

# CENTRAL BANK OF IRELAND

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## Bulletin

## Spring 2001

# Notes

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4. The method of seasonal adjustment used in the Bank is that of the US Bureau of the Census X-11 variant.
5. Annual rates of change are annual extrapolations of specific period-to-period percentage changes.
6. The following symbols are used:

e	estimated	n.a.	not available
p	provision	. .	no figure to be expected
r	revised	–	nil or negligible
Q	quarter	f	forecast
7. As far as possible, data available at end-Dec. 2000 are included in the Statistical Appendix (Section 3).
8. Updates of selected Tables from the Statistical Appendix, concerning monetary and financial-market developments, are provided in *Monthly Statistics*. Data on euro and Irish-pound exchange rates, Irish Government bond yields and on the Irish equity index are provided daily on recorded telephone message (Telephone: 353 1 6716299).

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# The Domestic Economy – Real and Financial Developments<sup>1</sup>

## Overview

The economy continued to record very high levels of output growth last year with the volume of GNP estimated to have risen by as much as  $9\frac{3}{4}$  per cent. Growth was driven by a combination of strong exports and domestic demand but was accompanied by increasing signs of overheating.

The international environment was positive, with a robust US economy for much of the year and stronger growth in the euro area. The depreciation of the euro, combined with strong productivity growth in some sectors, served to offset the impact of rising domestic wage costs on competitiveness and supported export growth. The strength of domestic demand, on the other hand, reflected a combination of significant growth in disposable incomes, continuing high levels of confidence and low or even negative real interest rates. The supply-side of the economy, however, demonstrated increasing difficulty in coping with the rate of increase in demand. Labour shortages became more widespread, the industrial relations climate deteriorated and wage rates began to rise more rapidly. The housing market also continued to experience strong demand and there was further upward pressure on prices. (Developments and prospects for prices, costs and competitiveness are dealt with in detail in the next chapter.)

The outlook for this year is for some slowing in output growth, perhaps to about 7 per cent, mainly reflecting a smaller contribution to growth from net exports. The external environment is less benign than last year with a large degree of uncertainty over developments in the US economy, following the rapid slowdown in output growth in recent months. The euro recovered significantly on foreign exchange markets in the early part of this year, although it subsequently fell back somewhat. Using a technical assumption of unchanged exchange rates, competitiveness developments are likely to be less favourable this year, given that there are no signs of an easing in wage pressures domestically.

These factors are likely to lead to a significant deceleration in export growth. There is a risk, however, that this deceleration could be more rapid than currently projected. The slowdown in the US economy could prove to be protracted and might impact significantly on investment and activity in the high-technology manufacturing sectors in Ireland. The euro could also appreciate rapidly in value. In addition, the agricultural sector has been affected by particular difficulties. The

<sup>1</sup> The forecasts contained in these chapters were compiled at the beginning of March and do not take account of data published subsequently. They also assume that interest and exchange rates remain unchanged from their levels at the beginning of March.

threat of foot-and-mouth disease and the impact of BSE could have a significant negative effect on agricultural exports. The precautions necessary to keep the country free of disease could also impact on a wide range of activities, particularly in the tourism sector.

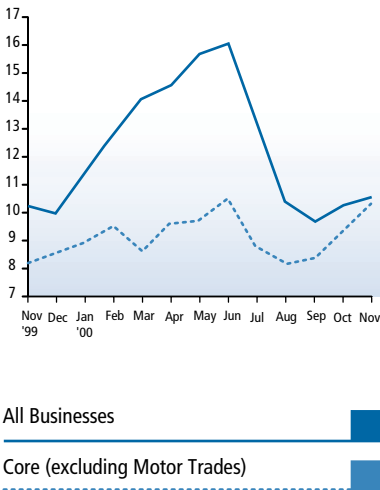
Domestic demand is likely to remain robust in the short-term. Consumer spending seems set to remain strong, although it may not be able to maintain the momentum of last year. While an assumption is made of unchanged nominal interest rates, the projected decline in headline inflation would imply some increase in real interest rates this year. The most crucial development may, however, be the extent to which sentiment could be undermined by adverse developments affecting particular sectors. The environment for the high-technology and agricultural sectors has deteriorated. If the problems currently being experienced become more serious and protracted, this could have a noticeable impact on consumption.

Investment is also likely to remain strong but supply-side constraints may limit the extent to which previous growth rates can be sustained in the construction sector. Machinery and equipment investment is also exposed to risks stemming from the external environment.

On the assumption that the slowdown in growth is modest, the labour market is likely to continue to tighten with further employment growth of about 3½ per cent in prospect, down from 4¾ per cent last year. The latest results of the Quarterly National Household Survey suggest that the growth in labour supply is decelerating. There is still a significant natural increase in the labour force, reflecting the age structure of the population, but other sources of labour supply are becoming increasingly limited. The participation rate of married women has not risen as rapidly in recent quarters as it did in the past. The inward migration of workers may also have peaked, possibly reflecting the increasing costs of accommodation. A further reduction in the unemployment rate to about 3¾ per cent is in prospect for this year, compared with 4 per cent last year. This represents a low level by international standards, and further reductions would constitute only a limited source of labour supply. Against this background, wage pressures in the economy are unlikely to ease in the short-term.

Chart 1  
**Index of Volume of Retail Sales**

Year-On Year % - 3 Month  
Moving Average (Sa)



**Domestic Demand**  
**Personal Consumer Spending**

Consumer spending has been one of the main driving forces behind growth in recent years. Last year saw a particularly strong performance and it now seems likely that the volume of spending rose by as much as 9½ per cent. This reflected a number of factors that have been in place for some time, namely a combination of strong employment growth, significant increases in earnings and declines in direct tax rates. In addition, real interest rates were very low or negative last year. This provided a poor reward for saving and an incentive to take on personal borrowing. Indeed, the proportion

of income which households save rather than spend appears to have fallen noticeably. In addition to these factors, the introduction of the National Car Test may have prompted earlier than normal replacement of motor cars. The strength of car sales accounted for much of the strength of retail sales in 2000 with a rise of over 32 per cent recorded for the year.

The prospects for this year are for further strong spending growth but with some modest deceleration. Employment growth is likely to be somewhat lower than last year, but average earnings seem set to rise more rapidly. Further tax reductions announced in the Budget are also likely to boost consumption expenditure. Some of the factors which applied to last year are not likely to be repeated, however, with interest rates set to rise in real terms, based on an assumption of unchanged nominal rates and a projected decline in headline inflation. The introduction of a special savings scheme by the Government will also increase the incentive to save rather than spend, although some savings may simply be moved from less attractive alternatives. According to data produced by the Society of the Irish Motor Industry, there was a year-on-year decline in car sales in January 2001 but this may be of limited significance given the exceptional level of sales in January 2000. Confidence indicators remain positive but the EU survey of consumers seems to suggest that sentiment may have reached a peak. Indeed, it is possible that a significant decline in confidence could occur if developments in the high-technology manufacturing, agricultural and related sectors were to be more unfavourable than currently expected. On the assumption that this does not occur, however, the volume growth in consumer spending this year may be as high as  $8\frac{3}{4}$  per cent.

**Table 1. Expenditure on Gross National Product 1999, 2000<sup>e</sup> and 2001<sup>f</sup>**

	1999	% change in		2000 <sup>e</sup>	% change in		2001 <sup>f</sup>
	€ million	Volume	Price	€ million	Volume	Price	€ million
Personal Consumption Expenditure	44,115	9 $\frac{1}{2}$	6 $\frac{1}{4}$	51,353	8 $\frac{3}{4}$	4 $\frac{3}{4}$	58,600
Public Net Current Expenditure	11,114	4	6	12,258	5 $\frac{1}{4}$	8 $\frac{1}{2}$	13,979
Gross Domestic Fixed Capital Formation	20,538	11	9 $\frac{1}{4}$	24,891	8	8 $\frac{1}{2}$	29,173
of which:							
• Building and construction	12,755	9	13	15,708	7 $\frac{1}{2}$	12	18,913
• Machinery and equipment	7,783	14	3 $\frac{1}{2}$	9,183	9	2 $\frac{1}{2}$	10,260
Value of physical changes in stocks	-72			20			420
Statistical Discrepancy	-52			-52			-52
<b>Gross Domestic Expenditure</b>	<b>75,643</b>	<b>8<math>\frac{1}{4}</math></b>	<b>8</b>	<b>88,470</b>	<b>7<math>\frac{3}{4}</math></b>	<b>7<math>\frac{1}{4}</math></b>	<b>102,120</b>
Exports of goods and services	76,764	17 $\frac{1}{2}$	5 $\frac{1}{4}$	95,088	10 $\frac{1}{2}$	2 $\frac{1}{2}$	107,656
<b>Final Demand</b>	<b>152,407</b>	<b>13</b>	<b>6<math>\frac{1}{2}</math></b>	<b>183,558</b>	<b>9<math>\frac{1}{4}</math></b>	<b>4<math>\frac{3}{4}</math></b>	<b>209,776</b>
Imports of goods and services	-64,729	16	7 $\frac{1}{4}$	-80,548	11 $\frac{1}{4}$	2 $\frac{3}{4}$	-92,060
<b>Gross Domestic Product</b>	<b>87,678</b>	<b>10<math>\frac{3}{4}</math></b>	<b>6</b>	<b>103,010</b>	<b>7<math>\frac{1}{2}</math></b>	<b>6<math>\frac{1}{4}</math></b>	<b>117,716</b>
Net factor income from rest of the world	-12,677			-15,580			-17,741
<b>Gross National Product</b>	<b>75,001</b>	<b>9<math>\frac{3}{4}</math></b>	<b>6<math>\frac{1}{4}</math></b>	<b>87,430</b>	<b>7</b>	<b>6<math>\frac{3}{4}</math></b>	<b>99,975</b>

## Government Consumption

Overall government expenditure has expanded significantly in recent years but the growth in the volume of consumption has been considerably lower. This reflects the fact that much of the increase in overall expenditure has been on investment and transfers. In addition, some of the increase in government consumption itself – which reflects the purchase of goods and services by the government including the salaries of civil servants – has been absorbed in the deflator or price component reflecting increased prices and wages. The volume increases have been more modest and this pattern seems likely to be repeated this year although the Budget did provide for an expansion in services in some areas. On balance, the volume increase will probably be about  $5\frac{1}{4}$  per cent compared with an estimated 4 per cent last year.

## Investment

Investment continued to grow strongly throughout 2000. National Accounts data for the second quarter of the year show provisional estimates of an increase of 18.8 per cent in the value and 10 per cent in the volume of investment in the first half of last year compared with the first half of 1999. This incorporates a downward revision of initial estimates of the volume of investment growth in the first quarter of 2000 from 16.6 per cent to 13.5 per cent. In addition, there is some evidence of a slowing down in the second quarter of 2000 in that the volume of investment was only seven per cent more than in the second quarter of 1999.

Within the construction sector, total housing output increased by 35,683 units in the first three quarters of last year, which reflects a 9.2 per cent increase in private housing completions and a 12 per cent decrease in social housing compared with the first three quarters of 1999. The total year-on-year increase of 7.8 per cent compares with an 11.4 per cent increase in total completions in the first three quarters of 1999 over the same period in 1998. This appears to confirm a slowdown in the rate of growth in housing output over the course of last year.

Employment growth in the construction sector as a whole, however, continued to grow strongly. According to figures contained in the Quarterly National Household Survey (QNHS), employment increased by 23,300 last year which constitutes a rise of around 15 per cent. Since 1995, employment in the sector has increased by almost 85 per cent. The Index of Employment in Construction, which measures employment growth in private firms with five or more people employed and usually records more modest employment growth than the more broad ranging QNHS, showed an increase of 5.1 per cent in the twelve months between October 1999 and October 2000.



This rate of employment growth will not be sustainable in future years. Labour shortages and other constraints, including those relating to the planning system, and the speed at which projects are brought on stream suggest that the rate of output growth of the construction sector will be lower this year than in 2000. The sharp decline in the number of Homebond registrations, which serves as a useful proxy for housing starts, in the second half of 2000 seems to support this view. Overall, registrations in 2000 increased by only  $2\frac{1}{4}$  per cent. However, this aggregate figure masks a substantial difference between the beginning and end of the year. Between January and June there was an increase in registrations of over 21 per cent compared with the first six months of 1999 whereas, between July and December, the number of registrations was over 16 per cent less than for the second six months of 1999. It is estimated that total investment in the construction sector increased by around 9 per cent in 2000. This year a deceleration to around  $7\frac{1}{2}$  per cent seems likely. This constitutes a downward revision of the previous forecast, reflecting a more significant reduction in housing output than was previously envisaged. However, public sector investment growth in construction is likely to remain strong subject to the ability of the industry to recruit the additional workers required to fulfil the provisions of the Public Capital Programme.

The volume of investment in machinery and equipment increased by an estimated 14 per cent last year, reflecting strong export growth and continuing inward investment. In the first nine months of 2000, the value of capital goods imports increased by almost 25 per cent and the value of the industrial sector's acquisitions of machinery and equipment by over 9 per cent compared with the same period in 1999. There was also strong growth in sales of commercial vehicles. Statistics released by the Society of the Irish Motor Industry record an increase in the number of new registrations of almost 19 per cent. This reflects an increase in sales of light commercial vehicles of over 22 per cent in 2000 and a reduction in the number of heavy commercial vehicles registered at just over 5 per cent. Overall, total investment is estimated to have increased by around 11 per cent last year.

Investment in machinery and equipment is also likely to increase at a more moderate rate this year. This is partly due to increased uncertainty about the future prospects of both the US economy and the global high-technology sectors. Machinery and equipment investment is now expected to increase by about 9 per cent in volume in 2001. This forecast is subject to considerable risks. In addition to the uncertainty surrounding the external environment, a reduction in the international competitiveness of the Irish economy, if it were to occur, could have a negative impact upon inward direct investment. Overall, the volume of gross fixed capital formation is forecast to increase by 8 per cent in 2001.

## Stock Changes

Stock building probably made a small positive contribution to growth last year, although no data are yet available on the position at the end of the year. The outlook for this year, however, is particularly uncertain reflecting developments in specific sectors. There now seems to be the prospect of some agricultural stock-building in the short-term as beef exports are being affected by the difficulties related to BSE. The picture is further complicated by the outbreak of foot-and-mouth disease in the UK, which, if it were to spread, could potentially affect both production and the value of stocks. The situation is unclear at the time of writing and could change sharply over the remainder of the year. For the present, an assumption is made that some positive level of stock-building will occur in the short-term but that the accumulation will not be very large. This depends, of course, on the success of various measures to restore consumer confidence in beef.

In addition to the unclear picture in the agricultural sector, some other sectors may be experiencing variations in demand due to external events such as the slowdown in US growth and developments in the high-technology sectors. It seems likely, however, that by the end of the year, no large involuntary stock accumulations will remain, even if these do occur in the interim. The ability of firms in these sectors to control inventories will assist in this respect. Other non-agricultural sectors that mainly service internal demand, such as distribution, may experience some further planned accumulation of stocks. Overall, therefore, stock levels are likely to be higher by the end of the year, although any projection has to be very tentative at this stage of the year.

Chart 2

### Volume of External Trade

Three Month Moving Average  
(Seasonally Adjusted) %  
Year-On-Year



## Merchandise Trade and the Balance of Payments

### Merchandise Trade

Exports grew more strongly than expected last year even allowing for some recent downward revisions to the merchandise trade data. There were a number of reasons for this robust performance. International demand remained strong with the slowdown in the US only emerging in the latter part of the year. Inward investment also continued to flow despite increasing labour shortages in the economy. The decline in the value of the euro was also a major factor, as it combined with continuing productivity gains to temporarily offset the loss in competitiveness that might otherwise have occurred due to domestic wages increases. Exports to destinations outside the euro area grew particularly strongly, with the value of exports to the US in the first ten months increasing by 34 per cent and those to the UK by 23 per cent compared with the same months in 1999. In contrast, exports to other euro area member states rose by just over 15 per cent. The main growth was once again in the high-technology sectors, particularly organic chemicals, computer equipment and electrical machinery. While official data are not available for the full

year, it now seems likely that the volume of merchandise exports rose by close to 20 per cent last year.

The prospects are for a deceleration in export growth to emerge this year. Demand conditions will not be as favourable, due largely to the recent sharp slowdown in US growth. The depth and duration of this slowdown are crucial factors as regards both inward investment and export earnings. At the time of writing, a sharp but short-lived slowdown in the US seems most likely, with only a limited impact on euro area growth but this could, of course, prove optimistic. The difficulties being experienced by the agricultural sector are another negative factor, the scale of which is difficult to anticipate at this point. The most probable overall outcome would seem to be a significant deceleration in exports generally, but one which would still leave volume growth at about  $11\frac{1}{2}$  per cent. This is based on the euro maintaining levels close to those obtaining at the end of February. There is the possibility that the euro could appreciate significantly. If this were to happen, with wage rates continuing to rise rapidly in the domestic economy, then a significant loss of competitiveness could occur, particularly in the indigenous sectors where growth tends to be lower than in the more high technology sectors. This could result in a more pronounced slowdown in export growth.

The volume of merchandise imports also rose strongly last year, reflecting both domestic demand and the growing input requirements of exporting firms. A deceleration in import growth is also likely this year, partly reflecting somewhat less robust domestic demand but, more significantly, the projected slowing of export growth. Traded goods prices were under significant upward pressure last year as the euro declined in value. There was also a terms of trade loss, partly reflecting the increase in energy prices internationally. These developments are unlikely to persist this year based on the technical assumption that the euro maintains its average end-February value and that there is no further sharp rise in oil prices. This, together with slower world output growth, should result in traded goods prices in domestic currency terms rising much more modestly. Taking the forecast volume and price developments together would suggest that the merchandise trade surplus will rise in nominal terms from an estimated €28,017 million (32 per cent of

**Table 2. Merchandise Trade 1999, 2000<sup>e</sup> and 2001<sup>f</sup>**

	1999	% change in		2000 <sup>e</sup>	% change in		2001 <sup>f</sup>
	€ million	Volume	Price	€ million	Volume	Price	€ million
Merchandise Exports (Adjusted)	62,953	19 $\frac{1}{2}$	5 $\frac{1}{4}$	79,231	11 $\frac{1}{2}$	2 $\frac{1}{4}$	90,299
Merchandise Imports (Adjusted)	-40,221	17 $\frac{1}{2}$	8 $\frac{1}{4}$	-51,214	13 $\frac{1}{2}$	2	-59,283
Trade Balance (Adjusted)	22,732			28,017			31,016
(% of GNP)	(30 $\frac{1}{4}$ )			(32)			(31)

GNP) last year to about €31,016 million (31 per cent of GNP) this year. This would be a quite a modest rise by recent standards and a significant reduction in the contribution of external transactions to growth.

### Services, Factor Incomes and International Transfers

The services balance is likely to show a further increase in its deficit following a significant rise last year. The slower growth of the exporting sectors may limit the imports of services by multinational corporations, however, which might ease the rate of increase in the deficit. A similar pattern is likely to occur in net factor income flows, with outflows continuing to grow but the pace of increase easing back somewhat, reflecting slower growth in the multinational sector and less favourable competitiveness developments. International transfers are set on an underlying pattern of decline, reflecting the fact that the country has to make an increasing contribution to the EU Budget and qualifies for fewer transfers due to its improved economic performance. There may be some increase in the level of EU transfers this year, however, related to the difficulties in the agricultural sector, although this is hard to assess at the time of writing.

The overall current account of the balance of payments seems set to move into increasing deficit, although individual quarters may deviate from this trend. This reflects gradually smaller increases in the merchandise trade surplus being more than offset by an ongoing

**Table 3. Balance of Payments 1999, 2000<sup>e</sup> and 2001<sup>f</sup>**

Current Account	1999	2000 <sup>e</sup>	2001 <sup>f</sup>
	€ million	€ million	€ million
• Merchandise Trade Balance (Adjusted)	22,732	28,017	31,016
• Services	-10,697	-13,477	-15,420
• Net factor income from rest of the world	-12,677	-15,580	-17,741
• Current international transfers	1,208	920	945
<b>Balance on Current Account</b>	<b>566</b>	<b>-120</b>	<b>-1,200</b>
(% of GNP)	( <sup>3</sup> / <sub>4</sub> )	(- <sup>1</sup> / <sub>4</sub> )	(-1 <sup>1</sup> / <sub>4</sub> )
<b>Capital and Financial Account</b>	<b>1999</b>	<b>2000</b>	
		(Jan - Sep)	
	€ million	€ million	
<b>Balance on capital account</b>	<b>560</b>	<b>505</b>	
• Direct Investment	12,707	12,597	
• Portfolio Investment	-14,042	-436	
• Other Investment	-258	-5,444	
• Reserve Assets*	1,746	-92	
<b>Balance on financial account</b>	<b>153</b>	<b>6,625</b>	
Net errors and omissions	-1,280	-6,907	

\* Change in reserves on a transactions basis, i.e. excluding valuation adjustments. A minus figure equals a net increase in reserves.

deterioration in the other components of the current account. On the basis of the technical assumptions used for the forecast, the current account could register a deficit of about €1,200 million ( $1\frac{1}{4}$  per cent of GNP) this year, compared with an estimated deficit of about €120 million ( $\frac{1}{4}$  per cent of GNP) last year. This reflects the shifting balance of demand towards more domestic sources as the environment for exports becomes more difficult and competitiveness developments become less favourable.

### Capital and Financial Account

There was a marginal surplus of €13 million on the capital account in the third quarter of 2000 giving a total surplus of €505 million for the year to September. EU structural fund receipts accounted for most of the capital account surplus. The financial account showed surpluses of €2.9 billion in the third quarter and €6.6 billion for the year until September. The balancing item, representing the errors and omissions in the balance of payments as a whole, was a debit of €2.3 billion in the third quarter.

Inward direct investment of €6.8 billion in the third quarter of 2000 was significantly higher than both the previous quarter and the corresponding quarter in 1999. Equity investment and reinvested earnings each contributed €3.7 billion while there was a reduction of €0.6 billion in other capital liabilities (mainly inter-company balances). The rise in inward direct investment flows compared to previous quarters, applied to both IFSC and non-IFSC enterprises (mainly foreign-owned multinational corporations). Direct investment abroad by Irish residents was €0.6 billion in the third quarter compared to €0.8 billion in the second quarter, giving net inward investment of €6.2 billion for the period.

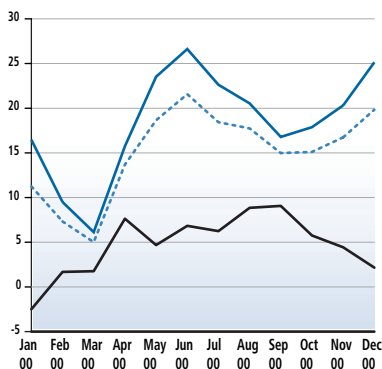
Outward portfolio investment of €30.9 billion in the third quarter reversed the sharp reduction in the second quarter, while inward portfolio flows of €25.3 billion were only marginally higher than the previous quarter. This resulted in a net increase of €5.6 billion in Ireland's holdings of foreign portfolio investment assets over the quarter. IFSC enterprises predominate portfolio investment flows for both assets and liabilities, most of which are with residents of countries outside the euro area.

Financial transactions other than direct and portfolio investment, covering mainly transactions in loans and deposits, resulted in net inflows of €2.4 billion in the third quarter. For the three quarters to September, there were net outflows of €5.4 billion. Again, IFSC-based activities comprise the largest component, and most flows are with non-euro area residents. The official reserves amounted to €5,807 million at end-December 2000, including a valuation write-down of €392 million.

Chart 3

## Volume of Industrial Production

Year-On-Year % Change -  
3 Month Moving Average



Hi-Tech

Manufacturing

Indigenous

## Output Trends and the Labour Market

### Industry and Services Output

Output in the manufacturing sector continued to expand strongly last year. For the year as a whole, total output was 15.4 per cent higher than a year earlier. This follows growth of 15 per cent in 1999. As has been the case for most of the recent past, the driving force behind the expansion of output in the manufacturing sector was the largely foreign-owned, high-technology sectors. Of these, output growth was particularly strong in the electrical machinery (up 42 per cent), precision engineering (up 38 per cent) and office machinery and computers (up 37 per cent) sectors. In the traditional sectors, where indigenous firms have a greater presence, output growth was more moderate. As a whole, output in these sectors was 5 per cent higher than in 1999. However, this rate of growth was relatively strong by historical standards, and reflects significantly higher output in sectors such as transport equipment and beverages.

The outlook for this year is for some moderation in the rate of output growth in the manufacturing sector, largely reflecting the deterioration in the short-term prospects for the US economy. While demand in the EU should continue to underpin further output growth in most high-technology sectors, inward investment, a significant part of which originates in the US, may be adversely affected if the slowdown in the US economy is more protracted or deeper than currently envisaged. In terms of the traditional sectors, which have a greater orientation towards the domestic and UK economies, the strength of demand both in Ireland and the UK should support moderate growth in this sector as a whole. In overall terms, therefore, the current forecast is for manufacturing output growth of around 10 per cent this year.

As outlined earlier, building and construction investment rose by an estimated 9 per cent in real terms last year. This suggests further strong output growth, an outcome which is likely to be maintained this year albeit with some deceleration. In terms of the service sector, the strength of domestic demand, underpinned by favourable employment growth, is likely to support further service sector output growth this year.

