNP ratio at its value in period t–1 is $S = D_*(i-G)/(1+G)$ where D is the beginning-of-period debt-to-output ratio, i is the implicit average interest rate on government debt and G is the growth rate of nominal output. $\delta S/\delta D = (i-G)/(1+G)$ which is strictly positive. In addition, $\delta S/\delta i = D/(1+G)$ which, again, is strictly positive. Therefore, higher indebtedness and higher interest rates are more burdensome when they occur in combination and less so when nominal output growth is rapid. It can also be shown that $\delta S/\delta G = D_*(i-2G-1)/(1+G)^2$ which is strictly negative, implying the need for a larger surplus the slower nominal growth is. This effect is non-linear and varies positively with interest rates and indebtedness. Finally, it is noteworthy that gradualism is not a virtue (it is more difficult to stabilise the debt-to-output ratio at high levels than at lower values), and that, on the assumption that Fisher's rule holds and nominal interest rates fully reflect changes in inflation (which is reasonable in the long run), higher rates of inflation ultimately also require higher primary surpluses.

81. See, for example, R. Savage, "Normes de stabilisation de l'effet 'boule de neige' : une réappréciation à la lumière de diverses simulations", unpublished manuscript, Ministère des Finances, SED/RS/3839, 8th November 1988.

82. This would be difficult to achieve, given that the autonomous increase in such spending would appear to be about 1 per cent per year.

83. The effect of reasoning at the general government level is to reduce the required primary surplus by some ¾ of a percentage point because of the primary surplus incurred by the non-central government (1.0 per cent in 1988) and of the absence of substantial indebtedness other than by the central government. For an explanation of the statistical discrepancy, see note 1 to Table 33.

84. Banque Nationale estimates carried out in March 1989 also show that the 1989 outcome for the primary surplus is likely to fall short of the debt-stabilising level by only 0.9 per cent of GNP.

85. It should also be noted that the substantial public indebtedness, which implies that the State must devote a significant share of its spending to servicing that debt, leads implicitly to involuntary income redistributions between the holders of the debt and others. The direction and size of such implicit transfers are determined by the course of real interest rates which are largely determined externally.

86. The general government sector currently employs one out of every five Belgian workers (compared to an OECD average of 15 per cent) and its outlays represent half of GDP (OECD average: 39 per cent).

87. The tax burden of such a level of public debt is heavy, especially when the size of the public sector is large, as is the case in Belgium.

88. Besides reducing its withholding tax on interest income, Belgium will probably have to make a number of other modifications to its tax system as part of any EC harmonisation plan. First, its excises will have to be increased, but most of these changes have already been programmed as part of the compensatory moves included in the tax reform package. Second, the average VAT rate will have to be reduced and the number of rates cut from seven to two. According to P. Strumelle ("Impacts sur la consommation privée de l'harmonisation des taxes indirectes dans le cadre du grand marché intérieur européen", *Aperçu économique trimestriel*, 1, 1989, pp. 113-162), these latter changes could cost the exchequer BF 9.3 billion per year.

89. See, for example, E. Jacobs and T. Timmermans, "Evaluation des incidences budgétaires d'une réduction du précompte mobilier de 25 à 10 pour cent", *Cahiers de la Banque Nationale*, No. 1, 1989 and "Premiers résultats de l'étude des effets de la réduction du précompte mobilier de 25 à 10 pour cent", Bureau du Plan, 8 novembre 1988. Different estimates vary according to: *i)* the size of the reduction; *ii)* the horizon of the calculations; *iii)* whether it is assumed to apply to all financial assets or just those newly issued; *iv)* the assumed impact on interest rates; *v)* the hypothesised amount of capital reflow into Belgium as a result of the harmonisation; *vi)* the amount of switching into untaxed Eurobonds; *vii)* the share of tax payments which are currently made by individuals, for whom the tax is "forfaitaire", versus those made by corporations for whom it is not; *viii)* the methodology used; in particular whether feed-backs from the economy onto government receipts are allowed for.

90. Simulation of the Bureau du Plan's Hermes model shows that with a reduction in the withholding-tax rate to 10 per cent, real output could rise by as much as 0.4 per cent after five years, led by nearly 2 per cent greater levels of investment. An important macroeconomic issue to face in evaluating the cost of such a change is the size of the multiplier response resulting from greater household disposable income, in particular the magnitude of the leakages into savings and imports. If the marginal propensity to save out of interest income exceeds the marginal propensity to save out of labour income, the multiplier will be overestimated and the budgetary impact underestimated by traditional macroeconomic models.

91. See P. Defeyt, "Soins de santé et vieillissement démographique", *Bulletin de l'IRES*, No. 130, January 1989.

92. According to the Bureau du Plan ("Les recettes et prestations de la Sécurité Sociale dans les prévisions 1988-1992", 2nd February 1989), the state's subsidy to the social-security system has been declining steadily since 1983, while the household share of its financing has risen. The ratio of public old-age pensions to GDP also peaked in 1983 at 9.3 per cent, but then fell to 8.9 per cent in 1986; on present policies, it is expected to reach 8.6 per cent in 1992. This is because there has been no revaluation of pensions in real terms since 1981 and because of an end, as of 1987, of early retirement pensions to women under the age of 60.

93. See *Economies in transition: Structural adjustment in OECD countries*, OECD, 1989, Tables 5.24 and 5.25.

94. One of the most controversial – and topical – questions in this area is the role of the withholding tax on interest income. This tax, at 25 per cent, is higher in Belgium than abroad, and it is likely that investors demand higher pre-tax returns in order to compensate for the additional tax liability. On some estimates, the effect on interest rates may be as large as half a point. For example, the European Investment Bank issued similar debt during the summer of 1988 in Belgian and Luxembourg francs. The respective interest rates were 7.75 and 7.18 per cent. Virtually the only difference between the two is that there is no withholding tax in Luxembourg.

95. Through the spring and early summer of 1988 the franc remained very close to its lower limit in the EMS. In addition, the "free" (unregulated) franc, applicable to capital transactions, moved to as much as a 1¼ per cent discount to the regulated franc in August and September, its largest divergence since January 1987. With the imminent end to the dual exchange market, there will be greater upward pressure on interest rates during times of crisis in order to maintain the franc within the agreed limits of the EMS. However, the effect on the *average* level of interest rates is less clear. While a weighted average of the regulated and "free" rates has often been below the lower band limits of the EMS, the additional security provided to actual and potential investors in francs that the currency will not diverge excessively from the central rate should yield some payoff in additional confidence and therefore, *ceteris paribus*, rate reductions.

96. The Bank still forswears the use of open-market operations because of their debt-management implications.

97. It is noteworthy that while virtually all other central banks in OECD countries have had this power for many years, several countries (such as New Zealand) have either recently removed it or are considering doing so.

98. Among the countries that still value their gold holdings at $42.22 per ounce, the share of gold in net official assets at the end of 1988 was 19.4 per cent in Belgium, 14.6 per cent in Switzerland and 10.8 per cent in Germany.

99. Between 1980 and 1987, movements in the Belgian terms of trade were less favourable than for other EEC countries.

100. While an official appraisal of Belgium's competitive position is undertaken once a year, a report is submitted every six months. Moreover, in the event of special circumstances

of external origin (for instance, major exchange-rate changes or a new oil shock), the government may convene an emergency meeting of the social partners without waiting for any deterioration in the indicators, and launch the same procedure. The first report has been published: see Conseil Central de l'Economie, *Rapport et avis relatifs à la position compétitive de la Belgique*, Brussels, 24th March 1989.

101. For example, the subsidy to the state railroad recently amounted to 1 per cent of GNP, although it has been declining. See "La SNCB : un colosse aux pieds d'argile ?", *Aperçu économique trimestriel*, 1, 1989, pp. 53-63.

102. See "Table ronde sur l'assurance maladie, groupe de travail sur l'équilibre financier : rapport final", unpublished manuscript, 1989.

103. Private fixed investment represented only 16 per cent of nominal GDP in 1988, compared to over 17 per cent in both France and Germany and nearly 19 per cent in the Netherlands.

LUXEMBOURG

Introduction

After the restructuring and diversification policy pursued by the authorities since the early 1970s succeeded in offsetting the effects of the steel and oil crises between 1973 and 1984, thereafter the Luxembourg economy began to recover the vitality it had previously lost. In contrast to the trend observed over the period 1974-1983, the past few years have seen faster GDP growth on average than in the other EC countries. Robust employment growth has helped to maintain the unemployment rate at a low level. Inflation outcomes have been among the best in the OECD. The current account has continued to show a substantial surplus. Despite significant tax reductions, a budget surplus has persisted. The first part of the Survey briefly retraces the progress achieved in the past few years. The second describes the main features of budgetary policy, analyses recent trends and outlines short-term prospects. The expanded role of Luxembourg's financial sector and the outlook for its development are examined in the third section.

I. Improved economic performance

The steel situation

The iron and steel industry still accounts for almost 7 per cent of total employment in the Luxembourg economy and over 8 per cent of total value added. While 1987 was a difficult year, with crude steel production down by nearly 11 per cent, the situation improved in 1988. In response to a brisk recovery in world steel

Table 1. **Trend and structure of value added**[1]

	Sectoral structure of value added as a percentage of total				Sectoral trend of value added Average annual growth rate		
	1970	1974	1983	1987	1970-1974	1974-1983	1983-1987
Agriculture	3.9	2.7	2.6	2.3	−2.9	1.3	1.3
Industry	37.9	36.8	29.0	29.4	5.5	−1.0	4.7
of which:							
Steel	19.1	17.5	9.0	8.4	3.9	−5.5	2.6
Other	18.8	19.3	20.0	21.0	7.1	2.1	5.7
Construction	7.9	8.8	6.6	6.2	9.3	−1.5	2.8
Market services	36.1	39.5	49.3	49.7	8.8	4.2	4.6
of which:							
Financial institutions	3.4	6.7	12.7	14.3	25.7	9.1	7.6
Other	32.6	32.7	36.6	35.4	6.5	2.9	3.6
Non-market services	14.6	12.7	13.0	12.3	2.7	2.4	3.0
Total	100	100	100	100	6.3	1.7	4.4
GDP (national definition)					6.3	1.8	4.4
GDP (SEC)					5.5	1.1	4.2
Memorandum item:							
Average GDP of EEC countries					3.9	1.8	2.6

1. At 1980 prices.
Source: STATEC.

demand[1], output in Luxembourg increased by 11 per cent, bringing it back to its 1986 level. This performance was reflected in the excellent financial results of ARBED, the country's leading steel group, whose cash flow rose from LF 2.4 billion in 1987 to LF 6 billion in 1988. It was able to improve its financial position by reducing its level of indebtedness such that its debt/equity ratio is now below unity. All in all, after a loss of LF 2.2 billion in 1987, group profits registered LF 2.3 billion in 1988. The business climate has continued to be favourable in the first half of 1989, and the recent trend in new orders suggests that demand will remain firm in the short term. In the longer run, however, the growth prospects of the international steel market, and particularly the European market, are tinged with uncertainty, owing to excess capacity and stiffer competition from the newly industrialising economies. The decision to embark on a modernisation programme involving proposed investment of LF 13 billion in this sector, starting in 1989, would thus seem a wise strategy. By diversifying into new activities[2], the ARBED group ought to be less sensitive to the cyclical vagaries of the steel sector.

Macroeconomic developments

Growth of total domestic employment has gained considerable momentum, rising from an average of 0.5 per cent a year between 1980 and 1984 to 2.5 per cent between 1984 and 1988. Almost 16 000 jobs, for the most part in dependent employment, were created in the last four years, equivalent to almost 10 per cent of the resident labour force (Table 2). The expansion in numbers employed was particularly marked in the "credit and insurance" sector (averaging nearly 8.5 per cent a year). The financial sector alone accounted for around 25 per cent of jobs created over the period, not including those indirectly induced by its growth. Despite strong labour-force growth (1.1 per cent per year or around 7 000 persons in the four years), the Luxembourg business sector had to call increasingly on cross-border workers, whose numbers rose by 9 000 in the space of four years (an annual average of 12.5 per cent). In 1988 they accounted for close to 14 per cent of total domestic employment. Because of the steep rise in job creation, the unemployment rate, already low compared with the average for the other European countries, declined slightly, from 1.8 per cent in 1984 to 1.6 per cent in 1988.

After declines between 1982 and 1985, overall real wages per employee have rebounded again since 1986. This has been due to a number of factors. Because of the improvement in the business climate, substantial real wage increases were awarded under collective agreements in such sectors as banking and insurance; payment of an

Table 2. **Labour market**

Thousands

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Yearly average										
1. Domestic employment	140.2	157.5	158.2	158.7	158.3	157.8	158.7	160.9	165.1	169.6	174.9
Dependent workers	112.6	132.8	137.0	138.7	138.7	138.4	139.5	142.1	146.6	151.4	156.8
Self-employed and family workers	27.6	24.7	21.2	20.0	19.6	19.4	19.2	18.8	18.5	18.2	18.1
2. Net border workers	4.4	7.5	6.8	6.7	6.7	7.0	7.2	8.2	10.3	13.0	16.2
Foreign border workers working in Luxembourg	7.7	12.5	13.4	13.8	14.1	14.5	14.9	16.1	18.2	20.9	24.3
Luxembourg border workers working abroad	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5	(–)0.5
Luxembourg international civil servants and other international organisations staff	(–)2.8	(–)4.5	(–)6.1	(–)6.6	(–)6.9	(–)7.0	(–)7.2	(–)7.4	(–)7.4	(–)7.4	(–)7.6
3. National employment (1) – (2)	135.8	150.0	151.4	152.0	151.6	150.8	151.5	152.7	154.8	156.6	158.7
4. Unemployed	—	0.1	1.1	1.6	2.0	2.5	2.7	2.6	2.3	2.7	2.5
5. Labour force (3) + (4)	135.8	150.1	152.5	153.6	153.6	153.3	154.2	155.3	157.1	159.3	161.2
6. Unemployment rate (4/5)	0.0	0.0	1.0	1.3	1.6	1.8	1.8	1.7	1.5	1.7	1.6

Source: STATEC, *Quarterly Bulletin.*

advance instalment was also reintroduced into the indexation system that year[3]; civil service pay was uprated and the minimum social wage increased. But the sectoral data available suggest that wage growth was uneven, particularly within industry. Nominal compensation per employee in the iron and steel industry does not appear to have increased between October 1985 and April 1987, although in the other industrial sectors it rose by 7 per cent. After the excellent performance of the iron and steel industry in 1988, however, some catch-up did occur. The inflation deceleration observed since 1982 was helped along from 1986 on by import-price movements, in particular the decline in energy prices. The price index for domestically-produced goods, which broadly reflects that for services, experienced faster growth than the overall index. All told, the Grand Duchy's inflation performance was among the best in the OECD area.

