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PART I
THE ECONOMIC AND FINANCIAL SITUATION IN LUXEMBOURG

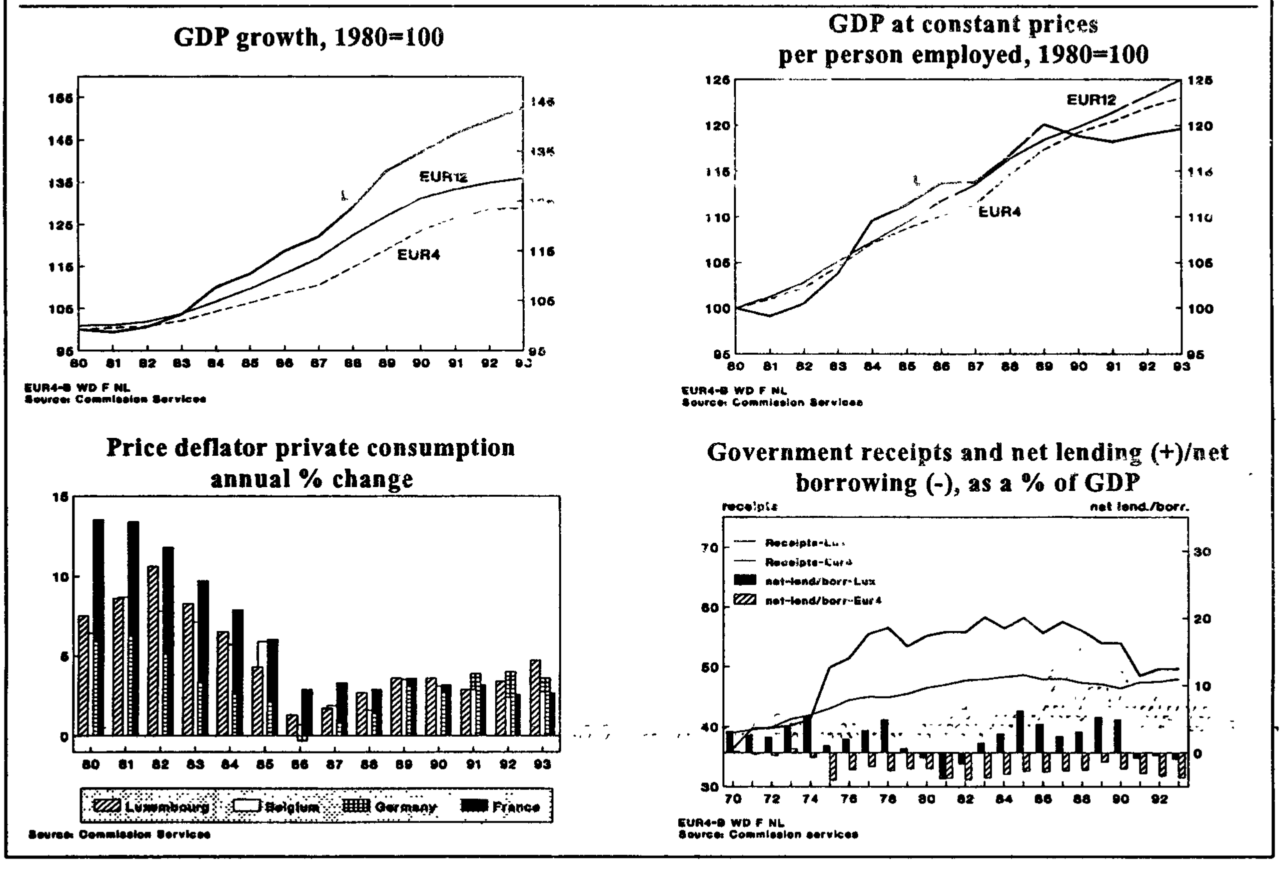
0. INTRODUCTION

Luxembourg has outperformed the economies of other Member States and in particular those of its neighbour countries for more than a decade. Good growth performance and a steady increase in employment have been accomplished with modest inflation. The rate of unemployment is 1.6% and by far the lowest in the Community. The deficit on the visible trade balance is exceeded for by an important surplus on the services balance and the current account continues in surplus. The government budget showed a modest deficit in 1991 after eight consecutive years of surplus and the gross public debt/GDP ratio is only around 3%. Luxembourg fulfills all five EMU convergence criteria and short-term prospects seem to be better than for any other Member States.

This good overall performance was accomplished in spite of a Community-wide decline, since the middle of the 70s, of the steel industry, once the country's major source of value added. The Luxembourg steel industry, however, had begun restructuring as early as 1974. Further restructuring at the beginning of the eighties was supported by effective government (and Community) intervention measures. From the sixties already, a more general policy for encouraging industrial diversification has been pursued. Private investment in sectors other than steel has been encouraged by a mixture of direct financial incentives and a policy of flexibility providing generally favourable business conditions.

Besides industrial diversification, there was also the impressive rise in financial services, particularly enhanced by liberal banking laws and tax provisions. However, the authorities have been well aware of the risk involved if the economy were again to become too dependent on one single branch of economic activity and they continue to advance investment in other industry sectors. All in all, it appears that a strong basis for further economic growth has been established.

Graph 1: Relative performance of Luxembourg



1. MACROECONOMIC PERFORMANCE AND PROSPECTS

Good economic performance

Between 1980 and 1991 output increased by an average of 3.4% per year and from 1986 to 1991 annual growth of GDP was even 4.0%. Employment grew by 2.0% per year between 1980 and 1991 (by 3.6% from 1986 to 1991). Unemployment peaked in 1983 at a level as low as 3.5% of the labour force and is currently 1.6%, by far the lowest in the Community. Prospects for 1992 and 1993 are also better than in most other Member States. After a buoyant 1989 with a 6.9% rise in domestic product, growth slowed somewhat in 1990, but in 1991 economic activity accelerated again. In spite of a considerable slowing of growth in neighbouring countries, total output is expected to increase by about 2.2% in 1992 and 2.0% in 1993.

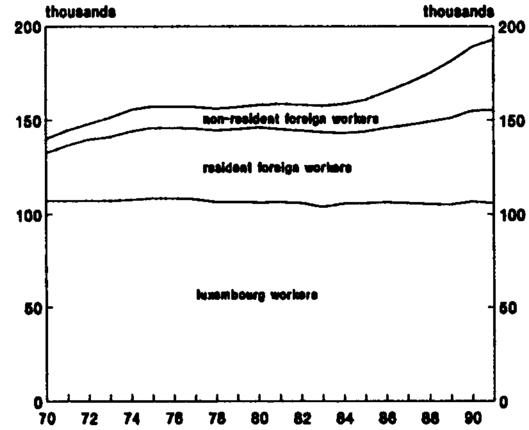
Throughout the period 1980 to 1991 private consumption has been an important source of growth in demand. In 1991 private consumption was boosted by a significant reduction of income taxes. Private investment has been showing considerable fluctuations, which is not surprising given the limited size of the economy. In the last few years buoyant private investment, both in equipment and construction, has boosted domestic demand. The ratio of total gross fixed capital formation to GDP amounts now to more than 25%, considerably more than in the surrounding countries or other Member States.

This remarkable growth performance was accomplished with relatively modest inflation. The early eighties saw price rises of up to 10% per year, and average inflation for the whole period 1980 to 1991 is 5.2%, but after 1985 the pace of price rises eased. Between 1986 and 1991 annual inflation was 1 point higher than in Germany, 0.5 point more than in Belgium and a little lower than the French inflation rate. In 1982 the system whereby wages were indexed according to inflation was suspended and pay rises were very modest for a few years. In 1984 wage indexation was reestablished, however, and in various wage rounds the "losses" which occurred in the previous years were gradually made up for. Wages have increased considerably in the last few years and further upward wage pressure is one of the few possible medium-term risk factors, particularly if shortages were to occur in the supply of labour. In the light of the modest size of the economy, Luxembourg has linked its money to the Belgian franc and has no independent monetary policy of its own.

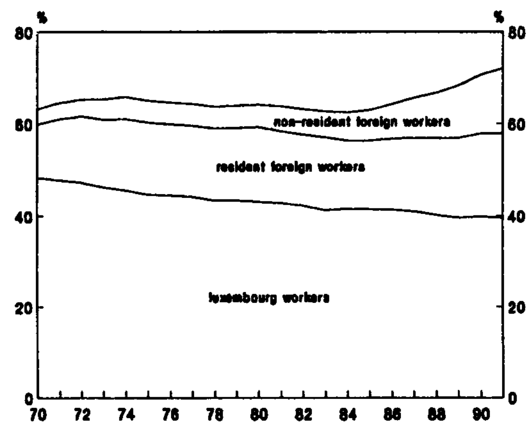
This overall picture of good performance should be understood against the background of Luxembourg's size and location. Economic output is 0.1% of total EC output. Without the sizable inflows of cross-frontier workers (relatively important, but modest in absolute numbers) this continuous strong growth of production and employment together with low unemployment and modest inflation would have been inconceivable. Resident and non-resident foreign labour represent 45% of all jobs. Non-resident workers account for two thirds of the observed rise in employment in the last few years and now represent more than 20% of total employment.

Graph 2: Employment

Total employment and foreign workers



Total employment and foreign workers as a % of population 15 to 64 years



Source: Statec

Since 1986 the level of GDP per head of the population has been the highest in the Community and it continues to increase more rapidly than in other Member States. Productivity growth, expressed as the growth of total output (GDP) per person employed, is one of the few areas where there are indications of a less favourable development. Between 1986 and 1991 productivity increased by less than 1% per year, which is, along with the Netherlands, the lowest productivity growth in the Community. At the same time GDP per person employed increased by 1.6% per year in the Community as a whole. Some qualifying remarks should be made here, however. First, the logic of the national accounts definitions implies that the contribution of the banking sector to the economy is underestimated in the case of Luxembourg. In a number of cases GNP might be a better measure for output than GDP (see box on page 10). Second, the incidence of part-time work has increased. Third, the high share of cross-frontier workers blurs the interpretation of the GDP per capita figure. While contributing to GDP, cross-frontier workers are not accounted for in the population figure, the denominator in the GDP per head ratio.

The Monetary Association with Belgium

One of the particular features of the Luxembourg economy is the monetary association with Belgium which has existed since 1922. Since the second world war, the monetary association has never been questioned except in 1982, when the Belgian franc was devalued. The fact that the Belgian franc in addition to the Luxembourg franc is legal tender in Luxembourg has some implications which are both interesting by themselves and in the wider context of European Economic and Monetary Union.

First of all, Luxembourg cannot conduct an independent monetary policy. The creation of Luxembourg francs by the Luxembourg Monetary Institute is limited by regulation in order not to jeopardize liquidity management in the monetary union by the National Bank of Belgium. The range of policy instruments at the disposal of the Luxembourg Monetary Institute is limited to direct credit control. This possibility has never been used.

Second, the Belgian and Luxembourg money markets are unified, as are the foreign exchange markets. Because of the special position of Luxembourg as an international financial centre, its banks play an important role in the money market and Luxembourg is a substantial contributor to the balance of payments of the union. The Luxembourg banks typically have a net position in the money market reflecting the reinvestment of Belgian deposits attracted by fiscal considerations. The liquid position of the Luxembourg banks does not appear to have created particular difficulties for the conduct of monetary policy in the union as a whole, which is explained by the fact that the Belgian Luxembourg Economic Union is a price-taker anyhow in credit and goods markets and that for a large part these deposits are reinvested in Belgium.

While it appears that Luxembourg's financial centre has not created particular difficulties for monetary policy in the union, this seems less so for its neighbours, to the extent that cross border holdings of deposits could obscure the relation between the national definition of the monetary supply and ultimate targets. The explanation for this differential impact can be attributed to the price-taking behaviour of the Belgian-Luxembourg Economic Union while some of Luxembourg's neighbours dispose of a certain degree of freedom to formulate an independent money supply target, whose realisation could be affected by cross-border holdings of deposits. To the extent that the latter problem exists, Luxembourg does not seem to be the cause of it (see chapter 2 of Part II).

Finally, to the extent that separate monetary indicators exist for Luxembourg (for example : the money supply or long-term interest rates), they are not relevant for the monetary stance of Luxembourg, which largely imports its monetary conditions. They seem to be more relevant for the situation of the association as a whole or of the larger partner. LFR long-term interest rates, for example, cannot be used to construct a yield curve in order to say something on inflationary expectations in Luxembourg. They appear in conjunction with the evolution of long-term BFR rates more informative on the evaluation by markets of the Belgian economic situation (see chapter 2 of Part II) although attention should be paid to the relative absence of the Luxembourg Government in domestic capital market when comparing interest rates.

Can the experience with the monetary association between Belgium and Luxembourg, which can be judged positive based on its survival for so many years, be extrapolated to the project of monetary union at the European level? A transposition is difficult, especially because of the big difference in size between the two countries involved, making the Luxembourg economy heavily dependent on factor mobility and an obvious candidate for forming a monetary union, according to the Optimum Currency Area Theory. Hence, the cost for Luxembourg of losing the monetary policy instruments is minimal. This can be illustrated by the low degree of real exchange rate variability which exists between Belgium and Luxembourg, suggesting that shocks affect both economies in a similar way. The standard deviation of the real exchange rate (based on yearly data on unit labour costs between 1971 and 1991) is 5 between Belgium and Luxembourg while it is 6.1 between Luxembourg and the Netherlands, 6.9 between Luxembourg and France and 7.2 between Luxembourg and Germany.

Nevertheless, some conclusions can be drawn from the Belgian-Luxembourg experience. The advantage of the association in terms of transactions costs and in the stability of the rate are clear. Its existence over such a long period suggests that the monetary association has not impeded the economic development of both partners and in particular that the impossibility of conducting an independent monetary policy by Luxembourg was not a drawback. Furthermore, it illustrates that asymmetric shocks are a threat to a monetary union, even if, as in the case of the Belgian Luxembourg Economic Union, the smaller region is extremely open to the larger. The deterioration of the competitive position of the union during the seventies affected Belgium much more than Luxembourg also because of divergent policy responses : a fiscal expansion to compensate for increased unemployment in Belgium and structural measures to encourage the development of the international banking sector in Luxembourg. Hence, Luxembourg seemed to have needed less the devaluation of 1982 for budgetary or economic reasons. Indeed, breaking the monetary assocation between the two countries would have had significant costs, because of the openess of the smaller region to the larger. In addition, the Luxembourg banks, having a large net position in Belgian francs, would have incurred severe losses in case of a revaluation of the LFR vis-à-vis the BFR with possibly important consequences for the economy given the relative size of the banking sector.