### Agricultural Output

Preliminary estimates relating to output and income in the agricultural sector last year were released by the CSO in February. The data point to improved conditions in this sector last year following the difficulties experienced during 1999. However, the volume of goods output was 1.6 per cent lower than a year earlier, largely due to a 2 per cent decline in the volume of livestock output. This was partly offset by increased output in the cereals and milk sectors, the latter reflecting an increase in the milk quota under the *Agenda 2000* reforms. Price developments, however, were much

**Table 4. Manufacturing Output, annual percentage change**

	Total	High-Technology	Indigenous
1994	12 <sup>3</sup> / <sub>4</sub>	17 <sup>1</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub>
1995	21 <sup>1</sup> / <sub>4</sub>	27 <sup>1</sup> / <sub>4</sub>	12 <sup>3</sup> / <sub>4</sub>
1996	8 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	2
1997	19 <sup>1</sup> / <sub>4</sub>	27 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>
1998	21 <sup>1</sup> / <sub>4</sub>	29 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>4</sub>
1999	15	20 <sup>3</sup> / <sub>4</sub>	0
2000	15 <sup>1</sup> / <sub>2</sub>	18 <sup>3</sup> / <sub>4</sub>	5
2001 <sup>f</sup>	10	12	2 <sup>3</sup> / <sub>4</sub>
Average 1994-2001	15 <sup>1</sup> / <sub>2</sub>	20 <sup>1</sup> / <sub>2</sub>	4 <sup>3</sup> / <sub>4</sub>

more favourable, with all major livestock categories recording significant price increases. In particular, large price increases were recorded in the sheep and pigs sectors, two sectors in which significant price reductions had been recorded in 1999. As a result, the value of goods output in the agricultural sector was 4.7 per cent higher than in 1999.

Broadly favourable output developments were partly offset by a 5 per cent increase in the value of farm inputs. While the usage of inputs was marginally lower than a year earlier, the price of some inputs increased significantly. The most notable increase was that for energy, which was attributable to the rise in oil prices last year. Incomes in the agricultural sector were boosted by significantly higher subsidy payments last year. Largely due to the *Agenda 2000* reforms, net subsidies last year were almost 13 per cent higher than in 1999. In overall terms, therefore, agricultural incomes rose by an estimated 7.1 per cent in nominal terms (around 1.5 per cent in real terms) last year.

The outlook for the agricultural sector this year is more uncertain than usual, because of difficulties related to BSE in cattle and the threat of foot-and-mouth disease in the wider livestock sector. Following the discovery of BSE-infected cattle in some continental EU markets in November of last year, beef consumption in the EU has fallen and some important third country markets have been closed. A number of measures have been introduced. For instance, since the beginning of this year, all animals over thirty months of age intended for human consumption have been tested for BSE. Alternatively, animals over thirty months may be offered for destruction as part of the 'Purchase for Destruction Scheme'. In addition, the feeding of meat-and-bone meal to all farm animals intended for human consumption has been banned since the beginning of this year. The outlook has now been further complicated by the threat of foot-and-mouth disease which could have more serious adverse implications for the sector as a whole.

Some increase in milk output is expected this year, reflecting the second quota increase under the *Agenda 2000* reforms. In addition,



**Table 5. Summary of Agricultural Output and Income 1999, 2000 and 2001<sup>f</sup>**

	1999	Percentage Change in			2000	Percentage Change in			2001 <sup>f</sup>
	€ m	Value	Volume	Price	€ m	Value	Volume	Price	€ m
Goods Output at Producer Prices <sup>a</sup>	4,581	4 <sup>3</sup> / <sub>4</sub>	-1 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>4</sub>	4,796	2	1 <sup>1</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	4,892
Intermediate Consumption	2,967	5	-1 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>	3,115	2	<sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	3,179
Net Subsidies plus Services Output less Expenses	571	15 <sup>1</sup> / <sub>4</sub>			659	11 <sup>1</sup> / <sub>2</sub>			735
Operating Surplus	2,185	7			2,340	4 <sup>1</sup> / <sub>2</sub>			2,448

<sup>a</sup> Including the value of stock changes.

**Note:** The format of this table has been altered following the introduction by the CSO of new methodology for compiling estimates of output and income in the agricultural sector.

subsidy payments are likely to be higher than last year, again reflecting the *Agenda 2000* reforms. In terms of inputs, energy prices are likely to be lower than their level last year, although some increase in fertiliser prices is expected. In overall terms, and assuming no outbreak of foot-and-mouth disease, an increase in farm incomes of around 4<sup>1</sup>/<sub>2</sub> per cent next year is provisionally forecast (broadly unchanged in real terms).

### The Labour Market

The strength of economic activity continues to have a positive impact on the labour market. According to the Quarterly National Household Survey (QNHS), total employment in the fourth quarter of last year was 62,900 (3.8 per cent) higher than in the same period of 1999.<sup>2</sup> Full-time employment was 53,500 (3.9 per cent) higher, while part-time employment rose by 9,400 (3.5 per cent). The increase in full-time employment was accounted for by increases of 30,600 and 22,900 in male and female full-time employment, respectively. The increase in part-time employment was entirely due to an increase among females; part-time employment among males fell slightly over the period.

Most sectors recorded a year-on-year expansion in employment. Once again, it was in the construction sector where the largest increase in employment was recorded, partly reflecting buoyant activity in the housing market. In the fourth quarter of 2000, employment in this sector was 23,300 (15.1 per cent) higher, year-on-year. Other sectors in which strong growth was recorded included the education and health sector (up 7.0 per cent) and the wholesale and retail sector (up 5.8 per cent). There were two exceptions to the

<sup>2</sup> Analysis is confined to year-on-year developments given that the data are not yet seasonally adjusted.



sectoral expansion of employment, the most notable being the agricultural sector, where employment declined by 17,300 (12.4 per cent). While a downward employment trend in this sector has been evident for some time, the fall in the fourth quarter was considerably larger than in the recent past. In addition, there was a small decline of 1,100 (1.2 per cent) in employment in the other services sector.

The data also point to a continued expansion of the labour force, which rose by 2.5 per cent, year-on-year, in the final quarter of 2000. The growth of the labour force reflects the rise in the population of working age, inward migration and increased participation. However, the contribution of the latter development to overall labour force growth was considerably lower than in the recent past – the participation rate increased by just 0.3 percentage points between the fourth quarters of 1999 and 2000.

As a result, total unemployment in the final quarter of last year was 68,800. This was a decline of 19,900 from the level recorded in the same period a year earlier, and resulted in a fall in the unemployment rate from 5.1 to 3.9 per cent. The downward trend in long-term unemployment, i.e. unemployed for one year or longer, continued in the fourth quarter. Of those unemployed in this period, 24,200 (1.4 per cent of the labour force) were classified as long-term unemployed. The remaining 44,600 (2.5 per cent of the labour force) were short-term unemployed, i.e. unemployed for less than a year.

In terms of annual averages, total employment last year was 76,600 (4.7 per cent) higher than in 1999. While still a very high rate of growth in terms of both historical and international standards, this rate of growth was lower than the 6.3 per cent rate of increase recorded in 1999. The slowdown in employment growth was evident throughout the year, with the annual rate of growth decelerating from 6.2 per cent in the first quarter to 3.8 per cent in the final quarter. The slowdown reflects a deceleration in labour force growth – to 3.3 per cent in 2000 compared to 4.0 per cent in 1999 – as well as more

**Table 6. Employment and Unemployment 1999, 2000 and 2001<sup>f</sup>**

(annual average '000)	1999	2000	2001 <sup>f</sup>
Agriculture	139	130	130
Industry	459	488	499
Services	1,018	1,075	1,122
Total Employment	1,616	1,692	1,751
Unemployment	95	76	68
Labour Force	1,711	1,768	1,819
Unemployment Rate (%)	5½	4¼	3¾

**Note:** Figures may not sum to the total because of rounding.

limited scope for the transfer from unemployment into employment, given the very low levels of both short- and long-term unemployment. For the year as a whole, unemployment averaged 76,000. This corresponded to a rate of 4.3 per cent, a decline from the 5.6 per cent rate recorded in 1999.

The outlook for this year is for a continuation of favourable employment trends, although some further moderation in the rate of employment growth is expected. This largely reflects a somewhat slower rate of growth of labour supply, which is forecast to expand by around 51,000 (2.9 per cent). In addition, while some further reduction in unemployment is expected, the scope for significant employment gains from this source is more limited than in the past, given the current very low level of unemployment. In overall terms, therefore, total employment growth of around 59,000 (3.5 per cent) is forecast for this year. Unemployment is forecast to average around 68,000, resulting in a rate of around  $3\frac{3}{4}$  per cent for the year as a whole.

## **The Public Finances**

### **2000 Exchequer Outturn**

The Exchequer Returns for end-December showed an Exchequer surplus for 2000 of €3,178 million, which included the repayment to the Exchequer of €127 million by the Insurance Compensation Fund. This compares with an Exchequer surplus in 1999 of €1,513 million and a 2000 Budget day target of a €2,043 million surplus. The General Government Surplus in 2000 was 4.5 per cent of GDP.

Total current expenditure in 2000 amounted to €20,633 million, an increase of 4.5 per cent on 1999 and €291 million above the 2000 Budget target. Central Fund Services, at €3,924 million, was €17 million below the Budget target. Net current voted expenditure amounted to €16,710 million, up 8.7 per cent on 1999 and exceeding the Budget target by €307 million. The main areas where current expenditure exceeded Budget targets were in Health and Children, Education and Science, Environment and Local Government and Public Enterprise. These additional expenditure outlays were partially offset by savings elsewhere, most notably in Social, Community and Family Affairs where spending was less than the Budget projection resulting mainly from lower-than-expected Live Register costs. Total current receipts in 2000 amounted to €27,606 million, €1,475 million above the 2000 Budget day target. Non-tax revenue came to €534 million which was €11 million below the Budget target. Total tax revenue, at €27,072 million, exceeded the Budget target by €1,487 million and was up 14.9 per cent year-on-year, reflecting stronger economic growth than projected at the time of the 2000 Budget.

Overall, the difference between current revenue and current expenditure in 2000 resulted in a current budget surplus of €6,972 million. This compares with a surplus of €4,366 million in 1999 and

a Budget 2000 target of €5,788 million. Exchequer borrowing for capital purposes amounted to €3,794 million (including the €127 million repaid to the Exchequer by the Insurance Compensation Fund) compared to a Budget target of €3,745 million. Voted capital expenditure, at €3,874 million, was broadly on target. Non-voted capital expenditure totalled €2,653 million compared to a Budget target of €2,381 million. This difference was largely owing to extra FEOGA payments and additional prefunding of pensions. Exchequer capital resources amounted to €2,126 million, some €89 million higher than the Budget target.

## 2001 Budget

In the 2001 Budget presented on 6 December, the Minister for Finance targeted an Exchequer surplus of €3,223 million for 2001. The General Government Surplus in 2001 is projected to be 4.3 per cent of GDP. Current revenue in 2001 is forecast to rise by 11.8 per cent on the estimated 2000 outturn, comprising a 20.9 per cent increase in non-tax revenue and an 11.6 per cent rise in tax revenue. The net reduction in tax revenue from Budget measures is estimated at €583 million in 2001 with Budget tax reductions totalling €1,587 million being partially offset by tax buoyancy arising from tax and spending changes amounting to €1,004 million. Income tax reliefs cost €923 million, reductions in indirect taxes €449 million, and other tax deductions and technical factors €215 million.

Budget measures (excluding technical factors) add €1,032 million to Net Non-Capital Supply Services expenditure in 2001, implying that voted current expenditure will increase by 18 per cent in 2001. Budget measures in Net Non-Capital Supply Services include increased outlays on Social Welfare, Health, and in respect of the adjustment to the pay terms of the PPF. The increases in Social Welfare improvements in 2001 will cost the Exchequer €488 million and the Social Insurance Fund €258 million (summing to a total cost of €745 million). The full-year cost of Budget measures in the Social Welfare area is €1,079 million. Additional outlays on Health amount to €247 million in 2001.

The opening position for the 2001 Budget was a €4,434 million surplus. This position would have been significantly higher without the additional expenditure commitments incorporated in the Estimates, published in November. The taxation and expenditure measures in the Budget led to a closing position of €3,223 million and would have been some €508 million lower if the Minister had not chosen to release funds from the Capital Services Redemption Account to meet interest costs on the national debt. Budget day measures are estimated to have increased household disposable income by about 3 per cent.

**Table 7. Main Budgetary Aggregates 2000 and 2001**

	2000 - Budget Estimate € million	2000 - Outturn € million	2001 - Budget Estimate € million
<b>Current Expenditure</b>			
– Central Fund Services <sup>a</sup>	3,940	3,923	3,403
– Non-Capital Supply Services <sup>b</sup>	16,402	16,710	19,931
<b>Total</b>	<b>20,342</b>	<b>20,633</b>	<b>23,334</b>
<b>Current Revenue</b>			
– Tax revenue	25,585	27,072	30,461
– Non-tax revenue <sup>c</sup>	545	533	676
<b>Total</b>	<b>26,130</b>	<b>27,605</b>	<b>31,137</b>
<b>Current Budget Surplus</b>	<b>5,787</b>	<b>6,972</b>	<b>7,803</b>
<b>Exchequer borrowing for capital purposes</b>	<b>3,746</b>	<b>3,794</b>	<b>4,580</b>
<b>Total Exchequer Surplus</b>	<b>2,043</b>	<b>3,178</b>	<b>3,223</b>
<b>General Government Surplus (% of GDP)</b>	<b>1.2</b>	<b>4.5</b>	<b>4.3</b>

<sup>a</sup> Debt servicing, judicial salaries and pensions and EU Budget contribution.

<sup>b</sup> Government current expenditure on areas such as Social Welfare, Health, etc.

<sup>c</sup> Central Bank surplus income, National Lottery surplus, interest and dividends, etc.

### Exchequer Financing

The Exchequer surplus fell by around €570 million in the final quarter of 2000, with a fall of Exchequer balances of €2,224 million offsetting net repayment of borrowings amounting to €1,657 million. In the year as a whole, the Exchequer surplus of €3.2 billion<sup>3</sup> was fully reflected in repayments of borrowings, as Exchequer balances were unchanged over the year. At end-2000, balances held in departmental funds and other accounts were €1,480 million, the same as at the end of the previous year.

Most of the net repayments in 2000 were redemptions of medium- and long-term bonds. This amounted to €3.6 billion, of which €2.0 billion was Irish Government bonds listed on the Irish Stock Exchange. There was net borrowing of €92 million in the form of commercial paper in 2000, with borrowings of €258 million in the final quarter offsetting net redemptions over the previous nine months of the year. In addition, €564 million was borrowed from ministerial funds in 2000. The contribution of national savings schemes to the Exchequer last year was negative to the tune of €230 million, due mainly to continued flows out of Savings Bonds and Savings Certificates.

<sup>3</sup> Including repayment to the Exchequer of €127 million by the Insurance Compensation Fund.

**Table 8. Source and Application of Funds**

€ million	1999	2000
<b>1. Borrowing (-)/repayments (+):</b>	<b>1,686</b>	<b>3,178</b>
Irish Government bonds listed on the Irish Stock Exchange	421	1,983
Other Irish Government public bond issues	967	915
EIB loans	129	132
Medium-term notes	112	26
Private placements	506	465
National saving schemes	117	230
Commercial paper	-178	-92
Miscellaneous debt	33	81
Borrowing from ministerial funds	-421	-564
<b>2. Increase (+)/decrease (-) in Exchequer deposits and other balances:</b>	<b>-173</b>	<b>-</b>
Increase (+)/decrease (-) in Exchequer balance	-78	-160
Increase (+)/decrease (-) in other bank deposits	-	250
Increase (+)/decrease (-) in other balances	-96	-90
<b>Exchequer Surplus (1+2):</b>	<b>1,513</b>	<b>3,178</b>

## Financial Sector Developments

### Overview

The increase in interest rates announced by the Governing Council of the ECB on 5 October 2000 was the seventh in just under a year and brought the cumulative increase to 2.25 percentage points. The increase in rates probably contributed to the signs of easing in the annual rate of growth of the monetary aggregates in Ireland, although with market interest rates remaining relatively low (and negative in real terms) credit growth in particular remained strong and around twice the euro area average. Against this background, the Bank has stressed to credit institutions the need to observe prudence in their lending policies. Property-related lending (including residential mortgage credit and lending to the construction and real estate sectors) has contributed substantially to recent credit growth, but the rate of increase in such lending shows signs of modest easing. Residential mortgage lending, adjusted for securitisations, slowed to an annual growth rate of 24.1 per cent in January 2001, compared with a peak of 26 per cent in February 2000. Lending to the construction and real estate sectors, while growing substantially in 2000, showed signs of moderating in the most recent quarters.

ECB interest rates have remained unchanged since October, in contrast to the declining trend in other major economies, and this contributed to a recovery of the euro towards the end of 2000. In addition, the relative firmness of short-term interest rates combined with an easing of bond yields led to a marked flattening of the yield curve in 2000. Monetary developments in the euro area are more fully analysed in the 'Euro Area and International Economy' chapter of this bulletin.

### Money Supply

Ireland's contribution to the euro area's broad money stock (M3) increased by €2,110 million, or 2.1 per cent, in the final quarter of 2000.<sup>4</sup> This was the weakest quarterly change since the start of monetary union. The annual rate of growth fell to 14.7 per cent in December, compared with 20 per cent at the start of last year. Non-Government deposits fell by €1,205 million in the three months to end-December; although deposits of Irish residents increased by €1,921 million, this was offset by a fall in deposits of other monetary union member countries with Irish resident MFIs amounting to €3,126 million. The latter was largely the result of end-year cash management activities of depositors with a small number of institutions. Deposits of IFSC entities with Irish resident MFIs contributed to the weakness in non-Government deposits in the final quarter, falling by €946 million. The fall in deposits in the fourth quarter was offset by other factors which increased Ireland's contribution to euro area M3. These were, principally, increases in debt securities up to two years' maturity, funds received under repurchase agreements and a seasonal increase in currency in circulation.

In January 2001, as in January of 2000 but to a greater extent, there was a large increase in Ireland's contribution to euro area M3. This was mainly due to an increase in the deposits of other monetary union member residents, which in turn was largely explained by the reversal

**Table 9. Monetary Aggregates: Annual Rates of Change (%)**

		Residential Mortgages <sup>a</sup>	Private-sector credit		Irish contribution to euro area M3 <sup>c</sup>
			Unadjusted	Adjusted <sup>b</sup>	
<b>1999</b>	December	25.6	33.5	n.a.	n.a.
<b>2000</b>	January	25.7	32.6	28.8	20.0 <sup>e</sup>
	February	26.0	34.8	32.7	19.2 <sup>e</sup>
	March	25.5	34.7	33.1	18.7 <sup>e</sup>
	April	25.4	28.6	25.4	14.3 <sup>e</sup>
	May	25.3	26.4	23.9	13.7 <sup>e</sup>
	June	25.4	25.7	24.3	18.0 <sup>e</sup>
	July	25.2	25.3	21.9	18.5 <sup>e</sup>
	August	25.2	28.9	26.4	18.5 <sup>e</sup>
	September	25.4	26.6	23.7	16.0 <sup>e</sup>
	October	25.2	26.1	24.2	15.7 <sup>e</sup>
	November	25.0	22.8	22.2	16.7 <sup>e</sup>
	December	24.3	20.6	21.3	14.7 <sup>e</sup>
<b>2001</b>	January	24.1	20.1	20.9	16.2 <sup>e</sup>

<sup>a</sup> This series is adjusted for securitisations. See Table A2 in the Statistical Appendix.

<sup>b</sup> Adjusted for transactions between credit institutions and non-bank IFSC companies and valuation effects arising from exchange-rate movements.

<sup>c</sup> After the start of monetary union, it only became possible to produce an annual growth rate calculated on a consistent basis from January 2000.

<sup>4</sup> The discussion of Ireland's contribution to euro area M3 excludes money market fund (MMF) shares and units. See Table A3 in the Statistical Appendix for further details.

of the end-year cash management activities mentioned above. The annual growth rate for Ireland's contribution to M3 rose to 16.2 per cent in January but the trend remained modestly downward.

### Private-Sector Credit

Lending by credit institutions resident in Ireland to non-Government Irish residents (private-sector credit) increased by €2,294 million in the final quarter of last year. This represents a rise of 2.1 per cent, which compares with an increase of 7.2 per cent in the final three months of 1999. The relative weakness of private-sector credit in the three months to end-December 2000 is partly accounted for by the pattern of lending to non-MFI IFSC entities; the latter fell by almost €200 million in this period, compared with an increase of €2.3 billion in the last quarter of 1999. In addition, private-sector credit was reduced in November 2000 as a result of a restructuring by a bank of intra-group funding in such a way that an amount of the order of €1.2 billion was transferred from private-sector credit to interbank lending. In the three months to end-December, all of the increase in private-sector credit was denominated in euro, with lending denominated in non-euro currencies falling over the period. The latter partly reflected valuation effects arising from the appreciation of the euro in the final months of last year.

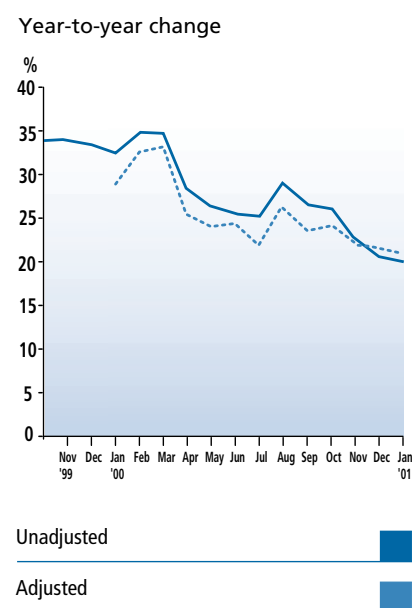
The annual rate of growth in private-sector credit, adjusted for lending to IFSC entities and valuation effects caused by exchange rate changes, fell to 21.3 per cent in December compared with a peak earlier in the year of just under 29 per cent (if the impact of the Irish Life & Permanent merger is excluded).<sup>5</sup> Adjusting for the latter, the average annual growth rate was 24.6 per cent last year. The downward trend in the rate of credit growth continued in January 2001 with a further modest fall to 20.9 per cent.

The main contributor to the increase in private-sector credit in the fourth quarter of last year was residential mortgage lending. The amount of residential mortgage lending on the balance sheet of credit institutions resident in Ireland increased by €1,733 million, or 6.2 per cent, in this period. However, this does not take account of mortgages removed from the balance sheets of lending institutions by securitisations. Adding back these securitised mortgages, residential mortgages increased by 5.3 per cent in the fourth quarter, a slower rate of increase than in the previous three months and also slower than has been typical for the final quarter in recent years. The adjusted annual growth rate for residential mortgages fell to 24.3 per cent in December from 25.4 per cent three months earlier. There was a further slight fall, to 24.1 per cent, in January 2001. At end-December, 69 per cent of the residential mortgages on the balance sheets of credit institutions were at variable rates (which includes those fixed for up to one year), with the balance at fixed rates.

<sup>5</sup> For technical reasons, the merger between Irish Life and Irish Permanent boosted the annual growth rate for private-sector credit between April 1999 and March 2000.

Chart 4

### Changes in Private-Sector Credit





### Sectoral Breakdown of Credit Growth

Looking at the sectoral distribution of advances, lending to the financial intermediation sector fell in the final quarter of 2000. This was mainly due to the restructuring of lending within a banking group referred to above, but even adjusting for this item lending to this sector was relatively weak. Lending to the personal sector dominated credit growth in the fourth quarter, the bulk of which was housing related. There was also strong growth in the category 'Real estate, renting and business', most of which was related to real estate activities. Other contributors to the growth were 'Wholesale/retail trade and repairs' and lending to the construction sector. Regarding property-related credit, lending for real estate activities in the third quarter of last year recorded the weakest growth since the three months to May 1998 and it was only slightly stronger in the final three months of 2000. The 5.3 per cent increase in lending to the construction sector in the final quarter was the smallest quarterly rise since the three months to May 1999.

Personal sector lending accounted for about one-third of the increase in private-sector credit in 2000. Lending to the financial sector represented a further 26 per cent, although this share would be halved if lending to IFSC entities were excluded. The other principal contributors to lending growth over the year were 'Real estate, renting and business', 'Construction' and 'Manufacturing'. The fastest rates of growth in the year to December 2000 were in the

**Table 10. Change in Credit Institutions' Non-Government Credit by Sector\***

	End-December 1999/ End-December 2000			End-September 2000/ End-December 2000		
	€ million	% increase	% share of total increase	€ million	% increase	% share of total increase
Agriculture and forestry	73	2.4	0.4	-35	-1.1	-1.6
Fishing	89	57.8	0.5	-2	-0.8	-0.1
Mining and quarrying	91	35.3	0.5	17	5.1	0.8
Manufacturing	920	19.1	4.9	119	2.1	5.3
Electricity, gas and water supply	181	47.5	1.0	48	9.3	2.1
Construction	1,236	51.6	6.6	184	5.3	8.1
Wholesale/retail trade and repairs	657	17.8	3.5	204	4.9	9.0
Hotels and restaurants	538	15.1	2.9	117	2.9	5.2
Transport, storage and communications	220	13.9	1.2	-84	-4.5	-3.7
Financial intermediation	4,949	16.3	26.2	-1,230	-3.4	-54.5
Real estate and business activities	3,359	46.7	17.8	793	8.1	35.1
Education	77	70.6	0.4	10	5.7	0.4
Health and social work	72	26.0	0.4	9	2.6	0.4
Other community, social and personal services	100	10.4	0.5	-28	-2.6	-1.2
Personal:	6,296	19.1	33.4	2,138	5.8	94.7
– House mortgage finance	4,960	20.4	26.3	1,731	6.3	76.7
– Other housing finance	152	26.8	0.8	64	9.8	2.8
– Other	1,184	14.8	6.3	344	3.9	15.2
<b>Total</b>	<b>18,856</b>	<b>20.5</b>	<b>100.0</b>	<b>2,258</b>	<b>2.1</b>	<b>100.0</b>

\* Data are unadjusted for IFSC lending and valuation effects.