Table 3. **Wage and price developments**

Percentage change

	1982	1983	1984	1985	1986	1987[2]	1988[2]
Compensation paid by resident employers[1]	6.9	6.6	8.0	5.4	8.5	7.3	7.9
Domestic dependent employment	0	−0.2	1.0	1.9	3.2	3.3	2.5
Per capita compensation	6.9	6.8	7.0	3.5	5.2	3.9	5.4
Consumer price index	9.4	8.7	5.6	4.1	0.3	−0.1	1.4
Real per capita compensation	−2.3	−1.7	1.4	−0.6	4.9	4.0	4.0

1. Compensation of resident and non-resident employees paid by resident employers, including pensions paid to civil servants, excluding international civil servants.
2. Estimates.
Source: STATEC.

In the early 1970s steel products accounted for the largest share in exports of goods and services (with almost 50 per cent of the total), and the trade balance showed a sizeable surplus. But in 1975 it began to move into deficit, as oil prices rose and the prices of steel products plummeted. However, despite this, the Grand Duchy's growing popularity as an international financial centre kept the current account in surplus. In 1987 investment income accounted for around 70 per cent of goods and services exports, producing a surplus on that account of LF 40 billion, or over 15 per cent of GDP (Table 4). The steep growth of receipts from banking services as a result of the expansion in the private banking business also boosted the surplus on services

Table 4. **Luxembourg's current payments balance**

LF billion

	1970	1975	1980	1985	1986	1987	1988[1]
Exports of goods	42.5	65.3	87.9	168.1	166.2	163.3	186.4
Imports of goods	38.2	69.2	105.6	186.7	188.1	195.6	214.7
Trade balance	4.3	−3.9	−17.7	−18.6	−21.9	−32.3	−28.3
Exports of services	18.7	95.3	376.8	622.4	574.7	584.9	615.0
of which:							
Factor income	12.8	81.0	348.1	568.7	516.0	523.4	550.0
Services excluding factor income	5.9	14.3	28.7	53.3	58.7	61.5	65.0
Imports of services	15.2	81.0	339.8	554.8	506.0	513.8	543.0
of which:							
Factor income	11.5	73.4	326.3	529.6	478.2	483.6	510.0
Services excluding factor income	3.7	7.6	13.5	25.2	27.8	30.2	33.0
Balance on services	3.5	14.3	37.0	67.2	68.7	71.1	72.0
of which:							
Factor income	1.3	7.6	21.8	30.1	37.8	39.8	40.0
Services excluding factor income	2.2	6.7	15.2	28.1	30.9	31.3	32.0
Private and public transfers, net	−0.5	−0.7	−1.8	−3.8	−3.5	−4.5	−5.0
Current balance	7.3	9.7	17.5	44.8	43.3	34.3	38.7

1. Estimates.
Source: STATEC.

excluding factor incomes. In all, the balance on services account amounted to LF 71 billion in 1987, approximately double the current payments surplus, estimated at 15 per cent of GDP.

II. Economic policy, recent trends and short term prospects

Fiscal policy

With the improvement in the business climate that began in 1984 and lower exceptional spending on restructuring and modernising the iron and steel sector, the government was freer to act on the fiscal-policy front. After beginning by replenishing its reserves[4], from 1986 onwards the government pursued a more expansionary policy, while taking care not to compromise budgetary equilibrium. It introduced substantial tax relief[5], totalling LF 9.9 billion over the period 1985-1988 or around 4.2 per cent of GDP (European System of Integrated Economic Accounts), with two-thirds going to households and one-third to the corporate sector. These measures altered the composition of tax revenues by increasing the share of indirect taxes. Over the period 1980-1987, the share of indirect taxes in total government tax receipts rose from 32 to 36 per cent. Despite the rise in transfer payments (as a result, *inter alia*, of the introduction of a minimum guaranteed income in 1986), higher public investment and higher civil service pay, the share of government expenditure in GDP remained more or less unchanged at around 38 per cent. Altogether, the budget has continued to show a surplus. Although the budgets adopted in 1987 and 1988 foresaw slight deficits, the additional non-budgeted tax revenues resulting from the improvement in the business climate enabled the authorities to pursue a policy of reducing government debt, while still achieving a surplus[6]. Under the effect of curbs on new loan issues and the accelerated amortisation of past loans, the State's gross debt, which was 9.5 per cent of GDP in 1984, was probably down to under 7 per cent in 1988.

The broad fiscal-policy thrust of recent years has been maintained for 1989. The budget again included a substantial tax-relief package, including increases in personal income tax brackets and a further reduction in corporation tax. The latter has been brought down in stages from 40 per cent in 1986 to 34 per cent in 1989.

Table 5. **Central government budget**

LF billion

	1987 Outturn	1988 Budget voted	1988 Provisional outturn[1]	1989 Budget voted
Ordinary budget				
Receipts	85.9	84.4	92.5	89.4
Expenditure	74.7	77.3	81.9	80.7
Balance	11.2	7.1	10.6	8.7
Extraordinary budget				
Receipts	0.4	0.6	0.1	0.1
Expenditure	11.5	8.2	10.6	8.2
Balance	−11.1	−7.5	−10.5	−8.0
Total budget	0.1	−0.4	0.1	0.7

1. After appropriations resulting from unexpected gains in receipts.
Source: Ministry of Finance.

Taken together, these measures are expected to reduce taxes by some LF 1.7 billion, or 0.5 per cent of GDP. Expenditure, on the other hand, should overshoot the budget target by LF 1.5 billion. This is due to the trend in ordinary expenditure which has been pushed up by the rise in civil service pay and pensions as well as in social-assistance transfers. Extraordinary expenditure, i.e. expenditure to finance public infrastructure investment, has been maintained in the 1989 budget at its level voted in the 1988 budget (Table 5). Despite the new tax-relief measures and expenditure increases, the budget balance is expected to remain positive, because of the buoyancy of economic growth. So the process of public debt reduction ought to continue.

Recent trends and short-term prospects

The Luxembourg economy displayed great vigour in 1988, with GDP growth exceeding 5 per cent[7], mainly under the impetus of foreign demand. The rise in orders for Luxembourg steel products led to a surge in exports. This favourable trend would seem to have carried through to the early months of 1989. Private consumption growth remained brisk, boosted by the tax-relief measures and higher real wages. Despite a decline in gross fixed capital formation in industry due to the completion of certain projects, particularly in the chemical sector, total investment continued to rise, owing to higher capital expenditure in the services and construction sectors. As in 1987, inventory building also helped to stimulate activity. The first few months of 1989 suggest that, along with its main neighbours, Luxembourg has been experiencing a slight resurgence of inflationary pressures, mainly as a result of the rise in the prices of oil products, some food items and services such as medical care and medicines. Thanks to the pick-up in the iron and steel industry, the trade deficit, which had widened quite substantially in 1987, narrowed by LF 4 billion in 1988 according to first estimates (Table 4). The services surplus was helped by a continuing expansion of activity in this sector. All told, the current payments surplus, slightly down between 1986 and 1987, probably widened in 1988.

In the wake of outstanding performance in 1988, the outlook for the Luxembourg economy remains good, although less brilliant, reflecting some slowdown in manufacturing activity due to a progressive deceleration in export growth in the wake of a slightly less buoyant international climate. Growth of the financial sector should however continue to prove robust. Private consumption should grow at a fast pace, thanks not only to the cuts in personal income tax, but also to the wage increases awarded in 1988 and at the beginning of 1989. Investment growth, especially in industry, could accelerate slightly in 1989. Stockbuilding is not expected to contribute positively to real growth, and the external contribution ought to decline. All in all, GDP growth could be maintained at around 3½ per cent in 1989,

Table 6. **Short-term prospects**[1]

	1987 current prices		Annual change (volume)			
	LF billion	As % of GDP	1987	1988	1989	1990
Private consumption	132.2	59.1	3.1	3.2	3.4	3.1
Public consumption	37.3	16.7	3.6	2.5	1.5	1.5
Gross fixed capital formation	50.5	22.6	5.2	3.0	4.0	3.2
Final domestic demand	219.9	98.4	3.7	3.1	3.2	2.9
Change in stockbuilding[2]	2.2[3]	1.0	3.6	1.1	0.0	0.0
Total domestic demand	222.1	99.3	7.5	4.0	3.0	2.7
Change in foreign balance[2]	1.5[3]	0.7	−4.2	1.3	0.5	0.2
Exports of goods and services	225.2	100.7	4.6	7.9	5.5	4.4
Imports of goods and services	223.7	100.0	9.5	6.9	5.3	4.5
GDP	223.6	100.0	2.7	5.2	3.4	2.7
Unemployment rate			1.6	1.4	1.4	1.4
Private consumption deflator			2.9	1.4	2.8	2.4
GDP deflator			−1.1	1.8	2.5	2.4

1. SNA definitions.
2. As a percentage of GDP in previous period.
3. Actual amount of stockbuilding and foreign balance.
Source: OECD, *Economic Outlook*, No. 45, 1989.

decelerating slightly to 2¾ per cent in 1990. Despite a certain slackening in line with activity, employment growth could still be relatively brisk, and the unemployment rate could stay at its low level of 1988. While inflation will clearly accelerate in 1989, the increase would appear unlikely to exceed that experienced by Luxembourg's main trading partners.

III. Luxembourg's financial markets: developments and outlook

Organisation of Luxembourg's financial markets

Institutional features

A number of factors have played a part in shaping the organisation and structure of Luxembourg's financial markets. The more important of these are the small size of the domestic market, the oft-repeated determination of the authorities to open up the economy; the Grand Duchy's social and political stability; its central geographical position within the European Community; the presence of several EEC institutions; and, finally, such special features as a multilingual population. Luxembourg is indeed highly exposed to the outside world. In the field of finance, one of the most noteworthy aspects of this openness is its monetary association with Belgium in the framework of the Belgian-Luxembourg Economic Union (BLEU). The protocol between the two states makes Belgian banknotes legal tender and redeemable in the Grand Duchy (though not the reverse). It also provides for monitoring of the issue of notes and coinage by Luxembourg[8]. The protocol stipulates that exchange rates *vis-à-vis* third countries are to be set by mutual agreement, but does not formally establish any equivalence between the two currencies. While, in theory, Belgian and Luxembourg francs may differ in value, this has in fact only happened during the crisis of the 1930s. Responsibility for implementing the exchange-rate policy adopted in the framework of the Belgian-Luxembourg monetary association lies with the Institut belgo-luxembourgeois de change (IBLC) which supervises the application of the foreign-exchange regulations. Responsibility for intervention on the foreign-exchange market in line with EMS mechanisms lies with the Banque Nationale de Belgique. The existence of a two-tier foreign-exchange market since 1955, a regulated market for commercial transactions and services and a free market for all other capital transactions, serves to avoid, at times of exchange rate pressure, recourse to stringent controls on capital flows; such restrictions would be contrary to Luxembourg's traditionally very liberal policy with respect to capital movements. However, in agreement with the Belgian authorities, the Grand Duchy has undertaken, in the context of the effective implementation of the European Directive on the liberalisation of capital movements and in the framework of the strengthening of the European Monetary System, to phase out the two-tier foreign exchange market by 31st December 1992. Maintenance of a strong-currency policy within the EMS since the 1982 devaluation has subsequently prevented the emergence of large differentials between the two rates[9].

Another feature of Luxembourg's financial market is that the country does not have a central bank as such or an independent monetary policy that constrains the banking system. The Institut Monétaire Luxembourgeois (IML), created in 1983, nonetheless has some of the attributes of a bank of banks. Its task is to put out monetary signals, to see to the smooth working of the financial market, to help keep the value of the currency stable and to fulfil commitments and exercise rights resulting from existing international agreements (within the IMF, for instance) or any future agreements (particularly should European monetary integration become a reality). The IML is not, however, a central bank in the true sense of the term, since it does not, in practice, control the growth of credit by way of an organised money market or by tightly regulating money supply (through credit controls or compulsory reserve requirements). While not putting into question the agreements resulting from the BLEU, Luxembourg has nonetheless created an institution and regulatory framework that would allow it to pursue, if need be, an independent monetary policy[10] with a view to ensuring economic and monetary stability.

The dominance of the international financial market over the domestic market

The small size of the domestic financial market is due not only to the small size of the country, but also to the very low level of gross public debt as a result of rigorous management of the public finances. An examination of the structure of the Luxembourg financial market reveals the preponderance of international activity over domestic market activity. In 1987, for instance, foreign currencies accounted for nearly 90 per cent of lending institutions' balance sheets (Table 7, bottom line). Furthermore, the high proportion of European currencies (the Deutschemark, Swiss franc and ECU) in the total, as well as the heavy concentration of Euro-liabilities and Euro-assets on Western European lenders are evidence of the marked specialisation of the Luxembourg market. The geographic origins of lending institutions established

Table 7. **The position of Luxembourg banks on Euromarkets compared with that of banks in a 15-country area monitored by the BIS**

Percentage of total

	Assets				Liabilities			
	End of period							
	1978 Q4	1980 Q4	1985 Q4	1988 Q3	1978 Q4	1980 Q4	1985 Q4	1988 Q3
Banks in monitored area[1]								
Eurocurrencies in US$ billion of banks in monitored area	502.5	751.2	1 119.5	1 718.9	510.8	801.4	1 196.0	1 862.5
1. Geographical breakdown (%)								
Western Europe	57.4	55.4	48.3	44.6	58.8	55.3	51.3	51.6
Eastern Europe	6.3	5.2	3.4	3.0	3.1	1.7	1.6	1.3
Latin America	5.9	7.5	6.5	3.7	3.5	2.9	1.3	0.8
United States and Canada	6.2	6.9	14.2	13.8	8.9	8.9	17.0	14.0
Other	24.2	25.0	27.6	34.6	27.1	31.3	28.5	32.3
2. Foreign currency breakdown (%)								
US$	67.6	69.0	63.9	54.6	68.2	68.4	66.1	54.9
DM	19.4	16.3	14.0	14.7	18.2	15.6	12.9	15.9
SF	5.6	6.6	6.8	6.0	5.5	6.4	6.2	5.7
ECU	—	—	3.4	5.0	—	—	2.9	4.1
Other	7.4	8.1	11.9	19.7	8.1	9.6	11.9	19.4
3. Sector breakdown (%)								
Banks	74.7	74.2	73.2	78.0	88.1	86.1	81.2	82.0
Non-banks	25.3	25.8	26.8	22.0	11.9	13.9	18.8	18.0
Banks in Luxembourg								
Eurocurrencies in US$ billion of Luxembourg banks	58.3	87.3	106.5	172.7	54.5	83.5	98.2	160.0
1. Geographical breakdown (%)								
Western Europe	70.5	70.6	69.4	69.2	82.0	80.7	77.4	76.0
Eastern Europe	6.9	6.6	5.7	5.1	1.1	1.2	3.1	2.2
Latin America	7.4	8.5	7.0	4.3	2.6	1.3	0.7	0.6
United States and Canada	3.1	2.7	6.0	6.3	2.7	2.9	3.6	3.4
Other	12.1	11.6	11.9	15.1	11.6	13.9	15.2	17.8
2. Foreign currencies breakdown (%)								
US$	37.7	38.5	37.9	35.1	44.8	45.5	45.1	33.4
DM	50.6	45.1	40.4	37.8	45.3	38.2	32.5	38.1
SF	5.7	9.2	8.5	8.7	5.0	8.6	9.2	8.8
ECU	—	—	4.1	4.2	—	—	3.4	3.4
Other	6.0	7.2	9.1	14.2	4.9	7.7	9.8	16.3
3. Sector breakdown (%)								
Banks	44.1	48.5	50.8	60.7	86.4	87.2	81.8	73.6
Non-banks	55.9	51.5	49.2	39.3	13.6	12.8	18.2	26.4
4. Share of Luxembourg in Eurocurrencies of monitored area (%)	11.6	11.6	9.5	10.0	10.7	10.4	8.2	8.6
Memorandum item:								
Share of foreign currency transactions in balance-sheet total	86.5	86.0	88.5	86.7	84.4	84.8	87.1	86.1

1. The monitored area comprises the following countries: Belgium, France, Germany, Italy, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom, Austria, Denmark, Ireland and, since end-1983, Finland, Norway and Spain.