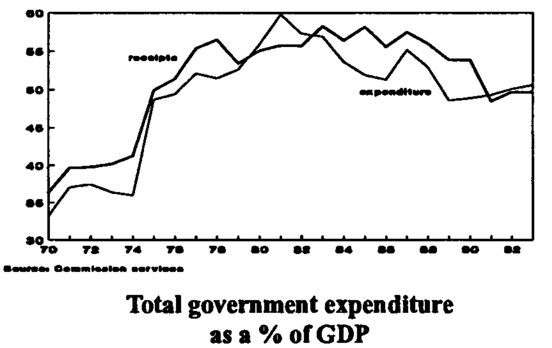
Since the decline in the steel industry in the seventies, the trade balance has been in deficit. The internal dynamism of the last few years spurred imports and a cyclical fall in prices and demand on the steel market depressed exports. The deficit in visibles has been rising and was LFR 60 billion in 1991. Given the current weakness of the international steel market and the continuing strength of domestic demand the trade deficit may increase further. The surplus on the services balance, an important part of which is from capital earnings from abroad, is about twice the size of the goods deficit, and the current account surplus is some 20% of GDP. In addition, exports of services - air transport, telecommunications and audiovisual services are growing.

A healthy public finance situation

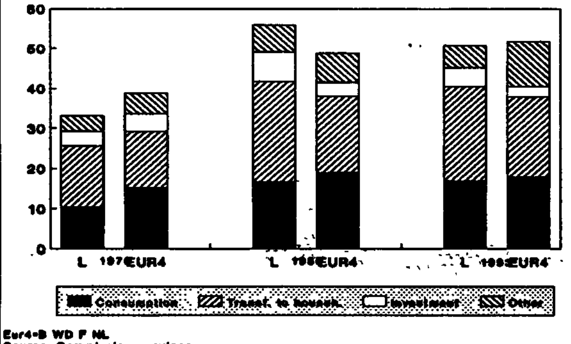
With the exception of the years 1980 and 1981 the government budget was in surplus for more than two decades. The public debt/GDP ratio is around 3%, the lowest in the Community. Taking into account the various investment funds that exist, the net debt of the central government is actually negative. Although the total burden of taxation has gradually been decreased from 58% in 1985 to its current 52%, it is still among the highest in the Community. In January 1991 direct taxes were substantially reduced and the tax system simplified. The top income-tax rate was brought down from 56% to 50% and other tax rates reduced accordingly and tax progressivity was mitigated. The tax decreases led to a central government deficit of LFR 8.0 billion (2.0% of GDP) in 1991 which could rise to LFR 15 billion in 1992. The existence of accumulated reserves allows, however, for a continuous negative borrowing requirement.

Graph 3: Public finance

General government receipts and expenditure, as a % of GDP



Total government expenditure as a % of GDP



With a view to harmonizing taxes in the integrated market, VAT rates and excise duties are being increased in a two step exercise. On 1st January 1992 the higher VAT rate was raised to 15% (from the previous 12%). The overall increase in indirect taxation (and prices) is more modest, however, than this rise would suggest. For a number of items VAT rates were actually reduced as they were shifted to lower rate categories. In order to limit the effect of tax harmonization on cross-border shopping the same approach is taken for excise duties, which are adapted progressively since 1.1.1992 and in 1993 will attain the minimum levels agreed on the European level. Some easing of the underlying inflation rate seems apparent which should facilitate the accommodation of these measures by the economy. Total annual tax revenue should increase by about LFR 4 billion; the cumulated upward pressure on inflation in this two-year period should not be more than 0.8 percentage points.

The contribution from the government budget to social security provisions is as high as 40% and this "fiscalization" shows a tendency to increase. Legislation has been voted which envisages curbing the gradual "fiscalization" of health care financing. The share in GDP of transfers to households declined for a number of years after it peaked at 26.3% in 1981. It is now rising again and at 23.2% of GDP in 1991 it is second only to the Netherlands and several points higher than in, for instance, France and Belgium. Outlays related to pensions are particularly generous and becoming increasingly costly. Given the ageing of the population the pension system appears to need revision in the longer term; either contributions need to be raised or payments lowered.

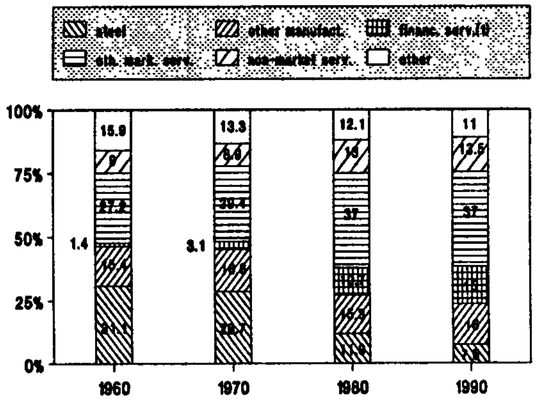
2. INDUSTRIAL DIVERSIFICATION AND REGIONAL INFLUENCE

Before the EC wide crisis in the steel industry, the Luxembourg authorities had recognized the risks involved with the economy's over-dependence on the steel industry. Firstly, the cyclical movements in the world steel market implied major fluctuations in an economy with over 30% of its GDP coming from this branch of industry; secondly, it was felt that both a slowing of long-term demand for steel on world markets and increased competition from newly industrializing countries were to put constraints on the sector's long-term growth potential. With a view to steering and accommodating the structural changes that were considered necessary, the government embarked, therefore, on a policy for industrial diversification. This policy approach is pursued at present within a context of regional cooperation.

Strong growth in spite of a decline in the steel industry

The good overall performance in the eighties is, remarkable since it was accomplished during a period of a Community-wide decline and important restructuring of the steel industry, once the country's major source of value added. Restructuring began as early as 1974, however, when other producers in Europe were still expanding their production capacities. In 1974, employment in the Luxembourg steel sector peaked at 28 000, but in 1980 it had already fallen to 18 000. Further restructuring and capacity cuts were required at the beginning of the eighties. Between 1981 and 1990 the steel sector's share in GDP, which was still 29% in 1970, fell further from 12% to 7.5% and its share in total employment decreased from 11% to under 5%.

Graph 4: Industrial structure % shares in value added (1)



(1) Value added reflects GDP.
The contribution of the financial sector to GNP is considerably more important (see also box on page 10 of this report)
Source: STATEC

Rationalization and capacity cuts at the beginning of the eighties were supported by an overall government "Steel Plan" and subsequently by Community-wide measures within the European Coal and Steel Community framework. Significant state aids were given and the government took a 32% participation in the capital of the major steel company. With the support of labour representatives redundant steelworkers were used in the realization of public works instead of being laid off. With a view to balance the budget, the costs concerned were not to be financed from borrowing and a "solidarity tax" was imposed involving a 10% rise in direct and indirect taxes[1], which was later reduced to 5% and then to its actual 2.5%.

Policy of industrial diversification

Investment is encouraged by providing direct financial incentives and, on the other hand, by a strengthening of supply-side factors.

Since 1962, the financial incentives system has been progressively evolving in time. Its main elements involve capital grants towards investment costs (including investment in non-tangibles), interest rebates, loans and the provision of industrial sites and buildings. Partial tax exemptions for projects during the development phase may be granted for new companies and new products. For the audiovisual industry "investment certificates" were created, which entitle investors to tax deductions. The situation as regards industrial policy provisions is relatively open and transparent. Subsidies to the manufacturing industry are lower than in the EC on average. Nevertheless, specific factors like the disproportionally high cost of the public transport system, because of the small size of the country, account for somewhat distorted overall high subsidy figures.

A draft is now pending which is to adapt national industrial policy provisions in line to new EC regulation. This implies that investment activities, in order to be eligible for state aids, should serve regional policy aims, environmental purposes, the enhancement of research and development activities. In addition, investment incentives will continue to be available for the SME's. The Luxembourg authorities stress their traditionally highly selective approach to new investment projects and related requests for financial support. They do not, therefore, expect this regulatory change to have much effect on their industrial policy practice.

Generally favourable supply factors and the flexible and responsive regulation by the Luxembourg authorities may have been of as much importance as the specific set of measures more commonly labelled "industrial policy". Luxembourg's greater autonomy compared with other "regions" of its size may have given it a comparative advantage in this respect.

Among the more general supply side factors accounting for the appeal Luxembourg has for investors, the authorities stress the high level of education, the linguistic skills of the population and, furthermore, the reliability and quality of the labour force. Another factor that needs mention in this context is the climate of social peace and stability that has been achieved by a continuous effort of consensus building between government, employers and labour. Another point particularly stressed by the Luxembourg authorities in connection with the general business climate relates to their cautious public finance policy. This policy stems from the view that an economy this size cannot afford to run deficits or to have a debt problem without risking the loss of investors' confidence. A particular "scale advantage" concerns the accessibility of high officials up to minister level and the possibility that licences and permissions can be delivered rapidly.

The chemical industry (mainly rubber and plastics processing) is the most noticeable among the "new" manufacturing activities. Today this sector accounts for 5000 jobs, about 14% of total industrial employment. Other "new" manufacturing activities concern, for instance, non ferrous metal products, machinery construction and glass. In a period of barely two decades the Luxembourg economy has gone through a process of very rapid "tertiarization". Between 1970 and 1991 the total share of manufacturing in GDP (including the steel sector) fell from 45% to 24%; that of the

1 In the aftermath of the 1973 oil shock many governments raised both their spending and, as taxes were not increased accordingly, their borrowing. The Luxembourg government also expanded its spending exceptionally rapidly, but adapted taxes accordingly and the budget continued in surplus until 1980.

services sector expanded from 41% to 65%. The industrial policy has aimed at preventing the scissor effect by developing new manufacturing industries.

The emergence of the financial sector forms a very visible success of the approach taken since the early 1960's, but various other service industries rapidly expanded as well. Examples are the air transport industry and, more recently, telecommunications and medias. Notwithstanding this strong growth in the tertiary sector, output in non-steel manufacturing has also developed favourably with growth rates of 4 to 5% a year throughout the eighties; therefore, its share in (the strongly growing) GDP has remained a steady 16%. Total employment in non-steel manufacturing has been rising again from 1984 and employment growth has been particularly fast in the last few years.

A specific labour market situation

Resident and non-resident foreign labour represents about 45% of total employment (50% of employees) and 70% of new jobs are accounted for by non-resident foreign workers. These high percentage figures represent modest numbers in absolute terms, however. The daily inflow of cross-frontier workers involves about 42 000 jobs in all. The surrounding regions have, so far, had little difficulty in coping with this situation and wage levels there are still some 30% to 50% lower than in Luxembourg. Travelling distances for the increasing numbers of daily commuters from Belgium, Germany and France are probably no greater than the distances usually travelled by workers to any other major city or regional centre in Europe. These flows of workers, although strictly speaking an international phenomenon, should rather be interpreted as the progressive integration of regional labour markets. European integration will further emphasize this (inter-) regional perspective. Certain international aspects are, nevertheless, involved relating to taxation and the provision of public goods, e.g. education and training, and the financing of social security. According to calculations by the Luxembourg authorities, tax revenue might fall by approximately 5% of budget receipts were the principle applied that tax is paid in the country of residence, as proposed by the Commission.

After several years of strongly rising employment, shortages are now becoming apparent for certain categories of labour. Constraints may occur even on supply in this "extended" labour market in the long term and this could lead to upward pressure on wages. A continuation of the current situation might also involve greater political frictions. Furthermore, land prices have gone up considerably and the physical availability of land - a negative scale factor - is another potential constraint on future development.

Policy issues and prospects

In spite of the possible future constraints referred to, the policies for encouraging a diversified pattern of investment are being further pursued. Taking account of the current labour market situation and the age structure of the population, these are aimed at activities with high value-added per person. With a view to improving the infrastructure, the share of public investment in GDP has gradually been increased to 4%. Priority is given to the further development of highways, telecommunications facilities and health and old age infrastructures. The authorities have also offered to co-finance a high speed train track in France from which the country would benefit. The authorities also continue to lay stress on education and training. Recently a training institute, at university level, for the banking sector has been established. A cooperation arrangement has been established with the surrounding regions with a view to joint activities in the area of industrial development and promotion and to provide a framework for avoiding bottle-necks.

The approach taken by the Luxembourg government has so far been effective and successful in ensuring a strong basis for economic growth. Several questions can be raised, nevertheless. They concern 1) the extent to which government measures may have distorted the working of market forces; 2) whether the policy of subsidies represents an optimal use of Luxembourg tax revenues and 3) the policy approach to be taken in future. The two latter points are accentuated by the increasingly strained situation in the labour market and by the high level of taxation in Luxembourg. In this context, it has been suggested that tax resources now used for subsidizing industries might find higher returns in portfolio investment abroad.

The following points deserve consideration in this context. Firstly, the rationalization and capacity cuts in the steel industry in the early eighties clearly required significant government intervention measures. During that period, given the predominance of the steel industry, state aids as a percentage of GDP to the manufacturing sector were higher than the EC average. From 1986, however, they have been lower. Therefore, in spite of the emphasis the authorities put on industrial policy, actual policy measures are possibly not much at variance with the approach taken by other governments. Secondly, the policies pursued (and the results accomplished) should be seen in a regional context. Although they may seem unusual in comparison with other Member States (especially the explicit emphasis they receive), they are less striking if compared with the approach taken by other regional authorities. The growth performance, which also appears exceptional in a nation-by-nation comparison is less uncommon if compared with developments in other regions performing well. In addition, it could be argued that without these policies - and given the size of the economy and the decline of the steel industry Luxembourg might now not have been a boom area.

Considerations of competition policy and possible supply constraints lead to questions about the future policy approach. For the time being, one has to conclude that the current policy has been successful. The effort to strengthen cross-frontier regional coordination and cooperation may provide an opportunity for avoiding possible future bottlenecks and frictions and enhancing the efficient use of resources. Furthermore, the adaptation of national law while maintaining the principal policy instruments particularly for regional development will emphasize investment of SME's.

3. IMPORTANCE AND STRUCTURE OF THE FINANCIAL SECTOR

Luxembourg's financial centre is one of the largest in Europe and unique in its international orientation. In 1990, the financial sector accounted for 15% of GDP and 8% of employment; this is, in international terms, a very high figure. In absolute terms, however, Luxembourg is not more important than a medium-sized European financial centre. It is clearly behind Frankfurt, Paris or, of course, London and also lacks the complete line of financial services which they offer.

Luxembourg, rather than serving the varied needs of a large domestic economy for financial services, as is the case for most other European centres, has established itself in certain niche markets for Europe as a whole.

Its development started around 30 years ago as a location for the Eurocurrency business in view of tighter regulation in other countries (in particular the US withholding tax and German minimum reserve requirements). Today around 170 foreign banks operate in the market and deal mainly with clients from their respective home countries. Apart from regulatory advantages of the Euromarkets, falling transactions and telecommunications costs also supported the creation of Luxembourg's Eurocurrency markets. Today, Luxembourg comprises 10-11% of the total European Eurocurrency business, behind London (40% share) and Paris (15%).