**Table 11. Euro Area Retail Bank Interest Rates (monthly average, %)**

	Deposit interest rates		Lending interest rates		
	Overnight		To enterprises		To households
			Up to 1 year	Over 1 year	Consumer lending For house purchase
<b>1999:</b> December	0.67		5.81	5.51	9.38 5.80
<b>2000:</b> January	0.69		5.91	5.74	9.51 6.03
February	0.69		6.01	5.85	9.52 6.13
March	0.73		6.07	5.85	9.55 6.10
April	0.76		6.24	5.99	9.62 6.12
May	0.78		6.40	6.16	9.70 6.30
June	0.83		6.56	6.23	9.81 6.34
July	0.87		6.77	6.37	9.92 6.46
August	0.89		6.81	6.44	9.97 6.51
September	0.94		6.94	6.44	10.00 6.56
October	0.97		7.15	6.60	10.11 6.57
November	0.99		7.18	6.63	10.16 6.56
December	1.01		7.16	6.45	10.14 6.43

**Source:** ECB Monthly Bulletin. Rates are calculated as the weighted average of national rates. These rates should be used with caution as they are not harmonised across euro area countries.

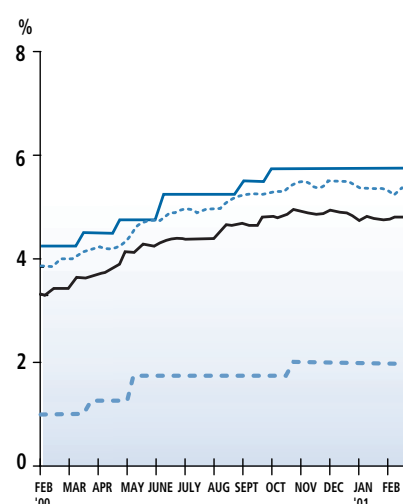
categories 'Education' and 'Fishing', but they account for a small proportion of total credit. Of the larger items, the property-related sectors continued to show the fastest annual growth rates, with lending to construction and to real estate activities both increasing by around 50 per cent. In both cases, the year-on-year growth rate shows some signs of easing over recent quarters. Lending to the sub-category 'Hotels' slowed significantly last year, increasing by €84 million (under 5 per cent) in the year to end-December compared with an increase of €550 million (46 per cent) in the thirteen months to end-December 1999.<sup>6</sup>

## Financial Markets

Euro area financial market developments are discussed in more detail in the 'Euro Area and International Economy' chapter of this bulletin. The Governing Council of the ECB decided to increase each of its key interest rates by 0.25 of a percentage point on 5 October 2000. This brought the cumulative increase in rates to 2.25 percentage points since November 1999, or 1.75 percentage points since the start of 2000. The October increase brought the main refinancing rate to 4.75 per cent. Interest rates were left unchanged, however, for the remainder of last year and in the opening months of 2001. With interest rates falling in other major economies, differentials moved in favour of the euro, which appreciated somewhat between last autumn and the spring of 2001. The euro rose by around 12 per cent against the US dollar between late October 2000 and early March 2001 and it also rose by close to 10 per cent against sterling. The

**Chart 5**

## Selected Interest Rates



Marginal Lending Facility Rate

Clearing Banks' Prime Rate

1 Month Interbank Rate

Clearing Banks' Deposit Rate £25,000 - £100,000

<sup>6</sup> Before December 1999, sectoral advances data were reported at end-February, end-May, end-August and end-November. Since then they have been reported at end-quarter.

notional value of the Irish pound against sterling rose from a low of around stg£0.73 last autumn to around stg£0.80 in early March.

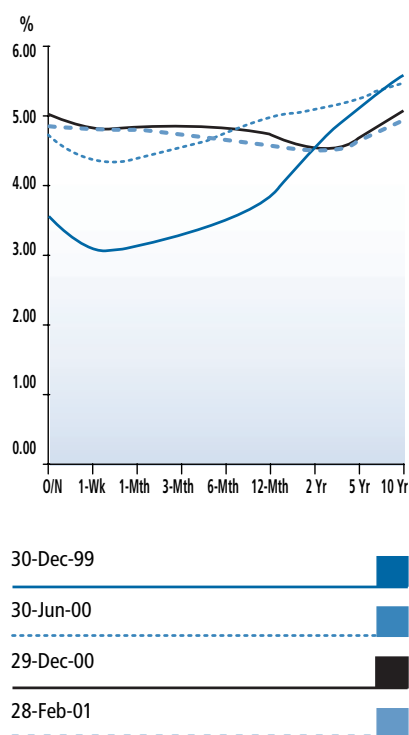
With short-term money-market interest rates relatively steady in recent months at close to the main refinancing rate, retail interest rates in Ireland have generally been unchanged. The average rate for the standard variable mortgage rate for all mortgage lenders was 5.99 per cent at the end of last year compared with 4.19 per cent a year earlier. The rate was still at this level in early March 2001. The personal overdraft level of the main clearing banks was in a range of 12.15 per cent to 12.75 per cent at end-2000, compared with 10.5 to 11.0 per cent at the end of 1999. The range also did not change in the early months of this year. The clearing banks' prime rate, on which the cost of borrowing for many commercial borrowers is based, averaged around 5.5 per cent at the end of last year, up from 4.1 per cent a year earlier. The average eased slightly to around 5.4 per cent by end-February 2001.

### Bond Yields

Having been relatively steady for a number of months, Irish bond yields fell towards the end of last year in line with international trends. Over the year as a whole, the five-year yield fell from 5.12 per cent to 4.68 per cent, while the ten-year yield fell from 5.60 per cent to 5.07 per cent. Bond yields were broadly stable in the opening months of this year. Differentials between Irish and German five-year yields generally fluctuated within a narrow range in the final quarter of last year but contracted sharply in the early months of 2001. The ten-year differential, which has been steady at around 0.25 percentage points since the start of monetary union, narrowed fractionally at the start of this year to just above 0.20 of a percentage point. Irish ten-year yields remain close to the euro area average.

Chart 6

### Irish Yield Curve



The fall in bond yields last year, allied to the rise in short-term rates, led to a marked flattening of the yield curve. By the end of 2000, the curve was inverted over part of its range. There was little change in the shape of the yield curve in the early months of 2001.

### Financial Institutions

The Bank has approved the acquisitions of ICC and ICC Investment Bank by the Bank of Scotland and of TSB Bank by Irish Life & Permanent, but neither deal had been finalised at the time of writing.

### Monetary Policy Implementation by the Central Bank of Ireland

By early March 2001, 40 institutions (including some in the IFSC) had met the general eligibility requirements to act as a counterparty for the monetary policy operations conducted by the Bank on behalf of the Eurosystem. Last year, 18 of these institutions took part in main refinancing operations and 15 in longer-term refinancing operations.

**Table 12. Irish Government Bond Yields and Differentials (%)**

		5-year Bond yield	Differentials against:			10-year Bond yield	Differentials against:		
			Germany	UK	US		Germany	UK	US
End-month									
1999	December	5.12	0.34	-1.18	-1.20	5.60	0.25	0.10	-0.77
2000	January	5.38	0.34	-0.94	-1.25	5.78	0.25	0.05	-0.84
	February	5.33	0.25	-0.74	-1.27	5.75	0.26	0.30	-0.68
	March	5.11	0.26	-0.83	-1.24	5.45	0.24	0.21	-0.60
	April	5.24	0.25	-0.52	-1.29	5.52	0.22	0.29	-0.70
	May	5.31	0.22	-0.46	-1.30	5.47	0.27	0.28	-0.83
	June	5.27	0.23	-0.34	-0.92	5.48	0.28	0.31	-0.52
	July	5.36	0.21	-0.35	-0.81	5.46	0.26	0.23	-0.59
	August	5.45	0.20	-0.31	-0.60	5.58	0.27	0.24	-0.23
	September	5.28	0.22	-0.35	-0.56	5.46	0.23	0.24	-0.32
	October	5.26	0.18	-0.31	-0.55	5.48	0.24	0.32	-0.26
	November	5.08	0.23	-0.21	-0.37	5.24	0.21	0.33	-0.27
	December	4.68	0.16	-0.49	-0.33	5.07	0.22	0.18	-0.03
2001	January	4.67	0.18	-0.42	-0.20	5.02	0.22	0.17	-0.17
	February	4.64	0.05	-0.44	-0.07	4.98	0.22	0.09	0.04

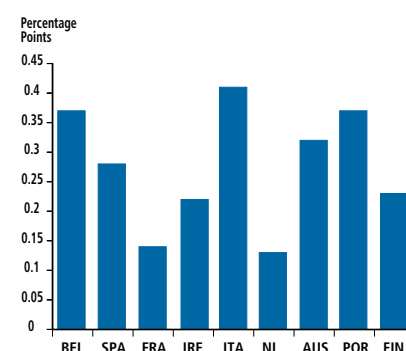
**Note:** (-) denotes Irish yields are lower than foreign yields.

Lending by the Bank to financial sector counterparties in the euro area amounted to €8.4 billion at end-December compared with €7.9 billion at end-September. The bulk of the lending at end-year (€5.2 billion) constituted lending under longer-term refinancing operations, with €3.2 billion under the main refinancing operations. Lending under the main refinancing operations increased by €610 million in the quarter while lending under longer-term refinancing operations fell by €146 million. The interest rates charged by the Bank on borrowings and paid on deposits are those determined by the Governing Council of the ECB for the whole Eurosystem. Since the changes announced on 5 October 2000, the deposit facility rate has been 3.75 per cent, the minimum bid rate for the main refinancing facility is 4.75 per cent and the marginal lending facility rate is 5.75 per cent.

All 83 credit institutions operating in Ireland, whether under Irish law or on a branch basis, are subject to the minimum reserve requirements of the Eurosystem. The minimum reserve requirement is 2 per cent of specified liabilities and compliance is determined on the basis of average daily reserve holdings over a one-month 'maintenance period'. In the maintenance period from January 24 to February 23, institutions held balances in their minimum reserve accounts with the Bank which were, on average, €10.3 million more than required. The Bank is responsible for monitoring compliance of credit institutions in Ireland with the minimum reserve system. In 2000, the Bank imposed sanctions for a breach of minimum reserve

**Chart 7**

**Ten-year Yield  
Differentials vis-à-vis  
Germany end-February  
2001**



obligations on 16 occasions, although in half of these cases the sanctions, based on the extent of the shortfall, were very small.

The Bank participates in the Correspondent Central Banking Model (CCBM) which facilitates the use of eligible assets in euro area monetary policy operations on a cross-border basis. This enables, for example, a counterparty in Ireland to use eligible assets deposited in another monetary union member country as collateral to obtain liquidity from the Central Bank of Ireland. At end-February, 15 of the Bank's counterparties (including IFSC banks) were using the CCBM and collateral with a nominal value of €7.0 billion was held for refinancing purposes in custody accounts with other euro area national central banks on behalf of the Bank. The securities involved were mainly located in Germany, Italy, France, Luxembourg, Belgium and Spain. This compares with €2.8 billion of domestic collateral for refinancing purposes at end-February.

The Irish real-time gross settlement (RTGS) system is linked to those of the other euro-area countries through a system called TARGET (Trans-European Automated Real-Time Gross Settlement Express Transfer). This enables large value payments to be settled with the same certainty and timing throughout the euro area, facilitating the integration of the euro area money market and contributing to the smooth implementation of the single monetary policy. In the fourth quarter, the Irish RTGS system averaged 770 cross-border payments per day with total payments of, on average, €5.3 billion per day. There was an average of 1,233 domestic payments per day in the same period with an average value of €9.2 billion per day. In the three months to end-December, Ireland accounted for around 1.2 per cent of TARGET cross-border payments by value and around 1.8 per cent by number of transactions.

# Domestic Prices, Costs and Competitiveness

## Overview

The average rate of inflation, as measured by the Consumer Price Index (CPI) reached a sixteen-year high of 5.6 per cent in 2000. This poor inflation outturn compares unfavourably with the performance during the previous decade when headline CPI inflation averaged 2.3 per cent and remained within a range of 1.5 to 2.5 per cent from 1993 onwards. There was also a sharp deterioration in Ireland's relative inflation performance last year. The increase in the Harmonised Index of Consumer Prices was, as recently as 1997, the lowest in the European Union. In 2000, it averaged 5.3 per cent. This was the highest in the European Union and over twice the euro area average.

Roughly one third of the increase in the headline rate of inflation in 2000 reflected extraneous factors including the sharp rise in the dollar price of oil, the weakness in the euro and the impact of higher excise duty on tobacco. The rise in headline CPI inflation was further boosted by higher mortgage interest rates. Accordingly, the headline inflation rate tended to exaggerate the deterioration in underlying inflationary pressures last year. Nevertheless, underlying inflationary pressures did increase significantly during 2000, following increases in each of the preceding two years.

Core inflation in Ireland, as measured by the HICP index excluding energy products and unprocessed foods, increased from an average rate of 2.2 per cent in 1998 to 2.5 per cent in 1999 and 4.7 per cent in 2000. The increase in core inflation in Ireland since 1998 contrasts with a stable position in the euro area. While some of this increase is accounted for by higher prices for imported goods due to the decline in the euro, it is primarily due to the sharp acceleration in services sector inflation. Underlying services sector inflation averaged close to 7 per cent last year, up from about 5½ per cent in the previous year. This higher rate of services inflation reflects a combination of strong domestic demand and accelerating wage pressures.

The sharp acceleration in inflation in the services sector in recent years is in marked contrast to the relatively low rate of inflation in the traded sector of the economy despite the sharp depreciation of the exchange rate. The weak pass-through from exchange rate weakness to traded goods prices would appear to reflect a combination of strong competitive pressures in the retail sector in Ireland and a high degree of uncertainty regarding the sustainability of exchange rate trends. There may also be a more permanent reduction in the ability of UK suppliers to pass on price increases in some sectors, due to a deepening of the Single Market, with Irish importers in a better position to switch to euro area sources of supply.

It is estimated that nominal wage increases averaged about  $7\frac{1}{2}$  per cent last year. It would appear that the average size of wage settlements increased significantly as the year progressed. This increasing momentum in wage inflation is likely to be sustained this year given the tightness of the labour market. It may be accentuated by the additional wage increases agreed under the revised terms of the Programme for Prosperity and Fairness (PPF) although this revision, to a large extent, simply formalised what is already happening in the market.

Although wage increases in Ireland have outstripped those in most of our trading partners in recent years, the impact on competitiveness has been more than offset by the decline in the value of the exchange rate. In addition, Irish productivity growth has been higher than the average of our main trading partners, largely because of the high-technology sectors. Accordingly, there has been a continuous improvement in competitiveness in recent years. In the absence of further exchange rate weakness, however, there is likely to be little improvement in Ireland's competitive position this year. Furthermore, in the event of a significant recovery in the value of the euro, the gap between Irish wage inflation and that of our main trading partners may create difficulties for many firms. Those firms in the more traditional labour intensive sectors, where productivity increases are substantially lower than in the modern sectors, are particularly vulnerable.

Some of the temporary factors, which boosted headline inflation last year, are likely to have the opposite effect in 2001. In particular, oil prices now appear likely to be lower on average and the effect of this decline will be accentuated by the recent recovery in the euro rate against the dollar. The stronger euro will also tend to cap traded goods prices. In addition, indirect tax changes in the 2001 Budget are likely to reduce the price level by about  $\frac{1}{2}$  of a percentage point if fully passed on to the consumer. Headline inflation could ease to an average rate of about  $4\frac{1}{2}$  per cent if the fall in the price of oil and the recovery of the euro are sustained. By contrast, underlying inflationary pressures are likely to strengthen somewhat this year, against a background of a sharp pick-up in wage inflation and buoyant domestic demand conditions boosted by large income tax reductions and increases in public spending.

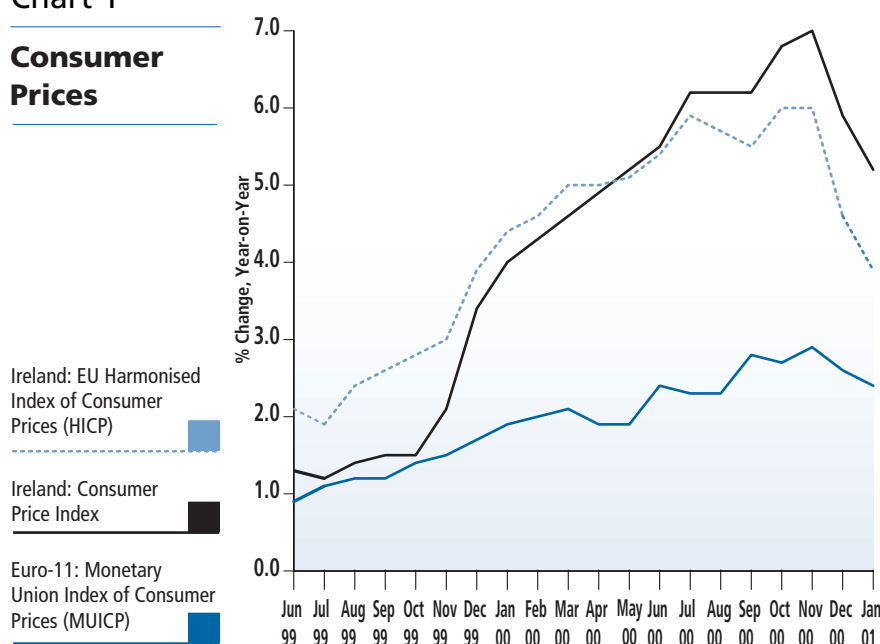
The risks to the inflation outlook from external factors are fairly evenly balanced but those emanating from the domestic economy are primarily on the upside. Of particular concern is the labour market where there is increasing evidence of sharply increasing wage expectations. Given the strength of domestic demand, it is likely that higher wage costs will be quickly passed on to consumers.

## Consumer Prices

Inflation, as measured by the CPI, averaged 6.6 per cent, year-on-year, in the fourth quarter of 2000, up from 6.2 per cent in the previous quarter and 2.3 per cent in the final quarter of 1999. The rate of CPI inflation peaked in November 2000 at 7 per cent but has subsequently declined significantly as some of the temporary factors which had boosted headline inflation (oil prices, euro weakness and tobacco excise duties) began to abate. In December, the impact of the increase in tobacco excise duty in Budget 2000 dropped out of the year-on-year comparison. In addition there was a fall in the price of petrol and other oil based products due to a decline in the price of oil and a cut in excise duty on fuels. As a consequence, the rate of CPI inflation declined by 1.1 percentage points to 5.9 per cent. Lower energy prices again contributed to a decline in the rate of CPI inflation in January, to 5.2 per cent. In addition there was a cut of 1 percentage point on the VAT rate and excise duty was reduced on petrol and diesel.

Chart 1

### Consumer Prices



The rate of increase in the HICP has also declined in recent months, from 6 per cent, year-on-year, in November of last year to 4.6 per cent in December and 3.9 per in January 2001. The gap between the current rates of increase in the CPI and the HICP is mainly accounted for by mortgage interest rates. These are included in the CPI but not in the HICP.

## Producer Prices

Price trends at both the factory and farm gate level are reflected in the industrial and agricultural producer price indices. They provide potentially useful information regarding future price developments at the retail level. Both indices increased strongly over the last year. The rise in the Agricultural Output Price Index is mainly accounted for by

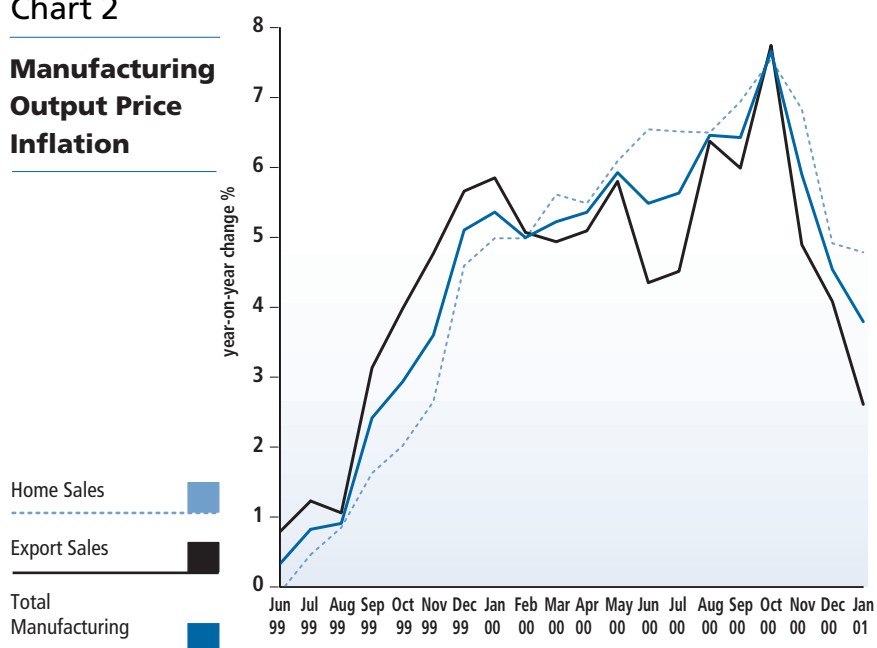


a sharp rebound in livestock prices. A combination of exchange rate weakness and strong domestic demand underlay a sharp acceleration in the Industrial Output Price Index.

The Manufacturing Output Price Index increased by 5.7 per cent on average in 2000, compared to an average of 1 per cent in 1999. In the three months to January 2001, it declined by 0.1 per cent over the preceding three months and increased by 4.8 per cent, year-on-year. The home sales sub-index increased by 0.5 per cent in the three months to January 2001 and by 5.5 per cent, year-on-year. Over the same period, the export-sales sub-index declined by 0.7 per cent, on a three-month basis, and increased by 3.9 per cent, year-on-year. The

**Chart 2**

**Manufacturing  
Output Price  
Inflation**



decline in the export sales sub-index in the three months to January reflects the recovery in the value of the euro over this period. While the short-term trend in the home sales sub-index has remained strong in recent months, the year-on-year rate of increase has fallen sharply since December because the effect of the increase in tobacco excise duty in December 1999 has fallen from the year-on-year comparison.

The Agricultural Output Price Index (AOP) increased at an average rate of 6.7 per cent in 2000 compared with a decline of 4.2 per cent, on average, in 1999. On a seasonally adjusted basis, the AOP increased by 1.7 per cent in the final quarter of 2000 over the previous three months and was up by 10.9 per cent, year-on-year. While prices in most output categories rose during the year, higher livestock prices, which were up by 16 per cent, year-on-year, accounted for much of the increase in the overall index. Over the same period, milk prices increased by 6 per cent while crop products increased in price by an average of 10.4 per cent.



## Services Prices

Strong domestic demand conditions combined with accelerating wages have underpinned a strong upward trend in services sector inflation in recent years. Core market services sector inflation (excluding administered service, alcohol and telecommunications) has accelerated from an average of about 4½ per cent in 1998 to an

Chart 3

### Services Sector Inflation\*



\*Services and related expenditure Sub-index of the CPI.

average of 7 per cent in 2000. Overall services sector inflation, shown in the chart below, has been lower than this in recent months because of a number of once-off factors. These include a significant decline in the rate of increase in both crèche and third level tuition fees arising from methodological changes and a positive base effect, a sharp cut in telephone charges and price restrictions on alcohol and a range of administered services. Accordingly, the rate of increase in the Services and Related Expenditure sub-index of the CPI, at 3.7 per cent in January, greatly understates the underlying trend in services inflation, which remains close to 7 per cent.

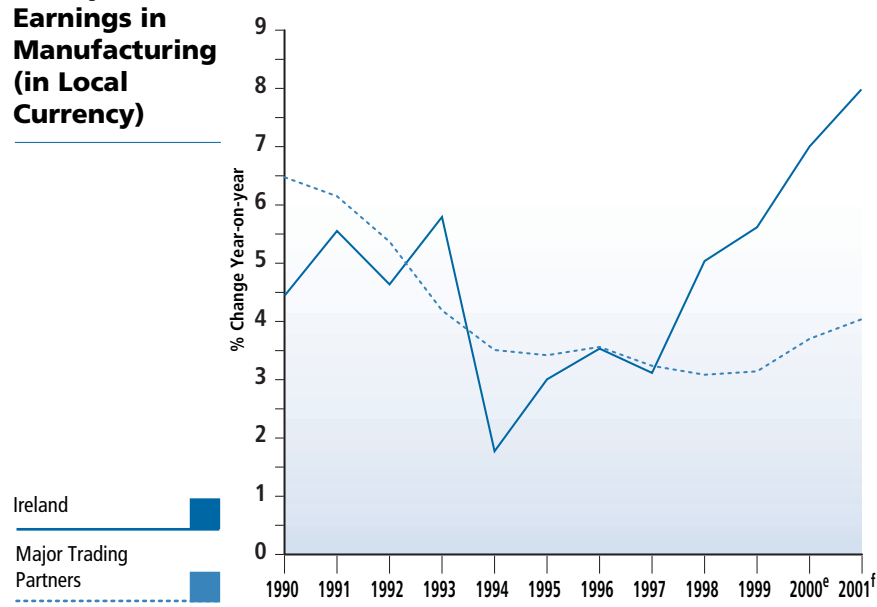
It is likely that the headline rate of services sector inflation will begin to increase again in the coming months as prices rebound following the ending of government price controls. In the case of VHI and alcohol, significant price increases have been signalled for the early months of the year.

## Pay

It has been clear for some time now that shortages of labour have moved beyond the realm of specific skills shortages to become more generalised across the economy. With bargaining power within the labour market shifting towards employees, wage pressures have risen, as employers have been obliged to increase remuneration in order to

Chart 4

### Hourly Earnings in Manufacturing (in Local Currency)



attract and retain staff. Available indicators of sectoral pay trends are consistent with this broad picture. In the construction sector, where shortages of labour are particularly evident, hourly earnings in the first half of last year were 13.0 per cent higher than in the same period of 1999. Interestingly, wage rates rose more rapidly for unskilled workers than for skilled workers over this period, providing evidence of the generalised nature of shortages in this sector.