Source: Institut Monétaire Luxembourgeois.

Table 8. **Geographical origin of banks and savings institutions established in Luxembourg**

	At end of period				
	1970	1975	1980	1985	1988
Number of establishments	37	76	111	118	143
of which:					
Luxembourg/Belgium	14	12	12	12	16
Germany	3	16	29	29	36
Scandinavia	—	3	14	16	17
Switzerland	4	5	7	7	12
France	4	5	6	7	9
Italy	—	1	5	8	9
United States	7	15	11	11	9
Japan	—	2	4	6	8
Other	5	17	23	22	27

Source: Institut Monétaire Luxembourgeois.

in Luxembourg testify to this international, and more particularly European, focus (Table 8). Of the 143 establishments located in Luxembourg at end-1988, only 16 were of Belgian or Luxembourg origin, and over 70 per cent of the others were European. The Luxembourg stock exchange too is strongly internationally oriented. Over three-quarters of listed quotations are for Eurobonds, while close to 60 per cent of all public Eurobond issues are quoted on the Luxembourg exchange. This specialisation is even greater in the case of ECU-denominated bonds, with quotation of almost 90 per cent of all flotations. Last, the international thrust of the Luxembourg financial market is also reflected in the location of such institutions as CEDEL, which acts as an international clearing house for securities transactions, and such European financial institutions as the European Investment Bank, the Court of Auditors of the European Communities and the legal headquarters of the European Monetary Co-operation Fund.

Structural change

Far-reaching change

The current structure of Luxembourg's financial markets reflects their high degree of adaptability to changes in the international environment. The growing importance of the financial sector in Luxembourg reflects the far-reaching changes that are taking place in the economy, with the financial sector replacing the declining iron and steel industry as the main focus of activity. This structural adjustment, which was reviewed in an earlier survey[11], is evidenced by the evolution of the structure of production, as well as by the trend of employment and the external accounts. From 3.4 per cent in 1970, the share of financial institutions in total value added rose to 14.3 per cent in 1987. Its share in total employment, 3.1 per cent in 1970, stood at 7.7 per cent in 1987. The international activity of Luxembourg's banking sector has also boosted the current payments position. The surplus on services widened substantially between 1970 and 1986, as a result of net investment income and the rapid growth of banking services, mainly commission-earning activities. The surplus on net investment income was thus up to 14.6 per cent of GDP in 1986, compared to 2.3 per cent in 1970. Over the same period, the services balance excluding factor incomes (which includes commissions) moved up from 3.9 per cent to 12.5 per cent of GDP. Last, it should be said that the financial sector is one of the prime sources of tax revenue (providing around 20 per cent of the total).

Active government support

The growth of the Luxembourg financial sector owes much to the active support provided by the authorities, concerned to offset the relative decline of the iron and steel industry. While there has been no "big bang" as such, they adapted the liberal legislative and regulatory system with a view to enhancing the Grand Duchy's appeal to banks and their private customers. The absence of restrictions on capital movements and of entry barriers for foreign institutions, the system of universal banks and equality of treatment of domestic and foreign establishments by virtue of the "national treatment" principle are all indicative of the resolutely international stance of Luxembourg's financial legislation. The legislative framework has been modified to meet the changing requirements of the financial market, while taking due account of EC regulatory directives. The 1983 and 1988 Acts, setting out the legal and tax rules for mutual funds, gave statutory recognition to open-end investment companies as well as umbrella funds in Luxembourg. These Acts also ensured that the funds were in compliance with the relevant EC directive. In this way, with the European seal of approval, authorised Luxembourg mutual funds will be able, as of 1st October 1989, to market their services throughout the European Community without having to seek additional approval.

One of the special attractions of the Luxembourg financial market from a tax standpoint is that there is no withholding tax on dividend or interest payments for non-residents and that stockmarket transactions are not taxed. Here too, changes in the taxation system – corporation tax reduced from 40 to 34 per cent between 1987 and 1989, the abolition of stamp duty on securities issues – mean that the Grand Duchy now ranks as one of the world's most attractive financial markets[12]. The Commission pour l'Amélioration de l'Infrastructure de la place du Luxembourg (CAIL) also investigates ways and means of improving the financial market, such as the adoption, in 1987, of the post mortem power of signature principle[13] ("mandat post mortem"), thereby eliminating a serious obstacle to competitiveness in the field of estate management. Legislation adopted in 1989 confirming the right to bank secrecy *vis-à-vis* the tax authorities, except in the event of criminal activity, is a further advantage for the Grand Duchy. The creation, in 1983, of the IML, the tighter controls on mutual funds introduced with the Act of 30th March 1988, along with a package of strict prudential rules, have also enhanced the stability and soundness of the Luxembourg financial market. These rules include minimum net capital requirements for financial establishments setting up in the Grand Duchy; Luxembourg standards are considerably more stringent than those laid down in EC directives[14]. This determination to tighten surveillance of the Luxembourg financial market has also been reflected over the recent past in the finalisation of draft legislation to invest the government's stock-market watchdog body with greater powers.

Rapid adjustment to changes in the international financial market

Luxembourg's importance as a financial market may be traced back to the strong growth of Euromarkets in the 1970s. Their spectacular development was connected with the emergence of serious financial disequilibria on the international front and the measures taken to tackle them. Between 1973 and 1980 average annual growth of Euro-assets of the banks in the fifteen European countries for which statistics are compiled by the Bank for International Settlements was over 20 per cent. The growth of this market may be ascribed to a surge in short-term capital flows generated by oil-producer trade surpluses looking for a home and a steep increase in the medium- and long-term demand for financing by some governments and a large number of major firms. Finally, the issue of variable rate loans (Libor + spread) by international banking syndicates has been particularly buoyant, since these are not bound by domestic market constraints, and earnings on the foreign-currency deposits financing them are not taxable. Banks, particularly those established in Luxembourg, bridged the gap between supply and demand by "converting" these short-term resources into medium- and long-term funds. The strong expansion in the number of foreign banks established in the Grand Duchy, from 23 in 1970 to 99 in 1980, reflects in part the way in which Luxembourg managed to turn this development to its advantage. In terms of Euro-assets, Luxembourg's banks experienced considerably higher growth than banks monitored by the BIS taken together – over 30 per cent between 1973 and 1980, with the market share of banks established in the Grand Duchy rising from 7 per cent to almost 12 per cent over the period.

A salient feature of the Luxembourg financial market (Table 7) is the concentration of its operations on Western Europe. The heavy presence of German and Swiss banks (Table 8) and the importance of these two countries' currencies serve to explain the preponderant role of these two Euro-currencies in Luxembourg banking transactions. This geographical concentration derives too from the close links of foreign banks operating in Luxembourg with their commercial and industrial customers back home, which is why the share of non-banks in total bank assets is greater in Luxembourg than in the total assets of banks monitored by the BIS. That share went up from 16 per cent in 1973 to over 23 per cent in 1980. Four-fifths of these credits were refinanced by way of interbank borrowing. The traditional European financial centres, such as Switzerland, the United Kingdom and Germany, play a special role here. Part of the funds deposited with Swiss banks, for instance, is invested on the Euromarket with Luxembourg banks and accounts for a substantial proportion of the latter's total interbank liabilities (Diagram 1).

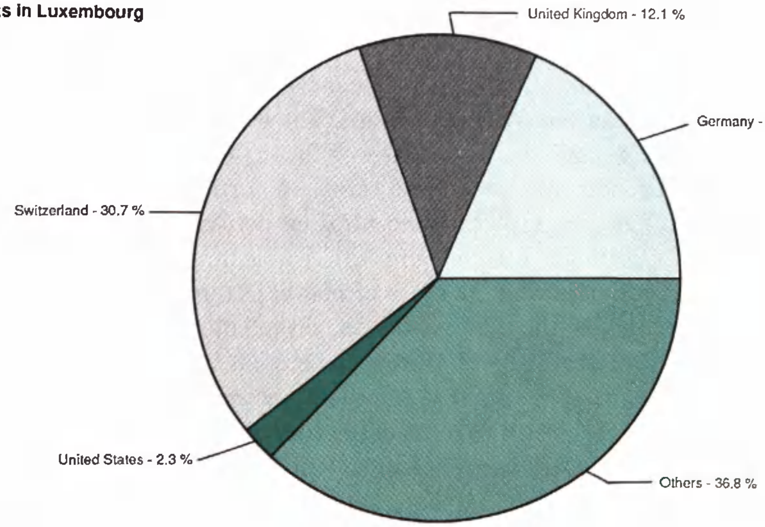
The international debt crisis that began in the early 1980s altered the whole face of international banking and financial activity. By bringing to light the liquidity risk that "converting" short-term borrowing into long-term lending could pose for banks, as well as the solvency problems of borrowing countries, the crisis prompted the international banks and, more particularly, Luxembourg banks to adjust to the new market conditions. Because the Luxembourg capital market is so geared to Europe, the appreciation of the dollar, against both the Deutschemark and other currencies, was a factor in narrowing the Euromarket share of Luxembourg banks between 1980 and 1985. Its subsequent depreciation probably had the opposite effect between 1985 and 1987. Annual average growth of Luxembourg banks' Euro-assets (in dollar terms) was indeed only one-third as rapid between 1980 and 1987 as between 1973 and 1980.

Responding to the banks' liquidity problems caused by the crisis of the early 1980s, the process of disintermediation observed on domestic financial markets spread to Euromarkets. As a result, there was a relative reduction in bank financing and a corresponding expansion in the international bond market. Total public Eurobond issues surged from $18 billion in 1980 to $143 billion in 1987, boosting the development of the Luxembourg Stock Exchange which specialises in securities of

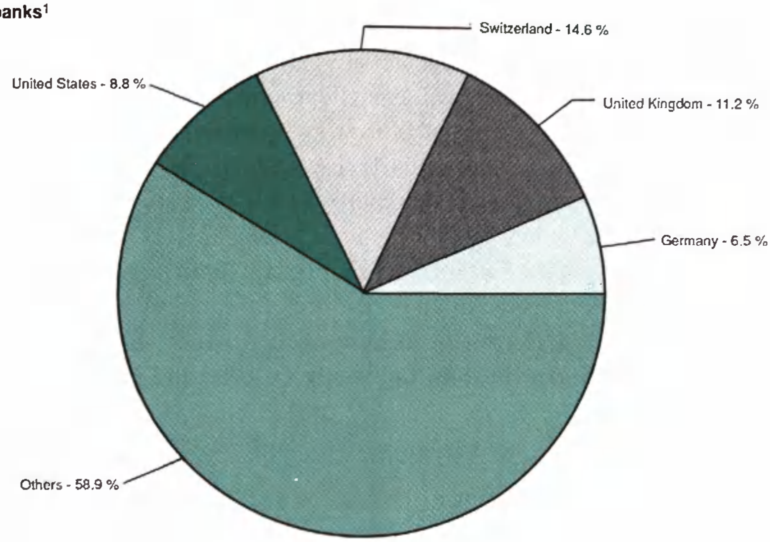
Luxembourg

Diagram 1. BREAKDOWN OF INTERBANK REFINANCING ON THE EUROMARKET 1987

Banks in Luxembourg



All European banks[1]



1. Coverage : Germany, Belgium, France, Italy, Luxembourg, Netherlands, United Kingdom, Sweden, Austria, Denmark and Ireland and, since end-1983, Spain, Finland and Norway.

Source: = Institut Monétaire Luxembourgeois.

Table 9. **Trend in the contingency reserves of Luxembourg's banks**

LF billion

	1980	1981	1982	1983	1984	1985	1986	1987
Capital	65	77	84	96	107	115	118	125
Reserves	40	45	53	62	66	75	85	93
Provision against geographic risks	n.a.	n.a.	36	60	107	140	172	176
Other[1]	49	80	105	128	134	165	167	180
Total	154	202	278	346	414	495	542	574
As percentage of total liabilities and shareholders' equity	3.9	4.0	4.6	5.2	5.7	6.5	6.8	6.6

1. Including, in particular, subordinated debt similar to net capital and provision against specific non-geographic risks.
Source: Institut Monétaire Luxembourgeois.

this type. Faced with the possibility that some debtors could default because of the international debt problem, the initial response of Luxembourg's banks was to increase their equity capital. From 1980 to 1987, the Grand Duchy's banks and savings institutions increased their contingency reserve ratio from 3.9 per cent to 6.6 per cent of total liabilities (Table 9). Geographical contingency reserves were increased fivefold between 1982 and 1987, accounting in the latter year for over 30 per cent of total contingency reserves. A second consequence of the international debt crisis was that Luxembourg acquired a firmer place in the financial markets of the industrialised countries. Since 1984, Luxembourg banks, along with those from elsewhere in Europe, have moved steadily to disengage from Latin America. With the strengthening of its net capital and its relatively small exposure to high-risk countries, based on IML figures the Grand Duchy's banking system already satisfies the international standards proposed by the BIS Committee on Banking Regulations and Supervisory Practices (the Cooke ratio).