After the take-off of the Eurocurrency markets, the Eurobond business came next in building the Luxembourg financial centre. The seventies and eighties saw a sharp increase in international capital flows and the rise in securities as a major means of financing. Luxembourg managed to reap considerable benefits from these developments with an attractive liberal framework and the presence of different institutions operating in this field (the Exchange responsible for listing and trading, the CEDEL for the settling, the EIB as issuer). Luxembourg gained in the past mainly from the considerable activity in dollar bonds, but more recently the emergence of the private ECU as a top currency in the international markets is giving another boost. There exists no natural home market for the ECU, while, for other currencies, the home market is the main competitor. In contrast to the Eurocurrency markets, however, the Eurobond market, failed to attract business in DM, as the German Bundesbank is trying to keep this business based in Germany.

A third major market for Luxembourg was built on mutual funds, especially after the EC regulatory liberalization in 1985 (and its early implementation in Luxembourg) of certain types of mutual funds. The number and total asset size of funds registered in Luxembourg skyrocketed in recent years and now contributes significantly to overall activity. At the end of 1991, a total of LFR 4.100 billion net asset value (eleven times the 1991 GDP) was recorded.

Other markets and lesser services, such as private banking, stock trading, or re-insurance, are of importance compared to the above-mentioned markets; some of them, however, have just started to play a role in the country and are growing rapidly.

Luxembourg's financial markets have gradually become more broadly based with an increasing share of services requiring high-quality labour input. Yet, Luxembourg remains a centre which is different from other European centres, because it is :

- rather specialized in a few financial services (small role in stock trading, insurance, investment banking, or other services such as auditing, legal services.);
- serving a mainly international clientele, (less than 15% of bank deposits are held by domestic clients) and the "export ratio" in other areas is generally even higher;
- a comparatively young, financial market place. Just a few decades ago it began from almost zero; its high flexibility and innovative strength at least partly stems from this fact; - old traditions do not slow down further development;

Table 1:Financial Sector : The Business Structure

Market	Importance for Luxembourg	Worldwide Share	Future Dynamics	Main "export" markets	Main Competitors
Eurocurrency Market	Large	Large	Low-medium	D, F	London, New York
Eurobond					
– trading	Medium		Medium		London
– issuing	Large		Medium-high	F, B, USA	London, Paris
– clearing	Large		Medium-high		Brussels
– listing	Medium	Very large	Low-medium	USA	London
Private banking		Large		D, F, NL, B	Switzerland, Channel Islands Bahamas
Mutual funds	Large	Very large	High		Jersey, Dublin
Re-insurance	Medium	Still low	High	UK, Scandinavia, F	Bermuda, Cayman Islands, Switzerland
Stock-trading	Very low	Very low	High	NL	London

– exposed to international competition to a far higher degree than other European cities. This creates more risk but also an above-average potential for further development.

The international position

Luxembourg as a financial centre is a major player on the international market. Operating without a sizeable home market, Luxembourg was forced from the start to offer its services to foreign clients. To be successful in doing so implied that the country had to offer some clear advantages over other financial centres. Part of these advantages, but definitely not all, are of a regulatory nature.

Table 2: Financial Sector Importance in EEC Countries (1988)

Country	Gross Value Added in Banking and Insurance		
	Thousand Ecu Per capita	Billion Ecu Total	Share of Total Domestic Value Added (%)
Luxembourg	28.49	1.07	17.80
UK	19.35	110.41	16.20
Germany	8.13	49.96	5.10
Belgium	8.09	8.01	6.60
France	7.77	43.42	5.60
Netherlands	6.76	9.88	5.50
Italy	5.70	32.77	4.80
Denmark	4.98	2.55	3.00
Ireland	4.36	1.54	6.50
Spain	3.65	14.14	5.80
Portugal	2.45	2.52	7.30
Greece	0.94	0.94	2.50 *
EC Total	8.34	277.21	6.60 *

* share of GDP
Source: Eurostat

Luxembourg's international position varies largely according to the markets considered. In the Eurocurrency business it has a rather strong position (10% of the European Eurocurrency business is carried out in Luxembourg). This share is larger in the continental currencies such as DM, FF and SF. Luxembourg is weaker in the Eurodollar and the Eurosterling market. The most important competitor by far is, of course, the City of London, which dominates the markets. Luxembourg lacks the breadth in its banking community to aspire to a significantly larger share of business. Rather it will have to make efforts to keep its strong position in DM and FF, as more and more continental centres are competing seriously.

Luxembourg's international standing is more pronounced in certain services linked to the Eurobond business. Exchange listing is predominately done on the Luxembourg exchange, and CEDEL (Centrale de livraison de valeurs mobilières), the Luxembourg-based settlement firm shares the market only with Euroclear in Brussels. This dominance is striking in the field of EC-denominated bonds. Of newly issued ECU bonds in 1991 71% were listed solely in Luxembourg, another 6% also in Luxembourg. The country's popularity as a place for market listing is larger for bonds with smaller total issue volume.

The role of the bond market in domestic currency is unique. Here also the position as a major European financial hub can be seen. In 1991, less than 8% of the new bond volume was issued by domestic borrowers; Belgian and French borrowers were most heavily engaged in this market. The phenomenon of the bond market underlines and reinforces the international position of Luxembourg.

Regulation and supervision

A strict regime of regulation and supervision has been essential for the take off of the financial sector. When comparing Luxembourg's regime with other countries, one cannot identify a great number of differences and reliefs in Luxembourg. It offers only a few advantages, which are carefully designed however, for the development of certain important market segments. It was not only the use of a few incentives in tax and regulation, but also the credible attitude and long-term view of the Luxembourg authorities. Foreign-owned financial institutions were, and are, welcome in principle and not just tolerated. They have been offered a high degree of political, economic and social stability and security.

The main factors contributing to such a productive climate are summarized in table 3. More general conditions such as the stable political climate, the quality of the workforce, the geographical location in Europe's economic centre, or its absolute freedom of capital movements affecting virtually all sectors are not listed in this table.

Table 3: Specifics In The Regulatory Framework

Provision	Regulatory Framework
No withholding tax on foreign interest income	Eurobond market, Euromoney market, Private banking
Favourable tax treatment for foreign holding companies' income	Fund business
Favourable tax treatment for insurance companies' income	Re-insurance
Banking secrecy	Private banking
Liberal rules for foreign banks' settlement	

None of these factors are unique to Luxembourg. There are tax free havens which offer more generous tax breaks and, in addition, the large neighbouring countries at least partly fulfil these requirements. But Luxembourg started to liberalize its capital markets early and to create an efficient environment. Starting early has paid off already.

Prospects

Unlike most of the other major financial centres in the world, Luxembourg's markets are built on a very clear and rather specialized product structure and completely tied to the development of international finance in general. Therefore, without the background of a large home market and a broadly diversified financial services industry, risks as well as further growth and profit potential are larger than usual.

The likely future path will be determined by the imminent structural shifts on the financial markets such as :

- a general slowdown in the trends towards securitization (although no long term reversal) is likely;
- the relative restraint of public borrowers on the European capital markets, partly enforced by EMU entry conditions;
- a revival of loan financing, notably in the developing zones of Eastern Europe as borrowers from there are excluded from the standard securities markets for the medium term;
- a further increase in derivative products trading partly replacing trade in the underlying securities themselves (at least until they are completely paperless) for cost reasons;
- the market will become further sophisticated and separated between institutional and retail investors, with latter losing in importance.

Luxembourg has a good chance of benefiting from such developments:

- it is well prepared for the specific needs of institutional investors on the one hand and retail clients (funds, private banking) on the other;
- it should benefit from a gradual shift towards non-sovereign borrowers, because these have no home market attachment comparable to that of governments;
- it is well positioned as a low tax area, when increased capital mobility continues to reap such advantages in tax treatment; it could even profit from the liberalization in Eastern Europe;
- it will gradually gain a "home market" substitute, as financial integration and currency union in Europe will progress, with Luxembourg always in the leading group of countries, with its banks, insurance companies and securities industry all benefiting.

But, certain risks exist for the financial sector in the Grand Duchy i.e.:

- Luxembourg has no active securities trading on a large scale. This places it at a constant disadvantage in relation to other centres with strong exchanges (in terms of turnover). The complete lack of futures and options trading facilities will aggravate this drawback;
- as financial services will also, in the future, increase at an above average rate and attract more resources, the tight labour and real estate markets in the country could pose problems.
- an EC-wide harmonization in the field of minimum reserve requirements (as a consequence of monetary union) or interest income taxation (withholding tax for all EC residents) might affect Luxembourg's attractiveness to some private banking clients. Though this might not be considered to be a problem for the near future.

4. CONCLUSIONS

For more than a decade the Luxembourg economy has grown at a faster pace than other Member States. Employment has risen since 1984, particularly fast in the last few years, foreign labour, both resident and non-resident increasing significantly. Inflation has been modest and all the indicators of nominal convergence are satisfactory. Luxembourg complies without difficulty with all five criteria defined for EMU.

The prospering of the Luxembourg economy during a period of severe difficulties in world steel markets is remarkable. In a period of twenty years the economy has gone through a process of rapid "de-industrialization" and its over-dependence on steel has been greatly reduced. The government's policy for industrial diversification has largely contributed to both steering and accommodating this adaptation process. As part of these policies, the financial sector has seen a particularly fast expansion. In spite of its importance to the country's economy, Luxembourg's financial centre is of only modest size in an international context. It has, nevertheless, been able to develop an important role in particular niche markets.

The government is continuing its policy for diversification and further encouraging investment in other services industries. The recent adaptation of national legislation should ensure that future policies entirely comply with EC competition law.

Possible risk factors for medium term growth that could be identified involve the recent decline in productivity growth and, on the other hand, constraints that may occur on the supply of labour. The government has demonstrated, however, great flexibility and an ability to adapt to changing circumstances and less favourable developments.

The financial sector and the measurement of economic output

The size of the Luxembourg economy and its specific position as an international financial centre involve two particular aspects in relation to the measurement and interpretation of economic output.

1. The first one concerns the evaluation of the banking sector in measuring gross domestic product, GDP. According to standard national accounts methodology value added of the banking sector is considered as an intermediary product, i.e. as an input for the other sectors of the economy, implicitly included in their value added. Consequently, in the calculation of a country's GDP, in order to avoid double counting, the value added of the banking sector is deducted from the sum total of value added formed in the other sectors. The Luxembourg banking sector, however, "exports" about 80% of its services to foreign clients. The application of the international definition implies that these exported banking services are not reflected in Luxembourg's GDP. Therefore, STATEC, the government statistical service, produces, in parallel with GDP series according to the international definition, also GDP series including an estimate for these exported banking services. In correspondence with the development of gross margins of the banking sector, the discrepancy between the two has shown considerable variation and declined at the end of the eighties. In 1989 and 1990 the STATEC version of GDP was 11 to 12% higher than GDP measured according to international convention.

2. Secondly, Luxembourg's unusual position has resulted in an important gap to occur between gross domestic product and gross national product. In 1990, GDP - gross production formed on Luxembourg territory - amounted to LFR 291.5 billion. Gross national product, however, was LFR 397.2 billion in that year, 36% more. The difference is explained by the important net-flow of income from abroad. In 1990 net capital earnings from abroad were LFR 117.1 billion, 40% of GDP. Their strongest rise occurred at the end of the seventies; between 1980 and 1990 they were 35% of GDP on average. Net-earnings on capital largely offset the negative net-balance in salaries (LFR 11.4 billion in 1990, 4% of GDP). In the last few years, net salary payments have been rapidly increasing though, reflecting the rise in frontier workers (in 1986 net-salary payments were still less than LFR 1 billion).

PART II
SPECIAL TOPICS

CHAPTER 1
THE FINANCIAL SECTOR *

1. Introduction and Overview

Relative size

The financial sector of Luxembourg shows a number of characteristics which clearly distinguish it from those of other countries. The sector's importance, measured by any meaningful indicator, in relation to the country's overall economic size, is considerable :

- Financial services contributed, in 1990, over 15% of Luxembourg's GDP, up from 11% in 1980 and just 3% in 1970.
- The banking sector alone accounted, in mid 1991, for 8,7% of total employment, up from 4,8% in 1980 and 2,9% in 1970.
- Financial services, too, play an important role in general economic development; gross fixed capital formation of the financial sector grew between 1983 and 1989 on average by 22% a year in real terms, compared to 6,6% for the economy as a whole.
- The contribution of financial transactions to the external balance of Luxembourg is considerable : net factor income from abroad amounts to about 25% of GDP.

International orientation of the financial markets

In comparison to other major financial centres in Europe, Luxembourg almost exclusively serves its international clientele, for obvious reasons, as the domestic base is rather narrow. Thus, for example, at the end of 1991 out of 187 banks in Luxembourg, 162 were from outside the BLEU. This strong "export orientation" of its financial services has several major implications :

- It puts Luxembourg into a high degree of competition, which other financial centres, such as London, Paris or Frankfurt do not face, since the latter can build a good deal of their business on a rather inelastic domestic demand.
- There is a crucial dependence on the freedom of international capital flows, especially on Luxembourg's side, but also with regard to its main partners, Germany, France, Switzerland or Scandinavia.
- As the international business share is so big, the establishment of specific "offshore facilities" to separate domestic and international business would not be meaningful. Thus Luxembourg can, indeed, claim not to have a special offshore centre.

General structure

Luxembourg's financial services are clearly dominated by the banking industry. More than sixteen thousand people work there, whereas in insurance there are only 969 (end 1988) and in non-banking financial establishments at the same period, 379.

The latter group will, inevitably increase its share as the importance of the fund business increases further.

Luxembourg relies on four product-lines :

- traditionally the Eurocurrency market business (70% of that in US$ and DM);
- additionally since the 1970s, the Eurobond market, issuing and even more clearing and listing;
- more recently, after the sluggish period of the early 1980s, private banking, including portfolio management and gold trading;
- and, for a few years, the mutual fund industry.

Many other products do exist, but play no major role in the banking sector.

Post-war development

In contrast to many of its main competitors, Luxembourg's venture into the financial markets is relatively recent. Just thirty years ago, in 1961, there were only 19 banks on record, and of those 5 foreign institutions.

The early, and mid, sixties mark the beginning of the fast development of Luxembourg as a banking location. Some legislative action added to that. The 1962 US "interest equalization tax", which created the withholding tax pushed large amounts of dollars on to the Euro Market and from there into Luxembourg. Another more recent example was that of the Federal Republic of Germany which introduced as of 1.1.1989, a 10% withholding tax on interest income. The german authorities appear to have been surprised by the degree of the present-day international mobility of capital which resulted in a heavy outflow of capital from Germany and just 6 months later the law was abolished.