In the distribution and business services sector, where the most timely data are available, weekly earnings in the year to September of last year were 8.1 per cent higher, year-on-year. This represents an acceleration from the 5 per cent rate of increase recorded in 1999. In the industrial sector, hourly earnings of industrial workers in the first half of the year were 5.5 per cent higher, year-on-year. For all employees in this sector (i.e. including clerical and managerial workers), weekly earnings rose by 7.8 per cent over this period. In the public sector, an increase of 5½ per cent under the *Programme for Prosperity and Fairness* (PPF) was implemented at the beginning of October. Some public servants also received a further increase of 3 per cent for having settled early under previous agreements. The exception to these developments is the financial sector, where earnings in the first quarter were just 1.7 per cent higher, year-on-year.

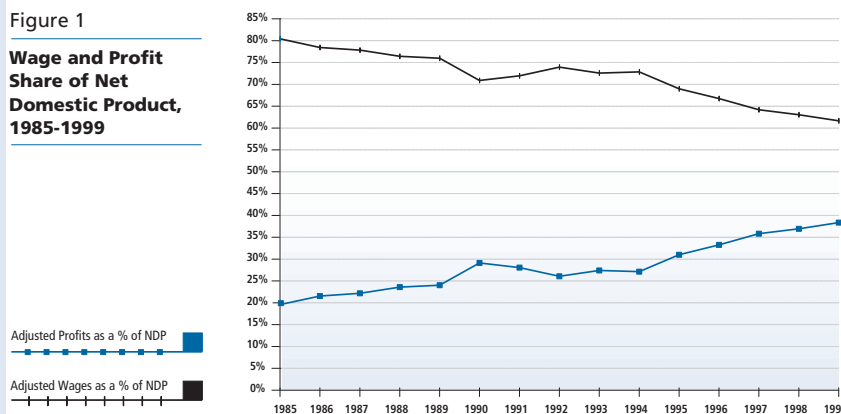
For the year as a whole, these sectoral trends, as well as anecdotal evidence of deterioration in the industrial relations climate in the final quarter of last year, point to a significant increase in wages. In overall terms, earnings per capita in the non-agricultural sector are estimated to have risen by around 7½ per cent last year. Non-agricultural employment rose by 5¾ per cent last year, so that the non-agricultural pay bill rose by an estimated 13½ per cent.

### Profits and Wages in Ireland

Wage moderation, associated with the social partnership process and strong labour supply growth, has been a significant feature of the Irish economy for a good part of the period since 1987. There has also been a simultaneous reduction in the share of wages and salaries in national income relative to corporate profits. It can be seen from Figure 1 that the profit share of net domestic product, adjusted for certain items, has increased from about 22 per cent to over 38 per cent during this period which implies that labour's share has declined from 78 per cent to under 62 per cent.

Figure 1

**Wage and Profit Share of Net Domestic Product, 1985-1999**



A number of adjustments are made to the simple profit and wage shares of net domestic product as recorded in the national accounts. Firstly, the imputed labour income of the self-employed is calculated for both the agricultural and non-agricultural sectors, subtracted from profits and added to wages. In addition, imputed rents which account for most of rental income are subtracted from profits as they do not constitute actual profit.

The attainment of full employment and resultant labour shortages more recently across a broad range of sectors is exerting upward pressure on wage demands and suggests that a reversal of labour's declining share of national income may be in prospect. Evidence of wage increases from a number of sectors shows that, when labour shortages arise, market pressures have a strong influence on wage formation even when national incomes policies are in place. Some commentators believe that in some respects rising earnings are to be welcomed because they will increase living standards and slow the economy to a more sustainable rate of expansion through a gradual loss of competitiveness. However, there is a risk that an overshooting of wages could result in a sharp reduction in the international competitiveness of the Irish economy which might have a lasting, negative, impact on output and employment.

The trends outlined in Figure 1 require careful interpretation. Four points are worthy of note.

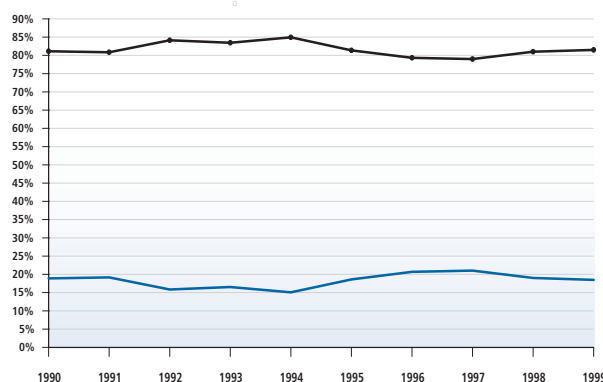
(i) The NESc has recently shown that, while the labour share of business output has been declining, it has done so from a very high starting point.<sup>1</sup> A comparison with other OECD countries confirms that, before 1987, corporate profitability in Ireland was low. A catching up of the profit rate has been an important part of the convergence of living standards with the EU and OECD averages.

(ii) It is now generally accepted that the measurement of national income in Ireland is complicated by the wide divergence, now over 18 per cent, between GDP and GNP. This divergence primarily reflects the large profits of foreign-owned multinational firms operating in Ireland. The very high values of net output per worker in certain, foreign dominated, high-tech sectors suggest that they may include returns to 'invisible factors' like research and development and marketing activities which are undertaken outside Ireland. If one excludes profit outflows, also adjusting for the profit inflows of Irish multinational firms operating abroad, from net domestic product it transpires that the wage share of national income has remained relatively stable since 1987 (Figure 2). This adjustment will err in the other direction, however, because it excludes the portion of the profits of foreign companies which constitutes a legitimate return on domestic factors of production. However, it does suggest that the underlying profit share of national income may not have risen as sharply as the raw data might initially suggest.

Figure 2

**Profit-Wage Share of National Income Adjusted for Net Profit Flows, 1990-1999**

Wages as a % of NDP, excluding Net Profit Flows  
Profits excluding Net Profit Flows as a % of NDP



(iii) The evolution of profits and wages should also be examined in the context of exchange rate developments over the same period. The declining value of the euro has boosted the profits of Irish exporters and offset the negative effects which rising wage inflation might otherwise have had on competitiveness. It is generally accepted, however, that the euro is now undervalued in foreign exchange markets relative to its 'fundamental' value. A corollary of this is that profits are currently inflated temporarily by the weakness of the euro and any re-alignment of currency markets is likely to be accompanied by some reversal of the recent shift from labour to capital.

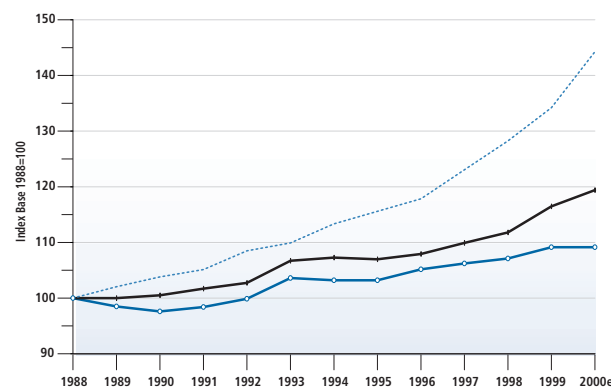
<sup>1</sup> NESc, *Opportunities, Challenges and Capacities for Choice* (1999).

(iv) The decline in the labour share of national income understates the benefits which have accrued to workers from economic growth. As the economy has expanded, the rate of income tax has been cut significantly which has added considerably to take-home pay. Since 1987, the effective tax rate for a worker on the average industrial wage has fallen from 40 per cent to below 20 per cent. Over the same period real disposable incomes have increased by over forty per cent and a further 13½ per cent nominal increase is estimated by the Department of Finance for this year. As can be seen from Figure 3, tax reductions have boosted real take-home pay considerably in excess of the increases in gross earnings.

Figure 3

#### Changes in Real Disposable Incomes (Average Manufacturing Earnings)

Index of Real Take Home Earnings  
Index of Real Gross Average Earnings  
Index of Pay Agreements adjusted for Inflation



The full amount of local bargaining clauses negotiated under the PESP and Partnership 2000 agreements have been included in the Index of Pay Agreements, spread evenly over the years in which they were provided for.

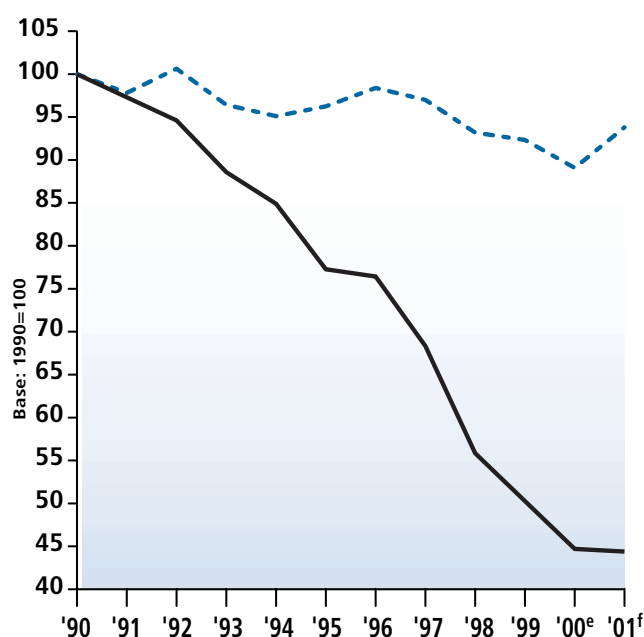
In addition to the aforementioned points, the recent rapid period of growth has given rise to increasing wage and profit dispersion. Wage formation for a large class of highly skilled professionals, often working in rapidly expanding high-tech sectors, is not covered by social partnership agreements. Above average wage increases in these sectors have been affordable because of rising productivity. However, the current tightness of the labour market means that the different sectors of the economy are increasingly competing for a scarce supply of labour which exacerbates wage pressures for more traditional sectors. In addition, as indicated, current buoyant domestic demand conditions and the sustained depreciation of the euro have perhaps inflated profits across other sectors. There is a danger that an increase of wages based on the current level of profitability will impose excessive labour costs on business in the event of an economic downturn. For this reason it is important that the social partnership process is flexible enough to accommodate diverse pay pressures, particularly in the event of an economic downturn.

As outlined in the Domestic Economy chapter, the growth of the labour force is likely to decelerate further this year. With the demand for labour set to remain very strong, existing imbalances between supply and demand are, therefore, likely to intensify, resulting in further upward pressure on wages. The original terms of the PPF allowed for an increase in wages of  $5\frac{1}{2}$  per cent this year (from April in the private sector and at the beginning of October in the public sector) as part of the second instalment of the 33-month agreement. As part of the renegotiations of the PPF, which were undertaken following the acceleration in headline inflation last year, an additional 2 per cent is payable from April of this year. However, given the strength of labour demand, there is likely to be some drift beyond these rates of increase, particularly in the private sector where a large number of workers are not formally covered by the agreement. Even in the public sector there is usually some drift from the terms of national wage agreements due, for instance, to grade inflation, promotions and overtime working. In addition, the high level of expectations, as suggested by the recent pick-up in industrial unrest, suggest that rates of increase may accelerate from last year's estimated outturn. In this general environment, earnings per capita in the non-agricultural sector are forecast to rise by around  $9\frac{3}{4}$  per cent this year. With non-agricultural employment expected to rise by around  $3\frac{3}{4}$  per cent, the non-agricultural pay bill is forecast to expand by around  $13\frac{3}{4}$  per cent in 2001.

Chart 5

**Irish Hourly Earnings & Unit Wage Costs in Manufacturing Relative To Main Trading Partners (in Common Currency)**

Relative Unit Wage Costs  
Relative Hourly Earnings



### Competitiveness

As has been outlined in previous Bulletins, measuring the competitiveness of an economy is complicated by the large number of variables which affect an economy's ability to trade, and by the

non-quantifiable nature of many of these variables. The analysis in this section is therefore confined to developments in relation to the exchange rate and wage costs in manufacturing, this being the sector in which the most complete data are available. In line with the economy-wide acceleration in wage pressures, it is estimated that earnings in the Irish manufacturing sector rose more rapidly than in our major trading partners last year. These higher rates of increase, however, were offset by the decline in the value of the euro against both sterling and the dollar, resulting in a small improvement in competitiveness.

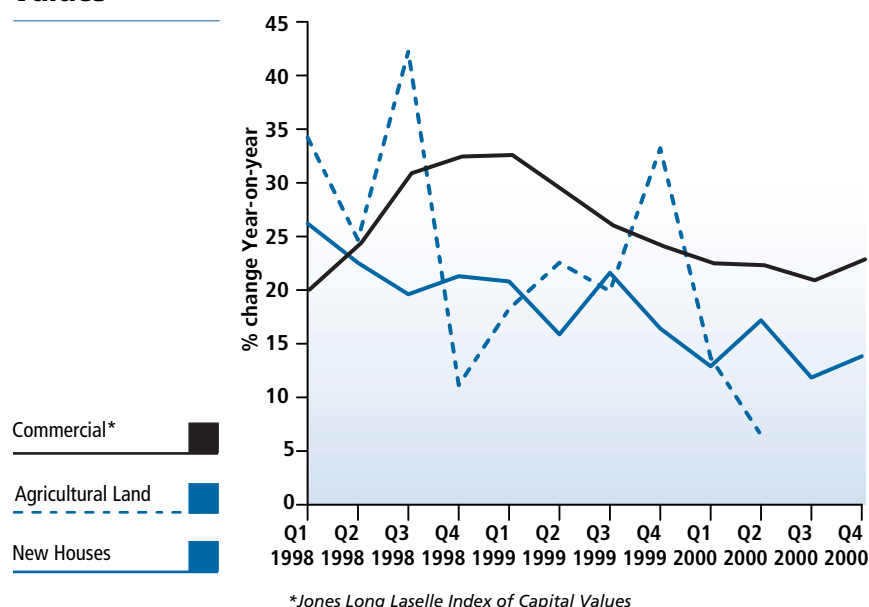
The indigenous sectors of manufacturing, for which the UK and domestic markets are most important, are likely to have benefited from this. Competitiveness was further enhanced by strong productivity growth in the Irish manufacturing sector, which resulted in a fall in unit wage costs. However, the strong productivity gains of the recent past in the manufacturing sector have largely been attributable to very strong productivity growth in the high-technology sectors. In the traditional sectors of manufacturing, productivity gains have been much lower.

As outlined, the tightening of the domestic labour market is likely to result in a further acceleration in wages this year. As a result, earnings growth in the Irish manufacturing sector is forecast to exceed that in our major trading partners once again. Based on the technical assumption of unchanged exchange rates, when expressed in common currency terms, this is likely to result in some loss in competitiveness. However, assuming further strong growth in productivity, unit wage costs are, at this point, forecast to remain largely unchanged. There is, however, some considerable risk attached to this relatively benign forecast. In particular, the indigenous manufacturing sector remains exposed to developments in the euro/sterling exchange rate. Given relatively subdued productivity growth in this sector, higher wage increases, which were compounded by a significant appreciation of the euro against sterling, could present trading difficulties for some indigenous firms.

### **Asset Prices**

There was a modest slowdown in the rate of price inflation in fixed asset markets last year. Nevertheless asset prices increases remained well in excess of the consumer price index and were high, both by historical standards and relative to international trends. Equity prices recovered strongly from a low point in the middle of last year. By the beginning of this year, the ISEQ index had out-performed most international indices on a year-on-year basis. The commercial property market recorded increases in capital values in excess of 20

Chart 6

**Fixed Asset Values**

per cent. In the residential market, anecdotal evidence of a modest slowdown in the rate of increase in residential property prices was given partial support in the fourth quarter data release from the Department of Environment and Local Government (DoE).

The DoE figures show a quarter-on-quarter increase of 0.7 per cent in prices in the second-hand market. The new house price market, however, was more buoyant at the end of the year, with prices rising at a quarterly rate of over 6 per cent nationally.

According to the DoE statistics, average new house prices nationally increased by 13.8 per cent, year-on-year, during the final quarter of 2000, compared with 16.4 per cent in the same period in 1999. In the second-hand house market, average prices are reported to have risen by 14 per cent, year-on-year, in the fourth quarter of 2000, compared with an increase of 17.9 per cent in the same period in the previous year.

Agricultural land prices increased by 6.5 per cent, year-on-year, in the second quarter of the year, down from 13.7 per cent, year-on-year, in the previous quarter and 22.6 per cent in the same period last year. These data should be interpreted with some caution, however, since agricultural land sales account for a very small proportion (0.2 per cent) of the total area farmed nationally and the quality and location of land sold can vary considerably.

Price inflation in the commercial property market was stable at between 20 to 23 per cent year-on-year throughout 2000. This rate of increase was down compared to the first half of 1999 when prices



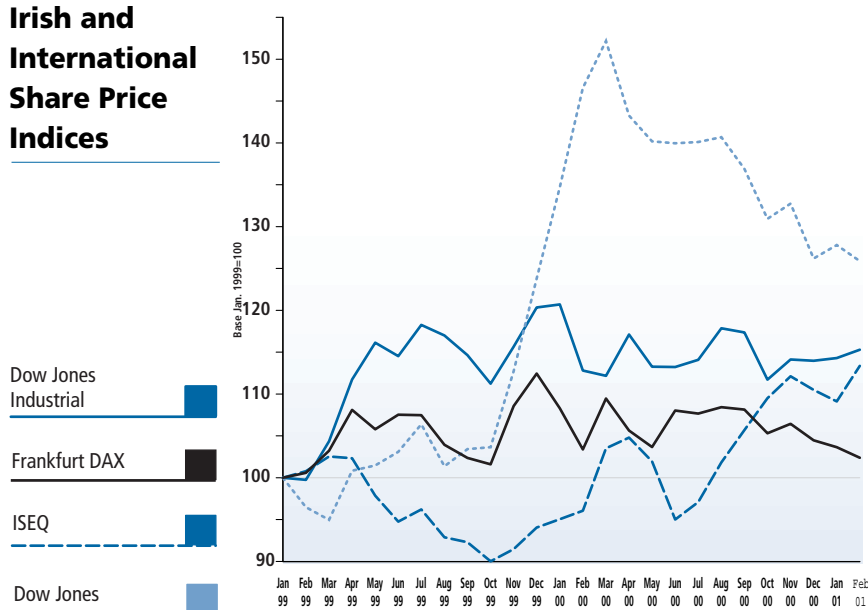
increased by close to 40 per cent in some sectors. The rates of increase in capital values and rents were, nevertheless, very high by historical standards and compared to international trends. The latest available data on price trends in the commercial property market relate to the fourth quarter of 2000. Overall, the rate of increase in capital values was higher than in the previous quarter but slightly lower than in the same period in 1999. Rent increases in the industrial and retail sector have accelerated during 2000 but remain below the rate of increase in the office sector.

In the office sector, the Jones Lang LaSalle (JLL) index of capital values and rents increased at year-on-year rates of 23.7 per cent and 25.2 per cent, respectively, in the fourth quarter of 2000. This compares with an annual rate of increase in capital values of 30.6 per cent and an increase in rents of 23 per cent, year-on-year, in the same period in 1999. In the retail sector, the JLL index of capital values increased by 23.6 per cent, year-on-year, in the December 2000 quarter, up from a rate of 14.8 per cent. in the third quarter of last year. Over the same period, the year-on-year rate of increase in retail rents increased strongly from 8.6 per cent to 19.6 per cent. In the industrial sector, the JLL index of capital values increased by 13.9 per cent in the year to December 2000 compared with 14.6 per cent a year earlier. Over this period, the year-on-year rate of increase in industrial rents has accelerated from 4.6 per cent to 14.5 per cent.

Turning to financial assets, the Irish Stock Exchange Index (ISEQ) has recovered strongly since the middle of last year following a prolonged period of under performance relative to international trends. In February 2001, the average value of the ISEQ was 18 per cent higher on a year-on-year basis. Over the same period, the Frankfurt DAX

Chart 7

**Irish and International Share Price Indices**



(Germany) declined by 14.1 per cent, the FTSE (UK) was 1 per cent lower and the Dow Jones Index (USA) was just 2.2 per cent higher. Over a three-year horizon since the beginning of 1998, the ISEQ has out-performed the FTSE and is broadly in line with the Dow Jones index.

In general, Irish bond yields moved in line with those in Germany over the last year, with ten-year differentials with respect to Germany averaging 0.25 percentage points in the year to end-January 2000. A more detailed analysis of the bond market is contained in the euro area chapter.

### Summary

The rate of inflation, as measured by the CPI, averaged 5.6 per cent in 2000, up sharply from an average of 1.6 per cent in 1999. The inflation outturn for last year was the highest since 1984. The increase in the HICP last year, at 5.3 per cent, was the highest by far in the European Union. Much of the rise in inflation was due to a number of extraneous factors including higher oil prices, the weak euro and higher indirect taxes. However, a sharp increase in inflation in the sheltered sector of the economy due to exceptionally strong domestic demand and accelerating wage inflation was also an important factor.

In recent months, there has been a partial reversal of previous adverse trends in both oil prices and the exchange rate. If this is sustained, it should result in a modest reduction in the headline rate of inflation this year. In addition, the reduction in excise duty and VAT, introduced in the 2001 budget, should, if fully passed through, reduce the rate of inflation by about  $\frac{1}{2}$  per cent. Domestic inflationary pressures, however, are likely to intensify this year against a background of tight labour market conditions and strong domestic demand. Taking account of these factors, headline inflation is forecast to ease to an average of about  $4\frac{1}{2}$  per cent in 2000. Underlying inflationary pressures are, however, forecast to strengthen this year, given the outlook for wage inflation and domestic demand.

# The Euro Area and International Economy

## Overview

While the global economy enjoyed its fastest expansion in a decade last year, world economic growth slowed somewhat in the middle of 2000 and this outlook is subject to increasing uncertainty. In the US, the moderation in growth which had become apparent in the third quarter developed into a more rapid than expected downturn. Amid fears that the slowdown could develop into a deeper and more prolonged downturn, the Federal Reserve cut interest rates by 1 percentage point in January. The nascent recovery which was underway in Japan has given way to renewed weakness and there are increasing concerns that the economy could fall back into recession. The euro area has, however, continued to enjoy strong, albeit moderating, growth. Among the emerging economies, the outlook for Eastern Europe remains relatively benign, reflecting the greater importance of the euro area's performance to these economies. While the performance of the Latin American economies has been relatively strong, the easing in US growth and lower oil prices are causing the pace to decelerate. Other Asian economies have experienced a slowing in growth as external demand, which is of particular importance to their economies, has eased.

Overall, while the performance of the global economy remains quite positive, greater uncertainties surround the outlook than has been the case for some time. It is uncertain how the slowdown of the US economy, which has been the main engine of global growth for a number of years, will affect other regions, through both direct and indirect effects. The deterioration in US import demand is negatively affecting global external demand. While trade with the US is of quite limited importance to the euro area, a downturn in third country markets would add to the direct trade effects. In addition, the changing relative growth performance of the major economies and the associated monetary policy responses are likely to have implications for financial market flows and for exchange rates. With current account imbalances between the US and Japan remaining historically large, the risks of financial market disruption arising out of a change in size or direction of capital flows is increased.

The overall slowdown in economic activity is contributing to a lowering of inflationary risks in the international economy. As the risks to the inflation outlook have gradually moved from being skewed towards the upside to being more balanced, monetary policy in the euro area has been on hold since October 2000. A fall in oil prices and, to a lesser extent, in non-oil commodity prices, alongside

some recovery in the euro have underpinned the improvement in the euro area inflation outlook. With US growth falling well below potential, inflationary risks, while still present, are diminishing. UK inflation has remained quite subdued throughout the current expansion and the recent easing in inflation risks facilitated an easing in monetary policy in February 2001. Financial markets are anticipating that the general easing in inflation pressures will allow official interest rates to be cut in the US, UK and euro area in coming months. In Japan, meanwhile, deflationary pressures remain, prompting calls for the Bank of Japan to undertake measures such as monetary aggregate- or inflation-targeting to counter these pressures.

The recovery in the euro against other major currencies, which had got underway in the last quarter of 2000, continued in the past few months. A reassessment of the relative prospects for growth and interest rates in the US and the euro area provided support for the euro vis-à-vis the US dollar, and it also gained against sterling. The Japanese yen has depreciated quite sharply since late 2000, as the economic and financial sector outlook has deteriorated and political instability has undermined investor confidence.

### **Economic developments in the Euro Area**

Having begun to expand robustly from around mid-1999, the euro area economy recorded annualised growth of 3.5% or above during the four quarters to mid-2000, after which the pace of activity moderated somewhat. With annual growth having jumped from 2.5% in 1999 to 3.4% in 2000, this moderation reflects an easing in the growth rate to a more sustainable rate and, while the slowdown in the external environment is having some impact, there are as yet few signs of a broad based slowdown in activity. The euro area's expansion has been underpinned by both external and domestic demand; the latter has taken over as the main engine of growth as the expansion matured. Both private consumption and investment have grown at a healthy pace, with household and corporate income growth underpinned by employment gains and rising capacity utilisation respectively. More recently, the lower pace of growth reflects the effects of the deterioration in purchasing power engendered by high oil prices and euro depreciation, alongside the lagged effects of monetary tightening. So far, there are no convincing signs that weakening in the US economy is having major spillover effects on the euro area economy. Net export growth was more buoyant in the fourth quarter of 2000 than the third, industrial production has remained quite solid, and orders are relatively strong. Business and consumer sentiment have, however, recorded substantial falls in recent months, reflecting increasing uncertainty about the short term outlook.