Because of the slowdown of banking activity by institutions operating on the Luxembourg financial market due to Euromarket developments, the Grand Duchy has sought to diversify the activities of its financial institutions. Banks are making efforts to step up their private banking business, i.e. the range of their private customer services and especially commission-earning off-balance-sheet transactions. Several indicators testify to the scale of this development. Examination of the sectoral breakdown of Luxembourg banks' Euromarket liabilities reveals that the share of business with non-banks rose from 15 per cent in 1983 to almost 27 per cent by the end of the second quarter of 1988, enabling them to fund their activities. For the

Table 10. **Gross income of Luxembourg banks**

Percentage

	1981	1982	1983	1984	1985	1986	1987
Margin on interest	76.3	81.6	82.5	86.8	80.3	78.6	79.9
Income from foreign exchange transactions	15.5	8.5	6.8	1.8	5.5	2.5	3.3
Other income							
of which:							
Commission	4.7	3.9	5.1	6.3	7.2	9.3	9.9
Capital gains	1.4	4.1	3.6	3.1	5.6	8.4	4.3
Miscellaneous	2.1	1.9	2.0	2.0	1.4	1.2	2.6
Total	100	100	100	100	100	100	100

Source: Institut Monétaire Luxembourgeois.

aggregate sample of banks for which statistics are kept by the BIS, this share contracted from 20 to 19 per cent over the same period. Furthermore, net commission earnings of Luxembourg's banks and savings institutions rose from 5 per cent of gross income in 1983 to 10 per cent in 1987 (Table 10). Unlike interest margins, which still account for the bulk of income of Luxembourg's banks, these earnings are not in direct relationship with balance-sheet items and thus do not entail any costs in terms of equity capital, since they are payments for financial services. Last, there has been a rapid expansion in the number of Luxembourg mutual funds, from 76 in 1980 to 525 by end-1988; over the same period their total net assets increased from LF 118 billion to over LF 2 000 billion, or one-fifth of the Luxembourg banks' balance-sheet total. An important development in this sector has been the substantial expansion in open-end investment funds (SICAVs) since 1983, when the statutory measures enabling them to operate in Luxembourg were introduced. By end-1988 they accounted for over 40 per cent of mutual funds' total net assets and for over 55 per cent of their number.

The future of the Luxembourg financial market

After the successful adjustment and diversification phase of the past five years, Luxembourg has become a major, efficient and sound financial market and one which is set to play an important role, as evidenced by the ever-growing number of foreign banks setting up in the country. However, progress towards a single European market, and, in particular, the liberalisation of capital movements that is due to take place in the Community as from 1st July 1990, means that Luxembourg will almost certainly have to adjust again to changes in the international financial environment. Some harmonisation of taxes on savings within the European Community seems ultimately inevitable, if the Community's proclaimed goal of freeing capital movements is upheld. The German experience of levying a withholding tax on income from securities seems to suggest that, in the absence of controls, differences in tax treatment across countries lead to substantial capital flight in search of higher-yielding investments. Thus, whether as a result of market pressure or Community-wide negotiations, some harmonisation of the tax treatment of savings among EC countries appears likely.

In this connection, the choice of the optimal rate of tax on investment income depends on a number of constraints and objectives common to all EC countries, as well as on the need to reconcile the sometimes conflicting objectives of individual Member states. These constraints include the existence of financial markets outside the European Community which might provide a haven for savings, should taxation of investment income become the norm. In view of the major risk of capital flight such a measure implies – which would almost certainly have greater ramifications in Luxembourg than elsewhere – an extreme alternative might be to take savings completely out of the tax net. However, such a measure would not be without drawbacks, inasmuch as it would reduce the tax revenues of EC Member states and run counter to the principle of equal tax treatment of earned and unearned income, which could ultimately lead to less than optimal allocation of labour and capital. Moreover, zero-rate EC tax harmonisation would mean, in the specific case of Luxembourg, that its financial market would no longer benefit from the comparative advantage it enjoys by virtue of its specialisation in tax-free Euromarkets. While it is no doubt difficult to determine what the optimal tax rate on investment income should be, it is fair to say that were a non-zero tax rate on income from financial investments to be adopted and income from funds placed on Eurobond markets to be untaxed, one of the consequences of the liberalisation of capital markets could well be stronger growth in the demand for financial products of this kind, because of the greater number of agents with potential access to such attractive investment opportunities. Should things indeed develop along these lines, the Grand Duchy would be able to expand and enhance its financial role as a Euromarket specialist.

The Luxembourg financial market was one of the first to foresee the trend in banking towards advisory and financial services which allow better account to be taken of individual customer needs. Here, Luxembourg's strategy could be to adapt to the development of the financial system, so as to reinforce its position on profitable markets, while maintaining a policy of diversification, so as to become less reliant on the international conjuncture. Thus, despite the boom in securitisation since the stock-market crisis of October 1987, the new financial instruments (such as futures and options) have been slow to catch on in Luxembourg. The growing interest evinced in these products may be ascribed to efforts to hedge against interest- and exchange-rate risks. Keener demand is thus likely to be seen for them in the future from the traditional customer base of Luxembourg's banks, as well as from the new customers whom the liberalisation of capital markets may be expected to generate. To respond to this potential demand calls for advance planning, since the sophisticated nature of these instruments demands manpower with the expertise to handle a variety of requests.

More broadly, the need for Luxembourg to acquire the services of skilled staff, able to adapt to the development of new products, is a direct consequence of its financial market strategy of stepping up its private banking activities. In addition to adjustment in terms of product diversification and manpower training, competitiveness among the world's different financial markets may also be measured in terms of the cost of the services provided. One effective way of improving Luxembourg's competitive position would be to introduce investment programmes to enhance productivity and rationalise management. Charging lower brokerage fees for small operators than other rival markets would, for instance, help to boost the growth of the Luxembourg market relative to the other European financial centres which tend to specialise in larger-scale transactions.

Notes and references

1. Growth of world crude steel output increased to 6 per cent in 1988 from 2.7 per cent in 1987.
2. This redeployment was effected with assistance from the Société Nationale de Crédit et d'Investissement.
3. The advance instalment system was a one-time real wage increase of 1.5 per cent awarded in 1986 so as to offset losses due to the lagged adjustment of wages to prices under the wage escalator mechanism. This increase, which was first introduced in 1972, had been discontinued in 1981.
4. Depleted in 1983, reserves were up to LF 5.6 billion by 1987, or 2.5 per cent of GDP (European System of Integrated Economic Accounts).
5 The reduction in taxation was achieved by cuts in personal income tax, in the solidarity tax levied on households and businesses (used to finance unemployment benefits) and in tax rates on company profits. Last, the subscription tax and stamp duty on bond issues were abolished.
6. Preliminary results for 1988 show a surplus of around LF 2.1 billion (before appropriations resulting from unexpected gains in receipts).
7. Given the importance of banking in Luxembourg, its national-accounts treatment raises problems. On standardised accounting definitions, imputed banking-sector output is treated as intermediate consumption by the other sectors and hence as not contributing to GDP. On the other hand, the balance on interest paid and received from abroad is deemed to be a component of GNP. Thus the difference in Luxembourg between GNP and GDP is considerable. To resolve this problem, in calculating GDP, the Luxembourg National Statistics Institute decided to separate out from total banking services those that are provided to residents (treated as an intermediate consumption) and those provided to non-residents (treated as final consumption and hence included in GDP). For further discussion see G. Als, "The nightmare of economic accounts in a small country with a large international banking sector", *Review of Income and Wealth*, 34, 1, March 1988, pp. 101-110.
8. The issue ceiling is set with reference to two variables: the ratio of the population of Belgium to that of Luxembourg and the amount of notes and coinage issued by Belgium.
9. After peaking at an annual average of over 7 per cent in 1982, the differential between the two markets has since remained at under 2 per cent. See Diagram 10 in the accompanying *Survey* of Belgium.

10. Articles 22, 28 and 29 of the Act of 20th May 1983 establishing the IML constitute Luxembourg's statutory framework for an independent monetary policy.
11. *OECD Economic Surveys, Belgium-Luxembourg*, Paris, 1986.
12. The lowering of corporation tax in the United Kingdom in 1984 was one of the factors that impelled Luxembourg to introduce a similar measure so as to enhance the appeal of its financial market.
13. The post mortem power of signature for heirs does away with some of the capital transfer problems associated with inheritance.
14. The Luxembourg standard is a minimum capital of LF 350 million, whereas the Directive stipulates only 5 million ECUs or just over LF 200 million.

Annex I

A macroeconomic wage equation for Belgium

Specification

In line with the other wage equations estimated for individual countries in the OECD INTERLINK model, a modified Phillips-curve equation has been estimated for Belgium. It should be noted that the basic hypothesis underlying the Phillips curve is that (real) wage growth is a function of the unemployment rate. Accordingly, the starting point for the specification of the equation is:

$$\dot{WR} = f\,(\sum_{1} a_i \dot{P}_{-i},\ g(UNR)) \qquad (1)$$

where WR is wages and salaries per employee in the business sector[1],
P is the price level,
UNR is the unemployment rate (based on OECD, *Labour Force Statistics*),
f and g are functions and a dot indicates a logarithmic difference.

Three modifications to the basic specification have been undertaken. First, it is hypothesised that wages vary in line with realised cyclical labour productivity growth, independent of its trend value which should be manifest in the equation's constant. Second, since the wage equation is a reduced-form equation deriving from structural labour-demand and labour-supply relationships, it is necessary to specify the price-inflation term quite carefully. Employees will view the wage offered in consumer-price terms, while employers will reckon in producer-price terms. Therefore,

$$\dot{P} = \emptyset\ \dot{PCP} + (1-\emptyset)\dot{PGDPB} \qquad (2)$$

where PCP is the private consumption deflator, adjusted for "index skips"[2],
PGDPB is the business-sector value-added deflator and
Ø is a constant strictly between zero and unity.

Finally, allowance has been made for the possibility that employers' social-security contributions may not be borne entirely by employers: increases in rates may reduce net-of-contribution wages and vice-versa.

Incorporating these changes in (1) yields the following:

$$\dot{WR} = b + \emptyset \sum_{i=0}^{m} d_i \dot{PCP}_{-i} + (1-\emptyset) \sum_{j=0}^{n} h_j \dot{PGDPB}_{-j} + \sum_{k=0}^{p} c_k (\dot{GDPBV/ETB})_{-k} + m(WSSE_{-1}/\dot{WR}_{-1}) + g(UNR) \qquad (3)$$

where GDPBV is constant-price value added of the business sector at factor cost, ETB is total business-sector employment and WSSE is total compensation per business-sector employee (including employers' social-security contributions).

It is expected that b, d_i, h_j, c_k will be positive and m negative and that $\delta\dot{WR}/\delta UNR < 0$.

Estimation results

Because the equation was estimated in part for insertion in INTERLINK, which is a semi-annual model, the data were semestrialised prior to estimation[3]. Preliminary estimation of (3) was undertaken in order to fix the values of m, n and p. The results easily confirmed that the optimal choice is m=0, n=1 and p=0. The estimated value of h_0 was also not significantly different from zero. The next step was to test whether the Phillips curve is vertical, that is whether $\Sigma d_i + \Sigma h_i = 1$. This constraint was easily accepted by the data. The final step was to decide on the functional form in which the unemployment rate should enter the equation: the choice revolves around a linear versus a logarithmic specification; in addition, various lags and moving averages were tested. The linear specification clearly dominated its logarithmic counterpart, but there was little to choose from amongst the unlagged, once-lagged or moving-average versions. For simplicity as well as parallelism with other country models, the unlagged specification was retained. Thus, $g(UNR) = g_* UNR$.

The estimation results were as follows:

$$\begin{aligned}\dot{WR} = \; & 0.0198 + 1.0000\,\dot{PCP} + 0.6660\,(\dot{PGDPB}_{-1} - \dot{PCP}) + 0.7830\,(\dot{GDPBV/ETB}) \\ & (3.43) \qquad (\text{imposed}) \qquad (4.59) \qquad\qquad\qquad (5.73) \\ & - 0.6249\,(WSSE_{-1}/\dot{WR}_{-1}) - 0.0020\,UNR \\ & (1.81) \qquad\qquad\qquad (3.66)\end{aligned}$$

$\bar{R}^2 = 0.7304$ SEE = 0.0105 DW = 1.88 SMPL 1971S2-1987S2

The results show that, except in the very short run, output prices in fact dominate consumer prices, as one might expect for a small, open economy. This is an element of flexibility: in the event of an unfavourable external supply shock, labour will share the burden with capital. It can also be seen that increases in employers' social-security contributions do indeed cause net-of-contribution wages to decline, another element of labour-market flexibility. The implied "non-accelerating-rate-of-wage-inflation rate of unemployment" is[4]

$$-(b+(c-1)*\mathrm{mean}(\dot{(\mathrm{GDPBV/ETB})}))/g$$

which, using the estimated coefficient values, is equal to 8.4 per cent.

Notes

1. Including the statistical adjustment in the national accounts.
2. Account has been taken of the three "index skips" of 2, 2 and, implicitly, 1.85 per cent of 1984, 1985 and 1987 in the estimation.
3. See OECD, *Analytical Data Base Reference Manual*, Economics and Statistics Department, 1988.
4. The so-called "NAWRU" (U^*) can be calculated by setting wage growth equal to inflation, subtracting average productivity growth from the constant and assuming that in equilibrium there are no changes in the "terms of trade" nor in employer social-security contributions. Thus, $0=b+(c-1)*\mathrm{mean}(\dot{(\mathrm{GDPBV/ETB})})+gU^*$
which reduces to $U^*=-(b+(c-1)*\mathrm{mean}(\dot{(\mathrm{GDPBV/ETB})}))/g$.

Annex II

Measuring the differentials between unit labour cost levels in manufacturing[1]

The traditional method of analysing competitiveness, using indexes of relative unit labour costs in manufacturing in a common currency, does not provide information on absolute cross-country differentials between levels of labour costs. These indicators only measure movements in relative competitiveness by reference to a specific period. One of the main problems in calculating the level of individual countries' unit labour costs is estimating output levels in common-currency terms. Though not an ideal solution, the use of purchasing-power-parity (PPP) exchange rates does provide an answer to the problem for a base year[2]. Thus the indicator of the level of individual countries' labour costs is defined as the ratio of total nominal labour compensation in manufacturing[3], expressed in dollars, to real value added in that sector translated into common currency by means of the PPP exchange rate.

$$\text{ULCDi} = (\text{ERAi} * \text{Ci}) / (\text{PPPi}^{85} * \text{Qi})$$

where	ULCDi	is the level in dollars of each country i's common-currency unit labour costs,
	ERAi	the dollar exchange rate of country i's currency,
	Ci	total nominal compensation in manufacturing,
	PPPi^{85}	country i's 1985 purchasing-power-parity exchange rate, and
	Qi	real value added in manufacturing in local-currency terms.

Constructed in this way, the series can be used to calculate, by means of a weighting system[4], the average costs of competitors for each country. The results provide the basis for the comparisons set out in Table 10.

While this approach gives some idea of relative cost levels across countries, great care is needed in analysing the results, since the information supplied depends very much on the PPP exchange rates used. The difficulties involved in calculating these variables are considerable and the resulting differences between estimates made for various reference years substantial. Moreover, these PPP exchange rates do not relate only to internationally-traded goods. What is more, the data, which in principle should be used for cross-country comparisons between the various GDP components, include indirect tax differentials between countries. In view of this distortion, which does not affect foreign trade, the solution adopted for purposes of international comparisons of cost levels poses problems. The results in Table 10 are thus no more than indicative and should be seen as very approximate.