The early 1980s saw a phase of sluggish development in Luxembourg's financial markets, due to the disruptions in international capital flows, created by the second oil shock. But from the mid-1980s onwards, Luxembourg's financial markets resumed their strong growth, which has continued until now.

Legal and institutional framework

The remarkable development of a financial centre far beyond its domestic needs has taken place in a legal and institutional environment which, in comparison to other countries, has clearly enhanced this trend. The financial industry received support in efforts to establish itself as a strong and emerging sector at a relatively early stage so as to enhance sectoral change in the Grand Duchy and to diversify its industrial base. This support takes different forms, especially the following which will be discussed later in detail in the chapters dealing with the different parts of the financial sector.

a) The tax system

- there is no withholding tax on capital income from non-domestic companies.
- there is a very favourable taxation of holding companies and companies in the mutual fund business, the income of these remains untaxed; there is essentially only a registration tax on the company's net asset value (due to this fact, Spanish tax codes, for example, regard Luxembourg as a tax-free haven).
- global corporate income tax is fairly low, has been lowered in the last few years (to 39% total) and will be further lowered next year.
- there is no stamp duty on sales on the stock exchange.
- since 1979 there has been no VAT on the sale of gold.
- foreigners do not have to pay any property or estate tax.

b) Banking rules and supervision

- foreign banks are free to establish branches in Luxembourg. Licences are, in accordance with the EEC directive of 1977, issued by the Treasury on the fulfillment of capital requirement and personal reputation of the executives.
- the supervision of the banking and financial sectors in general is centralised with the "Institut Monétaire Luxembourgeois"; (Insurance supervision is carried out by an independent institution, however, and stock exchange supervision is in the hands of a stock exchange supervisory commissioner).
- the principle of banking secrecy does not apply in any criminal matter.

c) The existence of the stock exchange with liberal listing requirements

d) The general political framework, which is especially described by

- an overall stability
- a firm embodiment in the common market as well as in the Belgian Luxembourg Economic Union and the European Monetary System.

Altogether these lead to a financial centre which combines a favourable treatment comparable to those of "free havens" and on the other hand, a direct positioning within one of the most developed parts of the world's industrialised countries and a country specific "risk premium" which is negligible.

2. The Banking Industry

Size

The banking sector, as outlined in the last chapter, is the core of the financial sector in general. At the end of 1991 there were 187 banks in Luxembourg authorised by the Treasury. 35 of them were banks established under foreign law. All the others were established under Luxembourg law. However, there is some "double-counting" : several foreign banks have branches established, governed by foreign law, and in parallel, affiliates under Luxembourg law. Besides these commercial banks, there are 47 rural credit corporations (Caisse Rurale/ Raiffeisen) which mainly serve the domestic rural population and smaller domestic clients in general.

Table 1.1 gives an overview of development and a geographical breakdown of the banks. It shows that development has taken place in several waves, with the pronounced

Table 1.1: Geographical Base of Parent Companies of Banks in Luxembourg

	1975	1980	1985	1990	1991
Luxembourg/Belgium	12	12	12	22	25
Germany	16	29	29	38	40
France	5	6	7	20	21
Switzerland	5	7	7	16	17
USA	15	11	11	12	10
Others	23	46	52	69	74
Total	76	111	118	177	187
EEC				99	106
EFTA				37	38
Others				41	43

Source: IML

interruption in the early 1980s. It shows the early arrival of US banks, after the introduction of the withholding tax in 1962. Later on, however, other centres, especially Nassau, emerged as strong competitors for US business. The second wave of inflow was led by German banks, which started in the sixties in order to escape the stiff German minimum reserve requirements and later the withholding tax of 1989. Lately, however, French and Swiss banks, especially, have increased their presence in Luxembourg, although for different reasons. French banking has followed the liberalisation measures taken in the second half of the 1980s.

The Swiss banks use Luxembourg more and more as a foothold in the EEC and as an additional centre to London in the Euro money markets. Taking into account the respective size of the banks, the pre-eminence of the German institutions is becoming clearer : in terms of total asset size these held a share of almost 34% of the total market at end 1990.

As several exceptional reasons simultaneously gave a push to the Luxembourg financial markets and in a phase of slowing world-wide monetary growth, one has again to expect an imminent slowdown in international demand for Luxembourg's banking in general and, therefore, a slowing of new establishments.

Additionally, the tight labour market in Luxembourg makes any establishment or enlargement increasingly difficult. Already 48% of all employees in the banking sector are foreigners, from just 34% five years ago. And, whereas in the past foreigners were mainly found in executive positions, institutions are increasingly forced to bring their staff with them even for non-management positions. The over-proportional increase of foreigners during the last five years mainly stemmed from the sharp increase in non-executive personnel. On the management level, the share of foreigners has been stable at around 62% for the past 15 years.

After the liquidation of BCCI (see page 16), the largest banks behind Deutsche Bank, are three domestic banks, the Banque Internationale de Luxembourg, the Banque Générale de Luxembourg, and the Banque Caisse d'Epargne. They are the largest institutions in the country, with total balance sheets currently accounting for 600 bn.

The balance sheet

In line with the increase in the number of banks operating in Luxembourg, their combined assets grew strongly as well. Between 1980 and 1990 assets grew at an annual average rate of nearly 10%, and faster in the second half of the last decade than in the first half.

The gross structure of the combined balance sheet already shows some of the changes which have taken place within the last decade : Table 1.2 gives the balance sheet structure of the Luxembourg banks. In 1980, the Luxembourg banks net interbank deposit position was negative : 73.5% of the liabilities were Interbank positions, whereas only 51.9% were on the asset side. This negative interbank position corresponded to a positive position against non-banks. In particular, lending, at 35%, still had a considerable share. A main activity of Luxembourg banking was corporate financing, not least of German firms, outside the regulated domestic German market.

Table 1.2: Luxembourg Banks' Balance-sheet Structure

	1980	1985	1990
Total Assets (Bn FLux)	3917.0	7628.0	12480.0
of which in foreign currency (%)	85.6	88.5	84.8
of which (%)			
Bank deposits	59.1	54.1	60.4
Loans	35.1	32.1	24.0
Securities	8.3	11.0	11.8
Others	4.7	2.8	3.8
Total	100.0	100.0	100.0
Total (Liabilities/Bn FLux)	3917.0	7628.0	12480.0
of which in foreign currency (%)	84.8	87.1	84.4
of which			
Bank deposits	73.5	66.7	47.0
Deposits	18.6	23.0	40.2
- Demand Deposits	9.2	14.5	24.5
- Time Deposits	7.9	7.4	14.7
Capital, Reserves, Provisions	5.1	8.9	11.7
Others	2.8	1.4	1.1
Total	100.0	100.0	100.0

Source: IML, own calculations

In 1990, this relationship changed profoundly. "Private banking" grew dramatically in importance; deposit gathering amongst private individuals, mainly in the medium income range, was highly successful. At the end of 1990, non-bank deposits amounted to over 40% of total liabilities. Demand deposits increased markedly to 24.5%. Time-deposits did not do quite as well in the early and mid-1980s, but more recently, following the world-wide rise in short-term interest rates, have grown substantially. Savings deposits play a minor role in this context. So Luxembourg's financial centre has now developed into a location with a negative net position against non-banks; the private clients' deposits are, therefore, deposited on the euromarkets at other institutions in other centres.

Business in Luxembourg mostly takes place in foreign currency. The balance sheets consistently show assets and liabilities in foreign currency between around 80% and 90%. The statistical fall in the share of foreign currency positions between 1985 and 1990, is only due to the US$ depreciation during this period and not to a genuine change in business practice.

Holdings of securities are relatively minor on average with a 12% share of all assets, though slowly increasing. Widely cited "securitisation" obviously did not have as strong an impact on Luxembourg's banking, with its special geographical and product range of business, as in other banking centres.

Capital, reserves and provisions have been increased during recent years. 1988 and 1989 especially saw a significant capital infusion, whereas loan and other provisions had to be piled up in the early 1980s, as elsewhere in the banking industry, from 0.3% of all assets in 1980 to 2.9% in 1986. Calculations by the IML show for 1990 a capital base in relation to the risk weighted assets of 8.9% on average; clearly exceeding the 8% threshold set up by the Cooke Committee; a case by case calculation revealed, that at the end of 1990, a volume-weighted 60% of all banks has capital exceeding this 8% level. In terms of capital adequacy, conclusions should be drawn carefully : the majority of the banks are affiliates of foreign banks, and, therefore, through formal guarantees, draw upon more resources than just their own funds.

New and off-balance-sheet financial instruments are used by the banking sector but still only to a moderate extent. Underwriting facilities, like NIF's (Note Issuance Facility) or RUF's (Revolving Underwriting Facility), as well as standard, exchange-traded futures and options play a very minor role and amount together to just one percent of the aggregate balance sheets. The situation in the interbanking market of interest rate swaps and forward rate agreements on currencies is very different. These two types each reached an aggregate total of almost LFR 1.800 billion at the end of 1990, each representing commitments of around 14% of the aggregate bank balance sheets. It is clear that for some institutions which are more prone to such instruments, the relative commitment is much higher. On the other hand, it has to be kept in mind that these figures are gross figures. Netting opposite commitments between institutions would result in much lower levels.

Currency distribution on the Eurocurrency Markets

Luxembourg's banking sector traditionally does business and trading in all major convertible currencies. There are, however, clear priorities in this kind of business with regard to currencies. The Eurocurrency market business in Luxembourg evolved in the 1960s mainly as US$ business; later DM loans and again later, DM deposits emerged as major areas of business. These two currencies, US$ and DM, have retained their position as the dominant currencies in Luxembourg.

Table 1.3 gives an overview of the currency distribution of the Eurocurrency business based in Luxembourg (left column). DM and US$ together account for about 60% of the Eurocurrency markets in Luxembourg. But other currencies have gained additional importance during recent years, notably the FF, business in which increased sharply in 1990.

Looking at these market shares in Luxembourg in relation to overall euromarket business in Europe, especially in London, the specific profile of business in Luxembourg can be noticed. Luxembourg has very strong positions within the total markets in DM, FF and SFR. On the other hand, of relatively minor importance are deposits in US$ (as the total markets here are so large) and Yen. Here, in these two worldwide traded currencies, London with its even more international banking centre has the lead in Europe. Luxembourg's overall share has, especially with regard to deposits by nonbanks, steadily increased since the early 1980s. Its relative position is stronger in the non-bank market (end 1990 around 19%) than in the interbank market. This corresponds with the fact that interbank markets are for Luxembourg less important (57%) than for all the European euromarkets together, on average (74%). It holds a share of 16% in the non-bank market of all Europe's markets as compared to just 7,5% (10% loans, 8% deposits) in the interbank market. However, as the currency distribution of Luxembourg's market does not match the total, exchange rate movements (DM/US$) affect these market share figures significantly.

Table 1.3: Currency Breakdown of Luxembourg's Euromoney Market (Percentage figures as of 31.12.1991)

	Luxembourg's Currencies as % of Luxembourg's Total		Luxembourg's Markets as % of Total European Euromoney Market	
	Assets	Liabilities	Assets	Liabilities
DEM	34.5	38.2	25.8	20.6
FF	11.4	11.8	36.5	33.8
GBP	3.0	3.5	8.6	8.8
ECU	5.9	4.4	11.2	7.0
USD	24.6	21.1	6.2	4.7
SFR	8.5	8.4	20.3	14.3
YEN	1.1	1.2	1.9	1.9
OTHERS	10.8	11.8	11.6	9.7
Luxembourg TOTAL	100.0	100.0	11.0	9.9

Source: IML, BIS, own calculations

Profitability

According to IML figures, in 1990 the banking sector operated with a net rate of return on its own funds (capital and reserves) of 6.8% (Table 1.4). Profits, therefore, continued their downward trend from the unusually high 1988 levels. Increasing provisions for loan losses (in 1990 amounting to 36% of gross income) and mounting labour costs (employment increased between 1985 and 1990 by 60%) go together with increasing competition and a more difficult general economic environment. Again, one has to take into account the fact that, due to close economic links between Luxem-

Table 1.4: Profit before Taxes of Banks in Luxembourg

	Per employee (Mio. Flux)	Percentage of Capital + Reserves
1986	2.37	9.2
1987	2.23	9.2
1988	2.88	11.7
1989(1)	2.38	9.5
1990(1)	1.71	6.8
1991(1)	2.00	8.7

(1) Without BCCI
Source: IML, own calculations

Table 1.5: Bank Profitability in Luxembourg

	1986		1991(1)	
	In % of total gross income	In % of average asset size	In % of total gross income	In % of average asset size
Net interest income	78.6	1.11	73.5	0.86
Commission and other income	21.4	0.30	26.5	0.31
Total gross income	100.0	1.41	100.0	1.17
Personnel expenses	16.9	0.24	21.2	0.25
Other general expenses + Depreciation of non-financial assets	11.8	0.17	15.5	0.21
Taxes (other, than on income)	2.2	0.03	2.0	0.02
Total expenses	30.8	0.44	40.5	0.47
Gross profit	69.2	1.00	59.5	0.69
Provisions and Depreciation on financial assets	46.1	0.66	36.9	0.42
Taxes on income	10.3	0.15	6.4	0.07
Profits	12.8	0.18	16.2	0.19

(1) Without BCCI
Source: IML, own calculations

bourg's affiliate banks and their foreign parent companies, the capital recorded in the accounts understates the effective liable capital.

In 1990, the two banks with the largest profits were foreign-owned institutions; the Kredietbank Luxembourg and DG Bank International with profits of 1,92 and 1,65 bn LFR respectively. With the arrival of new banks, the increasing international competition in private banking, the further deregulation of major competing financial centres and mounting operating costs, it is at least doubtful if the degree of profitability enjoyed in the late eighties is sustainable in the medium term. One institution. But the figures still seem to show a degree of profitability which exceeds, for example, that of banks in Germany and Belgium.

1991 saw a remarkable overall increase in profitability, due less to increased income than to a successful cost cutting, mainly in the field of personnel expenses.

Supervision and regulation

– Supervision

  The task of banking supervision is assigned to the Institut Monétaire Luxembourgeois (IML). Although the Treasury is formally responsible for permission to establish new banks, it also draws on the support of the IML.

  The establishment of new banks or branches is, as already outlined, in principle, free. The conditions are of a sufficiently qualified management and adequate capital of at least 350 million francs. No special rules apply for non-domestic requests for establishment, and there are also no reciprocity reservations. Current supervision takes the form of minimum operating ratios concerning risk exposure and liquidity and regular inspections.