**Table 1. Changes in Key Economic Variables in Various Countries**

	Real GDP Growth		Unemployment Rate		Inflation <sup>a</sup>		Current Balance of Payments as a % of GDP	
	2000	2001	2000	2001	2000	2001	2000	2001
	%	%	%	%	%	%	%	%
Belgium	3.8	3.1	8.2	7.9	2.6	1.9	4.2	5.1
Germany	3.0	2.7	7.7	6.9	1.5	1.6	-0.9	-0.6
Spain	4.1	3.5	14.1	12.9	3.4	3.2	-3.3	-3.7
France	3.3	2.9	9.7	8.8	1.5	2.1	2.3	2.3
Ireland <sup>b</sup>	10.8	7.6	4.3	3.7	5.6 <sup>c</sup>	4.5 <sup>c</sup>	-0.1	-1.0
Italy	2.8	2.7	10.8	10.1	2.7	2.5	-0.9	-0.7
Netherlands	4.5	3.9	2.8	2.5	3.0	4.1	5.1	5.2
Austria	3.6	2.9	4.6	4.2	2.1	1.9	-3.0	-2.5
Portugal	3.2	3.0	4.1	4.1	2.7	3.0	-10.6	-11.5
Finland	5.4	4.6	9.6	8.8	3.2	2.6	5.5	6.5
Greece	4.0	4.6	11.4	10.7	2.9	2.7	-4.6	-4.6
<b>Total Euro-Area<sup>d</sup></b>	<b>3.5</b>	<b>3.1</b>	<b>9.0</b>	<b>8.3</b>	<b>2.2</b>	<b>2.3</b>	<b>-0.0</b>	<b>0.1</b>
Denmark	2.8	2.5	5.2	5.1	2.9	2.7	1.4	2.2
Sweden	4.0	3.2	4.7	4.1	1.0	1.8	2.4	1.6
UK	3.0	2.6	5.5	5.4	1.4	2.4	-1.5	-1.9
<b>Total EU</b>	<b>3.4</b>	<b>3.0</b>	<b>8.2</b>	<b>7.6</b>	<b>2.1</b>	<b>2.3</b>	<b>-0.2</b>	<b>-0.2</b>
US	5.2	3.5	4.0	4.2	2.5	2.1	-4.3	-4.5
Canada	4.8	3.4	6.7	6.7	1.7	2.3	1.8	2.2
Japan	1.9	2.3	4.7	4.6	-0.5	0.0	2.8	2.7

<sup>a</sup> Private consumption deflators<sup>b</sup> Central Bank of Ireland estimates<sup>c</sup> Consumer Price Index<sup>d</sup> The euro was introduced in Greece on 1 January 2001**Sources:** OECD Economic Outlook, December 2000, estimates and projections

The outlook for the euro area remains broadly favourable as growth continues to be well underpinned. Steady employment and earnings growth are supporting consumer spending, an effect which will be reinforced by tax cuts taking effect in a number of euro area countries. Indeed, looser fiscal conditions generally will provide a further stimulus to domestic demand. Most official forecasts anticipate the euro area economy expanding by around 2.75 - 3% this year and about 3% next year. The greater importance to the economy of domestic demand - which remains quite buoyant - compared to external demand, underpins the favourable outlook. Nevertheless, the slowdown in the international economy poses a downside risk to the euro area's prospects, given the potential for a greater than anticipated downturn in export demand - both direct and through third country effects - and a strengthening in the exchange rate.

The euro area expansion has led to a continuing improvement in labour market conditions, albeit at a more sedate pace in recent months. Strong employment growth was reflected in a fall in the euro area unemployment rate from 9.6% in January 2000 to a 10-year low of 8.8% in November, where it has remained since. Increased uncertainty about the prospects for economic growth appears to have slowed the pace of employment creation recently but, with sustained growth in activity and a generally favourable outlook, survey data point to positive employment expectations in coming months. Thus, unemployment is expected to fall further, though at a moderate rate. There is, however, some divergence in labour market performance between different euro area economies – a number of the smaller economies which are generally recording higher growth have experienced faster falls in unemployment, albeit from higher starting points, than some of the larger economies. The range of unemployment rates remains substantial, from 13.6% in Spain to 2.8% in the Netherlands, although there has been a slight narrowing in recent months. Wage inflation increased moderately last year; with productivity growth helping to limit the rise in unit labour costs to 1.1% year-on-year. Wage restraint has been facilitated by multi-year wage agreements in a number of euro area countries which have been in place since early 2000, thus limiting the scope for wages to respond to the sharp rise in inflation last year. Now, however, there are signs of an upward trend in wage inflation, with cyclically strong productivity growth appearing to have tapered off somewhat – reflecting the slight slowing in output growth – and wage restraint proving difficult to maintain in tight labour markets, where shortages of skilled labour have become evident in a number of countries and wage agreements are being renegotiated.

Having deteriorated over much of last year due to the significant increase in energy costs and the depreciation of the euro, the euro area headline rate of inflation has shown an improvement in recent months. From its peak of 2.9% in November, the annual rise in the Harmonised Index of Consumer Prices (HICP) fell back to 2.6% in February, with easing in energy costs and a recovery in the euro exchange rate being the main contributing factors. The underlying inflation rate (the headline rate excluding energy and food) has increased to 1.7%, however, indicating that spillover effects from higher import prices onto a broad range of other prices have been increasing. The rate of producer price and intermediate goods price inflation has, however, eased back somewhat in recent months, mainly reflecting weaker energy prices. Nevertheless, there are concerns that the current environment of buoyant activity will provide an opportunity for producers to pass price increases occurring along the chain of production onto final prices. While the average inflation rate rose to 2.3% in 2000, from 1.9% in 1999, it is expected to ease back this year. An easing in the inflationary impact of oil prices and the external value of the euro, combined with a slowdown in external demand, will counter the risks presented by narrowing output gaps,

labour market tightening, pro-cyclical fiscal policy, and the potential for past increases in import prices to lead to indirect effects on other prices.

At country level, many euro area members have experienced their most buoyant performance for several years. Among the three largest economies – which account for over seventy per cent. of euro area output – France has continued to record a strong expansion, despite its more advanced stage in the business cycle, while the expansion has accelerated somewhat in Italy. Germany has recorded solid growth but somewhat below the euro area average. The smaller economies are generally further advanced in their economic expansion than the larger economies and are experiencing robust activity.

The **German** economy grew at its fastest rate in a decade last year, although there was a marked slowdown from the middle of the year. Quarterly growth slowed from 0.5% in the second quarter to 0.3% and 0.2% in subsequent quarters, reflecting weakening in both external and domestic demand. The effects of monetary tightening and reduced purchasing power arising from higher oil prices throughout much of 2000 contributed to the easing in domestic demand. The combination of rising inflation and moderate wage growth – the latter reflecting collective bargaining agreements which largely apply until spring 2002 – eroded real wage gains and, with employment growth slowing, private consumption growth weakened. The export-dependent manufacturing sector has recorded quite a marked slowdown. The easing in external demand and recovery in the euro has eroded some of the earlier gains emanating from euro depreciation and wage moderation. Although industrial production has shown a recent improvement, orders have been weakening. While the numbers unemployed had fallen to a 5-year low in the Autumn, the unemployment rate has deteriorated since, recording an unexpected rise in both December and January. Germany's employment creation in this expansion has lagged behind that in several other euro area countries, although the government has undertaken and continues to undertake measures to reduce the significant rigidities in the labour market.

Looking forward, the German economy is expected to grow at around trend this year. Fiscal expansion, which will add c. 1% to net household income, will help to support private consumption, which should also be supported by real wage gains as headline inflation rates ease back and employment growth resumes. While the slowing international environment will negatively impact on net export growth, the buoyancy of the euro area economy, which accounts for the largest share of German exports, will help to offset this drag. Investment is also expected to be boosted by tax cuts and rising capacity utilisation. Official forecasts of growth are for rates of



around 2.5% - 2.75% this year, revised down from around 3% some months ago. The headline inflation rate has eased slightly since the Autumn and remains the same as the euro area average. This rate is somewhat inflated by the imposition of the second phase of the environmental tax in January; underlying inflation remains relatively muted.

Despite the greater maturity of its expansion – **France** has recorded three years of strong growth, peaking in mid-1999 – the French economy recorded an unexpected pick up in late 2000. Real GDP growth rose from 0.6% in the third quarter to 0.9% in the fourth, with both domestic and external demand remaining quite strong. Although the contribution to growth from domestic demand was weaker in the fourth quarter than in the third, this appears to reflect destocking rather than a marked weakening in private consumption and investment. In particular, private consumption has remained remarkably strong into 2001 and consumer confidence levels are at record highs. This reflects the strong employment gains over the past year, which have been facilitated by greater labour market flexibility and lower social security contributions, and have brought the unemployment rate to a 10-year low. Although business investment growth is moderating somewhat, it is still well supported by tax cuts, relatively high capacity utilisation and continuing high levels of business confidence. Net exports were particularly strong in recent months, although this reflects some one-off factors. The economy is expected to record growth of 2.5 – 2.75% this year, with the main downside risks presented by the slowdown in the international economy and the emergence of supply-side constraints in the domestic economy, as the labour market tightens further and capacity utilisation rises to historically high rates. Inflation, which has generally been quite subdued for such an advanced stage in the economic cycle, has been easing back recently as the effects of lower energy price and euro appreciation are felt. At 1.4% in January, France's inflation rate is one of the lowest rates in the euro area. Wage moderation – in which the package of labour market reforms of recent years played a part – and increased competition in product markets have been important contributing factors in this inflation performance.

The recovery in the **Italian** economy, which began in the second half of 1999, deepened last year to bring real GDP growth to 2.8% for the year as a whole. The acceleration in the early part of the year gave way to a slight easing in mid-year but the economy returned to more robust growth of 0.6% in the third and 0.8% in the fourth quarters. Domestic demand, especially investment, is particularly buoyant, reflecting high rates of capacity utilisation, fiscal incentives and relatively low real interest rates. Private consumption growth, initially slow to recover as real wage growth remained low, has now become more solid. Employment growth and tax cuts have taken effect and consumer confidence has improved. Faster output growth and wage



restraint have facilitated a further fall in the unemployment rate to 10%, its lowest level in eight years. Competitiveness gains deriving from the decline in the external value of the euro and limited wage growth have fuelled strong growth in exports and, although the pick up in domestic demand has increased import growth, net trade made a positive, albeit declining, contribution to growth recently. The Italian economy is broadly expected to expand by around 2.5% this year, with looser fiscal policy likely to enhance the expansion in private domestic demand. The headline inflation rate has fallen back slightly in recent months but remains above the euro area average, at 2.7% in January. With subdued wage growth having been a factor in limiting inflation over the past year, the negotiation of a new wage round which is underway at present is of particular importance to the inflation outlook for this year.

### Monetary Developments in the Euro Area

Having tightened monetary policy by 2.25 percentage points in seven moves between November 1999 and October 2000, the Governing Council of the ECB has left official interest rates unchanged in the intervening period. Thus, the minimum bid rate on the Eurosystem's main refinancing operation remains at 4.75% and the rates on the marginal lending facility and the deposit facility are unchanged at 5.75% and 3.75%, respectively. This reflects the assessment of the Governing Council that the risks to medium-term price stability in the euro area, taking into account the monetary policy tightening undertaken to date, have become more balanced. On the one hand, inflationary pressures emanating from one-off or temporary external factors – namely oil price increases and euro weakness – have been reduced to some degree, while the lagged effects of earlier monetary tightening and the slowdown in the external environment are also positive for the inflation outlook. On the other hand, the environment of relatively strong growth increases the risk of second-round effects on inflation from past increases in import prices, while

Chart 1

### Euro Area Monetary Aggregates

Year-to-year change

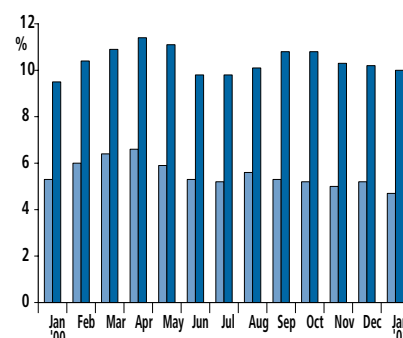
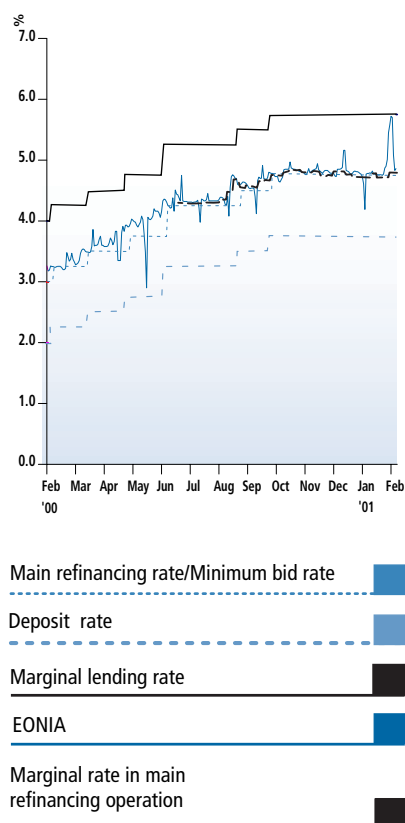


Table 2. Three-Month Interest Rates

	Euribor	US Dollar	Japanese Yen	Sterling
	%	%	%	%
28 April 2000	4.09	6.50	0.12	6.25
31 May 2000	4.45	6.86	0.11	6.19
30 June 2000	4.55	6.77	0.23	6.12
31 July 2000	4.64	6.72	0.22	6.12
31 August 2000	4.89	6.68	0.41	6.19
29 September 2000	5.00	6.81	0.54	6.19
31 October 2000	5.14	6.76	0.54	6.06
30 November 2000	5.05	6.72	0.59	6.00
29 December 2000	4.86	6.40	0.58	5.83
31 January 2001	4.74	5.42	0.51	5.72
28 February 2001	4.77	5.05	0.37	5.62

Chart 2

## ECB Interest Rates and Money Market Rates



tightening labour market conditions and fiscal loosening exacerbate these risks.

The decisions to leave official interest rates on hold since October have been taken against the background of less ample liquidity conditions compared to earlier in 2000. Euro area M3 growth has eased to 4.7% year-on-year in January, compared to a peak of 6.6% in April last year. The current figure is coming closer to the reference value of 4.5%; the gap is now at its narrowest since the start of EMU. The 3-month moving average rate has also eased, from a peak of 6.4% in April 2000 to 5.0% at present. This weakening has occurred against the background of rising euro area short-term interest rates between Autumn 1999 and Autumn 2000. With regard to total credit growth, this expanded by 6.1% year-on-year in January, while private sector credit growth, which has eased somewhat from its peak, remains very strong at 10.0%. These data appear to indicate that current financing conditions are generally not hampering economic growth.

In an environment of slower global growth and increased uncertainty about the short-term economic outlook, short-term money market interest rates in the euro area have been easing back in recent months. The 3-month EURIBOR rate, which was around 5% at end-November, has fallen to around 4.75%, as markets' expectations of further monetary tightening dissipated. Subsequently, markets' expectations moved to anticipating that the next movement in euro area official interest rates would be an easing, and implied interest rates from futures contracts are currently discounting an easing in euro area monetary policy of about 50 b.p. over the course of this year.

In the bond markets, euro area bond yields have continued their downward trend in recent months, although periodic reassessments about the prospects for the euro area in a slowing international environment have led to greater volatility. Initial expectations regarding the potential impact of the downturn in the US economy on the euro area were quite pessimistic, contributing to a substantial easing in yields. This effect was enhanced by substantial inflows from equity markets, where investors' reappraisal of the attractiveness of equity holdings, in an environment of earnings warnings and concerns over high equity valuations, caused equity markets generally to fall back. As later data confirmed that the euro area expansion was continuing relatively robustly and amid increasing confidence that the US downturn might not be as deep or long-lasting as initially feared, yields rose somewhat. The extent of spillover effects from the US bond market onto euro area bonds has generally been quite transitory, suggesting that investors anticipate that the US economic slowdown will have a relatively limited effect on euro area activity. The 10-year bond yield differential between the euro area and the US has narrowed to around 20 b.p., while the slope of the euro area yield

curve – measured by the difference between 10-year euro area bond yields and the 3-month EURIBOR rate – is now completely flat.

### Economic and Monetary Developments outside the Euro Area

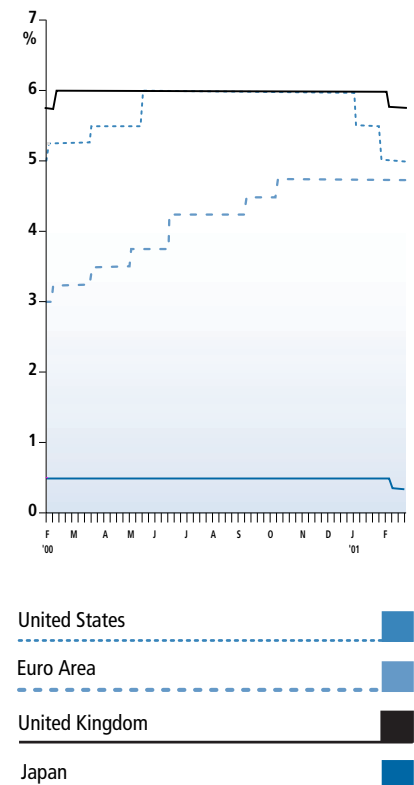
While the global economy enjoyed its fastest expansion in a decade last year, world economic growth has slowed somewhat since the second half of 2000. Although the outlook remains largely favourable, it has undergone a considerable turnaround in the past few months and is subject to increased uncertainty. Global recessionary risks are considered to be low, but risks to growth appear weighted towards the downside. These include: the prospect that the US downturn will be deeper and more prolonged than is currently anticipated, increasing the potential for large spillover effects on to other regions; and the risk that, if the changing growth performance of the major economies impacts on investors' preferences, then financial market flows could change direction.

In the **US**, the moderation in growth which had become apparent in the second half of 2000 developed into a more rapid than expected downturn and raised fears that the decade-long expansion was giving way to recession. Behind this slowdown were a sharp fall in the growth of business investment and, to a lesser extent, a moderation in the pace of consumer spending growth, the two factors which had driven the expansion of the US economy over the 1990s. The sharp slowing in the US economy reflects a combination of the impact of the earlier tightening of monetary policy, when official interest rates rose by 1.25 percentage points between June 1999 and May 2000; the continuing strength of the US dollar; higher energy prices, which reduced real income growth; and falling equity prices, which have reduced the wealth effect in private consumption and increased the cost of finance to firms.

Business investment – which has, since 1993, grown at around 10% per annum and had expanded by 3.1% in the third quarter – contracted by 1.7% in the fourth; the faster than expected slowdown in demand led to inventory build up and, with profit growth easing and financing costs rising, firms cut back rapidly on planned new investment, especially in new technologies. After the long period of buoyant investment, there are concerns that firms' demands for further capacity building and technology enhancements may fall quite sharply. The manufacturing sector has slowed especially quickly, as unexpected inventory build up led to production cut backs. Private consumption growth has moderated to a lesser extent so far; the strong employment and wage gains of recent years helped to offset some of the drag from earlier monetary tightening and higher oil prices. The fall in consumer confidence has, however, been more marked, reaching a four-year low, and business confidence has also faltered albeit to a lesser extent. Against this background, the Federal

Chart 3

### Selected Official Interest Rates



**Note:**

The rates shown in this chart are the main refinancing rates for the euro-area, discount rates for the US and Japan, and the base rate for the UK.

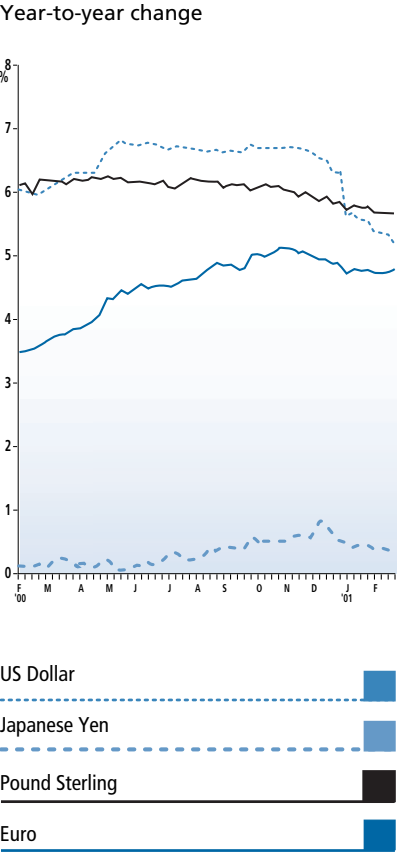
Reserve moved swiftly to contain downside risks to the economy, reducing the federal funds target rate by 50 b.p. on 3 January – the first official interest rate change outside of a Federal Open Markets Committee (FOMC) meeting in 2 years – and by a further 50 b.p. following the 31 January FOMC meeting, to bring the rate to 5.5%.

Although the exceptional weakness around year-end does not seem to have been sustained into early 2001 and fears of recession have eased, downside risks to growth remain. With weaker demand, inventory overhang and rising employment costs affecting corporate profitability, the outlook for employment has deteriorated. For the moment, firms’ willingness to engage in layoffs appears to be constrained by the tight labour market. Households are increasingly concerned about their future prospects, though, and, alongside a negative wealth effect from falling equity prices, there is a risk that consumers will seek to rebuild savings from their present historically low rate by cutting consumption more rapidly. Investment growth is also likely to be negatively affected by widening credit spreads. However, a planned fiscal stimulus is expected to help alleviate some of the downward pressure on the domestic demand components. In view of the continuing downside risks, financial markets are discounting a further easing in monetary policy of 100 b.p. by September 2001, which would bring the federal funds rate to 4.5%.

While growth has been slowing, the rate of inflation has picked up in recent months. The headline CPI rate rose to 4.1% year-on-year in January from 3.7% and the core rate (excluding energy and seasonal food) has also been rising, suggesting that the rate of passthrough of past energy price increases onto a broad range of other prices has increased. The tightness of the labour market has also exerted upward pressure on wage inflation over the past year, although productivity growth was a major factor in limiting these pressures. Productivity growth has, however, been easing recently and unit labour costs have been rising. Broader measures of wage pressures suggest that the weakening in activity is now impacting on wage expectations and gauges of inflation expectations are not clearly signalling higher inflation expectations in the forthcoming period. While in the short-term, wage pressures and past energy price developments pose risks for inflation, the environment of weaker growth is likely to reduce the ability of the corporate sector to pass cost increases onto consumers.

Japan’s gradual economic recovery, which got underway in 1999, has stalled in recent months. The initial upturn, which was largely fuelled by fiscal stimulus and strong export growth, succeeded in improving business conditions to some extent and contributed to a pick up in business fixed investment in early 2000. With private consumption remaining extremely weak and the stimulus from public investment programmes waning, this raised hopes that private investment would

Chart 4  
**Selected Three-Month Interest Rates**



**Note:**  
The rates shown in this chart  
are London Market mid-closing rates.

become the engine of growth. However, this sector has weakened since mid-2000, as growth in profitability proved to be slower than earlier expected, external demand for new information technologies weakened and, amidst sharp falls in equity values and tighter credit conditions, firms' financing costs rose. Private consumption has shown no real improvement recently, as it remains weighed down by high unemployment, continuing uncertainty associated with ongoing economic restructuring and deflationary pressures. The latter has increased the real burden of debt of Japanese households, which is already high by international standards, ensuring that savings rates remain high. With weakening domestic and external demand, manufacturing output has fallen sharply in recent months and unemployment is at a historically high 4.9%. The deteriorating economic outlook, alongside weakening equity markets internationally, has brought the Japanese stock market to a 16-year low. With Japanese banks being substantial holders of equities, their capitalisations have been fluctuating with the value of these shareholdings, raising concerns – already heightened by high levels of non-performing loans – regarding the solvency of the banking sector. This has exacerbated the difficulties which firms and households face in accessing credit.

There is increasing concern at the prospects of renewed economic stagnation in Japan, given the limited room for manoeuvre with fiscal and monetary policy. With government spending having supported the economy for most of the 1990s, the overhanging burden of fiscal consolidation is extremely serious and conditions for the stabilisation of public debt have become more difficult. On the monetary policy side, amidst worries that a further slowing in the Japanese recovery would put more downward pressure on prices, the Bank of Japan decided at its meeting of 9 February to cut its largely-symbolic official discount rate from 0.5% to 0.35% and introduced measures to lower the effective cost of liquidity. On 28 February, it reduced the official discount rate again, this time to 0.25%, and also reduced its overnight call target rate from 0.25% to 0.15%. However, in the current environment, it seems unlikely that these measures will do much to stimulate activity; difficulties in accessing credit has limited the effectiveness of lower interest rates to businesses and consumers.

There are increasing pressures on the Japanese authorities to undertake extraordinary measures to encourage firms and consumers to resume spending. These include measures to generate actual and expected inflation, such as monetisation of government debt – whereby government debt would be purchased by the Bank of Japan and financed by printing money – and adopting inflation or monetary aggregate targets consistent with positive inflation expectations. To help address the critical state of financial and corporate sector balance sheets, the government is being encouraged to put funds into

further write-offs of non-performing loans and into buying up Japanese equities to prop up their value. Foreign exchange market intervention to weaken the external value of the yen has also been advocated. While the authorities have continually signalled unwillingness to undertake these steps, there are signs of some softening in their position in recent months.

The **UK** economy has, like the US, been enjoying a sustained period of non-inflationary growth and, while it moderated from this brisk pace in the second half of 2000, it remains relatively solid. Having expanded by 0.9% in Q2, growth eased to 0.7% in Q3 and 0.3% in Q4, bringing the annual rate to 3.0%. Although some special factors – fuel protests, railway transport problems and flooding – played a part in the fourth quarter performance, the underlying trend was of an easing in domestic demand. Private investment growth has been weakening, reflecting the combination of lagged effects of monetary tightening and fewer capacity constraints following a number of years of strong investment performance. Private consumption growth has moderated, but remains ample, as increases in employment, wage growth and disposable income, while slowing, continue to support activity. Labour market conditions have continued to tighten; unemployment is now at a 13-year low of just over 1m (5.3% on an ILO measure). The contribution of net exports to growth remains negative and, with strong domestic demand driving import growth while a weakening in external demand affects exports, this sector has exerted a greater drag on activity more recently. Growth is expected to remain around trend this year, with buoyant consumer demand likely to be reinforced by the planned increase in government spending and some pick-up in business investment.