Notes

1. The approach described here is based on an article by P. Hooper and K.A. Larin, "International comparisons of labour costs in manufacturing", Board of Governors of the Federal Reserve System, International Finance Discussion Paper No. 330, August 1988.
2. Purchasing-power-parity exchange rates are currency translation rates used to equate the purchasing powers of different currencies. In other words, a given sum of money translated into local currencies by means of the PPP exchange rate will buy the same basket of goods and services in all the countries. The PPP exchange rates used here are those calculated for 1985 by the OECD and Eurostat for a set of representative manufactures.
3. The figures used are those compiled by the Bureau of Labor Statistics, US Department of Labor.
4. The weightings are those used to calculate the OECD competitiveness indicators published in the *OECD Economic Outlook*, redefined for 15 OECD countries and two South-East Asian economies.

Annex III

A simple model of Belgian interest-rate determination

Specification

A simple model has been chosen to describe Belgian interest-rate determination. It is based on the following:

$$I \;= I^{*} + ID \qquad (1)$$
$$ID = f(\underline{X}) \qquad (2)$$

where I is the interest rate,
ID is the interest rate differential,
$\underline{X}$ is a vector of its determinants and
an asterisk indicates an exogenous foreign variable.

Thus, after substitution of (2) into (1) we have:

$$I = I^{*} + f(\underline{X}) \qquad (3)$$

In a small open economy, foreign interest rates should go a long way in the determination of domestic rates, especially in light of the EMS exchange-rate mechanism. The interest differential is assumed to be a function of three factors. The first is the inflation differential: differential rates of inflation should presumably influence nominal interest rates relative to those elsewhere. A second consideration is the condition of the current account: the greater the need for the nation to resort to foreign souces of savings, the greater should be the price demanded by the market for such borrowing. The final determinant of the interest differential considered here, of particular relevance in the Belgian case, is the state of the public finances, specifically the level of net borrowing by the general government[1]: the greater are the financing needs of the exchequer, the greater is likely to be the margin required.

Therefore, (3) can be elaborated as follows:

$$I = k + I^{*} + a(P\text{-}P^{*}) + b(CB/GDP) + c(D/GDP) \qquad (4)$$

where CB is the current balance,
D is the general-government deficit,
GDP is gross domestic product and
k, a, b, c are parameters such that a, $c \geq o$; $b \leq o$.

In fact, for estimation purposes several of the constraints implicit in (4) were relaxed, viz. the unit constraint on I*, as well as the constraint that the two inflation rates enter in differential form. In addition, lagged values were inserted to proxy expectations and adjustment lags. Three interest rates were considered, covering much of the range of Belgium's financial markets: the rates on day-to-day loans (IRSP), on three-month Treasury certificates (IRSG) and on central-government bonds (IRLG). The corresponding foreign rates chosen were German: the rates on day-to-day loans (IRSP*), on two-to-three-month Treasury bills (IRSG*) and on public-sector bonds (IRLG*). Inflation was measured by the respective consumer-price indices.

Estimation results

The national accounts data for GDP and D were interpolated in order to generate quarterly time series prior to estimation. Preliminary results showed that the unit constraint on I* could be rejected, but that the inflation-differential specification could only be rejected in the IRLG equation, where the German inflation rate did not seem to play a role. The results are given in Table A1, while a summary of short- and long-run multipliers is given in Table A2.

The hypotheses advanced receive strong support from the data: each of foreign interest rates, the inflation differential (or at least domestic inflation) and both the budget deficit and the current balance in relation to GDP influence the level of Belgian rates in a significant way. The adjustment mechanisms are, not surprisingly, much more rapid in each of the short-term-rate equations than in the bond-rate equation. Foreign rates are especially influential for the short-term instruments. As one would expect, public-sector borrowing rates are more sensitive to the government deficit in the long run than is the private-sector rate. However, the latter is the most affected by variations in the size of the current balance in relation to GDP.

These equations have been used to determine the contribution of each factor to the evolution of interest rates over the period (Table A3). However, the dynamics have been largely ignored: the effects of lagged dependent variables have been labelled "inertia". It can be seen that: *i)* the exogenous decline in foreign rates over the years 1981 to 1987 explains between a quarter and a third of the reduction in Belgian short-term rates; *ii)* the improvement in the state of the public finances explains a further one-third of the decline in the three-month Treasury certificate rate; *iii)* and the improvement in the current balance explains between one-quarter and one-third of the fall in short-term rates.

Finally, in order to eliminate the recently-observed interest-rate differential with Germany, the government deficit would have to be cut by approximately 7½, 3¾ and 3 percentage points of GDP for the public short-term rate, the public long-term rate and the private short-term rate, respectively.

Table A1. **Estimation results**

	Public short-term rate	Public long-term rate	Private short-term rate
Constant	1.6963	0.6557	1.5744
	(2.79)	(4.46)	(2.75)
Corresponding foreign rate	0.4703	0.2729	0.2678
	(4.35)	(5.43)	(4.10)
First lag		−0.2491	
		(4.57)	
Inflation differential[1]	0.1926		0.1396
	(3.58)		(2.60)
Belgian inflation		0.0175	
		(1.96)	
General-government deficit/GDP[2]	0.4527	0.0538	0.2501
	(4.73)	(3.17)	(3.91)
Current balance/GDP[3]	−1.2911	−0.1792	−1.3365
	(4.68)	(3.98)	(4.79)
Lagged dependent variables:			
First	0.6220	1.4800	0.5413
	(7.74)	(19.82)	(5.90)
Second		−0.6075	
		(8.86)	
Third	−0.4397		−0.2644
	(5.66)		(3.43)
RHO		−0.4755	
		(4.42)	
$\overline{R}^2$	0.9178	0.9952	0.8613
SEE	0.9753	0.2222	1.0835
DW/h	1.85/0.74	1.96/0.20	2.01/−0.07
SMPL	1971Q2-1987Q4	1971Q2-1987Q4	1971Q2-1987Q4

1. A two-quarter moving average.
2. Lagged two quarters in the equation for the public long-term rate and five quarters in that for the private short-term rate.
3. A two-quarter moving average in the equations for the public and private short-term rates.

Table A2. **Calculated multipliers**

	Public short-term rate		Public long-term rate		Private short-term rate	
	Short-run multiplier	Long-run multiplier	Short-run multiplier	Long-run multiplier	Short-run multiplier	Long-run multiplier
Corresponding foreign rate	0.47	0.58	0.27	0.19	0.27	0.37
Belgian inflation	0.19	0.24	0.02	0.14	0.14	0.19
Foreign inflation	−0.19	−0.24	..	..	−0.14	−0.19
General-government deficit/GDP	0.45	0.55	0.05	0.42	0.25	0.35
Current balance/GDP	−1.29	−1.58	−0.18	−1.41	−1.33	−1.85

Source: Calculated from the equations presented in Table A1.

Table A3. Factors determining Belgian interest rates

	Public short-term rate	Public long-term rate	Private short-term rate	Contribution of explanatory variables[1]																				
				Constant			Corresponding foreign interest rate			Belgian inflation			Foreign inflation			General-Government deficit			Current balance			"Inertia"[2]		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
1972-1976	7.4	8.1	5.9	1.7	0.2	1.6	2.1	0.2	1.7	1.8	0.1	1.3	−1.2		−0.8	2.0	0.2	0.9	−0.6	−0.1	−0.6	1.5	7.1	1.7
1977-1982	11.4	11.1	8.8	1.7	0.2	1.6	2.4	0.2	1.9	1.4	0.2	1.0	−1.0		−0.7	4.1	0.5	2.0	0.8	0.1	0.8	2.2	9.6	2.5
1983-1987	9.4	10.0	7.6	1.7	0.2	1.6	1.7	0.1	1.3	0.8	0.1	0.6	−0.3		−0.2	4.2	0.5	2.6	−0.3	−0.0	−0.3	1.4	8.8	2.0
1981	15.2	13.8	11.5	1.7	0.2	1.6	3.4	0.3	3.0	1.5	0.1	1.1	−1.4		−1.0	6.0	0.6	2.1	1.4	0.2	1.4	3.0	12.1	3.0
1982	14.1	13.4	11.4	1.7	0.2	1.6	3.1	0.1	2.3	1.7	0.1	1.2	−0.8		−0.6	5.1	0.7	3.1	1.0	0.1	1.1	2.4	11.8	3.3
1983	10.6	11.8	8.3	1.7	0.2	1.6	1.8	0.2	1.4	1.3	0.1	0.9	−0.6		−0.5	5.3	0.6	2.9	0.2	0.0	0.2	1.0	10.3	1.9
1984	11.4	12.0	9.5	1.7	0.2	1.6	1.8	0.1	1.5	1.0	0.1	0.8	−0.4		−0.3	4.3	0.6	2.9	0.1	0.0	0.0	2.4	10.5	2.8
1985	9.6	10.6	8.3	1.7	0.2	1.6	1.9	0.1	1.4	1.0	0.1	0.7	−0.5		−0.3	4.0	0.5	2.5	−0.3	−0.0	−0.3	1.3	9.5	2.2
1986	8.1	7.9	6.6	1.7	0.2	1.6	1.5	0.1	1.2	0.1	0.0	0.0	0.2		0.2	4.1	0.5	2.2	−0.8	−0.1	−0.8	1.2	6.9	1.7
1987	7.1	7.9	5.6	1.7	0.2	1.6	1.2	0.1	1.0	0.5	0.0	0.3	−0.2		−0.2	3.3	0.4	2.3	−0.6	−0.1	−0.7	1.1	6.8	1.4

1. Based on the equations in Table A1.
2. Effect of lagged dependent variables.

Notes

1. An alternative hypothesis, not tested here, it is that is the *stock* of public debt rather than its *flow* which influences investors' willingness to lend: the portfolio allocation decision may generate either stock or flow equilibrium (or both).

Annex IV

Chronology of main economic policy measures

BELGIUM

MONETARY POLICY

(*Note*: Only important interest-rate changes are enumerated)

1988

January

Key interest rates reduced in stages: Treasury certificate rates by 0.3 percentage points and discount rate and rate for advances by 0.25 points.

February

Further 0.25 percentage-point reduction in Treasury certificate rates.

April

Reduction from BF 180 billion to BF 160 billion in indirect advances Central bank can grant the Treasury through the Fonds des Rentes. Given BF 37 billion in direct advances maximum total central-bank advances reach BF 197 billion.

July

Discount rate and rate for advances raised by 0.25 percentage points each. Three-month Treasury certificate rates increased in stages by 0.50 percentage points.

August

Discount rate and rate for advances raised in stages by 0.75 percentage points each. Three-month Treasury certificate rates increased in stages by 1.00 percentage point.

September

Three-month Treasury certificate rates cut by 0.15 of a percentage point in two stages.

November

Discount rate and rate for advances lowered by 0.25 percentage points each.

December

Staged increase in the discount rate, the rate on advances and the various Treasury certificate rates, each by 0.50 of a percentage point. Later, three-month Treasury certificate rates cut by 0.15 of a percentage point. Law of 23rd December: *i)* Central bank existence rendered permanent; *ii)* franc no longer legally backed by gold; *iii)* Central bank given power to institute compulsory reserves.

1989

January

Discount rate and rate on advances raised by 0.50 of a percentage point. Three-month Treasury certificate rates increased by 0.10 of a percentage point.

February

Three-month Treasury certificate rates raised in small steps by 0.40 of a percentage point.

March

Three-month Treasury certificate rates cut by 0.20 of a percentage point. Central bank implements new system of credits to financial institutions. Central bank sells about 10 percent of its stock of gold, some 127 tonnes for about BF 63 billion.

April

Discount rate and rate for advances increased by 0.50 of a percentage point each. Three-month Treasury certificate raised by 0.10 of a percentage point.

May

Three-month Treasury certificate rates raised in steps by 0.35 of a percentage point. First issue of "linear bonds".

June

Discount rate and rate for advances increased by 0.50 of a percentage point each.

FISCAL POLICY

1988

September

Adoption of the draft budget for 1989, Government net borrowing requirement reduced from BF 460.8 billion (8.3 per cent of GNP) in 1988 to BF 403.2 billion (7 per cent of GNP) in 1989.

1989

March

Revisions made to the 1989 budget. Net borrowing requirement revised to BF 405.4 billion (6.9 per cent of GNP).

STRUCTURAL POLICIES

1988

June

System of price controls replaced by one of prior notification.

August

Constitutional reform enacted transferring substantially greater spending powers to the three Communities and the three Regions (Flanders, Wallonia, Brussels).

December

Passage of tax reform legislation allowing BF 91 billion in personal tax reductions, financed by increases in indirect taxes and broadening of the personal and corporate tax bases.

1989

January

Legislation adopted to safeguard competitiveness. Semi-annual reports to be published by the Conseil Central de l'Economie and specific steps outlined which must be taken if competitiveness is endangered.

LUXEMBOURG

1988

March

Legislation passed enacting "post mortem power of signature" in order to make management of financial wealth more flexible with respect to inheritance. Also legislation adopted setting regulations for sale and management of mutual funds in line with 1985 EC directive.

August

Presentation of draft budget for 1989. As adopted, corporate tax rate reduced to 34 per cent and increases in personal tax brackets. Budgetary surplus set at LF 0.7 billion.

1989

January

Minimum wages as well as private-sector pensions increased by 3.5 per cent. Increase in family allowances.

March

Legislation adopted formalising bank secrecy.