– Deposit insurance

  As a consequence of the EC recommendation of 22.12.1986, in May 1989 a deposit insurance scheme was established for the first time. For that purpose, the "Association pour la garantie des dépôts" was established. Deposits of up to 500.000 LFR are covered.

– In January 1992 the government proposed a general financial markets law, updating previous laws and therefore providing an even more structured and transparent legal code for the financial community. It will also take into account the new EC legislation on banking (2nd banking directive).

– Luxembourg implemented the EC directive on insider trading by passing a law dealing with this matter.

International competition

Operating without a sizeable domestic clientele and mainly in wholesale banking, Luxembourg's banking industry, as such, is in significant competition with other places. This adds to the competition between Luxembourg's banks.

The main competitor in the Eurocurrency business is London. London has in this field the higher market share, a more diversified currency structure and a broader general banking sector. Luxembourg is not in a position to challenge London's lead. But it has gained the role of a successful "mid-player", especially in the Continental currencies and for European clients. With the gradual shift away from the US-Dollar as the only reserve currency and the further opening up of Europe's capital markets, Luxembourg's position in the Eurocurrency market business might even be enhanced, provided that the regulatory advantages over other Continental locations continue to prevail.

Luxembourg's banks have also built up another "product line" around private banking and portfolio management. In this market Zürich is also a dominant competitor. Luxembourg has tried to establish itself in the market for medium to high net worth private clients and to leave the very upper market segment to Zürich. The basic rationale behind this behaviour lies in its different cost structure : Zürich provides its services at higher costs than Luxembourg, a fact that matters in the medium market range. But Switzerland has been successful in diminishing its disadvantage in securities' commissions. Besides costs, banking secrecy is an important competitive factor.

Supplementary to the banks, specialised asset management companies operate in Luxembourg. They are established and supervised under a law passed only in 1990. In November 1991, 15 such firms were established, primarily subsidiaries of foreign banks, brokers and insurance companies.

The "BCCI Case"

The Breakdown

On 5 July 1991, the Bank of England took the initiative to secure control of the assets of banks in the BCC Group; the action was carried out by parallel action in seven countries, one of them Luxembourg. BCCI, the "Bank of Credit and Commerce International"

- had its operational headquarters in the centre of activities in London, UK;
- its ultimate majority shareholder in Abu Dhabi;
- its registration and the seat of the holding company (BCCI Holdings) in Luxembourg;
- offices in about seventy countries, worldwide.

During the process of investigating BCCI's business activities after the closing in July last year, it was discovered that:

- assets of around 1.16 US$ face total liabilities of around 10.6 bn US$, almost tenfold the amount;
- over at least ten years, the bank concealed foreign exchange losses of at least 1 bn US$, it did not report deposits to the value of several hundred Mio US$;
- BCCI was operating under less than perfect conditions of supervision, because the bank's seat and its operational centres were separate, because there was widespread criminal activity on the part of the bank's managers to mislead the regulators, and because the auditor for a long time seemed to rely on the principal shareholder's willingness to bear losses.

The consequences for Luxembourg as a financial centre

- BCCI was, in terms of assets, Luxembourg's largest non-affiliated bank. At the end of 1989, the balance sheet total amounted to 358 bn LFR, at least as officially reported. This meant a share of Luxembourg banks total balance sheet of almost 3.2%.
- Losses for other banks or other creditors in Luxembourg occurred but were rather minor compared to total business or also compared to the UK and the USA, where the majority of depositors resided. The BCCI was never a large participant in Luxembourg's Eurocurrency market, which could otherwise have caused heavy losses for partner banks.
- A difficult effect to assess is the one on the reputation of Luxembourg's banking sector in general. Prejudices seemed to be confirmed which judge Luxembourg as a financial free haven with favourable tax regulation and lack of supervision. The special circumstances of BCCI and the actual good track record of the IML are sometimes overlooked.

3. The securities markets

General situation

Historically, Luxembourg has always relied upon financial markets which are fairly integrated and complementary to each other. In particular, there has never been a regulatory distinction between the banking and securities industry; the banks are the major participants in the securities markets and therefore "universal banks" in the classical sense.

As in the banking industry, Luxembourg's securities markets are highly integrated within the international financial markets. The importance of Luxembourg as a market for securities again lies not in the matching of domestic savings with domestic investment but instead in its role as a specialised market place for the international financial community.

The bond market

The major segment of the securities market is the Eurobond market.

A few important factors have contributed to this :

- the freedom to issue debt in foreign and (in the meantime also) own currency;
- the existence of bearer bonds, which allows the identity of the bond holder to be concealed;
- again, the absence, as in other countries, of any withholding tax as an incentive for private investors;

- the monetary association with Belgium and, therefore, private clients' demand from Belgium;
- the availability of the stock exchange for bond listing.

This has allowed Luxembourg to take on a leading role in international fixed income securities. But only the sharp increase in international investment in the 1980s led to a spectacular increase in the Luxembourg bond market.

Table 1.6 shows the figures for the years 1985 and 1991. Gross bond issues in 1990 amounted to 207,7 billion francs. Almost 72% were issued as private placements that means without advertisement and prospectus. Private placements have become increasingly popular within the last few years, as they give issuer and investor the necessary flexibility to optimise their specific strategy on the capital markets. In Luxembourg, a private placement is often widely spread at the underwriting and investor level. It is private only in so far as the absence of prospectuses and advertising is concerned.

Table 1.6: Gross Bond Issues in Luxembourg Breakdown of Principal Types

	1985 (BN FLux)	1991 (Bn FLux)	1991 Share (in %)
Public issues	15.9	87.2	42.0
Government and public enterprises	1.5	1.0	0.5
Private domestic enterprises	7.2	17.1	8.2
Rest of the world	7.2	69.1	33.3
Private placements	11.7	120.5	58.0
Domestic financial institutions	2.9	44.3	21.3
Rest of the world	8.9	76.2	36.7
Total Bond Issues	27.6	207.7	100.0

Source: OECD, own calculations

Two-thirds of the amount issued on Luxembourg's bond markets were issued by foreign borrowers, who take advantage of the relatively cheap possibility to raise funds in Luxembourg. Bonds denominated in US$, CAD, ECU, and LFR itself, in particular, are the cornerstones of the bond market.

The market for bonds denominated in Luxembourg Francs

The LFR bonds are especially attractive due to their freedom from withholding tax for the holder. Therefore, especially Belgian retail investors can easily avoid their domestic withholding tax without any currency risk.

Due to these differences between the Belgian and Luxembourg bond market, a yield differential between these two markets prevails. Until 1984, Belgian rates persistently surpassed those in Luxembourg by more than one percentage point. In more recent years, this differential has narrowed, although in 1990 it was again around one percentage point. However, as of 1.1.1991 Belgium lowered its withholding tax on residents' interest income from 25% to just 10%, hoping to activate its domestic retail bond market. Whether this narrowing of the tax gap between the two countries will be enough to recuperate considerable business lost to Luxembourg has to be seen. At least, some Belgian corporations have started again to issue bonds in Belgium designated for retail investors.

Since 1990, the market for bonds denominated in, or otherwise linked to, the Franc has been considerably liberalised. Now any issuer is free to proceed with his issue whenever and however it is convenient for him. There only remains the obligation to inform the authorities, the admission and queueing procedure, therefore, has been completely abolished.

This step will, in the medium term, increase the volume of, and competition in, the LFR bond market. Underwriting fees, therefore, are about to fall. Another important step also for Luxembourg is the start of the Belgian futures and options market BELFOX, as this allows institutional investors to hedge even better against interest changes and to adopt a more flexible investment strategy. But already in 1990 the effects of this liberalization were felt; issues increased by 147% over a relatively weak 1989 figure. Both segments, private placements and public issues, benefited roughly equally. Although Belgian borrowers remained on top, French borrowers extended their use of this market especially, whereas the former importance of Scandinavian borrowers dwindled further. In 1991 the market registered another 25% rise of new issues, with Belgian and French issuers again increasing their market share to a combined figure of almost 50%. The classical straight bonds dominate the market. Exceptions are very rare : in March 1991, LFR 1 bn were raised by an equity linked issue after the last non-classical issue dating back to mid-1989.

The Eurobond market

The Eurobond market is even more important for the Luxembourg financial institutions than the LFR market for bonds. The market in general, which comprises the issue of bonds denominated in currencies other than the one legal in the country of issue, has become a major source of international corporate and official authorities' financing. The issue of Eurobonds grew more than tenfold from 1980 to 1990, despite the fact that regulatory consensus still restricts this market, notably the opposition of the German authorities to DM Eurobonds.

Luxembourg participates in this market in different ways :

- its banks act as underwriters of primary debt;
- the banks and other financial institutions trade these instruments in the primary and secondary market;
- the exchange lists a good part of them;
- the local clearing house provides its services in this market.

According to IML figures, in 1988 Luxembourg's banks took part in 16.4% of newly underwritten capital in the Eurobond market. Being the latest available figure, it is not clear if the slight downward trend over the last 15 years has continued until recently. It seems to be that the successful placement of new bonds rests less on Luxembourg's investors' demand than a decade ago.

One has to be prudent in the interpretation of a possible trend in these figures, however, as they do not reveal the actual sums placed by different banks. It might be that, just through an average reduction in the number of banks per issue, this share could have been statistically decreasing, without a real loss of market share in underwriting. Another set of statistics could even support the view that Luxembourg's banks are not about to lose a share in global placing power : the OECD statistics on foreign bonds (as a part of total Eurobonds, underwritten only in a single country) show that Luxembourg in 1990 had a share of 9.4% (far behind Switzerland with almost 50%). This share was higher than the year before. But as mentioned, these figures cover only a relatively small and probably biased part of all international bond offerings.

In contrast to the above-mentioned figures, those for market listing of Eurobonds show an enormous and sustained importance of the Luxembourg exchange : in 1988 almost 67% of all new Eurobonds were listed on the Luxembourg exchange, a share clearly above that ten or fifteen years ago. The exchange enjoys its overwhelming popularity due to its liberal listing requirements and its closeness to the general financial centre.

Finally, Luxembourg hosts, with CEDEL (Centrale de Livraison de Valeurs Mobilières) one of the two relevant clearing houses in international bond business. CEDEL directly profits from Luxembourg bond trading and vice-versa. In 1991 CEDEL registered a turnover of 3.336 bn US$ and claimed a market share of 37%. Turnover showed a remarkable 37% increase over 1990, but less than the 40% increase enjoyed by its larger competitor, EUROCLEAR, in Brussels. At the end of 1991, securities worth 543 bn US$ were deposited at CEDEL. Although not necessarily linked to, or parallel with trading in Luxembourg, the CEDEL turnover might also give some hints on Luxembourg Eurobond trading. Table 1.7 breaks CEDEL's turnover down by currency and market category for 1991. It confirms the overall leading role of US$ instruments but only due to money market instruments and notes. Here the share of US$ issues was 61%.

European currencies, with the exception of UKL, still play a role in this field far behind the general position of the respective currencies. In the classical Eurobond market, the situation is completely different. In this segment, and with 70% still the dominant one, bonds denominated in ECU and EMS member currencies are heavily traded and are the main basis of the business currently done via CEDEL.

The Stock Exchange

– Recent regulatory changes

The law of 21.9.90 brought some important regulatory changes to the exchange :

* the monopoly of the exchange was abolished, competing exchanges have become legally possible, though economically hardly feasible;

Table 1.7: Securities Turnover of Cedel in 1991

	Primary transactions		Secondary transactions	
	Value (Bn USD)	Share (Percentage)	Value (Bn USD)	Share (Percentage)
USD	230.1	53.1	790.8	27.2
AUD	39.9	9.2	78.6	2.7
YEN	4.5	1	112.2	3.9
ECU	66.9	15.5	625.9	21.6
EMS Currencies of which	77.3	17.9	1154.2	39.8
FRF	15.1	3.5	317.7	10.9
DEM	0.9	0.2	300.5	10.4
NLG	2.7	0.6	216.6	7.5
GBP	19	4.4	137.9	4.7
ITL	31.7	7.3	89.8	3.1
Others:	7.9	1.8	91.8	3.2
Other Currencies	14.4	3.3	141.7	4.9
Total	433.1	100.0	2903.3	100.0

Source: CEDEL, own calculations

- supervision of the exchanges was assigned to the "Commissariat aux Bourses";
- the admission of new securities for a listing in Luxembourg has been simplified since 1.1.91;
- on March 19, 1991 a law was passed which bans insider trading.

– Main characteristics of the exchange

The exchange is characterised by a number of features which distinguish it clearly from most other exchanges and which have not been affected by the recent regulatory changes :

- the listing on the exchange comprises mainly foreign securities;
- Eurobond listings constitute the centrepiece of the market;
- trading activity in relation to market capitalization is subdued, the exchange often serves more as a quasi-official securities register than as an active market place;
- quotes are not only in Luxembourg Francs but also in other currencies, especially the "home" currency of the instruments;
- new listings are possible on the basis of the submission and examination of a prospectus. In general, especially as different countries' respective accounting rules are accepted, admission is relatively simple and inexpensive.

The Stock Market section

Table 1.8 gives the country distribution of listed corporations.

Table 1.8: Luxemburg Stock Exchange Geographical Origin of Corporations with Share Listing (End 1990)

	Number of Companies	Share of total market capitalization (%)
Luxembourg	54	5.7
Belgium	8	7.4
Netherlands	4	33.9
Germany	6	29.3
France	2	6.8
Japan	45	6.1
Others	94	10.8
Total	100	100.0

Source: Luxembourg Stock Exchange

It shows the dominance of foreign corporations, especially in terms of market capitalization. This stock market capitalization is very concentrated on a few companies. It is dominated by Royal Dutch with 23% share of the exchange's total stock market value.

The new admissions to the exchange in recent years have not changed this distribution much. The net new listing (net of listings and deletions) in the years 1988-1990 comprised 5 domestic and 21 foreign companies.

Relative trading volume is very different to that of other European stock markets. In 1990, transactions volume for shares amounted to 3.64 bn LFR, down almost 32% from the previous year's level. Although in terms of market capitalization domestic shares are of minor importance, they do count in terms of trading volume; four out of the five most heavily traded corporations are from Luxembourg, including BIL and ARBED as the two leaders.

– The Bond Market section

The bond market has clearly outgrown the stock market in volume terms in recent decades. The volume of bond transactions in 1990 was 18.44 bn LFR, roughly five times the amount of the stock turnover in the same period. At the end of 1990, there were 7.423 bonds listed, up from 3.245 just five years ago. Of these, 104 were domestic and 7.320 Eurobonds.