UK inflation has remained subdued, reflecting the strength of sterling, declining retail margins due to competitive pressures and relatively favourable wage developments. Although earnings growth, which had fallen over the course of the year, picked up in December to 4.8%, unit labour costs have been falling, as productivity growth improves. With underlying inflation having been below the Bank of England's target of 2.5% for two years now, and in view of the easing in inflationary risks represented by moderating domestic and international growth, the Bank of England's Monetary Policy Committee cut official interest rates by 25 b.p. to 5.75% on 8 February, the first change in a year.

### **International Price Developments**

International inflationary pressures increased significantly last year. Strong world demand, combined with a substantial increase in oil prices, was reflected in a gradual acceleration in both output and consumer price inflation in most industrial economies. In the euro area, the effect of higher oil prices was exacerbated by a decline in the



value of the euro against the US dollar. At the end of the year, however, the adverse trends in both the exchange rate and price of oil went into reverse. At the same time, an easing in world output growth has got underway and is expected to continue this year. Accordingly, global inflationary pressures are forecast to be significantly easier in 2001 compared to last year.

The impact of higher oil prices on energy prices was a major factor behind the rise in consumer price inflation over most of last year. Oil prices increased from the second quarter of 1999 until the third quarter of 2000. According to IMF statistics, the average US dollar price of Brent crude oil was almost 60 per cent higher in 2000 compared to 1999. In the final quarter of 2000, however, the US dollar price of oil declined by 2.5 per cent compared to the previous quarter and, while in early 2001 the price of oil has been quite volatile, the underlying trend is weaker than in the latter half of 2000. At the end of February, the US dollar price of Brent crude was about \$5 lower than its average in the third quarter of 2000. Non-oil commodity prices have, according to IMF statistics, increased by 1.7 per cent on average during 2000, although prices experienced a weakening in the second half of the year. The IMF composite index of non-oil commodities was, in contrast, 3.1 per cent lower year-on-year in US dollar terms in the last quarter of the year.

While the higher oil price was a major explanatory factor in the increase in consumer price inflation in industrial economies last year, core inflation also increased in most major economies, indicating that some of the past increases in intermediate prices and in headline rates were being passed on. In recent months, there has been a reduction in international inflationary pressures, reflecting a combination of the weaker outlook for global growth, the strong recovery in the value of the euro and the fall in oil prices.

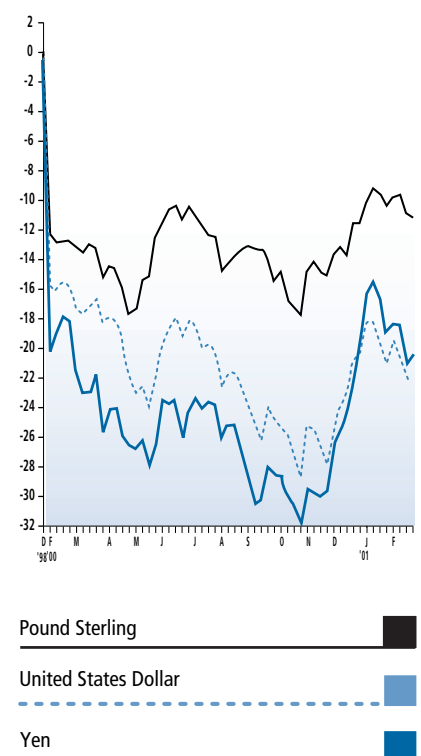
### Exchange Rate Developments

The recovery in the euro against other major currencies, which got underway in the Autumn, continued in the past few months and, by mid-March, the euro had reached 9% above its lowest point of end-October against the US dollar, 10% higher against sterling and 23% higher against the Japanese yen. Amidst a sharper than expected slowdown in the US economy and considerable uncertainties surrounding the outlook, a reassessment of the relative prospects for growth and interest rates in the US and euro area provided support for the euro. The speedy response by the Federal Reserve to the downturn in the US economy, which was seen in financial markets as reducing the prospects of recession, allowed the US dollar to recoup some of these losses during February. Subsequently, data confirming that euro area growth, while slowing, was still relatively firm underpinned further gains in the euro in recent weeks.

Chart 5

### Exchange Rate Changes for the Euro

End-week data



**Note:**  
This chart shows percentage changes in Euro exchange rates by reference to 31 December 1998.

Sterling has also appreciated against the US dollar since late 2000, reflecting the more positive outlook for the UK economy and expectations of a move in interest rate differentials in its favour over the course of 2001. The Japanese yen has depreciated quite sharply since late 2000, as the deteriorating economic and financial sector outlook and political instability have undermined investor confidence. Its decline was arrested to some extent in February, as firms repatriated funds to Japan ahead of the fiscal year end in March. In early March, comments from Japanese authorities which were interpreted by financial markets as indicating that they advocated yen depreciation as a policy tool to help stimulate economic activity, renewed the downward trend in the yen against other major currencies.



# Trade-weighted Competitiveness Indicators for Ireland

New trade-weighted **Competitiveness Indicators** for Ireland are published for the first time in Table B4 of the Statistical Appendix to this Bulletin. The table contains three indicators; one **nominal** indicator, together with two **real** indicators based on relative consumer prices and relative producer prices. The nominal indicator measures the effect of exchange-rate changes on external competitiveness and may be seen as the natural successor of the Effective Exchange Rate (EER) index for the Irish pound, which was discontinued at end-1998. The real indicators give a more comprehensive measure of competitiveness changes by also taking into account changes in consumer and producer prices in our trading partners relative to those in Ireland.

For Eurosystem countries, the introduction of the euro led to a re-assessment of the way in which EER indices are calculated. The European Central Bank (ECB) publishes a nominal EER index, which gives an average external value for the euro, and a number of real indices, which monitor changes in the competitiveness of the euro area. These indices, however, cannot replace the EER indices of individual Eurosystem countries, since: (i) they ignore trade between countries within the euro area and (ii) the weights are derived from euro-area external trade patterns which are unlikely to match those of any individual country.

In order to address these issues, the ECB and national central banks agreed that each country should calculate *national competitiveness indicators*, in which trade with the other countries within the euro area would play a part. These competitiveness indicators would be constructed in the same way as the EER indices for the euro<sup>1</sup>. This common methodology for calculating indicators provides a consistent and comparable framework for countries wishing to monitor some of the quantitative aspects of changes in national competitiveness. Comparability is further enhanced by the provision, by the ECB, of a common dataset for manufacturing trade flows. Most other Eurosystem national central banks either publish or plan to publish competitiveness indicators. The Central Bank of Ireland is participating in the initiative by publishing the set of indicators for Ireland in Table B4.

<sup>1</sup> Full details of the indices for the euro and the methodological issues involved in their calculation are provided in "The nominal and real effective exchange rates of the euro", **European Central Bank**, Monthly Bulletin, April 2000, pp 39-48.

The three indicators are produced by calculations based on *competitiveness weights*. These weights are calculated from imports and exports of manufactured goods, averaged over the three-year period 1995-1997. The data were made available to all Eurosystem national central banks by the ECB and take account of competition between Irish exports and those of our trade partners in third country markets. While the weighting scheme is fixed, the weights themselves will be revised every five years, on the basis of updated trade data. Ten trading partner countries are included in the Competitiveness Indicators for Ireland. These countries, which account for some 83 per cent of manufacturing trade, and their respective weights, are shown in the table below.

Country Weights in Competitiveness Indicators

Trade Partner	%
UK	27.66
US	18.31
Germany	16.22
France	9.12
Japan	8.57
Netherlands	5.67
Italy	5.43
Belgium	3.51
Singapore	2.93
Spain	<u>2.58</u>
<b>Total</b>	<b>100.00</b>

In the case of the **real** indicators, consumer prices are measured by the European Harmonised Index of Consumer Prices (HICP) for Ireland and for the seven EU countries in the indicators. CPI indices are used for the remaining three countries. With regard to producer prices, indices of domestic output prices for manufacturing are used for Ireland, for the seven EU countries and for Japan. The index for finished goods is used for the US and the wholesale price index for Singapore.

The series for all three Competitiveness Indicators in Table B4 begin in January 1999 and the base period for each is Q1, 1999 = 100. The nominal indicator will be available daily on the Bank's web site. It is intended that these series will provide a basis for the Bank's regular comments on competitiveness trends.

## Section 2

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The articles in this Section are in the series of signed articles on monetary and general economic topics introduced in the Autumn 1969 issue of the Bank's Bulletin. The views expressed in these articles are not necessarily those held by the Bank and are the personal responsibility of the authors.



# Fiscal Sustainability when Time is on Your Side

David Cronin and Daniel McCoy\*

## Abstract

Using future Irish fiscal and growth prospects for illustrative purposes, it is argued in this article that favourable baseline prospects provide no less a challenge for public finance management than dealing with poor baseline prospects.

Two long-term policy options - reducing the debt and prefunding future pension liabilities - with a direct impact on the public finances are discussed. Both raise important issues for government and have implications for the financial and monetary system that need careful consideration. It is pointed out that member states face disincentives under EU fiscal rules to initiating prefunding schemes.

The dynamics of fiscal sustainability in a fast-growing, catching-up economy are also considered. It is argued that the EU fiscal rules may limit the attainment of the optimal growth path of an economy, particularly in economies where significant government investment may be warranted. With a wide range of growth rates and stage of development experiences in prospect across member states in future years, it is important that the EU fiscal rules be reviewed as to whether they cater successfully for the diversity of investment requirements and public finance prospects in the EU.

## 1. Introduction

*There will come seven years of great plenty throughout all the land of Egypt, but after them there will arise seven years of famine, and all the plenty will be forgotten in the land of Egypt; the famine will consume the land, and the plenty will be unknown in the land by reason of that famine which will follow, for it will be very grievous.*

*(Genesis 41, 29:31)*

The Irish economy has just experienced its seventh consecutive year of historically high economic growth, a pattern that is expected to be maintained in the medium term. Recent years have also seen the General Government balance move into surplus. Demographic projections, that are critical both to long-term economic growth and fiscal prospects, indicate an improvement in the dependency ratio up to 2006 and no marked disimprovement in that ratio until about the year 2026. It is within this context that fiscal sustainability issues in Ireland are

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being debated, an environment that might be considered quite favourable in an European context. Using future Irish fiscal and growth prospects for illustrative purposes, it is argued in this article that favourable baseline prospects provide no less a challenge for public finance management than dealing with poor baseline prospects.

A reasonable "base case" scenario, outlined in detail in section 2, suggests that demographic developments are unlikely to threaten fiscal sustainability in Ireland in the years ahead. In section 3, two long-term policy options with a direct impact on the public finances are discussed. The first option - reducing the debt - raises issues for government and has implications for the financial and monetary system that need careful consideration. The second option - prefunding future pension liabilities - also raises important issues, not least that member states face disincentives under the EU fiscal rules to initiating such prefunding schemes. In section 4, the dynamics of fiscal sustainability in a fast-growing economy are considered. The EU fiscal rules may unnecessarily restrict government investment in some member states and may consequently have a negative impact on their long-term macroeconomic prospects. Section 5 concludes.

## **2. Irish Economic and Fiscal Performance in the Long Run**

### **2.1 Macroeconomic and Fiscal Performance in Ireland, 1991-2003**

In Table 1, data are provided that summarise Irish economic performance over the last ten years and prospects for the medium-term. The GDP growth rate data illustrate that the Irish economy experienced its seventh consecutive year of historically high growth in 2000. There has been a parallel improvement in the General Government balance in recent years with a surplus having been recorded in each year since 1997. The debt-to-GDP ratio has also decreased significantly in recent years, as can be seen in column (c) of Table 1.

The December 2000 *Stability Programme Update* for Ireland (Department of Finance, 2000) contains macroeconomic and fiscal projections for Ireland for the period 2001 to 2003. It forecasts average GDP growth of 6.9 per cent per annum over the period and an average budget surplus of 4.2 per cent per annum.

### **2.2 A Long Run Projection of Fiscal Variables in Ireland in the 21st Century**

While the medium-term prospects for the Irish public finances appear quite good, the question naturally arises as to how they will develop in the longer-term. In recent years, the Irish Department of Finance established a Long-Term Issues Group (LTIG) to assess the budgetary implications of potential developments over the period up to 2050.

**Table 1. Summary of Irish Macroeconomic and Fiscal Data 1991-2003**

Year	GDP Growth (%)	General Government Balance* (as % of GDP) Borrowing(-)/Lending(+)	General Government Debt* (as % of GDP)
	(a)	(b)	(c)
1991	1.9	-2.3	92.0
1992	3.3	-2.5	89.2
1993	2.7	-2.2	92.6
1994	5.8	-2.0	90.5
1995	9.7	-2.6	83.1
1996	7.7	-0.4	74.3
1997	10.7	0.7	65.1
1998	8.6	2.1	55.0
1999	9.8	3.9	50.1
2000	10.7	4.6	39.0
2001	8.8	4.3	33.0
2002	6.3	3.8	28.0
2003	5.7	4.6	24.0

\*The general government data for 1991 to 1993 are measured on an ESA79 basis and for 1994 to 2003 on an ESA95 basis. The 1999 general government balance figure, for consistency with the earlier data, excludes the impact of prefunding costs for that year in the 2000 Budget (1 December 1999). A Securities Exchange Programme undertaken in May 1999 added 4 per cent to the debt-to-GDP ratio.

**Sources:** (a): 1991-1999: *Central Statistics Office (2000)*; 2000-2003: *Department of Finance (2000)*.

(b) & (c): 1991-1993: *Excessive Deficit Procedure Notifications to the European Commission and Department of Finance*; 1994-2003: *Department of Finance (2000)*.

### Demographic Trends

The LTIG (1999) utilised the Actuarial Review of Pensions as the source of long-term demographic trends in Ireland. In Table 2, some of the key projections for the years up to 2056 are provided. The total population is projected to increase up to the year 2026 and to decline relatively slowly thereafter. The working age group will increase by 16 per cent in the years up to 2016 but will fall below 1996 levels by 2056. The over 65 group will more than double by 2036 and will continue to increase up to 2046. The proportion of the population of working age (20-64 years) is projected to increase from 56 per cent in 1996 to 60 per cent in 2006, to decrease slowly up to 2036, and fall somewhat faster thereafter to 51 per cent in 2056.

Although the proportion of the population aged 65 and over is projected to increase over the whole period, the old age dependency ratio will remain in the low to mid 20 percentage points range up to 2016. It will rise sharply thereafter, reaching a level of 53 per cent by 2056. The overall dependency ratio (old age dependants and those in the 0-19 years groups to the working age group) is expected to fall over the period up to 2006 but to rise steadily thereafter to 95 per cent in 2056.

**Table 2. Long-Term Demographic Projections for Ireland**

Year	Total Population (000's)	Working Age Group (000's)	Old Age Group (000's)	Old Age Dependency Ratio (%)	Overall Dependency Ratio (%)
1996	3,626	2,013	414	21	80
2006	3,832	2,294	453	20	67
2016	4,012	2,351	584	25	71
2026	4,089	2,331	759	33	75
2036	4,071	2,263	908	40	80
2046	3,949	2,073	1,020	49	90
2056	3,730	1,911	1,018	53	95

Source: LTIG (1999).

#### *The Base Case Scenario*

Given this demographic profile, the LTIG prepared a "base case scenario" for the period 2000 to 2050 setting out a potential path for the economy and the government budget by taking into account both the demographic projections outlined above and a series of macroeconomic and fiscal assumptions.

A principal assumption underlying the base case is that the rate of economic growth will average 6 per cent from 1998 to 2000, 5 per cent from 2001 to 2006, 4 per cent from 2007 to 2010, 3.5 per cent from 2011 to 2014 and 2 per cent thereafter (inflation is assumed to average 2 per cent over the period). This "unwinding" of the growth rate pattern in Ireland over the next decade or so has also been suggested in Duffy *et al.*, 1999.

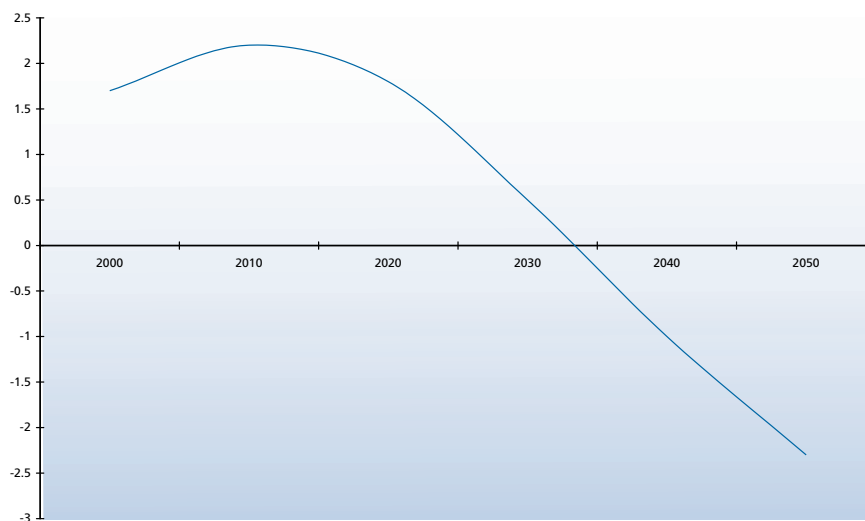
Assumptions relating to government expenditure and government revenue are also outlined in the report. Among the critical assumptions made is that trends over the last decade in pay-related social insurance receipts relative to GNP continue over the period. On the expenditure side, pension rates are assumed to rise by 2 per cent per annum above inflation and pay-related social insurance rates are also assumed to continue to reflect current arrangements. Both old age pensions and child benefit outlay projections are based on an annual real increase of 1 per cent per annum and on pensioner and children numbers from the Actuarial Review of Social Welfare Pensions. The capital expenditure projections assume that spending in this area is maintained at 4.5 per cent of GNP over the period. Finally, a contingency provision rising to 2.4 per cent of GNP by 2003, and maintained at that level in subsequent years, is assumed in respect of the possibility of adverse developments in economic activity or changes in taxation and/or expenditure arising in the future.



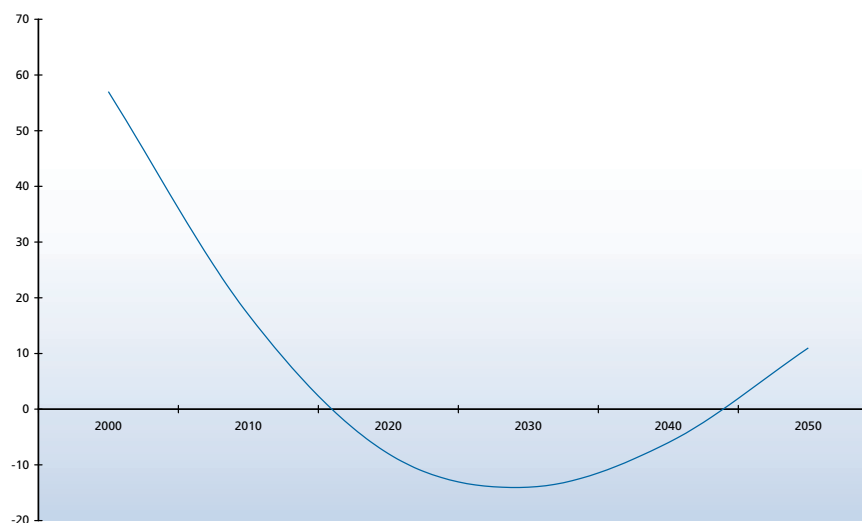
Given these various assumptions, the resultant projected paths for both the Exchequer balance and the National Debt are outlined in Figure 1.<sup>1</sup> An Exchequer surplus would be maintained for about 30 years after which a deficit would emerge - this deficit would rise to 2.3 per cent of GNP by 2050. The debt would be eliminated in about 20 years. It is assumed by the LTIG that the State will use budget surpluses to increase its cash balances, i.e. it will take a "negative debt" position. This negative debt position will peak at 14 per cent of GNP by 2030. Beyond this date, as the Exchequer balance moves into deficit, the negative debt will be unwound and the debt will rise to about 11 per cent of GNP by 2050.

**Figure 1. The LTIG's Base Case Scenario**

**Figure 1a: Budget Balance as % of GNP under the Base Case**



**Figure 1b: National Debt as % of GNP under the Base Case**



Source: LTIG (1999)

<sup>1</sup> The data are Exchequer-based. The Exchequer balance is cash-accounting based and covers the balance between the expenditure and receipts of central government only. The debt projections, likewise, relate to central government debt. The focus on Exchequer data, however, provides a fairly comprehensive view of the evolution of the public finances in Ireland because of the centralised nature of government.

### 3. Long Term Fiscal Policy Options

The natural question that arises for any country with favourable growth and fiscal prospects is: how best can the favourable fiscal position be best managed or utilised? In this section, there is a focus on policy alternatives that will have a direct impact on the evolution of the government budget balance and government debt over time. Two particular policy options are considered: using prospective fiscal surpluses solely to reduce government debt, and initiating a partial prefunding of future pension commitments of the government.

#### 3.1 Reducing the Government Debt

In the period 1994 to 2000 the General Government debt-to-GDP ratio in Ireland more than halved, from 91 per cent to 39 per cent. The debt-to-GDP ratio is expected to decline further to 24 per cent by 2003, according to the Stability Programme Update. Beyond that period, the LTIG "base case" projections suggest that continuing surpluses and strong, if slowing, economic growth will lead to the absolute and relative level of debt continuing to fall well into the 21st century.

While the prospect of a falling government debt would seem to be a welcome and enviable situation, it nevertheless raises a number of issues for consideration by government. It also raises some practical difficulties for central banks in conducting monetary policy operations and could also have implications for financial management more generally.

##### *Issues for Government*

As a starting point in examining longer-term fiscal policy options, a further reduction in the debt-to-GDP ratio through running fiscal surpluses should not be neglected. Lane (1999, p. 73) argues that given its greater vulnerability to external shocks the Irish fiscal authorities should strive for a below-average debt ratio relative to other countries. Focussing on maintaining fiscal surpluses over the medium-term not only helps to reduce the debt but may also have the benefit in an economy such as Ireland, where a positive output gap appears to exist at the moment, of acting to damp domestic demand and inflationary pressures.

Against this, fiscal surpluses generate demands for increased government expenditure and tax reductions which if successful would add to overheating pressures. It is possible that private sector behaviour will be influenced by a commitment to a continued debt reduction strategy. For instance, the personal savings ratio in Ireland seems to have declined in recent years at least in part it seems due to the government having become a net saver (Central Bank of Ireland, 1999, pp.31-32). Duffy et al (1999, p.98) expect the personal savings ratio in Ireland to continue to decline in the medium-term "because of the considerable improvement in the state of the public finances

which means that the household sector can afford to consume today, safe in the knowledge that tax rates and government borrowings are unlikely to rise rapidly in the medium-term”.

Combined with a buoyant economic environment, a continued reduction in the debt-to-GDP ratio effecting a lower private savings ratio might have two significant implications for private sector behaviour and the economy more generally. First, a lower rate of savings has as its corollary a higher rate of current spending by the private sector. Such an increase in the rate of spending could add to any overheating pressures that exist in the economy. Secondly, lower or declining savings could also increase the net borrowing position of the household sector (as emerged in Ireland in the late 1990s), leaving that sector more exposed to increases in interest rates or adverse economic developments.

### *Issues for Monetary Policy and the Financial System*

Government securities have traditionally played an integral role in the operation of monetary policy. Open market operations involve the buying and selling of government securities and derivatives of those securities. Government bond markets, through their large size and diverse maturity spectrum, also facilitate a smooth monetary policy signalling process.

Government securities also have an importance in financial markets more generally. Since they have little or no credit risk, government security prices provide a benchmark against which the prices of private securities and derivatives can be ascertained or based. Their comparatively low credit and liquidity risk also means that government securities are often seen as essential to reducing the overall risk of private asset portfolios. Furthermore, government debt is also often used as preferred or required capital backing for banks and private pension funds.

A falling level of debt has implications for these areas of monetary and financial management. For the banking and pension fund industries, it means that there is less government debt available for holding for hedging or prudential needs. The reduction in the overall size of the bond market and the prospect of lower or even negative gross and net issuance of bonds could impair the government bond market's ability to facilitate smooth signalling within financial markets in general and by the monetary authority in particular.

With government deficit levels in the European Union having decreased to low levels in recent years and with ten EU member states forecast to have government balances in surplus by 2002,<sup>2</sup> the implications of falling debt levels for monetary policy and financial security could soon emerge as an important issue in Europe. Given the difficulties that falling debt levels might pose in this area,

<sup>2</sup> According to European Commission (2000).

governments might have to consider maintaining a minimum level of gross debt to facilitate the smooth operation of financial markets and monetary policy (OECD, 1999, p. 167).<sup>3</sup> This might suggest that EU governments faced with the prospect of budget surpluses might need to consider alternatives to using them solely to reduce gross government debt. One alternative to reducing the government debt alone as a long-term fiscal strategy in favourable circumstances is to initiate a policy of prefunding future government pension outlays.

### 3.2 The Establishment of Pension Funds

#### *The Social Welfare Reserve Fund and the Public Service Pensions Fund*

The Irish government decided in 1999 to initiate a policy of prefunding part of the future costs of social welfare and public service pensions by setting aside 1 per cent of GNP annually for this purpose. At the time, two pension funds were proposed. The first fund was a *Social Welfare Reserve Fund* (SWRF) which, according to Eurostat accounting conventions, was to be inside the General Government sector, was to receive two-thirds of all contributions, and was targeted at providing for future social welfare pension outlays. The second fund was a *Public Service Pension Fund* (PSPF) which, according to Eurostat accounting conventions, was to fall outside the General Government sector, was to be in receipt of the other one-third of all contributions, and was targeted at providing for future public sector pension outlays. The impact of this accounting practice and the distribution of contributions between the two Funds was that the annual 1 per cent of GNP contribution would reduce the General Government balance by about one-third of 1 per cent of GDP per annum. The first annual contributions to the Funds were to occur in 1999 with the contributions being held in a temporary holding fund prior to the passing of the legislation required for setting up and administering the Funds.