STATISTICAL ANNEX

Belgium – Selected background statistics

	Average 1979-87	1979	1980	1981	1982	1983	1984	1985	1986	1987
A. Per cent changes from previous year										
Private consumption[1]	1.7	4.8	1.9	–0.6	1.6	–1.3	1.2	2.1	3.6	1.7
Gross fixed capital formation[1]	–0.6	–2.6	4.6	–16.2	–1.9	–4.3	2.2	1.1	3.8	7.6
Public investment[1]	–5.3	4.3	3.0	–8.4	–8.8	–3.2	–11.3	–11.2	–7.7	–3.9
Residential[1]	–5.5	–13.1	–1.2	–40.9	–6.5	–2.8	–0.5	4.5	3.8	7.1
Non-residential[1]	3.4	3.3	8.9	–4.1	1.9	–5.1	7.0	2.9	6.1	9.9
GDP[1]	1.5	2.2	4.1	–1.4	1.5	0.2	2.2	0.9	2.1	2.1
GDP price deflator	4.8	4.5	3.7	5.2	7.2	5.8	5.1	5.9	3.5	1.9
Industrial production	1.1	4.5	–1.4	–2.7	–0.0	2.0	2.4	2.4	1.0	2.1
Employment	–0.1	1.2	–0.1	–2.0	–1.3	–1.1	0.0	0.8	1.0	0.5
Compensation of employees (current prices)	5.4	6.8	9.5	3.7	6.0	4.9	6.4	5.0	5.1	1.1
Productivity (GDP[1]/employment)	1.7	1.0	4.2	0.6	2.8	1.3	2.2	0.1	1.0	1.7
Unit labour costs (compensation/GDP[1])	3.8	4.6	5.1	5.2	4.5	4.7	4.1	4.1	3.0	–1.0
B. Percentage ratios										
Gross fixed capital formation as % of GDP at constant prices	17.6	20.6	20.7	17.6	17.0	16.2	16.2	16.2	16.5	17.4
Stockbuilding as % of GDP at constant prices	0.0	0.8	0.8	–0.3	0.1	–0.5	0.6	–0.7	–0.7	0.2
Foreign balance as % of GDP at constant prices	0.9	–4.6	–2.8	0.4	1.0	3.4	3.4	3.6	2.6	1.3
Compensation of employees as % of GDP at current prices	56.7	58.2	59.0	58.9	57.4	56.8	56.3	55.3	55.0	53.5
Direct taxes as percent of household income	15.0	15.5	14.9	14.6	15.6	14.9	15.3	15.2	14.8	14.7
Household saving as percent of disposable income	14.1	14.9	16.2	16.3	13.9	15.2	13.8	11.6	12.8	11.8
Unemployment as percent of civilian labour force	10.8	7.3	7.7	10.0	11.7	12.9	13.0	12.0	11.3	11.1
C. Other indicator										
Current balance (BLEU) (billion dollars)	–0.9	–3.1	–4.9	–4.2	–2.4	–0.4	–0.0	0.7	3.1	2.9

1. At constant 1980 prices.
Source: OECD Secretariat estimates.

Table A. **Belgium – Gross domestic product**[1]

Frs. billion

	1980	1981	1982	1983	1984	1985	1986	1987	1988[3]
	Current prices								
Private consumption	2 224.9	2 392.0	2 617.8	2 752.9	2 950.9	3 189.1	3 320.6	3 445.9	3 574.6
Public consumption	643.6	699.9	740.3	765.3	799.6	854.0	883.5	890.8	901.5
Gross fixed capital formation	728.4	644.1	671.3	670.0	709.6	743.2	781.8	847.5	996.2
Change in stocks[2]	27.3	–4.9	7.2	–27.4	17.5	–34.5	–47.7	4.6	6.1
Total domestic demand	3 624.2	3 731.2	4 036.5	4 160.9	4 477.7	4 751.8	4 938.3	5 188.8	5 478.4
Exports of goods and services	2 026.4	2 282.1	2 636.2	2 919.7	3 332.3	3 466.7	3 366.4	3 443.9	3 807.8
less: Imports of goods and services	2 124.7	2 355.9	2 695.7	2 862.1	3 275.4	3 375.1	3 187.5	3 309.7	3 675.8
Gross domestic product at market prices	3 525.9	3 657.9	3 980.1	4 218.6	4 534.3	4 843.4	5 115.2	5 323.0	5 610.4
	1980 prices								
Private consumption	2 224.9	2 212.3	2 247.0	2 217.4	2 243.5	2 291.5	2 373.7	2 414.4	2 474.7
Public consumption	643.6	648.7	640.9	642.6	641.3	655.7	665.3	667.5	669.5
Gross fixed capital formation	728.4	610.7	598.8	573.0	585.5	591.7	614.0	660.7	751.2
Change in stocks[2]	27.3	–8.9	4.2	–18.3	21.4	–23.8	–27.0	7.3	7.3
Total domestic demand	3 624.2	3 462.8	3 490.9	3 414.8	3 491.7	3 515.1	3 626.0	3 749.9	3 902.7
Exports of goods and services	2 026.4	2 088.6	2 134.0	2 201.6	2 327.6	2 355.1	2 490.1	2 647.4	2 882.0
less: Imports of goods and services	2 124.7	2 075.2	2 098.2	2 082.1	2 206.4	2 224.8	2 394.6	2 596.6	2 823.5
Gross domestic product at market prices	3 525.9	3 476.2	3 526.7	3 534.3	3 612.9	3 645.4	3 721.5	3 800.7	3 961.1

1. Includes a statistical discrepancy.
2. Includes adjustment in connection with gross fixed capital formation.
3. Estimates.

Sources: *Note de conjoncture*, Research and Documentary Service of the Ministry of Finance and OECD Secretariat estimates.

Table B. **Belgium – Income and expenditure of households and private non-profit institutions**

Frs. billion, current prices

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988[1]
Compensation of employees	1 899.4	2 079.0	2 155.3	2 285.6	2 397.7	2 550.9	2 679.0	2 815.8	2 846.2	2 937.2
Income from firms received by individuals	390.2	397.1	408.3	432.6	463.7	496.7	523.6	566.5	592.4	633.7
Household property income	377.7	434.6	518.8	603.7	660.8	743.4	830.6	883.4	930.3	976.2
Current transfers from government	680.5	734.6	823.6	888.7	959.1	1 010.3	1 054.2	1 086.4	1 137.1	1 178.7
Current transfers from the rest of the world	18.2	20.9	24.0	27.0	29.3	31.4	36.5	33.2	39.3	38.3
Household income	3 365.9	3 666.2	3 930.0	4 237.6	4 510.6	4 832.7	5 123.9	5 385.3	5 545.3	5 764.1
less: Direct taxes	516.3	541.8	566.8	654.3	666.6	731.6	773.9	790.4	807.9	821.4
Social security contributions by wage-earners and self-employed	405.2	437.7	464.7	505.2	557.5	634.9	698.7	744.4	786.6	814.3
Current transfers to the rest of the world	28.0	31.8	39.3	38.1	38.5	41.4	43.9	42.8	43.7	43.1
Disposable income	2 416.4	2 654.9	2 859.2	3 040.0	3 248.0	3 424.8	3 607.4	3 807.7	3 907.1	4 085.3
Household savings	359.1	430.0	467.1	422.3	495.0	473.8	418.3	487.0	461.0	509.4

1. Estimates.

Source: *Note de conjoncture*, Research and Documentary Service of the Ministry of Finance.

Table C. **Belgium – Income and expenditure of enterprises**

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988[1]
	Billion francs									
1. Gross operating surplus before subsidies	342	358	331	406	545	647	755	821	910	997
2. Subsidies	56	50	55	53	59	67	71	75	56	70
3. Gross operating surplus (1 + 2)	398	408	386	459	604	714	826	896	966	1 067
4. Net property income payable	65	79	60	57	155	193	211	191	215	241
5. Gross primary income (3 – 4)	333	329	326	402	449	521	615	706	751	826
6. Current transfers paid to government	92	89	87	113	114	133	148	157	160	166
7. Disposable income: (5 – 6)	241	240	239	289	335	390	466	548	591	660
8. Capital transfers received	59	99	131	128	144	115	144	116	119	91
9. Capital resources (7 + 8)	300	339	370	417	479	505	608	696	710	751
10. Gross capital formation	298	335	304	348	313	399	377	390	489	564
11. Net lending (9 – 10)	+ 2	+ 4	+ 66	+ 69	+ 166	+ 106	+ 233	+ 275	+ 220	+ 187
	Percentage of GNP									
Gross operating surplus	12.2	11.6	10.6	11.6	14.5	15.9	17.2	17.7	18.3	19.2
Disposable income	7.4	6.8	6.6	7.3	8.0	8.7	9.7	10.8	11.2	11.8
Capital resources	9.2	9.7	10.2	10.6	11.5	11.2	12.7	13.7	13.4	13.5
Gross capital formation	9.1	9.6	8.4	8.8	7.5	8.9	7.9	7.7	9.2	10.1
Net lending	+ 0.1	+ 0.1	+ 1.8	+ 1.8	+ 4.0	+ 2.4	+ 4.9	+ 5.4	+ 4.2	+ 3.4

1. Estimates.
Source: National Bank of Belgium, *1988 Report*.

Table D. **Belgium – Government revenue and expenditure**

Frs. billion

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988[1]
General Government										
Current revenue	1 242.2	1 293.6	1 301.9	1 434.3	1 487.3	1 629.8	1 715.4	1 737.2	1 855.4	1 925.8
Income from property and firms	3.4	20.4	28.3	43.6	23.5	32.0	39.2	32.0	34.2	22.5
less: Interest on the public debt	–164.6	–211.5	–285.2	–363.3	–392.3	–443.0	–511.3	–567.4	–561.3	–573.9
Indirect taxes	387.7	412.1	436.4	477.1	511.5	533.4	558.7	575.6	616.6	658.9
Direct taxes on households	516.3	541.8	566.8	654.3	666.6	731.6	773.9	790.4	807.9	821.4
Social security contributions by wage-earners and self-employed	405.2	437.7	464.7	505.2	557.5	634.9	698.7	744.4	786.6	814.3
Direct taxes on companies	91.9	89.7	87.5	112.9	115.0	133.1	148.4	157.1	164.4	174.9
Current transfers from the rest of the world	2.3	3.4	3.4	4.5	5.5	7.8	7.8	5.1	7.0	7.7
Current expenditure	1 339.4	1 454.5	1 610.8	1 720.9	1 823.8	1 912.9	2 006.6	2 074.4	2 130.2	2 196.7
Public consumption	588.1	643.6	699.9	740.3	765.3	799.6	854.0	883.5	890.8	901.8
Subsidies	55.8	50.3	55.3	53.4	59.3	68.0	71.1	75.0	55.7	63.3
Social security transfers to wage-earners and self-employed	604.1	655.7	734.8	797.7	866.6	907.4	943.2	976.8	1 020.8	1 058.5
Other current transfers (net) to households	76.4	78.9	88.8	91.0	92.5	102.9	111.0	109.6	116.3	120.2
Current transfers to the rest of the world	15.0	26.0	32.0	38.5	40.1	35.0	27.3	29.5	46.6	52.6
Savings of general government	–97.2	–160.9	–308.9	–286.6	–336.5	–283.1	–291.2	–337.2	–274.8	–270.9
Central Government										
Current revenue	774.4	800.1	775.9	856.5	859.5	902.6	915.6	882.3	950.1	..
Income from property and firms	–30.0	–17.0	–12.5	2.6	–18.8	–13.8	–12.2	–24.7	–24.0	..
less: Interest on the public debt	–131.3	–171.6	–241.3	–312.8	–334.7	–385.4	–452.8	–509.2	–507.3	..
Indirect taxes	377.5	401.1	424.2	463.3	495.4	515.1	540.7	556.5	597.1	..
Direct taxes on households	472.6	501.4	523.7	595.5	607.9	659.0	698.0	711.4	727.1	..
Direct taxes on companies	83.3	82.8	78.4	103.4	104.2	119.9	134.1	143.2	150.2	..
Current transfers from the rest of the world	2.3	3.4	3.4	4.5	5.5	7.8	7.8	5.1	7.0	..
Current expenditure	863.9	926.4	1 065.7	1 145.1	1 190.2	1 232.3	1 242.5	1 274.2	1 235.0	..
Public consumption	440.5	476.7	519.0	545.9	560.7	582.6	625.4	641.1	650.0	..
Subsidies	54.7	49.0	54.0	52.2	57.9	66.4	69.2	73.0	53.7	..
Current transfers (net) to households	64.1	65.8	75.0	75.9	76.7	86.3	92.9	90.4	96.0	..
Transfers (net) to the rest of the world	15.0	26.0	32.0	38.5	40.1	35.0	27.3	29.5	46.6	..
Transfers (net) to local authorities	79.5	83.2	94.2	97.9	103.8	119.6	123.9	134.8	125.5	..
Transfers (net) to social security	210.1	225.7	291.5	334.7	351.0	342.4	303.8	305.4	263.2	..
Savings of central government	–89.5	–126.3	–289.8	–288.6	–330.7	–329.7	–326.9	–391.9	–284.9	..

1. Estimates.
Source: *Note de conjoncture*, Research and Documentary Service of the Ministry of Finance.

Table E. **Belgium – Labour market**

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Labour market	In thousands[2]										
Labour force[1]	4 081	4 140	4 156	4 173	4 197	4 213	4 214	4 202	4 212	4 217	4 222
Domestic employment	3 753	3 798	3 797	3 722	3 672	3 634	3 635	3 662	3 698	3 712	3 759
of which: Employees	3 132	3 172	3 174	3 099	3 051	3 007	2 998	3 018	3 043	3 047	3 085
Wholly unemployed	290	304	322	416	490	545	546	506	478	466	424
of which: Completely insured	265	276	295	379	443	491	494	456	431	424	386
Partially unemployed, daily average	78.0	80.5	80.4	93.3	82.2	81.2	71.3	67.3	62.4	63.5	49.6
Vacancies, annual average	5.1	5.5	4.3	4.4	4.4	6.2	8.0	18.4	17.7	14.7	21.5
Employment by activity	In per cent										
Civilian employment	100	100	100	100	100	100	100	100	100	100	..
Farm	3.2	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.7	..
Non-farm	96.8	96.9	97.0	97.0	97.1	97.1	97.1	97.1	97.2	97.3	..
Wage and salary earners	82.9	83.0	83.0	82.7	82.5	82.2	81.9	81.8	81.9	81.7	..
Other	13.9	13.9	14.0	14.3	14.6	14.9	15.2	15.3	15.3	15.6	..
Secondary sector	35.7	34.6	33.9	32.5	31.4	30.7	30.0	29.4	28.8	28.2	..
of which: Manufacturing industry	26.0	25.0	24.5	23.7	23.2	22.9	22.7	22.2	21.7	21.2	..
Construction	7.9	7.9	7.6	7.0	6.5	6.0	5.6	5.6	5.6	5.6	..
Tertiary sector	61.1	62.2	63.1	64.5	65.6	66.6	67.0	67.7	68.3	69.0	..
of which: Trade	18.7	18.6	18.6	18.8	19.0	19.1	19.3	19.3	19.4	19.8	..
Transport and communication	7.2	7.2	7.4	7.5	7.5	7.4	7.3	7.2	7.1	7.0	..
Government	17.8	18.5	19.0	19.5	20.1	20.2	20.4	20.6	21.0	20.6	..

1. Including border workers (net) and armed forces.
2. Data at the 30th June, except for the partially unemployed and vacancies.
Source: *Note de conjoncture*, Research and Documentary Service of the Ministry of Finance.