Already almost 36% of total trading volume takes place in ECU bonds, followed by US$, CDN, AU$ and LFR bonds which account for a share of between 10% and 15%. Bonds denominated in other currencies hardly add to market turnover at all. ECU denominated bonds, in particular, are increasingly important for Luxembourg's exchange, for two reasons. On the one hand, the number and size of new ECU issues is on the increase; the volume of new issues rose in 1990 by 35% over 1989 and is nearly 60% above the corresponding 1985 level. The main source of increase is an increasing number of EC national government issues, through which the respective governments have tried to reduce their interest burden and to establish a futures market in ECU debt instruments in their respective countries. On the other hand, Luxembourg's exchange has a very strong posi-

Table 1.9: Luxembourg Stock Exchange Currency Distribution of Bond Trading

	Turnover (%)		New Listings (%)	
	1990	1991	1990	1991
FLUX	10.3	9.4	0.8	1.4
USD	14.9	10.7	54.6	44.9
CAD	12.1	18.0	2.6	10.3
AUD	11.3	8.8	2.1	1.7
YEN	2.6	1.2	10.0	8.8
ECU	29.1	37.6	16.7	12.9
FF	4.9	2.6	4.0	6.5
GBP	5.0	3.8	4.2	5.4
Others	9.8	7.9	5.0	8.1
Total	100.0	100.0	100.0	100.0
(in Bn FLux)	18.4	26.2	6209.4	6246.5

Source: Luxembourg Stock Exchange

tion in the ECU bond segment as, in contrast to bonds in "traditional" currencies, the "home market" as a strong competitor is missing. In 1991, not less than 73 of 90 new bonds denominated in ECU received an exclusive or parallel listing in Luxembourg. Other centres, notably Paris and London, play a marginal role and this only in issues by French or British issuers respectively. Luxembourg, therefore, has close to a monopoly on ECU bond listings.

- Other sections

On the Luxembourg exchange three other types of financial assets are traded : warrants, UCI's (Undertaking for collective investment) and gold. There are many Japanese warrants listed and traded. But warrant trading is very small, in 1990 just 0.67 bn LFR, and, after the Japanese stock market collapse in the spring and summer of 1990, this business lost over 50% of its 1989 level.

The UCI's turnover, however, is, in terms of Luxembourg's stock market proportion, sizeable. 3.51 bn LFR turnover could be registered in this section during 1990, almost the same amount as in the share section. Because of the specific regulation and size of the UCI sector in Luxembourg, most of the UCIs listed on the exchange are domestic (1339 at end 1990) and only 30 from abroad. On the gold market, finally, two products are traded, ingots of 1kg, quoted in LFR and standard bars of 400 ounces, quoted in US$.

- Market Type and Reform

The market is organised as an Open Outcry market type. In order to strengthen market activities, officials are working on a project to develop additional computerized trading as in London. They also want to relax the strict commission schedule in order to attract more business. These attempts are sensible and will support business to some degree. However, given the structure of the financial markets in Luxembourg, it is doubtful if Luxembourg will be able to attract much more business in the future. At best, it should be able to keep, and perhaps even expand, its role as a specialised centre for certain products, mainly in the Eurobond market especially in the ECU sector.

Attempts to establish a futures and options exchange in Luxembourg have also failed. The commitment of the banks to act as market makers had been hampered by similar projects in the countries of the respective parent companies, therefore leaving no room for a Luxembourg market.

4. Institutional Investors : Investment Funds

Size of the industry

A relatively new development is the emergence of a vast and dynamic mutual fund or UCITS (undertaking for collective investment in transferable securities) business. Various funds, in different legal forms, have existed for a long time. But it is only since the late 1980s that they have gained their present importance on the Luxembourg financial markets. Table 1.10 shows the rather dramatic increases in UCITS in the last five years. In this period alone their combined net asset value almost quintupled. Almost the same phenomenon can be noted in the previous 5 year time span. In the late 1980s, the arrival of new entities (from 177 to 805) was mainly responsible for total asset growth. In the early

Table 1.10: Development o f UCITs in Luxembourg (Undertakings for collective investment in transferable securities)

	1975	1980	1985	1990	1991
Total (1)					
Number	97	76	177	805	889
Assets (Bn FLux)	99	118	632	2914	4100
Average Asset Size (Bn FLux)	1.01	1.56	3.57	3.62	4.61
FCP (2)					
Number	33	34	84	268	321
Assets (Bn FLux)	70	75	360	1392	2220
Average Asset Size (Bn FLux)	2.13	2.2	4.28	5.19	6.92
SICAV (3)					
Number	-	-	41	501	532
Assets (Bn FLux)	-	-	100	1425	1779
Average Asset Size (Bn FLux)	-	-	2.45	2.84	3.34

(1) The total number includes, besides FCP and SICAV, other types of UCITs also.
(2) Fonds commun de placement.
(3) Société d'investissement à capital variable.

1980s, both the increasing number of UCITS and average asset size growth contributed to total asset growth.

The classical "balanced" funds (bonds, shares) are the most popular investment vehicles and have even increased their dominance. Specialized funds (either on stocks, bonds or real estate) lost ground with one exception : money market funds have experienced a very rapid development. The increasing popularity of this kind among German investors and the Bundesbank policy to ban this type of instrument from Germany have helped a lot.

The significance for the rest of the financial sector

With the emergence of the mutual fund business as a major part of the financial services industry in general, an important diversification and upgrading of the sector's structure was accomplished. The diversification added to the Eurocurrency, the Eurobond and private client business a fourth product line with a number of advantageous qualities :

- the market will increase further in this decade, as private financial wealth will grow, together with the willingness to seek advice from professionals;
- the market comprises the whole EC, therefore there is little dependence on narrow regional markets;
- the mutual fund sector is only weakly correlated with the other important segments of the Luxembourg financial market, therefore the overall stability of the sector should be enhanced;
- the mutual fund business is high quality business, which will, thus, increase the average quality of labour in the financial sector, and, as the labour market is already pretty tight, will serve as a means to further increase value added in the sector.

However, it should be noted that, although legally the central administration of the fund has to be located in Luxembourg, there is no restriction on the use of outside investment advisers who can be located anywhere. And obviously most of the funds rely on such outside support. This means that part of the value added in this market is dispersed all over the Western world's major financial centres.

Luxembourg's main competitors in this kind of business are the Channel Islands and especially Dublin, which have comparably favourable regulations on investment funds. Although the decisive competition parameters are indeed these regulations, especially taxation, Luxembourg can boast two other important factors : the established overall banking sector in Luxembourg and the local exchange as a logical and easily accessible place for a listing. Additionally, Dublins tax breaks are limited. If they are not extended, in roughly 10 years Dublin will lose a good part of its special appeal for mutual fund establishments.

Regulatory framework

The basic law governing mutual funds is that of March 30, 1988. It distinguishes between basic forms of funds. One distinction is between different legal forms : the "fonds communs" are special assets of a management firm, legally separated from the general assets of the firm. The fund owners acquire a part of this separate capital without receiving any other ownership rights than the right on the capital and its yields. The "SICAVs", on the other hand, are organised like closed-end funds. The investor gets full ownership rights within the company, especially the voting rights common stocks are classically endowed with.

Another legal distinction is made according to the kind of investment policy the funds pursue. The first class of funds is rather restricted in its asset allocation; it has to diversify rather broadly in mainly marketable securities. The second class consists of all more specialised funds, including, as the most important sub-category, the money market funds. Funds of the former class, either SICAVs of FCPs, can be freely marketed in all other EC countries, but not those in the latter class, (they can be sold but without any advertising). This provision, implementing the EC directive of December 20, 1985, is one of two elements which make it attractive to establish such entities in the Grand Duchy. The relevant market is not Luxembourg, but instead the whole of the EC.

Besides an initial small constitution tax and a rather marginal yearly tax on the net asset value, there are no other tax obligations. Each fund has to have a depository agent, which must be a Luxembourg bank (either a bank under Luxembourg law or under the law of another EC country and with a place of business in Luxembourg). The duties of overall supervision and the initial admission lie, as with the banking industry, with the IML.

5. Insurance Industry

As compared to the banking sector and the securities industry, insurance is rather small business in Luxembourg. However, some change can be observed, fuelled by an important trend on the insurance market, the rise of the "captives". These, legally independent, re-insurance branches of individual corporations, have grown to more than 3,000 units world-wide. Very specific and large corporate risks, on the one hand, and world-wide tax codes which favour at corporate levels the payment of insurance premiums rather than the creation of reserves, on the other hand, are the basis of this growth industry.

Tax law provisions also lure these captives into a few "offshore" centres. According to industry statistics, Luxembourg is one of the favourite locations. Estimates for total premium income of all captives in Luxembourg amount to 37 bn LFR for the year 1990 with total assets of LFR 91 bn. Compared to traditional insurance centres or to the banking sector in Luxembourg these are, however, small. But this sector is very dynamic (five years ago only 12 and still in 1988 just 81 such captives were established) and serves as a kind of diversification in the financial sector, which might lend it more overall stability. The main countries of origin of these re-insurance companies are France with 27%, Scandinavia with 25% and Belgium with 19%. The relative absence of German companies (just 2 establishments) is due to German tax laws.

Table 1.11: Insurance Companies Major Places of captives' (*) places of establishment (1991)

Bermudas	1319
Cayman Islands	360
Barbados	200
Guernsey	189
Luxembourg	140
Isle of Man	105
Singapore	46
Dublin	40

Source: Reactions, Handelsblatt

(*) Insurance companies set up to insure a very specific type of risk, e.g. the one of a specific corporation

The massive establishment of these captives has led to the settlement of just a few subsidiaries of professional re-insurance companies. The further development in this field will be one of the factors crucial for a proper and broader based insurance sector in Luxembourg.

Life insurance will, after the opening of the European markets in 1993, face a tremendous challenge to keep its domestic customer base and to expand abroad. Most companies in this sector have already joined forces with banks in order to serve a joint client base and to overcome their problems stemming from their unimpressive size.

6. Conclusions

Luxembourg's financial markets have developed a quite unique structure. They exhibit a successful combination of a liberal framework and of a high quality provider of specialised banking services. Though large, both in absolute terms and relative to its domestic economy, it is still far from being a full range financial centre. It is built on just a few products and services, mainly in the field of euromarkets, and to some degree of private banking and funds services. Having almost no domestic customer base and only a limited domestic banking industry, Luxembourg depends upon its regulatory advantages over a number of Western countries. But Luxembourg is also an efficient, moderate-cost, high quality producer of financial services. It has made some progress in enlarging its product range and further improving its product quality. This should leave the sector with rather good prospects in the medium term, even in an environment of increased competitive pressure.

* This chapter was mainly prepared by P. Grasmann of the Financial engineering and capital movements directorate.

CHAPTER 2
THE MONETARY ASSOCIATION WITH BELGIUM *

1. Institutional aspects

Several legal texts, agreed upon in different contexts, have determined and illustrate the particularities of the monetary situation of Luxembourg

The Belgian Luxembourg Economic Union (BLEU)

Since 1922 Luxembourg has formed an economic union with Belgium. Within that framework (latest full review in the Protocol of 9 March 1981) the Belgian franc, as well as the Luxembourg franc, has legal tender in Luxembourg, but the opposite is not true in Belgium. Nevertheless, the Luxembourg franc can be converted at the National Bank of Belgium without costs into Belgian francs, which has resulted in a limited circulation of Luxembourg notes in Belgium. Luxembourg's international payments are denominated in Belgian francs.

The circulation of Luxembourg francs is limited by a ceiling on the amount of notes and coins that Luxembourg can issue. This maximum is specified as one third of the ratio of the two populations to Belgian currency in circulation. Half of the circulation of LFR must have as a counterpart claims in BFR on Belgian residents (including the Belgian public sector). This resulted in a ceiling of LFR 5.8[1] billion for 1992, which is not completely used. Demand for Luxembourg notes and coins was LFR 3.5 billion in February 1992, about 20% (compared to a permitted one third) of total currency in circulation.

Luxembourg laws

The Luxembourg franc is at par with the Belgian franc. This one-to-one relation was only interrupted beetween 1935 and 1944. In 1935, the Luxembourg authorities did not follow the Belgian devaluation and at that moment the exchange rate was fixed at BFR 1,25 for one Luxembourg franc. Since the second world war the equality between the two currencies has never been under discussion except in 1982 when the Belgian franc was devalued by 8.5%; in the event, Luxembourg decided to leave unchanged the grand-ducal Regulation of 31 March 1979 fixing the one-to-one relation.

The Benelux Treaty

With respect to third currencies (other than BFR and LFR) the monetary arrangement between Belgium and Luxembourg makes explicit reference to the Benelux Treaty of 3 February 1958 requiring mutual agreement on exchange rate policy. This basically takes place in an EC context.

The EMU Treaty

Following the devaluation of the BFR in 1982, the Luxembourg Monetary Institute was set up in 1983 in order to affirm the monetary identity of Luxembourg. This was further enhanced by the Protocol on the Statute of the European Monetary Institute (EMI) and the Protocol on the Statute of the European System of Central Banks and of the European Central Bank (ECB) of the Treaty, according to which the Luxembourg Monetary Institute is due to become the Central Bank of Luxembourg. This does not change the present situation where the National Bank of Belgium carries out most of the central bank functions in Luxembourg, but implies that Luxembourg will be represented on a par with the other Member States in the future EMI and ECB.

Table 2.1: Outstanding claims and liabilities in the interbank market

(Oct. 1991, BFR billion)	Claims	Liabilities	Net Position
Belgian banks	694	988	-294
Public credit institutions	197	197	-50
Savings banks	55	92	-37
Rediscount and Guarantee Institute	5	10	-6
Luxembourg banks	279	58	221
Other foreign banks	451	285	166
Total	1631	1631	0

Source: National Bank of Belgium, Annual Report, 1991

1 Issued by the Luxembourg Monetary Institute and for a limited amount (LFR 50 mn in the form of LFR 100 notes) by a private bank (Banque Internationale à Luxembourg).

2. A unified money and exchange market

The monetary association between the two countries implies a unified money market and a unified foreign exchange market. The special characteristics of Luxembourg make it play an important role in both markets.

The money market

Luxembourg banks are the largest single supplier of funds in the interbank market (see table 2.1). This is the counterpart of the large volume of BFR deposits of Belgian residents held at Luxembourg banks, among other, for fiscal reasons. Due to the absence of a developed foreign loan market for BFR, those deposits are reinvested in the Belgian money market.

The foreign exchange market

The organisation of the foreign exchange market is entrusted to the Belgian-Luxembourg Exchange Institute (BLEI). With the abolition of the two-tier exchange market in March 1990, the role of the BLEI became, however, limited to data collection. The Luxembourg authorities welcomed the end of the dual exchange market leading to full freedom of capital flows as this would enhance the role of Luxembourg as a financial centre.