The state telecommunications company, Telecom Eireann, was privatised in 1999 with €4.7 billion being received by the State from the shares sale. It was decided firstly to utilise €1.6 billion of the proceeds to discharge in 1999 existing pension liabilities arising in respect of employees and former employees in both Telecom Eireann and An Post. Since these liabilities arose to entities outside the General Government sector, the impact on the 1999 General Government balance was to reduce it by 1.9 per cent of GDP. The balance (€3.1 billion) of the privatisation receipts was to be allocated to the two new pension funds in 2000 in the agreed two-thirds to one-third breakdown. This meant that €1 billion was to be allocated to the PSPF which would have the effect of reducing the General

3 See OECD (1999) and the Gensler, Bennett et al, and Fleming papers in Federal Reserve Bank of New York (2000) for a detailed discussion of the difficulties and possible solutions in this area.

Government balance by about 1.1 per cent of GDP in 2000.

A further tranche of funds arose from the Telecom Eireann privatisation in 2000 and was to be distributed to the two Funds in the two-thirds to one-third ratio. This would have reduced the General Government balance by a further 0.5 per cent in 2000. The full impact, therefore, of using Telecom privatisation receipts for prefunding public sector pensions was to reduce it by 1.9 per cent of GDP in 1999 and by 1.6 per cent in 2000. The privatisation allocation to the PSPF in 2000 was to be added to by the first two annual contributions of one-third of 1 per cent of GNP (for the years 1999 and 2000) being put into that Fund during 2000. Accordingly, the total payments to the PSPF were to reduce the General Government balance by 2.2 per cent in 2000 (see Table 3 for the impact of these measures on the 1999 and 2000 General Government Balance).

#### *Accounting Issues and the Stability and Growth Pact*

Table 3 illustrates that, within ESA95 general government accounting practice, payments to the SWRF would have had no impact on the General Government budget balance because that fund would have been within the General Government sector. In contrast, the PSPF was, under ESA95, to be outside the General Government sector so that payments by government to that fund would have reduced the General Government budget balance.

This feature of ESA95 is particularly interesting in the context of EU member states' need to adhere to the Maastricht Treaty and the Stability and Growth Pact. The Treaty requires that "Member States shall avoid excessive government deficits" (Article 104c). Compliance with Article 104c requires that the General Government deficit does not exceed 3 per cent of GDP and that the General Government debt does not exceed 60 per cent of GDP. The Pact was adopted in 1997.

**Table 3. The Impact of Pensions Prefunding and Once off Pensions Costs on the General Government Balance (GGB)**

	Impact on 1999 GGB (% of GDP)	Impact on 2000 GGB (% of GDP)
Payment of Telecom Eireann and An Post Pensions liability from Telecom Privatisation Proceeds	-1.9	
Payment to SWRF of Telecom privatisation proceeds		No Impact
Payment to PSPF of Telecom privatisation proceeds		-1.6
Payment to SWRF of regular 2/3 of 1 per cent of GNP allotment for 1999 and 2000		No impact
Payment to PSPF of regular 1/3 of 1 per cent of GNP allotment for 1999 and 2000		-0.6
Total Impact on GGB	-1.9	-2.2

*Source: Department of Finance (1999).*

It clarifies and strengthens the Treaty's fiscal requirements. In particular, member states are required to adhere to the medium-term objective of budgetary positions close to balance or in surplus. The emerging view is that, in practice, this provision will require that member states' structural budget balances do not fall below a level that ensures that their actual General Government budget balances will not exceed the 3 per cent Treaty deficit limit in normal economic circumstances.

The ESA95 statistical standard is used to assess fiscal performance in the EU member states. As illustrated above, a payment to a pension fund outside the General Government sector reduces the General Government budget balance. Since it constitutes a discretionary policy action, it will also reduce the structural budget balance. Payments to a pension fund like the PSPF, therefore, imply that, all other things being equal, there is a greater possibility of an excessive deficit arising in the medium term and the member state being found to be in violation of its Treaty and Pact commitments. The accounting rules, therefore, seem to provide a disincentive insofar as member states may wish to prefund their future public service pension outgoings but are penalised under the Pact for doing so. Payments to both Funds also occur at the expense of a reduced pay-off of General Government debt. For member states, therefore, whose structural budget balances are not yet at or are just at the close to balance level required by the Pact and/or whose debt ratios are close to or in excess of 60 per cent of GDP, there appears to be no incentive within the EU fiscal code to initiate public sector pensions prefunding.

The use of privatisation receipts for prefunding of public sector pensions is also discouraged within the Pact framework. This is because under ESA95 privatisation receipts are not counted as General Government revenue but their use as a pre-funding contribution to future public service pension outlays increases General Government expenditure with a consequent decline in the General Government budget balance. Privatisation of state-owned companies is being promoted by many EU governments as a means of improving their efficiency and competitiveness in increasingly globalised markets. What might be considered a prudent application of privatisation receipts over the next few years - using them to reduce future public service pension liabilities - may, however, be less desirable in a fiscal environment governed by the Treaty and the Pact, given the negative impact the overall transaction has on the General Government budget balance.<sup>4</sup>

<sup>4</sup> In June 2000, the Minister for Finance published legislation for the establishment, financing and management of a National Pensions Reserve Fund (NPRF) to implement the prefunding policy announced in 1999. While the 1999 decision envisaged the establishment of the SWRF and the PSPF, the published legislation provided for a single fund only. The NPRF will be inside the General Government sector.

## 4. Fiscal Sustainability in Fast-Growing and Catching-Up Economies

This section examines the role economic growth plays in the long-run evolution and sustainability of the public finances. The notion of fiscal sustainability embraced in the Maastricht Treaty links fiscal variables and national income, with public finances being regarded as sustainable when the General Government deficit-to-GDP ratio is below 3 per cent and the General Government debt-to-GDP ratio is below 60 per cent.

The role of investment in economic growth theory also deserves consideration. Government investment, particularly in the area of public goods provision, may be very important in fast-growing, catching-up economies. In spite of its possibly strong role in consolidating and maintaining economic growth, government investment is not distinguished from other government expenditure items in meeting the basic requirements of the Maastricht and Pact fiscal codes.

Sub-sections 4.1 and 4.2 review the facets of the economic growth literature with particular relevance to fiscal sustainability issues. In sub-section 4.1, the arithmetic of fiscal sustainability underlying the Treaty's requirements is considered. The importance of the rate of economic growth and its relationship to the rate of interest in examining fiscal sustainability issues is highlighted. In sub-section 4.2, there is a discussion of the critical role of the relationship between the interest rate and the growth rate and between savings and investment in standard neoclassical growth theory. The distinction between short run and long run equilibria in neoclassical growth theory is also highlighted. In sub-section 4.3, the implications of this review for the fiscal rules that have been adopted in EMU are considered. It is argued that the rules may prove over-imposing on fast-growing, catching-up economies, in particular by restricting government investment.

### 4.1 The Arithmetic of Fiscal Sustainability

#### *The Domar Framework*

The predominant analytical framework used to assess fiscal sustainability is based on the intertemporal budget dynamics introduced by Domar in the 1940s. This arithmetic of sustainability is centred around the relationship between government budget balances and debt levels. This framework provides the threshold figures of 3 per cent and 60 per cent of GDP for government deficits and debt, respectively, that underlie the Maastricht Treaty and the Stability and Growth Pact.

Albert Einstein is credited with the remark *"that everything should be made as simple as possible but not simpler"*. The conditions for the sustainability of fiscal policy are presented quite simply in the Domar framework. Expressing the government budget constraint as follows:



$$D = G - T = \Delta B + \Delta M$$

where    D is the government deficit  
           G is government expenditure  
               (including interest payments on the debt)  
           B is government debt  
           T is tax receipts  
           M is the money supply

The budget deficit can be financed by issuing money ( $\Delta M$ ) or by issuing government debt through bonds ( $\Delta B$ ). Under EMU, no monetary financing is allowed so  $\Delta M = 0$  such that  $D = \Delta B$ . Expressing each as a percentage of GDP ( $Y$ ) we get the deficit to GDP ( $d = D/Y$ ) and the debt to GDP ( $b = B/Y$ ) ratios. Using the latter we get  $B = b.Y$ . To get the change in the debt ( $\Delta B$ ) we can use total differentiation, or in this case the product rule of differentiation, to get

$$\Delta B = b.\Delta Y + Y.\Delta b$$

Divide both sides by GDP ( $Y$ )

$$\Delta B/Y = b.(\Delta Y/Y) + Y/Y.\Delta b$$

$$\Delta B/Y = b.g + \Delta b$$

where  $g = \Delta Y/Y$  is the NOMINAL growth rate of GDP.

Using the fact that if  $\Delta B = D$ , then  $\Delta B/Y$  is  $D/Y = d$ , the debt sustainability rule in this simple framework is

$$\Delta b = d - b.g$$

Fiscal policy is defined to be sustainable in this context if it leads to a stable or decreasing government debt ratio over time. In order to stabilise the debt ratio (not necessarily the level of debt) we should set

$$\Delta b = 0 = d - b.g$$

$$d = b.g$$

This implies a very simple rule for sustainability: that the deficit to GDP ratio must equal the nominal growth of GDP times the debt to GDP ratio. With this neat rule, the Maastricht convergence ratios can be inserted such that  $d = 0.03$  and  $b = 0.6$ . The nominal growth rate of GDP consistent with these ratios is 5 per cent ( $g = 0.03/0.6 = 0.05$ ). This rule highlights in a simple way the importance of nominal output growth for debt dynamics.



### *Fiscal Sustainability and the Relationship between the Rate of Interest and the Rate of Growth*

While this representation illustrates the role of economic growth in assessing fiscal sustainability, a more useful representation, with a richer economic interpretation, separates out interest payments on the debt from the overall budget balance, leaving a primary budget balance. Let  $P$  denote the primary balance and  $i$  denote the interest rate, then

$$D = G - T = P + i.B$$

Dividing by GDP ( $Y$ ) to express as a ratio gives

$$d = p + i.b$$

From earlier we have

$$d = \Delta b + b.g$$

such that

$$\Delta b = p + i.b - b.g$$

The sustainability rule now is

$$\Delta b = 0 = p + (i - g).b$$

or

$$-p = (i - g).b$$

In this representation, the requirements for fiscal sustainability depends on the rate of interest (or the intertemporal price) and the rate of growth such that:

- If  $i > g$  then  $p < 0$  (primary surpluses) required;
- If  $i < g$  then  $p > 0$  possible in medium term but not sustainable in the long term.

This formulation can be used with both growth and interest rates in real or nominal terms as long as they are consistently applied. While this representation enhances the basic Domar framework, it may still be too simple. The dynamics involved are obviously much more complex and the cyclical position of the economy is important for sensibly interpreting such rules.<sup>5</sup> However, this simple framework highlights the importance of the relationship between the economy's interest rate and growth rate for fiscal sustainability.

<sup>5</sup> The dynamics can be much richer using difference equations as in Marin (1999) or with differential equations as in Kinnunen and Kuoppamäki (1998).

## 4.2 Economic Growth Theory and the Golden Rule

### *The Golden Rule for Savings and Investment*

The relationship between the interest rate and growth rate is also critical within standard neoclassical growth theory. Neoclassical growth theory states that an economy is dynamically efficient when it follows the so-called “golden rule”.<sup>6</sup> This golden rule determines how much capital stock is required to ensure that each generation has a constant, or sustainable, level of per capita consumption. The precise conditions of the golden rule depends upon the model of the economy used and its treatment of investment and savings.

In the 1940s economic growth debate, Domar and Harrod (although working independently of each other) attempted to integrate the implications of full employment with elements of economic growth in response to the Keynesian revolution. The Harrod-Domar growth model presented two fundamental conditions that need to be satisfied to ensure long-term full employment. The first condition was that the economy must invest the full employment level of savings every year, or else if investment is short of this level, demand will be insufficient for full employment. The second condition was that the rate of growth rate of output must equal the growth rate of the labour force plus the rate of increase in labour productivity.

For equilibrium growth to hold it is necessary that the labour force and the capital stock be fully employed. The level of investment is associated with the level of output but also with the rate of growth of output through changes in the capital stock. To maintain the full employment capital stock, output must grow at a rate equal to what Harrod described as the “warranted” rate. This warranted rate was equal to the constant savings from output rate ( $s$ ) divided by the coefficient for capital in the fixed coefficients production function ( $v$ ).

$$g = \frac{s}{v}$$

On the labour side the condition is that output growth should equal the growth in the labour force ( $g_L$ ) plus productivity growth ( $\lambda$ ). Therefore

$$g = g_L + \lambda$$

So these constitute the Harrod-Domar conditions

$$g = g_L + \lambda = \frac{s}{v}$$

<sup>6</sup> Phelps christened the “golden rule” with its biblical connotation of “do unto others as you would have others do unto you”.

This is a “knife-edge” condition. If it is violated, either excess capital or unemployed labour results which leads to instability in the model. This results in oscillations around the steady state path. However, this instability results from the overdetermination of the model with its initial assumptions of constant capital/labour, capital/output ratios etc.. These rigidities can be removed by allowing for less specific production functions that allow for more realistic input substitutability and savings rates that are determined by profits and incomes that derived from the growth process.

#### *Modern Growth Theory and the Modified Golden Rule*

Barro and Sala-i-Martin (1995, p.10) state in their widely acclaimed text that *“between Ramsey and the late 1950s, Harrod and Domar attempted to integrate Keynesian analysis with elements of economic growth. They used production functions with little substitutability among the inputs to argue that the capitalist system is inherently unstable. Since they wrote during or immediately after the Great Depression, these arguments were received sympathetically by many economists. Although these contributions triggered a good deal of research at the time, very little of this analysis plays a role in today’s thinking”*.

More modern neoclassical growth models endogenise savings rather than assuming them to be a constant fraction of income. This is achieved on the basis of optimising choices made by households. Models with consumer optimisation state that the golden rule level of the capital stock occurs where the interest rate ( $i$ ) equals the steady state growth of output ( $g$ ).<sup>7</sup> The interest rate is equal to the marginal productivity of capital less the rate of capital depreciation ( $MP_K(K^G) - \delta$ ). This equality depends upon an assumption of competitive firms, so it is important to note that perfectly competitive markets and constant returns to scale are assumptions of this type of growth model. The steady state growth rate is equal to the rate of technical progress ( $x$ ) plus the rate of population growth ( $n$ ). Therefore, in these models, the golden rule is

$$i = MP_K(K^*) - \delta = n + x = g$$

$$i = g$$

While this is a simple condition, it may be too simple. This model can lead to too much savings. A modification to this condition is where the real interest rate equals the effective discount rate. The intuition here is the usual rationale given for discounting future values. The social rate of time preference, reflected by the effective discount rate, is equal to the social opportunity cost of capital, reflected by the

<sup>7</sup> These long run growth models deal only in real terms so that the interest rate ( $i$ ) throughout this section is the real interest rate along with real growth rates of output ( $g$ ).

interest rate. However, again the interest rate will typically only equal the discount rate under the quite restrictive assumptions of perfectly operating capital markets, no capital taxes and so on. The “modified golden rule” is

$$i^* = MP_K(K^*) - \delta = \rho + \theta x$$

where  $\rho$  is the rate of time preference and  $\theta$  is the intertemporal substitutability of consumption, such that  $\theta x$  term is the diminishing marginal utility of consumption. This modified golden rule overcomes the dynamic inefficiency problem of oversaving that arises in the simpler model. The lower optimal savings implies that the modified steady state golden rule capital stock is  $K^*$ , which is less than  $K^G$ . The intuition is that the optimising household does not save enough to attain the golden rule capital stock because their impatience, reflected in the effective discount rate, does not make worthwhile sacrificing more current consumption for higher steady state consumption. Here another key assumption of these models becomes vital, that is that there are diminishing returns to capital, such that  $MP_K(K^*) > MP_K(K^G)$ . Therefore ,

$$i^* = MP_K(K^*) - \delta > MP_K(K^G) - \delta = i$$

$$i^* = \rho + \theta x > n + x = i$$

$$i^* > g = i$$

This modification therefore suggests that the equality of the growth rate ( $g$ ) and the interest rate ( $i$ ) may have no general applicability outside the growth model with constant savings.

#### 4.3 Implications for Fast-Growing and Catching-Up Economies

Although the evidence is mixed, a view held in growth economics is that poorer countries tend to grow faster than richer countries and thereby eventually converge in living standards with those richer countries. Once this convergence is achieved a slowdown in growth rates occurs. For countries starting from a relatively low base, convergence over time to slower-growing, richer countries would be expected given the openness to foreign direct investment, technology, trade and financial flows. There is evidence of this convergence occurring for Ireland, for example, as it quickly approaches the EU average standard of living. Within this growth context, the Irish economy can be seen to be in an exceptional growth phase as it moves onto another growth path. The economy can be expected to slow down once it reaches a new steady state path.

While Ireland is the classic example of an economy currently experiencing high economic growth rates in the EU, there is a wide range of growth rates and stage of development experiences across

the EU at present. A dichotomy between mature economies and fast-growing, catching-up economies may become more clearcut if there is an accession of eastern and southern European countries into the EU in the future.

It is important in this context to assess whether the commonly-applied EU fiscal rules, provided by the Maastricht Treaty and the Stability and Growth Pact, will cater successfully for the diversity of investment and public finance considerations that is becoming more evident in the EU. The lesson from the quick pass-through of traditional economic growth theory in the previous sub-sections suggests that sustainability rules involving interest rates and growth rates need to take account of the stage of development of the economy. It also points to the need for an economy that is experiencing a rapidly growing labour force to acquire greater capital and infrastructure provision to return to an equilibrium growth path. An infrastructural deficit (as is recognised to exist in Ireland at present (see, for example, IBEC, 1998)), may justify increased investment to bring the economy onto an equilibrium growth path. Government may need to play a key direct role in the investment process, particularly in the provision of infrastructure.

The economic growth literature and experience, therefore, may point to the need for a comparatively high level of government investment while economies are in transition. The difficulty is that the fiscal requirements of the Treaty and the Pact may limit the scope for increased government investment at a time when it is needed to eliminate infrastructure and capital deficiencies that hinder long-term growth prospects. The Treaty and the Pact impose practical constraints on the level of government investment and do not differentiate between the varying growth rates across member states and the different current debt positions of member state governments. From a monetary policy and demand management perspective, this is understandable as imposing a uniform, low deficit limit ensures that member states' fiscal policies are each complementing the single monetary policy. The imposition of a uniform deficit limit may be open to criticism, however, on two grounds, both with particular relevance to developing EU economies.

First, from a pure fiscal sustainability perspective, uniform requirements of a 3 per cent deficit limit and budgetary positions close to balance or in surplus may make less sense when viewed from the varying stages of economic development across member states. The Treaty's 3 per cent deficit limit, for example, may be unnecessarily restrictive for ensuring fiscal sustainability in economies where nominal growth rates exceed 5 per cent (as illustrated in Box 1). Achieving a budget balance that averages close to zero or in surplus over the economic cycle, as specified in the Pact, would be more restrictive again than what is required in this situation for a

sustainable debt level. For fast-growing economies, therefore, the EU fiscal criteria may impose deficit requirements that go beyond what is required to achieve sustainable debt positions.

**Box 1. The EU Fiscal Rules’ Restrictive Arithmetic**

The EU sustainability requirement of a debt to GDP ratio of 60 per cent or less can be attained with a deficit to GDP ratio in excess of 3 per cent when an economy has nominal GDP growth above 5 per cent. To illustrate this use can be made of the Domar debt sustainability condition:

$$\Delta b = d - b.g \leq 0$$

where *b* is the debt to GDP ratio, *d* is the deficit to GDP ratio and *g* is the nominal growth rate. This arithmetic shows that the maximum 3 per cent deficit allowed under the Treaty can prove unnecessarily restrictive for the attainment of a debt ratio of 60 per cent or less. For example, a converging economy with a potential real GDP growth rate of 5 per cent and a price deflator of 2 per cent (implying 7 per cent nominal GDP growth) could run a deficit of 4 per cent and eventually stabilise at a debt to GDP ratio below 60 per cent ( $b = d/g = 0.04/0.07 = 0.57$ ). Table 4 shows that at higher growth rates larger deficits are congruent with the attainment of debt ratios of 60 per cent or less.

**Table 4. Debt to GDP Stabilisation Ratios ( $b = d/g$ )**

	d	3%	3.5%	4%	4.5%	5%
g						
5.0%	60.0%	70.0%	80.0%	90.0%	100%	
5.5%	54.5%	63.6%	72.7%	81.8%	90.1%	
6.0%	50.0%	58.3%	66.6%	75.0%	83.3%	
6.5%	46.2%	53.9%	61.5%	69.2%	76.9%	
7.0%	42.8%	50.0%	57.1%	64.3%	71.4%	
7.5%	40.0%	46.6%	53.3%	60.0%	66.6%	
8.0%	37.5%	43.8%	50.0%	56.3%	62.5%	

Secondly, the Treaty and Pact rules may restrict government investment within EU member states. All other things being equal, increased government investment reduces the structural budget balance and, consequently, increases the possibility of the member state concerned being found to be in violation of the Pact requirement of having a structural budget position close to balance or in surplus. If a member state is struggling to meet the close to balance requirement, either in the future or more immediately,<sup>8</sup> reducing government investment before increasing taxes or reducing current expenditure

<sup>8</sup> According to the Opinion of the Monetary Committee (MC/II/482-98-final), which was endorsed by the Ecofin Council, the requirement should be met by no later than 2002.

may be a comparatively easy political option but would occur at a greater cost to the long-term development of the economy.

A reduction in government investment may be less critical in a mature economy with an already well-developed infrastructure and where an improved primary budget balance may be of critical importance, either to reduce high debt ratios or to meet imminent increases in ageing-related expenditures. For other member states with comparatively low debt levels and favourable demographic prospects but a poor and increasingly restrictive infrastructure, an improvement in the structural budget balance to the close to balance level may make little sense from either a fiscal sustainability or a long-term economic growth point of view. Fast-growing economies may even be in a position to run budget deficits in excess of the 3 per cent Treaty limit for investment purposes while still reducing their debt-to-GDP ratio. In this context, where some economies can achieve declining debt-to-GDP values with deficits in excess of 3 per cent and are also those in need of a significant increase in government investment, there are some grounds for considering allowing the government deficit to exceed the 3 per cent limit for investment purposes. This stresses the need to examine the appropriateness and feasibility of fiscal “golden rules” in EMU.<sup>9</sup>

To sum up, the economic growth literature suggests that there may be some justification for an economy that has under-utilised resources, underdeveloped capital or deficient infrastructure running larger budget deficits for investment purposes than other countries. Fiscal rules designed to aid short-term macroeconomic management, however, may impede government investment programmes. With the existing EU member states having different medium-to-long-term growth rate prospects and such differences across the EU likely to be accentuated if there is an accession of new member states in the future, it is important that the implications of the Treaty and Pact fiscal rules for long-term economic growth are more closely examined.

## 5. Conclusion

In this article it has been argued that even in economies with time on their side policy-makers must address important issues in assessing how best to manage benign fiscal prospects. They have to assess the pros and cons of reducing the government debt against prefunding state pension liabilities, for instance. They may also have to assess whether a large increase in government investment would be appropriate. This is because while a fast-growing economy can provide an environment for favourable fiscal outturns, it can also highlight infrastructural deficiencies that threaten to retard long-term growth prospects.

The article has pointed to how long-term fiscal decision-making in EU member states has been made more complex by the Treaty and Pact

<sup>9</sup> See Buti and Sapir (1998) and Balassone and Franco (2000) for recent discussions in this area.



rules governing fiscal behaviour in the EU. These rules provide disincentives against adopting certain prefunding schemes. Furthermore, the rules may limit the attainment of the optimal growth path of an economy, particularly in economies where significant government investment may be warranted. With a wide range of growth rates and stage of development experiences in prospect across member states in future years, it is important that the EU fiscal rules be reviewed as to whether they cater successfully for the diversity of investment requirements and public finance prospects in the EU.

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# Using Financial Flows Data for Monetary Policy Analysis

by Trevor Fitzpatrick<sup>1</sup>

## Abstract

The relationship between financial variables and the real economy are of great interest to researchers and policymakers. To assist monetary policy analysis, the ESCB have undertaken the task of compiling a set of financial accounts for the euro area that will document these links in a consistent manner. This article briefly outlines the conceptual framework used to compile financial accounts before moving on to discuss their uses in analysing financial structure, the household balance sheet, and the monetary policy transmission mechanism. Despite some shortcomings, Monetary Union Financial Accounts (MUFAs) will be a useful additional tool in conducting monetary policy analysis and contribute to the effectiveness of the single monetary policy in the euro area.

## Introduction

The interactions between financial markets and the real economy are of great interest to researchers and policy makers. Financial accounts provide a structure to analyse the financial flows of various sectors of the economy and they can be used as a tool to aid in the explanation of these relationships. The European System of Central Banks (ESCB) and Eurostat have begun the process of compiling financial accounts for the euro area. These Monetary Union Financial Accounts (MUFAs) will be used as an additional tool for the analysis of monetary policy in the euro area. MUFAs will document the stocks and flows of financial assets and liabilities of the euro area in a concise and coherent way. They will be constructed using national financial accounts developed by member states and some additional data. Their structure will be similar to national financial accounts which have been published recently by most member states. The CSO are currently compiling national financial accounts for Ireland.<sup>2</sup> The Central Bank of Ireland, with the cooperation of the CSO will contribute to the development of MUFAs at the euro area level in the coming years.