Table F. **Belgium – Area breakdown of foreign trade**

Millions US $

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Exports, fob										
World	56 214	64 498	55 475	52 405	51 841	51 704	53 667	68 730	83 038	91 956
OECD	48 397	54 969	46 481	44 296	43 783	43 636	45 612	59 803	73 069	80 731
EEC	41 176	46 313	38 808	36 978	36 278	35 627	37 061	49 037	59 739	65 721
Germany	12 661	13 717	11 148	10 719	10 964	10 194	9 971	13 560	16 462	17 886
France	10 782	12 522	10 650	10 161	9 444	9 524	10 179	13 763	16 978	18 369
Netherlands	9 079	9 801	8 202	7 432	7 380	7 202	7 644	10 322	12 480	13 506
United Kingdom	4 535	5 470	4 777	5 061	5 106	5 125	5 251	5 980	6 991	8 580
Italy	2 985	3 562	2 819	2 642	2 420	2 656	2 921	4 009	5 290	5 723
USA	2 102	2 160	2 344	2 306	2 667	3 136	3 401	3 640	4 319	4 578
Other	5 117	6 495	5 327	5 011	4 837	4 872	5 149	7 125	9 010	10 431
Non-OECD	7 470	9 043	8 413	7 572	7 541	7 631	7 605	8 371	9 345	10 616
COMECON	1 114	1 347	1 141	926	1 103	963	1 085	1 049	1 076	1 166
OPEC	2 292	2 986	2 928	2 322	2 074	1 912	1 714	1 599	1 482	1 512
Other	4 064	4 710	4 343	4 324	4 362	4 755	4 805	5 722	6 786	7 937
Unspecified	346	486	580	536	516	436	449	555	623	608
Imports, cif										
World	60 353	71 679	61 852	57 829	54 096	55 252	56 048	68 616	83 304	92 103
OECD	50 186	58 003	49 455	46 381	45 975	45 936	47 584	59 899	72 587	80 105
EEC	40 691	45 255	37 887	36 526	36 457	36 917	38 176	48 569	58 949	65 602
Germany	13 273	14 093	11 701	11 568	11 383	11 012	11 789	15 876	20 241	22 548
France	9 494	10 355	8 488	8 039	7 744	8 081	8 456	10 871	13 065	14 197
Netherlands	10 015	11 736	10 447	10 178	9 977	10 377	10 229	12 257	14 287	16 374
United Kingdom	4 807	5 787	4 607	4 069	4 696	4 842	5 013	5 727	6 542	7 043
Italy	2 451	2 571	2 085	2 079	2 023	1 978	2 001	2 909	3 547	3 929
USA	3 985	5 493	4 439	4 066	3 530	3 326	3 184	3 463	3 954	3 924
Other	5 509	7 254	7 128	5 787	5 988	5 692	6 223	7 866	9 683	10 578
Non-OECD	10 126	13 626	12 367	11 407	8 082	9 031	8 236	8 566	10 381	11 939
COMECON	1 075	1 656	1 460	1 860	1 545	2 252	1 688	1 552	1 865	1 873
OPEC	4 474	6 587	6 177	4 880	2 362	2 312	1 840	1 837	2 150	2 328
Other	4 576	5 382	4 729	4 666	4 174	4 466	4 707	5 176	6 366	7 737
Unspecified	40	50	29	40	39	284	227	150	335	58

Source: OECD, *Foreign Trade Statistics, Series A.*

Table G. **Belgium – Commodity breakdown of foreign trade**

Millions US $

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Exports, fob	44 793	56 083	63 960	55 238	51 747	51 676	50 968	53 316	68 649	82 951
SITC sections										
0 Food and live animals	3 777	4 593	5 347	5 274	5 025	4 576	4 757	4 624	6 116	7 460
1 Beverages and tobacco	292	356	404	388	408	402	375	415	544	686
2 Crude materials, inedible, except fuels	1 325	1 586	1 669	1 506	1 352	1 339	1 497	1 490	1 716	2 077
3 Mineral fuels, lubricants and related materials	1 952	3 580	5 369	5 021	4 507	4 370	4 068	3 535	3 388	3 148
4 Animal and vegetable oils and fats	196	231	233	254	254	264	387	423	343	337
5 Chemicals	5 701	6 644	7 422	6 477	6 173	6 216	6 449	6 882	8 597	10 444
6 Manufactured goods classified chiefly by material	15 824	19 246	22 054	17 603	15 746	15 950	15 972	16 560	20 533	24 444
7 Machinery and transport equipment	10 899	12 930	13 919	12 093	11 866	11 668	10 757	12 429	17 784	22 447
8 Miscellaneous manufactured articles	3 224	3 754	4 465	3 887	3 661	3 756	3 709	3 883	5 377	6 753
9 Others	1 602	3 162	3 077	2 733	2 756	3 134	2 997	3 075	4 250	5 154
Imports, cif	48 268	60 186	71 186	61 448	57 367	53 654	54 386	55 561	68 025	82 598
SITC sections										
0 Food and live animals	5 015	5 919	6 434	5 851	5 736	5 094	5 184	4 973	6 272	7 335
1 Beverages and tobacco	624	768	837	678	655	648	621	641	840	1 027
2 Crude materials, inedible, except fuels	3 212	4 296	5 172	4 476	3 864	4 010	4 056	4 169	4 282	5 221
3 Mineral fuels, lubricants and related materials	6 007	8 580	12 393	12 560	11 956	9 501	10 232	9 323	7 284	7 739
4 Animal and vegetable oils and fats	256	351	323	293	283	272	365	353	290	273
5 Chemicals	4 267	5 376	5 972	5 235	5 144	5 184	5 437	5 735	7 119	8 698
6 Manufactured goods classified chiefly by material	11 172	13 585	15 786	12 145	11 326	11 115	11 386	11 442	14 876	17 976
7 Machinery and transport equipment	12 570	14 740	16 044	13 245	12 501	12 150	11 773	12 976	19 129	24 431
8 Miscellaneous manufactured articles	4 518	5 423	6 136	5 066	4 723	4 390	4 229	4 515	6 481	8 469
9 Others	628	1 148	2 088	1 898	1 179	1 289	1 102	1 434	1 452	1 429

Source: OECD, *Foreign Trade Statistics, Series C.*

Table H. **Belgium – BLEU Balance of payments**

US dollars millions[1]

	1979	1980	1981	1982	1983	1984	1985	1986[3]	1987
Exports, fob[2]	51 291	57 137	50 585	48 013	47 612	48 006	48 719	62 168	79 598
Imports, fob[2]	55 419	62 138	54 646	50 904	48 836	48 843	48 910	61 022	78 639
Trade balance	–4 128	–5 001	–4 061	–2 891	–1 224	–837	–191	1 146	959
Services, net	2 047	1 378	1 174	1 711	1 954	1 674	1 588	2 932	3 483
Balance on goods and services	–2 081	–3 623	–2 887	–1 180	730	837	1 397	4 078	4 442
Private transfers, net	–345	–376	–412	–241	–180	–173	–125	–215	–115
Official transfers, net	–624	–937	–889	–991	–982	–708	–579	–759	–1 384
Current balance	–3 050	–4 936	–4 188	–2 412	–432	–44	693	3 104	2 943
Long-term capital (excluding special transactions)	–150	3 394	3 880	2 455	–262	–50	–54	–3 762	–1 347
a) private	–1 081	919	1 365	322	–624	–1 390	–735	–3 480	–600
b) official	931	2 475	2 515	2 133	362	1 340	681	–282	–747
Basic balance	–3 200	–1 542	–308	43	–694	–94	639	–658	1 596
Non-monetary short-term private capital	–1 283	–1 976	–2 956	–810	–252	–237	–520	–770	246
Non-monetary short-term official capital	307	571	1 220	1 037	68	253	–747	1 222	977
Errors and omissions	–379	352	–746	–260	–409	–165	–125	206	327
Balance on non-monetary transactions	–4 555	–2 595	–2 790	10	–1 287	–243	–753	0	3 146

1. Exchange rates: 1979: 1$ = 29.31BF; 1980: 1$ = 29.25BF; 1981: 1$ = 37.14BF; 1982: 1$ = 45.70BF; 1983: 1$ = 51.13BF; 1984: 1$ = 57.76BF; 1985: 1$ = 59.43BF; 1986: 1$ = 44.69BF; 1987: 1$ = 37.34BF.
2. Including commission processing and non-monetary gold.
3. Figures have been revised from 1986 on.

Source: OECD Secretariat estimates.

Luxembourg – Selected background statistics

	Average 1978-87	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
A. Per cent changes from previous year											
Private consumption[1]	2.2	2.9	3.3	2.8	1.6	0.2	–0.1	2.4	1.7	4.2	3.1
Gross fixed capital formation[1]	1.6	1.3	4.1	11.8	–6.7	–0.4	–11.6	–0.4	–3.3	15.8	5.2
GDP[1]	2.9	3.9	2.7	1.2	–0.2	1.5	2.9	6.2	3.7	4.7	2.7
GDP price deflator	5.1	5.3	6.0	7.6	6.8	10.4	6.9	4.4	3.3	1.5	–1.1
Industrial production	2.7	3.4	3.2	–3.5	–5.5	2.3	5.5	11.8	6.8	2.8	0.3
Employment	0.7	–0.6	0.5	0.7	0.3	–0.3	–0.3	0.6	1.5	2.6	2.5
Compensation of employees (current prices)	7.7	5.6	8.1	10.5	9.8	6.9	6.7	8.0	5.4	8.5	7.3
Productivity (GDP[1]/employment)	2.2	4.5	2.1	0.5	–0.5	1.8	3.2	5.6	2.2	2.1	0.2
Unit labour costs (compensation/GDP[1])	–0.4	–3.5	–0.7	1.6	3.0	–4.6	–3.0	–2.6	–1.6	2.1	5.6
B. Percentage ratios											
Gross fixed capital formation as % of GDP at constant prices	22.8	24.2	24.5	27.1	25.3	24.9	21.4	20.1	18.7	20.7	21.2
Stockbuilding as % of GDP at constant prices	2.2	1.3	–1.3	–1.4	–0.3	0.4	3.4	5.7	6.0	2.2	5.6
Foreign balance as % of GDP at constant prices	2.0	0.6	2.6	–1.2	–1.8	–1.2	1.6	3.3	5.4	7.6	3.3
Compensation of employees as % of GDP at current prices	62.2	63.5	63.1	64.1	66.0	63.0	61.1	59.5	58.6	59.8	63.1
Number of unemployed	1 976	1 200	1 100	1 100	1 600	2 000	2 500	2 700	2 600	2 300	2 660
Unemployment as percent of civilian labour force	1.2	0.8	0.7	0.7	1.0	1.3	1.6	1.7	1.6	1.4	1.6
C. Other indicator											
Current balance (million dollars)	..	..	..	555.2	..	..	..	601.0	883.6	1 051.7	1 137.3

1. At constant 1980 prices.
Source: OECD Secretariat estimates.

Table I. Luxembourg – Gross national product

Frs. billion

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
	Current prices										
Private consumption	61.1	65.0	70.6	78.1	86.3	95.8	104.2	112.6	120.5	126.6	132.1
Public consumption	16.3	17.6	19.5	22.2	24.7	26.1	27.6	29.8	32.3	35.5	37.3
Gross fixed capital formation	25.7	27.0	29.8	36.0	36.0	39.6	37.1	38.6	38.2	46.1	50.5
Change in stocks	–4.2	1.4	–2.5	–1.8	–0.8	0.3	5.8	9.6	6.2	2.3	2.2
Total domestic demand	98.9	111.0	117.4	134.5	146.1	161.8	174.7	190.6	197.2	210.6	222.1
Exports of goods and services	88.5	94.0	111.1	117.3	122.5	141.1	157.4	195.7	222.3	224.3	225.2
Imports of goods and services	85.2	92.7	106.3	118.9	127.0	144.1	157.4	192.6	212.0	214.3	223.7
Gross domestic product at market prices (SNA)	102.3	112.2	122.1	132.9	141.7	158.8	174.7	193.7	207.5	220.5	223.5
Net factor income from abroad	19.6	20.4	21.5	26.6	34.8	58.0	69.2	72.9	80.6	76.9	72.3
Gross domestic product at factor costs	121.9	132.6	143.6	159.5	176.5	216.8	243.9	266.6	288.1	297.4	295.8
	1980 prices										
Private consumption	71.5	73.5	76.0	78.1	79.4	79.5	79.4	81.3	82.7	86.2	87.4
Public consumption	20.5	21.0	21.5	22.2	22.5	22.8	22.7	23.1	23.9	24.8	25.7
Gross fixed capital formation	30.6	31.0	32.2	36.0	33.6	33.5	29.6	29.5	28.5	33.1	34.8
Change in stocks	–2.5	1.7	–1.8	–1.8	–0.4	0.5	4.8	8.4	9.2	3.5	3.3
Total domestic demand	120.0	127.2	128.0	134.5	135.1	136.3	136.5	142.3	144.3	147.6	151.2
Exports of goods and services	104.0	108.4	118.7	117.3	113.1	114.0	119.9	140.7	153.3	162.7	173.2
Imports of goods and services	101.6	107.6	115.2	118.9	115.6	115.6	117.7	135.8	145.1	150.5	160.8
Gross domestic product at market prices (SNA)	122.5	128.0	131.4	132.9	132.7	134.7	138.6	147.1	152.5	159.7	163.6

Note: Data may not add because of rounding.
Source: STATEC.

Table J. **Luxembourg – Labour force, employment and unemployment**

Thousands

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Labour force (A + B)[1]	157.5	158.2	159.3	160.3	160.3	160.3	161.4	163.5	167.4	172.3
A. Unemployed	1.2	1.1	1.1	1.6	2.0	2.5	2.7	2.6	2.3	2.7
B. Total employed	156.3	157.1	158.2	158.7	158.3	157.8	158.7	160.9	165.1	169.6
Agriculture	9.7	9.1	8.5	7.9	7.6	7.2	6.9	6.7	6.5	6.1
Industry	46.0	44.6	43.6	42.9	42.0	40.5	40.1	39.8	40.3	39.7
Iron and Steel	19.7	18.7	17.7	17.2	16.7	15.0	13.8	13.1	13.0	12.1
Construction	15.0	15.6	16.4	15.9	15.3	15.1	14.4	13.9	14.2	15.3
Services	66.9	68.6	70.0	72.0	73.1	72.9	74.7	77.4	80.4	84.2
General Government	18.7	19.2	19.7	20.0	20.3	22.1	22.6	23.1	23.7	24.4
Employees	133.3	134.9	137.0	138.7	138.7	138.4	139.5	142.1	146.6	151.4
Self employed and family helpers	23.0	22.0	21.2	20.0	19.6	19.4	19.2	18.8	18.5	18.2
Unemployment rate	0.8	0.7	0.7	1.0	1.2	1.6	1.7	1.6	1.4	1.6

1. Domestic definition (including border workers, net).
Source: STATEC.

BASIC STATISTICS :