The Luxembourg contribution to the unified balance of payments of the BLEU can only be approximated, but it is estimated to be considerable due to the presence of a large international banking sector generating a surplus on the service account and on the capital account.

3. Monetary indicators and monetary policy in Luxembourg

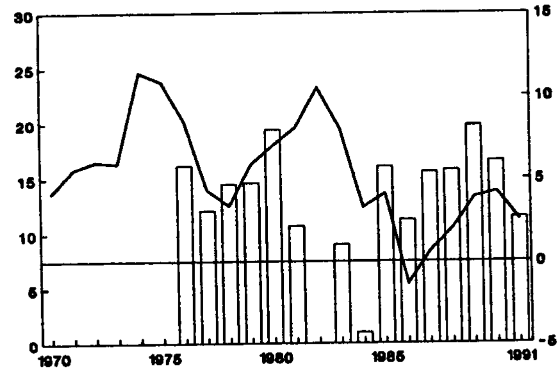
Monetary aggregates

As a consequence of the monetary union with Belgium, money aggregates for Luxembourg do not give much information. They reflect developments in the financial markets, without clear relation with final variables like nominal GDP growth or inflation. The rapid increase of M2[2] over recent years was not indicative of inflationary pressures building up (see graph 2.1).

Short-term interest rates

The same can be said for short-term interest rates, which are the same as in Belgium and reflect monetary conditions in the union. Nevertheless, Luxembourg banks are typically more liquid than the Belgian banks, which is reflected in somewhat lower lending rates (on mortgages, for example) and higher deposit rates (on savings deposits, for example) as compared to equivalent Belgian rates. This can be explained by the liberal framework including a favourable tax environment in which the banks in Luxembourg operate.

Graph 2.1: The evolution of the money supply and the rate of inflation in Luxembourg



This is a phenomenon which surpasses the individual bank and concerns a whole, geographically well defined group of banks. Although potentially there could be macro-monetary effects, the consequences have so far remained limited to the micro-economic level, only affecting competitive conditions. The fact that the monetary spill-over effects in the union are negligible, is probably not to do with the small size of Luxembourg relative to Belgium. Actually, in the financial sector, Luxembourg is big relative to Belgium. The total of the balance sheets of Luxembourg banks amounts to BFR 12960 billion in 1990 compared to BFR 18820 billion for Belgium. It is rather to be explained by the small, open character of the monetary association as a whole. Given the exchange rate policy, this leads the Belgian-Luxembourg Economic Union to import monetary conditions from Germany, which largely overshadow impulses coming from a region (in casu Luxembourg) within the union.

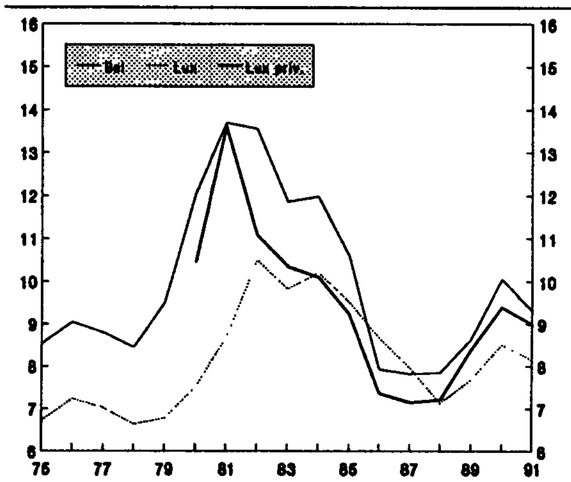
Long-term interest rates

In contrast, long-term LFR interest rates reflect domestic conditions (see graph 2.2). Until 1978 the differential between long-term interest rates on public debt denominated in LFR and BFR corresponded to the withholding tax, at that time 20%, which was levied in Belgium and non-existent for Luxembourg public debt (see graph 2.3).

In 1979, 1980 and 1981 the market took also the currency risk into account as the negative long-term interest differential widened to more than could be accounted for by the 20% withholding tax. By this the markets had anticipated the risk of breaking up the one-to-one relation between the BFR and

2 M2: residents' holdings of notes and coins, sight deposits and liquidities up to 1 year with domestic banks. In the perspective of harmonizing at the European level monetary aggregates, a broad aggregate (M3), traced back until 1986, is also available, including residents' foreign currency holdings at domestic banks.

Graph 2.2 : The evolution of long-term interest rates in Belgium and Luxembourg



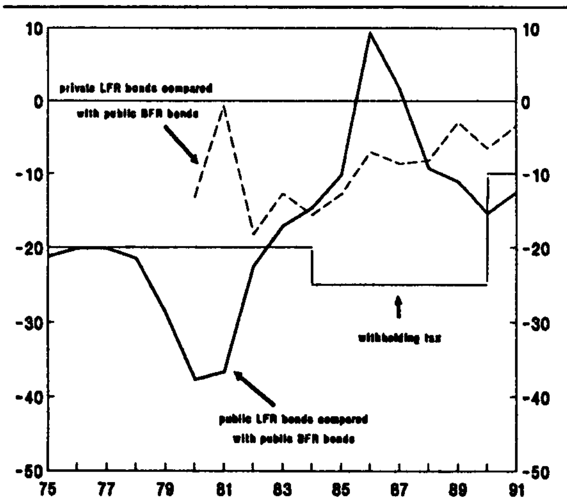
the LFR following a devaluation of the BFR (a devaluation that ultimately took place in February 1982).

With progress in the subsequent adjustment programme for the Belgian economy and the confirmation of the BFR/LFR link, the currency risk premium disappeared and the long-term interest rate differential between the two currencies tended to become even smaller than what one would have expected on the basis of tax considerations. The markets clearly did not seem concerned about credit risk.

The reason why in 1986 and 1987 the LFR interest rate exceeded the BFR rate is not immediately evident, but could be explained by institutional rigidities and the lack of liquidity in the small public LFR market which delayed what was at that time a declining interest rate trend.

Since 1990, however, the differential has again been larger than the Belgian withholding tax, itself reduced from 25% to 10% (see graph 2.3). This does probably not suggest a currency risk premium, but could be an indication of the emergence of a credit risk premium reflecting the fact that the debt/GDP ratio is only 3% in Luxembourg while almost 130% in Belgium.

Graph 2.3: The evolution of the long-term interest rate differential with the BFR and the withholding tax



The private LFR market has more depth and more transactions take place on it than in the public LFR market and as such has the advantage of containing more significant information. A comparison with the public BFR market has, however, to take credit risk into account, which explains why the negative differential based on the private LFR and public BFR bond market is smaller than the differential based on the public LFR and public BFR market.

The narrowing of the interest rate differential towards the end of the 1980s confirms the disappearance of the currency risk premium which existed at the beginning of the decade. In 1990, however, the differential remained negative, despite the reduction of the withholding tax in Belgium, suggesting that credit standards (assuming absence of currency risk) of issuers in the private LFR market, are approaching those of the Belgian government or vice-versa.

No independent monetary policy

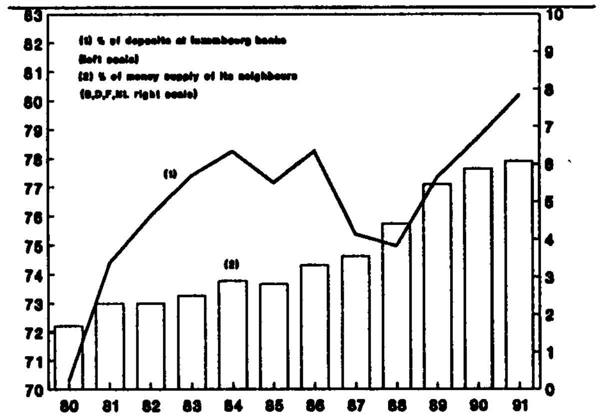
Besides the implication that monetary indicators do not say very much about Luxembourg and seem to be more relevant for Belgium - the larger partner in the union - the monetary association also implies that Luxembourg does not have an autonomous monetary policy at its disposal. It imports the decisions of the National Bank of Belgium on which its influence is limited. The Luxembourg Monetary Institute only has the power to make use of administrative measures such as credit ceilings or the regulation of interest rates. They have, however, never been used.

4. The impact of Luxembourg as a financial centre on the monetary policy of its neighbours

The quantitative importance

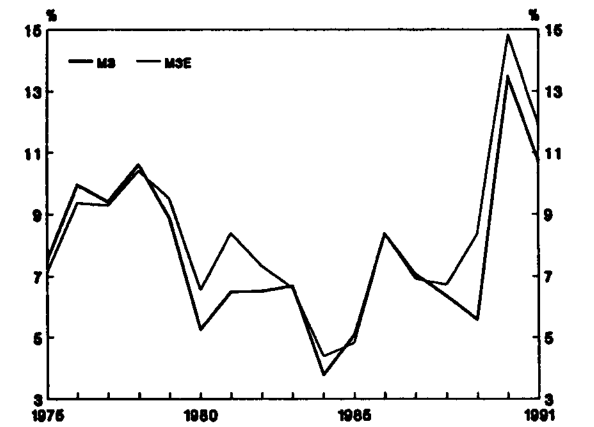
As an international banking centre, specialized in retail business, Luxembourg attracts a considerable amount of deposits from its neighbours (see graph 2.4). Almost 80% of total deposits collected in 1990 by Luxembourg banks are liabilities vis-à-vis non-residents from the non-bank sector. This represented about 6% of the aggregated broad money supply (M3) of its neighbours (Belgium, Germany, France and the Netherlands). The figure of 6% overestimates the quantitative importance of non-resident deposits in Luxembourg for the money supply because of the diffculty of eliminating deposits coming from countries other than Luxembourg's neighbours. However, to the extent that the geographical factor remains important in (international) retail banking, it could nevertheless, with the necessary degree of caution, be considered as a good first proxy.

Graph 2.4: The importance of foreign deposits of the non-bank sector at Luxembourg banks



Source: Luxembourg monetary institute, calculations by Commission services

Graph 2.5: The growth of M3 and M3E in Germany since 1975



Implications for monetary policy

Harmonization of monetary aggregates at the European level is based on a broad definition of money (M3) and focusses on the assets held with domestic banks by non-financial residents. As a consequence of financial liberalization and integration, deposits held abroad are growing and their significance for monetary policy is potentially larger as well. The relevant authorities are aware of this and include deposits held abroad in an "extended" monetary aggregate (M3e).

Germany, for example, although still using M3 as the most important aggregate, follows also the evolution of M3e as an additional indicator of the monetary stance in Germany. M3e is the money stock M3, plus domestic non-bank deposits with domestic banks' foreign branches and foreign subsidiaries, and bearer bonds in the hands of domestic non-banks. Since 1975 the average growth rate of M3e has usually been higher than M3 (see graph 2.5). The largest difference was observed in 1989, probably to be explained by the introduction of a withholding tax in Germany. Although not the whole of the difference between M3e and M3 is explained by international portfolio diversification, a large part can be attributed to it.

The steady increase of liabilities of Luxembourg banks vis-à-vis non-bank non-residents relative to the money supply of its neighbours, while the relation between those liabilities and total liabilities of Luxembourg banks vis-à-vis the non-bank sector seem to be less stable, suggests tentatively that the motive for holding deposits abroad finds its origin in the desire of domestic residents (i.e. residents of countries other than Luxembourg) to diversify their portfolio, to which Luxembourg reacted more or less passively. The hypothesis is that a more active role of Luxembourg in attracting foreign deposits would be reflected in a steady increase of the share of foreign deposits to total deposits of Luxembourg; this was not observed during the 1980's.

The growing importance of offshore deposits in Luxembourg and other financial centres raises the question how to account for them in the design of monetary policy. One possibility is to redefine monetary aggregates and include the offshore deposits of residents in order to strengthen the relation between the money supply and nominal variables. In addition, domestic policy makers could look to more indicators like interest rates, exchange rates and the yield curve, than exclusively concentrate on the evolution of the money supply. This does not mean that money aggregates became superfluous as an indicator of monetary conditions; especially at the European level, as a consequence of economic and financial integration, an increasingly stable relation might be found between money aggregates and nominal developments.

* This chapter was mainly prepared by F. Keereman of the Monetary matters directorate.

Statistical Annex

Table 1: Main Economic Indicators 1961-93 1)
Luxembourg (annual percentage change, unless otherwise stated)

	1961-73	1974-84	1985	1986	1987	1988	1989	1990	1991	1992	1993
1. Gross Domestic Product											
-at current prices	8.7	8.8	6.0	8.8	1.9	10.0	13.0	6.2	6.1	4.5	6.2
-at constant prices	4.0	1.7	2.9	4.8	2.9	5.7	6.7	3.2	3.1	2.2	2.0
2. GDP per Head of Population											
-at current prices	3.2	1.3	2.7	4.3	2.3	4.8	5.6	2.0	1.9	2.4	.7
3. Gross Fixed Capital Formation at Constant Prices											
-total	4.9	-2.1	-9.5	31.2	14.7	14.1	8.9	2.5	9.8	4.5	2.3
-construction	:	-3.1	-2.1	5.7	8.9	8.8	4.6	8.0	7.1	6.0	3.3
-equipment	:	-.8	-20.5	87.2	18.7	16.1	-16.9	10.9	11.4	3.5	1.7
4. Gross Fixed Capital Formation at Current Prices (% of GDP)											
-total	26.4	24.5	17.7	22.1	25.5	27.0	27.1	26.9	29.0	29.7	29.6
-general government	:	6.2	4.6	4.3	4.9	5.0	4.8	4.7	4.4	4.5	4.7
-other sectors	:	18.3	13.1	17.8	20.7	22.0	22.3	22.2	24.6	25.2	24.9
5. Final National Uses incl. Stocks											
-at constant prices	4.0	1.6	.1	8.0	4.2	6.8	5.7	5.1	8.4	3.3	2.2
6. Inflation											
-price deflator private consumption	3.0	7.7	4.3	1.3	1.7	2.7	3.6	3.6	2.9	3.4	4.7
-price deflator GDP	4.4	7.0	3.0	3.8	-1.0	4.0	6.0	2.9	3.0	2.2	4.1
7. Compensation per Employee											
-nominal	7.4	9.7	4.2	3.6	4.8	3.1	6.7	6.9	5.4	5.1	6.0
-real, deflator private consumption	4.2	1.8	.0	2.3	3.1	.4	3.0	3.2	2.4	1.6	1.2
-real, deflator GDP	2.8	2.5	1.2	-.2	5.9	-.9	.7	3.9	2.3	2.8	1.8
8. GDP at Constant Market Prices per Person Employed	3.0	1.2	1.5	2.1	.1	2.6	2.9	-1.1	-.6	.7	.5
9. Real Unit Labour Costs											
-1961-73 = 100	100.0	115.9	108.6	106.2	112.2	108.4	106.1	111.4	114.7	117.1	118.6
-annual % change	-.2	1.3	-.3	-2.3	5.7	-3.4	-2.1	5.0	2.9	2.1	1.3
10. Employment	1.1	.4	1.4	2.6	2.8	3.1	3.7	4.3	3.6	1.5	1.5
11. Unemployment Rate (% of civilian labour force)	:	1.6	2.9	2.6	2.5	2.0	1.8	1.7	1.6	1.9	2.0
12. Current Balance (% of GDP)	6.8	25.3	43.8	38.8	30.3	30.8	34.0	34.2	27.9	19.9	18.7
13. Net Lending (+) or Net Borrowing (-) of General Government (% of GDP)	2.0	1.4	6.2	4.3	2.4	3.1	5.3	5.0	-.8	-.4	-1.0
14. Gross Debt of General Government (% OF GDP)	:	15.4	14.0	13.5	11.9	9.8	8.3	6.9	6.1	6.8	7.8
15. Interest Payments by General Government (% OF GDP)	:	1.2	1.1	1.1	1.2	1.0	.7	.6	.6	.5	.5
16. Long Term Interest Rate (%)	:	8.0	9.5	8.7	8.0	7.1	7.7	8.6	8.2	7.9	:

1) 1961-91: EUROSTAT and COMMISSION SERVICES; 1992-93 Economic Forecasts January 1993

Table 2: Gross Domestic Product: GDP and its Demand Components at Constant Market Prices (1) (% change over previous year)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Private consumption	2.8	1.7	.4	.5	1.4	2.7	3.4	5.0	3.9	3.9	4.0	6.5	3.1	2.2
Public consumption	3.1	1.4	1.5	1.9	2.2	2.0	3.1	2.7	3.8	1.9	3.2	3.8	2.2	2.3
Gross fixed capital formation	12.7	-7.4	-.5	-11.8	.1	-9.5	31.2	14.7	14.1	8.9	2.5	9.8	4.5	2.3
of which: equipment	23.9	-15.5	.2	-6.9	2.7	-20.5	87.2	18.7	16.1	-16.9	10.9	11.4	3.5	1.7
construction	7.2	-3.0	-2.3	-13.3	-3.7	-2.1	5.7	8.9	8.8	4.6	8.0	7.1	6.0	3.3
Stockbuilding (as % of GDP)	-2.9	-1.0	-.2	1.4	2.5	2.6	2.1	-.4	.1	.9	2.4	3.9	3.5	3.5
Total domestic demand	5.4	1.2	1.1	-.6	2.5	.1	8.0	4.2	6.8	5.7	5.1	8.4	3.3	2.2
Exports of goods and services	-1.4	-4.8	-.3	5.3	18.0	9.5	3.2	6.3	7.5	6.9	2.6	3.5	1.1	1.3
Imports of goods and services	3.2	-2.9	-.3	1.2	13.9	7.0	6.0	7.6	8.5	6.1	4.3	8.3	2.1	1.5
GDP	.8	-.6	1.1	3.0	6.2	2.9	4.8	2.9	5.7	6.7	3.2	3.1	2.2	2.0

(1) 1985 prices
1992-93: Commission Forecasts January 1993
SOURCE: COMMISSION SERVICES

Table 3: Disposable Income, Consumption and Saving of Households (at current prices)

	1990: As % of disposable income		Luxembourg: (% changes)						
	Luxembourg	EC-12	1987	1988	1989	1990	1991	1992	1993
Compensation of employees	92.1	73.8	7.2	6.4	8.3	9.1	7.6	5.0	7.3
Non labour income, net	14.5	35.9	-2.6	-8.8	7.8	5.7	5.5	6.0	5.0
Current transfers received	38.3	28.8	6.7	4.1	6.0	6.2	8.3	5.6	7.5
Direct taxes and current transfers paid	44.8	38.5	3.9	5.7	4.8	6.4	-7.2	6.8	6.3
Gross disposable income	100.0	100.0	6.7	3.2	9.0	8.7	14.2	4.7	7.4
Real	:	:	5.1	.4	5.5	5.4	9.9	1.3	2.6
Consumption	86.5	86.5	7.2	6.6	7.3	7.7	10.6	6.6	7.0
Real	:	:	5.6	3.7	3.8	4.3	6.5	3.1	2.2
Household saving	13.5	13.7	4.1	-17.2	22.5	16.0	36.9	-5.1	9.8
Consumer price deflator	:	:	1.5	2.8	3.3	3.2	3.9	3.4	4.7
Household saving ratio			14.0	11.3	12.7	13.5	16.2	14.7	15.0

1992-93: Commission Forecasts January 1993
SOURCE: COMMISSION SERVICES

Table 4: Wages, Productivity and Terms of Trade (% change over previous year)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Nominal wages per employee	9.0	8.5	6.9	6.9	7.1	4.2	3.6	4.8	3.1	6.7	6.9	5.4	5.1	6.0
Private consumption prices	7.5	8.6	10.6	8.3	6.5	4.3	1.3	1.7	2.7	3.6	3.6	2.9	3.4	4.7
Real wages (priv. consumption prices)	1.4	-.1	-3.3	-1.2	.5	.0	2.3	3.1	.4	3.0	3.2	2.4	1.6	1.2
Productivity (real GDP/person employed)	.1	-.9	1.4	3.3	5.6	1.5	2.1	.1	2.6	2.9	-1.1	-.6	.7	.5
Unit labour costs, whole economy	8.9	9.4	5.5	3.5	1.5	2.7	1.5	4.6	.5	3.7	8.1	6.0	4.3	5.5
Terms of trade (goods and services)	-.3	-.4	1.5	-1.9	-2.0	.8	2.3	-4.0	1.2	2.2	-.8	-1.2	-1.5	-.3
Adjusted wage share	.6	1.5	-3.6	-2.2	-2.0	-.2	-1.5	3.8	-2.4	-1.4	3.3	2.0	1.5	.9

1992-93: Commission Forecasts January 1993
SOURCE: COMMISSION SERVICES

Table 5: Geographical Distribution of External Trade (as % of total)

		1980	1985	1986	1987	1988	1989	1990	1991
IMPORTS									
Eur-12		90.0	90.9	91.5	91.0	91.8	91.1	92.3	90.5
Of which:	Belgium	35.5	39.6	37.7	37.2	37.5	37.2	39.0	38.7
	Germany	35.2	30.3	30.7	31.1	32.9	32.1	31.0	29.9
	Netherlands	2.9	4.6	5.1	4.6	4.5	5.1	4.3	4.4
	France	12.5	11.3	12.2	12.2	11.5	11.6	12.4	12.1
	Italy	2.2	2.1	2.4	2.3	2.1	2.2	2.0	2.1
	United-Kingdom	1.5	2.0	2.2	2.4	2.0	1.5	2.0	1.6
U.S.A.		4.9	3.0	2.2	3.3	2.1	2.0	1.6	1.9
Japan		.1	.5	.6	.5	.7	.8	.8	1.9
Others		5.0	5.6	5.7	5.2	5.4	6.1	5.3	5.7
TOTAL		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
As % of GDP		79.5	90.9	80.4	85.8	86.4	86.6	85.0	87.4
EXPORTS									
Eur-12		78.1	74.5	79.3	80.5	81.0	79.5	80.8	82.6
Of which:	Belgium	17.9	17.1	16.7	16.5	17.9	16.6	16.3	17.3
	Germany	28.6	26.5	29.1	28.6	27.2	26.0	27.7	29.6
	Netherlands	6.9	6.1	6.1	5.8	5.6	5.5	5.8	5.1
	France	15.4	13.5	15.3	16.3	16.4	17.0	17.1	17.3
	Italy	3.5	3.6	4.4	4.9	4.6	4.5	4.7	4.2
	United-Kingdom	3.6	4.8	4.6	5.3	6.0	6.5	5.6	5.2
U.S.A.		3.4	5.5	5.2	5.2	4.8	4.7	4.0	3.1
Japan		.2	.1	.2	.4	.5	1.0	1.1	.7
Others		18.3	19.9	15.3	13.9	13.7	14.8	14.1	13.6
TOTAL		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
As % of GDP		66.1	81.9	74.4	71.7	75.4	75.6	71.1	68.5

SOURCE: Statec

Table 6: Labour Market Indicators

	1960	1970	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
1. Population (1000)	313.5	339.2	364.4	366.7	368.4	370.8	373.9	377.7	382.0	386.2	385.3	390.3
2. Population, 15-64 years (1000)	213.1	221.7	246.5	255.2	256.9	258.7	262.3	265.7	267.9	269.6	256.3	257.8
3. idem, as a % of total population	68.0	65.4	67.6	69.6	69.7	69.8	70.1	70.4	70.1	69.8	66.5	66.1
4. Labour force, as a % of popul. 15-64 y.(1)	:	63.3	65.8	64.8	65.8	67.1	67.9	69.3	71.6	73.7	78.8	79.7
5. Employment (1000)	132.0	140.2	158.2	160.9	165.1	169.7	174.9	181.3	189.1	196.0	198.9	201.9
1. of which:												
residents of Lux. nationality	:	107.1	106.3	105.9	106.4	106.0	105.5	105.1	106.8	106.0	:	:
residents of for. nationality	:	25.7	40.0	38.1	39.6	41.5	43.8	46.1	48.3	49.2	:	:
non residents	:	7.4	11.9	16.9	19.1	22.2	25.6	30.1	34.0	37.5	:	:
2. of which:												
steel	:	23.5	17.7	13.1	13.0	12.1	10.6	10.2	9.5	8.9	8.5	8.1
other manufactures	:	23.1	24.4	25.6	26.4	26.7	26.8	27.2	28.0	28.0	:	:
financial services	:	4.3	8.1	10.8	11.9	13.3	14.4	15.8	17.1	17.9	18.3	18.7
other services	:	60.9	81.5	89.0	91.2	94.1	98.5	103.3	108.8	:	:	:
other	:	28.4	26.5	22.4	22.6	23.5	24.6	24.8	25.7	:	:	:
6. Employment, as a % of tot. popul.	42.1	41.3	43.4	43.9	44.8	45.8	46.8	48.0	49.5	50.8	51.6	51.7
7. Self-employed (1000)	37.8	27.6	21.2	18.8	18.5	18.3	18.0	17.9	17.7	18.0	17.8	17.7
8. id., as a % of total employment	28.6	19.7	13.4	11.7	11.2	10.8	10.3	9.9	9.4	9.2	9.0	8.8
9. Wage and salary earners (1000)	94.2	112.6	137.0	142.1	146.6	151.4	156.9	163.4	171.4	178.0	181.1	184.2
10. id., as a % of total employment	71.4	80.3	86.6	88.3	88.8	89.2	89.7	90.1	90.6	90.8	91.0	91.2
11. Part-time workers	:	:	:	:	:	6.5	6.8	7.1	7.3	7.8	:	:
12. Unemployment rate (2)	:	.0	2.4	2.9	2.6	2.5	2.0	1.8	1.7	1.6	1.9	2.0

(1) Including non-residents from surrounding regions in Belgium, France and Germany
(2) Number of unemployed as a % of civilian resident labour force, Eurostat definition
SOURCE: STATEC and COMMISSION SERVICES

Table 7: Government Net Borrowing (-) or Net Lending (+) and Gross Debt as a % of GDP

	Government net borrowing (-) or net lending (+)								
	Including interest payments			Excluding interest payments			Gross debt		
	1	2	3	1	2	3	1	2	3
1970	3.2	.2	:	4.3	2.1	:	28.1	:	:
1971	2.6	-.7	:	3.7	1.2	:	28.2	:	:
1972	2.3	-1.6	:	3.4	.3	:	25.1	:	:
1973	3.8	-1.2	:	4.8	.7	:	20.4	:	:
1974	5.3	-2.2	:	6.1	-.1	:	16.6	:	:
1975	1.1	-4.9	:	2.0	-2.6	:	18.1	41.4	40.9
1976	2.0	-3.7	:	2.8	-1.2	:	16.4	40.9	40.5
1977	3.3	-3.0	:	4.2	-.4	:	16.6	42.4	41.9
1978	5.0	-3.9	:	6.0	-1.1	:	15.4	42.8	42.5
1979	.7	-3.6	:	1.6	-.7	:	14.2	43.1	42.9
1980	-.8	-3.8	:	.5	-.6	:	13.8	43.4	43.1
1981	-3.9	-5.2	-5.3	-2.5	-1.5	-1.6	14.4	45.6	45.4
1982	-1.6	-5.4	-5.5	.0	-1.3	-1.4	14.5	50.4	50.2
1983	1.5	-5.2	-5.3	3.1	-.8	-.8	14.8	53.3	53.2
1984	2.8	-5.1	-5.3	4.5	-.4	-.6	15.0	56.3	56.3
1985	6.2	-5.0	-5.2	7.4	-.1	-.2	14.0	58.8	59.0
1986	4.3	-4.6	-4.8	5.3	.4	.3	13.5	59.7	59.9
1987	2.4	-3.9	-4.1	3.5	.7	.7	11.9	61.0	61.3
1988	3.1	-3.4	-3.6	4.0	1.2	1.1	9.8	60.1	60.6
1989	5.3	-2.6	-2.8	6.1	2.1	1.9	8.3	59.3	59.9
1990	5.0	-3.9	-4.1	5.6	.9	.8	6.9	59.0	59.7
1991	-.8	-4.5	-4.7	-.2	.4	.4	6.1	60.9	61.6
1992	-.4	-5.3	-5.4	.2	.0	.0	6.8	63.6	64.2
1993	-1.0	-5.7	-5.8	-.5	-.1	.1	7.8	67.2	67.8

1=L; 2=EUR-10=EUR-12 excl. GR P; 3=EUR-12
1992-93: Commission Forecasts January 1993
SOURCE: COMMISSION SERVICES

Country Studies

See also Economic Papers No.79 (The United Kingdom), No.81 (The Netherlands) and No.82 (Belgium).

No. 1 The Federal Republic of Germany (September 1990)

No. 2 Portugal (February 1991)

No. 3 United Kingdom (March 1991)

No. 4 Denmark (April 1991)

No. 5 France (août 1991)

No. 6 Ireland (September 1991)

No. 7 Spain (March 1992)

No. 8 Netherlands (June 1992)

No. 9 Greece (July 1992)

No. 10 Luxembourg (March 1993)

Economic Papers*

The following papers have been issued. Copies may be obtained by applying to the address mentioned on the inside front cover.

No. 1 EEC-DG II inflationary expectations. Survey based inflationary expectations for the EEC countries, by F. Papadia and V. Basano (May 1981).

No. 3 A review of the informal economy in the European Community, by Adrian Smith (July 1981).

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