INTERNATIONAL COMPARISONS

BASIC STATISTICS: INTERNATIONAL COMPARISONS

	Units	Reference period[1]	Australia	Austria	Belgium	Canada	Denmark	Finland	France	Germany	Greece	Iceland	Ireland	Italy	Japan	Luxembourg	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States	Yugoslavia
Population																											
Total	Thousands	1987	16 249	7 575	9 868	25 803	5 130	4 932	55 627	61 149	9 998	245	3 542	57 331	122 091	372	14 671	3 284	4 184	10 280	38 830	8 399	6 610	52 010	56 890	243 915	23 410
Inhabitants per sq.km	Number		2	90	324	3	119	15	102	246	76	2	50	190	328	143	432	12	13	112	77	19	160	67	232	26	90
Net average annual increase over previous 10 years	%		1.4	0.0	0.0	1.0	0.1	0.4	0.4	0.0	0.7	1.0	0.8	0.3	0.7	0.3	0.6	0.5	0.3	0.5	0.7	0.2	0.5	2.2	0.1	1.0	0.8
Employment																											
Total civilian employment (TCE)[2]	Thousands	1987	7 079	32 997	3 645 (86)	11 954	2 630 (86)	2 414	20 988	25 456	3 601 (86)	117 (86)	1 068 (86)	20 584	59 110	164 (86)	5 135 (86)	1 517 (86)	2 090	4 156	11 370	4 337	3 219 (86)	15 632 (86)	24 987	112 440	..
of which: Agriculture	% of TCE		5.8	8.6	2.9	4.9	5.9	10.4	7.1	5.2	28.5	10.3	15.7	10.5	8.3	3.7	4.9	10.5	6.7	21.9	16.1	4.2	6.5	55.7	2.4	3.0	..
Industry	% of TCE		26.6	37.7	29.7	25.3	28.2	31.2	30.8	40.5	28.1	36.8	28.7	32.6	33.8	32.9	25.5	28.9	27.0	35.8	32.0	30.2	37.7	18.1	29.8	27.1	..
Services	% of TCE		67.6	53.7	67.4	69.8	65.9	58.4	62.1	54.3	43.4	53.0	55.5	56.8	57.9	63.4	69.6	60.6	66.3	42.3	51.8	65.6	55.8	26.2	67.8	69.9	..
Gross domestic product (GDP)																											
At current prices and current exchange rates	Billion US$	1987	193.7	117.2	138.9	410.9	101.3	89.5	879.9	1 117.8	47.2	5.3	29.4	758.1	2 376.5	6.0	213.2	35.1	82.7	36.7	289.2	158.5	171.1	67.4	669.8	4 472.9	61.7 (86)
Per capita	US$		11 919	15 470	14 071	16 019	19 750	18 151	15 818	18 280	4 719	21 813	8 297	13 224	19 465	16 138	14 530	10 620	19 756	3 761	7 449	18 876	25 848	1 296	11 765	18 338	2 652 (86)
At current prices using current PPP's[3]	Billion US$	1987	204.9	88.4	116.5	444.5	68.4	63.3	712.2	814.7	63.6	3.8	26.7	702.5	1 609.4	5.5	179.7	35.3	64.5	61.4	337.1	115.7	104.9	220.9	702.5	4 472.9	..
Per capita	US$		12 612	11 664	11 802	17 211	13 329	12 838	12 803	13 323	6 363	15 508	7 541	12 254	13 182	14 705	12 252	10 680	15 405	6 297	8 681	13 771	15 842	4 247	12 340	18 338	..
Average annual volume growth over previous 5 years	%	1987	3.7	1.8	1.5	4.2	2.7	3.2	1.6	2.1	1.4	3.1	1.8	2.6	3.9	4.0	2.1	2.1	4.1	2.1	2.9	2.4	2.3	6.0	3.2	4.3	
Gross fixed capital formation (GFCF)	% of GDP	1987	23.8	22.6	16.3	21.0	18.8	23.5	19.4	19.4	17.4	18.8	17.4	19.9	28.9	22.6	20.3	21.2	28.0	25.3	20.7	19.0	25.2	24.5	17.3	17.3	21.6 (86)
of which: Machinery and equipment	% of GDP		11.5 (86)	9.7	7.0 (86)	6.9 (86)	7.8	9.7	8.3	8.4	7.1	6.5	9.4 (86)	10.0	10.5 (86)	9.0 (82)	10.0	13.1 (85)	7.9 (86)	14.7 (81)	6.4 (86)	8.5 (86)	8.8	8.6 (84)	8.1 (86)	7.6	..
Residential construction	% of GDP		4.7 (86)	4.6 (86)	3.4	6.4 (86)	4.4	55	5.2	5.2	4.6	3.5	4.6 (86)	5.2	5.0 (86)	4.7 (82)	5.2	4.6 (85)	5.0 (86)	6.4 (81)	4.0 (86)	3.8 (86)	16.4 (9)	2.7 (84)	3.8 (86)	5.0	..
Average annual volume growth over previous 5 years	%	1987	1.7	2.3	2.0	4.8	6.5	1.9	0.6	1.8	–2.2	1.8	–3.7	2.8	5.3	0.8	4.8	2.0	4.1	–0.7	3.8	3.6	6.0	7.3	4.7	7.0	..
Gross saving ratio[4]	% of GDP	1987	20.3	24.1	17.6	18.8	15.5	22.5	19.6	23.9	14.7	15.2	18.6	20.9	32.3	56.5	21.8	20.3	23.4	27.5	21.9	18.0	31.7	24.1	17.2	14.7	..
General government																											
Current expenditure on goods and services	% of GDP	1987	18.2	19.0	16.3	19.5	25.4	20.7	19.1	19.8	19.5	17.7	18.0	16.7	9.6	16.7	16.1	17.6	20.9	14.4	14.4	26.7	12.8	9.1	20.9	18.6	14.3 (86)
Current disbursements[5]	% of GDP	1987	35.0 (86)	46.6 (86)	51.6 (86)	43.3 (86)	53.4 (86)	38.2	48.4	43.0 (86)	42.9 (86)	27.3 (86)	49.2 (84)	45.2	27.4 (86)	45.3 (84)	54.0 (86)	..	47.8 (86)	37.6 (81)	36.1 (86)	60.0 (86)	30.1	..	42.9 (86)	35.5 (86)	..
Current receipts	% of GDP	1987	34.7 (86)	47.9 (86)	45.0 (86)	39.4 (86)	58.0 (86)	39.6	49.4	44.9 (86)	36.6 (86)	32.1 (86)	43.3 (84)	39.3 (86)	31.3 (86)	54.1 (84)	52.8 (86)	..	56.5 (86)	33.3 (81)	35.0 (86)	61.6 (86)	34.5	..	41.6 (86)	31.2 (86)	..
Net official development assistance	% of GNP	1987	0.33	0.17	0.49	0.47	0.88	0.50	0.74	0.39	..	0.05	0.20	0.35	0.31	0.10	0.98	0.26	1.09	0.08	0.06	0.88	0.31	..	0.28	0.20	..
Indicators of living standards																											
Private consumption per capita using current PPP's[3]	US$	1987	7 389	6 535	7 593	10 059	7 236	6 966	7 796	7 374	4 273	9 930*	4 378	7 543	7 623	8 694	7 461	6 236	8 155	4 167	5 521	7 273	9 349*	2 844	7 731	12 232	1 335 (86)*
Passenger cars, per 1 000 inhabitants	Number	1985	..	306 (81)	335 (84)	421 (82)	293	329 (86)	369 (86)	441 (86)	127	431	206 (83)	355 (84)	221 (83)	439 (87)	341	455	382 (86)	135 (82)	252	377	402	18 (82)	312 (83)	473 (84)	121 (83)
Telephones, per 1 000 inhabitants	Number	1985	540 (83)	460 (83)	414 (83)	664 (83)	783	615	614 (86)	641 (86)	373	525 (83)	235 (83)	448 (84)	535 (83)	425 (86)	410 (86)	646	622 (84)	166 (83)	381 (86)	890 (83)	1 334	55 (83)	521 (84)	650 (84)	122 (83)
Television sets, per 1 000 inhabitants	Number	1985	..	300 (81)	303 (84)	471 (80)	392	370 (86)	394 (86)	377 (86)	158 (80)	303	181 (80)	244 (84)	250 (80)	336 (83)	317 (86)	291	346 (86)	140 (80)	256 (82)	390	337	76 (79)	336 (84)	621 (80)	175 (83)
Doctors, per 1 000 inhabitants	Number	1985	..	1.7 (82)	2.8 (84)	1.8 (82)	2.5 (84)	2.3 (86)	2.3 (86)	2.5 (84)	2.8 (83)	2.4 (84)	1.3 (82)	3.6 (82)	1.3 (82)	1.9 (86)	2.2 (84)	2.4	2.2	1.8 (82)	3.4 (86)	2.5	1.4 (84)	1.5 (83)	0.5 (83)	2.0 (85)	1.6 (82)
Infant mortality per 1 000 live births	Number	1985	9.2 (84)	11.0	9.4	9.1 (83)	7.9	5.8 (86)	7.0 (86)	9.1	14.1	5.7	8.9	10.9	5.9 (84)	9.0	9.6 (86)	10.8	8.5 (86)	17.8	7.0 (84)	6.8	6.9	..	9.4	10.4 (86)	31.7 (83)
Wages and prices (average annual increase over previous 5 years)																											
Wages (earnings or rates according to availability)	%	1987	5.7	4.9	3.4	3.6	6.1	8.5	6.4	3.6	17.4	..	8.8	10.5	2.6	..	2.3	7.4	10.2	17.9	10.3	7.6	..	..	8.5	3.1	..
Consumer prices	%	1987	7.0	3.0	3.5	4.2	4.7	5.0	4.7	1.1	19.3	25.7	5.2	7.6	1.1	2.2	1.3	12.6	7.0	17.2	8.5	5.9	2.1	41.6	4.7	3.3	56.3
Foreign trade																											
Exports of goods, fob*	Million US$	1987	26 484	27 084	82 824[7]	94 320	25 632	19 404	147 936	293 424	6 516	1 368	15 948	116 004	230 220	..[8]	92 592	7 164	21 804	9 144	33 972	44 388	45 312	10 344	130 632	254 124	11 425
as % of GDP	%		13.6	23.0	59.8	22.8	25.3	22.1	16.8	26.2	13.9	25.8	54.8	15.4	9.7	..	43.1	20.1	26.2	25.3	11.8	27.9	26.6	15.7	19.7	5.7	16.3
average annual increase over previous 5 years	%		4.4	11.6	9.6	6.5	11.1	8.2	9.0	10.7	8.7	13.7	14.6	9.6	12.1	..	6.9	3.4	4.4	17.0	10.4	10.6	11.8	12.1	7.7	3.7	2.2
Imports of goods, cif*	Million US$	1987	26 964	32 580	82 992[7]	87 528	25 452	18 828	153 204	227 916	13 116	1 584	13 620	124 596	150 300	..	91 068	7 224	22 428	13 248	48 816	40 596	50 424	14 460	153 768	424 440	12 603
as % of GDP	%		13.9	27.7	59.9	21.1	25.1	21.4	17.4	20.4	27.9	29.9	46.8	16.6	6.3	..	42.4	20.2	27.0	36.7	17.0	25.5	29.6	21.9	23.2	9.6	18.5
average annual increase over previous 5 years	%		2.8	10.8	7.4	9.7	8.8	7.0	6.7	6.5	5.6	10.8	5.9	7.7	2.8	..	7.2	4.6	7.8	6.9	9.1	8.0	12.0	9.7	9.1	11.7	–3.1
Total official reserves[6]	Million SDR's	1987	6 441	6 049	7 958[7]	5 778	7 153	4 592	26 161	58 846	2 007	221	3 393	23 631	57 925	..	12 818	2 298	10 105	3 047	22 035	5 974	22 283	1 254	30 070	33 657	557
As ratio of average monthly imports of goods	Ratio		3.4	2.6	1.4	0.9	4.0	3.5	2.4	3.7	2.2	2.0	3.5	2.7	5.5	..	2.0	4.5	6.4	3.3	6.4	2.1	6.3	1.2	2.8	1.1	0.6

* At current prices and exchange rates.
1. Unless otherwise stated.
2. According to the definitions used in OECD *Labour force Statistics.*
3. PPP's = Purchasing Power Parities.
4. Gross saving = Gross national disposable income *minus* Private and Government consumption.
5. Current disbursements = Current expenditure on goods and services *plus* current transfers and payments of property income.
6. Gold included in reserves is valued at 35 SDR's per ounce. End of year.
7. Including Luxembourg.
8. Included in Belgium.
9. Including non-residential construction.

Sources:
Population and Employment: OECD *Labour Force Statistics.*
GDP, GFCF, and General Government: OECD *National Accounts*, Vol. I and OECD *Economic Outlook, Historical Statistics.*
Indicators of living standards: Miscellaneous national publications.
Wages and Prices: OECD *Main Economic Indicators.*
Foreign trade: OECD *Monthly Foreign trade Statistics, series A.*
Total official reserves: IMF *International Financial Statistics.*

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The Economics and Statistics Department of the OECD offers challenging and rewarding opportunities to economists interested in applied policy analysis in an international environment. The Department's concerns extend across the entire field of economic policy analysis, both macroeconomic and microeconomic, and it is also responsible for the collection, processing and dissemination of a wide range of internationally consistent statistics. On the economic side, its main task is to provide, for discussion by committees of senior officials from Member countries, documents and papers dealing with current policy concerns. Within this programme of work, three major responsibilities are :

- To prepare regular surveys of the economies of individual Member countries;
- To issue full twice-yearly reviews of the economic situation and prospects of the OECD countries in the context of world economic trends;
- To analyse specific policy issues in a medium-term context for the OECD as a whole, and to a lesser extent for the non-OECD countries.

The documents prepared for these purposes, together with much of the Department's other economic work and its statistical output, appear in published form in *OECD Economic Outlook*, *OECD Economic Surveys*, *OECD Economic Studies*, the Department's Working Paper series, and an extensive list of statistical publications.

The Department maintains a world econometric model, INTERLINK, which plays an important role in the preparation of the policy analyses and twice-yearly projections. The availability of extensive cross-country databases and good computer resources facilitates comparative empirical analysis, much of which is incorporated into the model.

The Department is made up of about 90 professional economists and statisticians from a variety of backgrounds from all Member countries. Most projects are done by small teams and last from four to eighteen months. Within the Department, ideas and points of view are widely discussed; there is a lively professional interchange; and all professional staff have the opportunity to contribute actively to the programme of work.

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a) Solid competence in using the tools of both microeconomic and macroeconomic theory to answer policy questions. In our experience, this requires the equivalent of a PhD in economics or substantial relevant professional experience to compensate for a lower degree.

b) Solid knowledge of economic statistics and quantitative methods; this includes how to identify data, estimate structural relationships, apply and interpret basic techniques of time series analysis, and test hypotheses. It is essential to be able to interpret results sensibly in an economic policy context.

c) A keen interest in and knowledge of policy issues, economic developments and their political/social contexts.

d) Interest and experience in analysing questions posed by policy-makers and presenting the results to them effectively and judiciously. Thus work experience in government agencies or policy research institutions is an advantage.

e) The ability to write clearly, effectively and to the point. The OECD is a bilingual organisation with French and English as the official languages. Candidates must have excellent knowledge of one of these languages and some knowledge of the other. Knowledge of other languages might also be an advantage for certain posts.

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g) The Department works on a tight time schedule and strict deadlines. Moreover, much of the work in the Department is carried out in small groups of economists. Thus, the ability to work with other economists, from a variety of professional backgrounds, and to produce work on time is important.

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