This article provides a brief overview of the conceptual framework underlying financial accounts and describes some of their uses for analytical purposes germane to the conduct of monetary policy. The first section provides an introduction to the framework and

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<sup>2</sup> Ireland currently has a derogation from producing a full set of financial accounts.

terminology of financial accounts. The function of financial accounts within the national accounts system is explored briefly and a hypothetical example is provided to aid the discussion. The second section describes some of the applications of financial accounts: analysing the financial structure of economies, and in particular the household balance sheet. Related to this, the usefulness of financial accounts for the analysis of the monetary transmission mechanism is also discussed. The third section describes some of their limitations, while the final section concludes with a brief summary and outlines some future developments in this area.

## 1. Conceptual Framework

### 1.1 Introduction

In order to understand the value of financial accounts for analytical purposes, it is useful to outline the conceptual framework underlying financial accounts. National accounts are a standard source of information on the macro-economy for policymakers.<sup>3</sup> Financial accounts use a national accounting framework to record financial flows. While national accounts describe transactions and transfers in an economy, financial accounts provide information on how the flows of goods, services and transfers in the national accounts are financed. They record the flows of financial assets and liabilities at the sectoral level of the economy as a result of non-financial and financial transactions.

With the updating of the methods for compiling national accounts over the years, some terminology has also changed. What was commonly known as a 'flow of funds table', now approximately corresponds to the capital account in the System of National Accounts (SNA) and European System of Accounts 1995 (ESA 95).<sup>4</sup> Also, the account previously called 'the capital finance account' is now known as the financial account in the new systems. A short stylised example is provided in appendix 1 to illustrate how the concepts involved work in practice.

The System of National Accounts 1993 (SNA 93) is the most recent international methodological standard for compiling national accounts. The European System of Accounts 1995 (ESA 95) is the European version consistent with the latest revision of the SNA. One of the main differences between these two systems is that ESA 95 identifies Monetary Financial Intermediaries (MFIs) as a separate sub-sector within the financial corporations sector. This MFI sector is defined by the ECB to be the money-creating sector. The money-holding sectors are the non-financial sectors such as households, non-

<sup>3</sup> *National Accounts are a comprehensive accounting framework designed to record economic activity within an economy. Economic data are compiled and presented in these accounts in a summary way in order to aid economic analysis and policy-making.*

<sup>4</sup> *While these accounts are described in the system, they may not be implemented in practice due to the data collection and resource requirements needed to produce them.*

financial corporations, general government (with the exception of central government liabilities such as small savings schemes). The rest of the world and other financial intermediary sectors may also hold money.

Within the national accounts framework there are three broad sets of accounts. The current accounts, the accumulation accounts, and the balance sheets (see Box 1). The accumulation accounts show the changes in assets and liabilities of sectors due to economic activity. In this article the main emphasis is on the accumulation accounts, and in particular, the financial account.

### **Box 1: The National Account System in ESA 95**

The full set of national accounts is comprised of the three main categories in the following order:

1. Current Accounts
2. Accumulation Accounts
  - 2.1 Capital account
  - 2.2 Financial account
  - 2.3 Other changes in assets accounts
3. Balance Sheets

The current accounts record the production of goods and services and the income generated by this production. They also record the distribution and redistribution of income among economic agents, and the uses of income for consumption or saving. The residual item from the distribution and uses of income accounts is saving, i.e., income that is not used to consume goods and services. This balancing item is carried down as the first item in the capital account. This account details the acquisition and disposal of non-financial assets that results from transactions between economic agents or transactions connected to production. The balancing item on the capital account is financing also known as net lending/net borrowing. The financial account shows the financial instruments through which this net lending or net borrowing is carried out. Valuation effects such as price and exchange rate changes are recorded in the other changes in assets accounts. The balance sheet accounts record the amounts of assets and liabilities outstanding.

The first of the accumulation accounts is the capital account. This account shows changes in a sector's non-financial assets. It also reveals how a sector's saving is related to its net lending or net borrowing. In this sense, it bridges the national income concept of saving with that of a sector's net lending or net borrowing. Net saving plus net capital transfers can be used to accumulate non-financial assets. If some of this financial surplus is not used up, it can be lent to other sectors. When this is the case, it is called net lending.

Conversely, if net saving plus net capital transfers is not sufficient to cover the acquisition of non-financial assets, the resulting item is termed net borrowing.

Some sectors such as households are typically net lenders, while others such as government may be net borrowers. When these sectors transact with each other, surplus resources from one sector can be lent to another sector. The relationship between the capital account and financial account is as follows: the financial account shows the financial assets and liabilities over which the net lending or borrowing from the capital account is distributed. It also shows the relative importance of the various financial instruments in carrying out these transactions. The capital account is also important because it acts as a check on the accuracy of the net lending or borrowing in the financial account and in practice the two accounts may be compiled from different source data.

The example of a financial account in appendix 1 shows the various financial instruments in which the sectors transact. It has two organising principles: financial instruments and sectors. The account details the instruments 'currency and deposits', 'securities other than shares', 'shares' and 'loans'. It also shows the sectors such as 'MFIs', 'households' etc., transacting in these financial assets and liabilities. The difference between a sector's acquisition of financial assets and incurrence of financial liabilities is the item net lending or net borrowing. A similar financial account to that outlined in appendix 1 can be constructed using stock or balance sheet data. In this case, the account records the stocks of financial assets and liabilities outstanding at the end of each period. The difference between the amount of outstanding financial assets and liabilities is called net financial assets. The change in stocks from one period to another should equal the flows, adjusted for valuation and other effects.

## **2. Uses of Financial Accounts**

This section of the paper describes some of the analytical uses of financial accounts. Three areas relevant to monetary policy analysis are discussed: financial structure, the household balance sheet, and the monetary transmission mechanism.

### **2.1 Financial Structure**

Financial accounts, as part of a national accounts system, link the real economy (goods and services markets) with transactions in the financial markets. As outlined above, this relationship emerges as a sector's net lending/net borrowing. Thus, financial accounts can provide a broad overview of the financial structure of the economy at a point in time and indicate sector and economy-wide developments over time. Changes in the pattern of financial intermediation and disintermediation are of interest because such developments have implications for the financial positions of various sectors and by

implication for the stability of the financial sector. The substantial growth in size and composition of financial markets in recent times has made it all the more important to understand these changes.

Between 1985 and 1998, the total value of credit and equity outstanding has grown from approximately 150 per cent. to 250 per cent. of the GDPs of the largest OECD economies (Mylonas et al., 2000). There has also been a change in the composition of financial markets. In credit financing, for example, there has been a shift from bank loans to securities, though bank loans remain the primary source of financing in the majority of countries. In conjunction with this development, financial wealth has shifted from bank deposits to direct holdings of bonds and equities partly in response to low rates of return from deposits. There has also been a change in the indirect financial asset holdings of OECD economies. Economic agents have moved from holdings of bank deposits to investing in life and pension fund assets and in other non-bank financial intermediaries such as mutual funds. These funds in turn purchase bonds and equities in order to generate a return for their policyholders or investors.

It would be of interest to perform a similar type of analysis using existing data for Ireland. Flow of funds analyses have been performed by O'Connell (1985), and more recently by Honohan (1992). The latter argued that disintermediation was occurring as households and business financial flows shifted away from banks to life assurance and pension funds and portfolios became more internationally diversified as the importance of foreign financial intermediaries increased. The economic environment has changed substantially in the last decade and it may be useful to determine if the patterns of financial flows have also changed in a significant way.

Central banks have a direct interest in how the financial system develops and how intra-sector financial flows evolve over time. While aggregated microprudential data have been used to form macroprudential indicators in this financial stability context, international comparability has been a problem due to different accounting standards across countries (Evans et al., 2000). Fully articulated financial accounts provide richer detail about each sector's claim on the other sectors in terms of financial assets and liabilities, i.e., who is financing whom. This has the advantage of providing information on the distribution and changes in the level of financial assets and liabilities between various sectors and over time. They also benefit from a consistent international framework, from which macroprudential indicators can be derived for the various sectors and compared across countries.

For econometric modelling, financial accounts and balance sheets provide consistent time series data on sectors such as households and non-financial corporations where data might not be readily available from alternative sources. This is, of course, only possible where a sufficient time series of stock data is available for the required sectors. Where these data are available, they have been used to model lending or 'credit' demand to augment and improve the estimation of standard aggregate relationships such as investment and consumption functions (Bridgen et al., 2000). In the coming years, it may be possible to do so for the euro area with fully developed monetary union financial accounts (MUFAs).

## 2.2 The Household Sector

Economic theory emphasises the role of wealth in partly determining consumption. While no direct estimate of real estate wealth is directly available from financial accounts, the latter can shed some light on consumer portfolios by providing data on the stocks of financial assets and liabilities of households and the corresponding flows as households readjust their portfolios in response to changes in macroeconomic conditions.

Stock and flow data on the household sector are usually derived in practice by a residual or indirect process. It is necessary to follow this procedure because stock or flow data are not usually available directly to compile balance sheets or flows for this sector. The initial step is to obtain a known total figure for the whole economy, for example, the total amount of shares and equity outstanding.<sup>5</sup> The amount is apportioned to their respective sectors, leaving the household sector with the remainder. This process leaves open the possibility that measurement in defining the other sectors will lead to an incorrect estimate of the household share of the economy-wide total. This problem may be offset to some extent by using consistent definitions for sectors from ESA 95. However, the residual nature of the household figures must be considered when analysing them.

Some ratios can also provide useful summary indicators of the health of household balance sheets. For example, Mylonas et al., 2000, show that the ratio of household sector net wealth to disposable income has been increasing for several OECD countries, with the exception of Japan, for most of this decade.<sup>6</sup> When national financial accounts are fully developed for Ireland it will be possible to calculate such ratios and to make international comparisons.

It is also worthwhile to examine the relative importance of the various financial assets and liabilities in the household sector balance sheet. One factor that has contributed to the increase in direct holdings of financial assets by households is the method of funding the pension

<sup>5</sup> Including sectors and the rest of the world sector.

<sup>6</sup> For some of these countries real asset wealth is estimated on the basis of increases in housing prices.

system (Banca d'Italia, 1997). For example, where the majority of pensions are publicly funded, households' direct holdings of financial assets such as equities tend to be smaller. In more general terms, an awareness of the composition of households' balance sheets facilitates a better understanding of how household portfolios adjust to a change in monetary policy or to other changes in the economic environment.

Financial accounts also allow the construction of broad aggregates, such as debt, for a combination of sectors. The total debt outstanding of household and non-financial corporations sectors can be used as a 'broad' credit aggregate for macroeconomic research and as an indicator variable. The advantage in using such a broad based measure is that it provides a relatively accurate indication of the extent to which credit availability is reduced for these sectors during a 'credit crunch'. In the US, the Federal Reserve has used a measure similar to this, real domestic non-financial debt, as an indicator variable (Reid and Schreft, 1993). Somewhat similar credit aggregates, derived from the Federal Reserve Flow of Funds have also been used in studying the monetary transmission mechanism.

### 2.3 The Monetary Transmission Mechanism

In recent years, this area of research, which is concerned with how changes in monetary policy are transmitted to various sectors of the economy and the macroeconomy, has grown considerably. Traditionally, the monetary transmission mechanism refers to the effects monetary variables such as money supply, interest rates, and exchange rates have on variables such as prices and output. In summary terms, the traditional or 'money' view was that high rates of growth in the money stock have a tendency to be associated with persistent inflation. To control inflation, it would therefore be necessary to control the money supply.

The channels through which monetary policy affect the real economy are, in reality, more complex and the lags in the transmission process uncertain. The attempt to understand better the transmission process has led to several different directions in the literature.<sup>7</sup> Recently, one major strand of the literature has concentrated on the role of credit as well as that of the money supply in the transmission process. The advent of the single monetary policy has also acted as a catalyst to this line of research. This research aims to supplement the role of money with a role for credit in the transmission mechanism.<sup>8</sup> In recent empirical work, the focus has mainly been on two variants of the credit channel: the bank lending channel and the balance sheet channel (see Box 2).<sup>9</sup>

<sup>7</sup> See Bredin and O'Reilly (2001) for a review of the literature and some empirical work on the transmission mechanism of monetary policy in Ireland.

<sup>8</sup> In addition to these channels, expectations and uncertainty also play important roles in the transmission process.

<sup>9</sup> For an account of the bank lending channel see Kashyap and Stein (2000) and the references therein; for the balance sheet channel see Bernanke and Gertler (1998).



Numerous studies have sought to determine if a credit channel effects exist in the bank or balance sheet form and their significance using data sourced from both the micro and macroeconomic level. Micro level data would typically include data on the balance sheets of individual banks or firms. Macro level data consist of the standard macroeconomic variables drawn from the national accounts such as prices and output and financial variables such as interest rates and various measures of the money supply.

### **Box 2: The Credit Channel**

Arising from information asymmetries due to financial market imperfections, some economic agents are more reliant than others on financial intermediaries such as banks. Thus, there may be certain categories of borrowers, such as small firms and households, which are more dependent on banks than others because of their limited access to other forms of external finance, such as issuing commercial paper etc., on the capital markets. If monetary policy affects the supply of bank loans, then these types of economic agents may be especially affected by a change in the supply of bank loans. This is the main implication of the narrow or bank credit channel. A related approach is a balance sheet or broad credit channel. This concept is based on two main ideas. Again, due to information problems a wedge arises between the internal and external cost of funds. This wedge is termed the external finance premium (EFP). It compensates the lenders for the fact that the borrowers have better information regarding the viability and profitability of investment projects. This EFP is inversely related to the borrowers' net wealth used as collateral for obtaining funds. This is so because the greater collateral net wealth, the smaller the 'moral hazard' problem, i.e., the borrower has more to lose. A monetary policy tightening may reduce the market value of assets and also simultaneously reduce the value of borrowers' collateral. The borrowers' net worth decreases, worsening their financial position, and increasing the EFP. In theory, this increased cost of finance affects the borrowers' productive decisions and reduces investment, which in turn reduces demand even further, propagating the cycle. However, it has been argued by some economists that in practice these information asymmetries will also provide incentives for borrowers, such as firms, to engage in corporate risk management (Fender, 2000). The size of firms appears to be an important factor in the use of derivatives and there may be some fixed costs that have to be overcome before a hedging programme can be instituted. If some small firms cannot overcome these fixed costs, then they will still be bank-dependent. In theory, larger corporates will use derivatives to hedge the risk of interest rate changes on their cash flow and maintain their production and investment decisions. This would tend to reduce balance sheet channel effects, where they exist.

Very few studies have used data with an intermediate level of aggregation, such as the sectoral approach presented in financial accounts. This is due, in part, to the implementation of a revised SNA, SNA 93, and its counterpart ESA 95 in Europe, which means that time series data compiled under the previous systems would have to be readjusted to account for breaks in series due to these methodological changes. In the Federal Reserve Flow of Funds accounts some methodological changes have taken place, but by and large, a consistent time series of adequate length exists. Christiano et



al. (1996) use quarterly Federal Reserve Flow of Funds data from 1960-1992 to trace the effects of monetary policy changes throughout the various sectors of the economy.<sup>10</sup>

The authors use measures of net funds raised in financial markets and various measures of monetary policy stance. When the amount of net funds raised is positive, this approximately means that a sector is spending more than its revenue, i.e., it is a borrower. The opposite also holds. The authors find that net funds raised by the business sector rise initially for almost a year after a contractionary monetary policy shock before eventually falling. This result is driven primarily by an increase in short term borrowing, particularly by large corporations and manufacturing firms. The authors suggest that this may occur as firm's cash flow is affected by the slow down generated by a tightening of monetary policy, and are unable to adjust their nominal expenditures in the short term. However, as mentioned in Box 2 above, there is some evidence to suggest that the use of derivatives to hedge against interest rate changes may reduce these effects where they are present (Fender, 2000).

For the household sector, net funds raised do not change initially after a shock to monetary policy but decline eventually over longer time horizons, which is consistent with previous studies. However, this result is contingent on the monetary policy measure used. The authors do not offer any explanation for the insignificant results for the financial sector. Nevertheless, this example points to the usefulness of national financial accounts and MUFAs for similar work in this area.

While the study of the euro area monetary transmission mechanism is one of the main reasons behind the development of MUFAs by the ECB and the NCBs, a related purpose is to deepen the understanding of monetary developments. Financial accounts will be useful for observing the boundary between monetary and non-monetary assets, which may change over time due to financial innovation, deregulation, and the changing preferences of consumers. National financial accounts and MUFAs can also be used to focus on the counterparts of broad monetary aggregates. Information on alternative sources of financing and investment for the non-financial sector, particularly on close substitutes for bank lending and deposits such as Other Financial Intermediaries (OFIs), will be useful in understanding monetary developments and the evolving financial structure of the euro area. Financial accounts will supplement the assessment of how monetary policy changes affect firms, households and aggregate economic activity in the euro area. In this way, they will contribute to the effectiveness of the single monetary policy.

<sup>10</sup> The Federal Reserve Flow of Funds are similar to the financial accounts outlined in this article in that they make use of flow and balance sheet data. For more information see *The Board of Governors of the Federal Reserve System (1993)*.

### 3. Limitations

As with any set of statistics, knowing the limitations of financial accounts is a prerequisite for their use. Financial accounts compiled by some countries do not cross-reference one sector's transactions in financial instruments with another. For instance, the example in Appendix 1 does not show who is financing whom. In order to accomplish this, the column containing financial instruments would have to be expanded to include further rows on the type of claim and debtor or creditor as appropriate. What this amounts to is essentially a detailed cross-referencing process. For example, the total amount of shares could now be disaggregated to show the shares issued by the one sector and of this issue, the amount held by another sector. This process can be repeated for all financial instruments (currency and deposits, loans etc.) and would mean a vastly expanded table. In practice, this is rarely carried out in the manner outlined above because of the large amount of data needed and the cost of obtaining this information.

While the sector breakdown makes analysis manageable, it also conceals the heterogeneity within sectors. In practice, the household sector is usually combined with non-profit institutions because of lack of data on these institutions; in ESA 95 they are defined as separate sectors. Another issue is the differences between financial accounts data compared with that from other sources. For instance, the balancing item on the capital account, net lending/net borrowing, may not exactly match net lending/net borrowing as recorded in the financial account because they may be compiled using different data sources.

With the implementation of ESA 95 in the EU, time series data from financial accounts may not be currently available for every member state. In some countries estimates have to be made to obtain a series, while in others quarterly national financial accounts are currently being compiled, with the ultimate aim of producing a consistent series complete with back data. Where time series of sufficient length are available, caution must be exercised to ensure that discontinuities in the series resulting from reclassifications or definitional changes are taken into account before use.

### 4. Conclusions

This article has discussed the conceptual framework of the financial accounts and how they can be linked to the national accounts. Financial accounts record financial flows from both the non-financial and financial areas of the economy. Some analytical uses of financial accounts were explored. These included a broad analysis of financial trends in the economy and, using data derived from financial accounts, for macroeconomic research and financial stability purposes. In this regard, the use of financial accounts for analysing

the household sector was also discussed. Finally, the application of these types of accounts for studying the monetary transmission mechanism and for monetary policy analysis was mentioned.

In the coming years, the ECB, individual euro area member states, and Eurostat will be developing quarterly Monetary Union Financial Accounts (MUFAs) for the euro area. National financial accounts will be an essential input into this challenging process. At a euro area level these will be consolidated to net out intra-euro area positions, and combined with other data, to produce MUFAs. In the immediate future, the first step in this process will be the development of the table on Financing and Investment (TFI) for the euro area. This table will document financial flows of the non-financial sectors (household, firms and general government) vis-à-vis the financial sectors and the rest of the world at a relatively aggregated level. The next step will be to develop full quarterly MUFAs for each sector. These will have a similar conceptual framework and uses to the accounts outlined in this article and will contribute to the monetary policy analysis for the euro area.

## Glossary

**ECB:** European Central Bank.

**EMU:** Economic and Monetary Union

**Euro area:** the area encompassing those member states in which the euro has been adopted as the single currency in accordance with the Treaty and in which a single monetary policy is conducted under the responsibility of the relevant decision-making bodies of the ECB. The euro area comprises Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

**Eurostat:** The Statistical Office of the European Communities. This is the European Commission's statistical office.

**ESA 95:** European System of Accounts 1995. This is the EU version of the System of National Accounts (SNA), which is the international methodological standard for compiling national accounts. ESA 95 specifically includes Monetary Financial Institutional (MFIs) as a sub-sector of the Financial Corporations sector. The MFI sub-sector is the grouping that the European System of Central Banks (ESCB) defines as the money-creating sector.

**ESCB (European System of Central Banks):** the ESCB is composed of the ECB and the national central banks of all 15 member states, i.e., it includes, in addition to the members of the euro area, the national central banks of the Member States which did not adopt the euro at the start of Stage Three of EMU.

**MUFAs:** Monetary Union Financial Accounts.

**NCB:** National Central Bank.

**SNA:** System of National Accounts. This is the international methodological framework for compiling national accounts developed by the European Commission, OECD, IMF, World Bank and the UN. The most recent version was finalised in 1993 and is known as SNA 93.

## Appendix 1: A Stylised Example

A short stylised example can be used to crystallise the concepts mentioned in the main body of this paper and to demonstrate the usefulness of financial accounts for tracing financial flows throughout the economy. A simple financial account is presented below. Table 1 shows the changes in financial assets and liabilities, or flows, for various sectors of the economy. These financial flows are generated in part by economic activity recorded in the current accounts (see box 1 in the article), such as payment for producing a good. They are also generated by transactions only recorded in the financial account, i.e., a firm repaying a loan from an MFI. The figures in this example are hypothetical and for illustration only.

To keep the analysis clear only four financial instruments and four domestic sectors are considered in this example: banks, government, households, and firms. This hypothetical economy also trades with the rest of the world; hence the rest of the world sector is also included. These five sectors acquire financial assets and incur liabilities. Logically, there are some restrictions on whether a sector can incur a liability or hold a certain asset. For example, households cannot issue 'shares' or 'securities other than shares', i.e., debt, and consequently do not have these as liabilities. The shaded areas in Table 1 illustrate these restrictions.

**Table 1: Financial Account Stylised Example<sup>a</sup>**

€ million	MFIs	Government	Households	Firms	Rest of World	Total
<b>Change in assets</b>						
Currency and deposits	–	–	20	–	–	20
Securities other than shares	10	10	10	0	10	40
Shares	–	20	10	5	15	50
Loans	50				10	60
<b>Net acquisition of financial assets (1)</b>	<b>60</b>	<b>30</b>	<b>40</b>	<b>5</b>	<b>35</b>	<b>170</b>
<b>Change in liabilities</b>						
Currency and deposits	30				–	30
Securities other than shares	20	25		–	10	55
Shares	5			20	10	35
Loans	–	15	10	15	10	50
<b>Net incurrence of liabilities (2)</b>	<b>55</b>	<b>40</b>	<b>10</b>	<b>35</b>	<b>30</b>	<b>170</b>
<b>Net lending/net borrowing (1)–(2)</b>	<b>5</b>	<b>–10</b>	<b>30</b>	<b>–30</b>	<b>5</b>	<b>0</b>

<sup>a</sup> All figures are hypothetical and are for illustrative purposes only. Shaded areas indicate that these sectors cannot hold these financial assets or liabilities.

Referring to this table, it can be seen that the MFI sector has a surplus of €5 million available for lending to other sectors. It does this by acquiring net financial assets of €60 million and incurring net financial liabilities of €55 million. The difference between these two items is net lending of €5 million. By contrast, the household sector has a net lending surplus of €30 million. This occurs by acquiring financial assets of €40 million, and incurring financial liabilities of €10 million.

Looking closer at the household sector in this example, 'currency and deposits' are the most important financial asset, followed by 'shares' and 'securities other than shares', i.e., debt. An increase of €10 million is recorded under the financial instrument 'loans' on the liabilities side. Firms, on the other hand, finance their net borrowing of €30 million through 'shares' and 'loans'. They issue no debt in this example. However, on the assets side they hold a small amount of 'shares'. The Government sector holds debt on the assets side as well as €20 million in 'shares', perhaps representing shareholdings in partly privatised state companies. On the liabilities side, the government finances its net borrowing requirement by issuing 'securities other than shares' of €25 million and through 'loans' of €15 million.

For a closed economy as a whole, net lending/net borrowing would have to sum to zero. That is, the net lending sectors would have to finance the net borrowing sectors exactly. In this example, the economy trades with the rest of the world. The sum of the net lending/net borrowing for the domestic sectors must equal the economy's net lending to, or borrowing from, the rest of the world. In the example, the sum of the domestic economy's net lending/net borrowing is minus €5 million. This means that the domestic economy has a net borrowing requirement of €5 million. Therefore, the net lending to the domestic economy from the rest of the world is €5 million. This example ignores the effect of price and exchange rate changes on financial assets and liabilities. A similar type of financial account can be compiled using stock or levels data instead of flows. The changes in stocks in one account should equal the flows recorded the example outlined above, net of exchange rate or price changes. This is not shown here for the sake of simplicity.

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# National Balance of Payments in a Euro Area Context

by John O'Malley<sup>1</sup>

## Abstract

Balance of payments (BOP) and international investment position (IIP) data are normally assessed in the context of a sovereign state managing its own currency. The euro has replaced the national currencies of the participating member states in EMU with the latter now effectively being regions in a common currency area. As such, the natural area for judging balance-of-payments and reserve asset strength for monetary and exchange rate policy purposes is the euro area as a whole rather than individual member states.

In this context, it is noted that national BOP/IIP data are required for the compilation of EMU aggregates, which, in turn, are essential for the conduct and assessment of euro-area monetary and exchange rate policy. National BOP/IIP data are also needed for specific national purposes, most notably for the compilation of national accounts and financial accounts statistics. In both of these areas, they continue to have a high degree of conceptual and analytical relevance.

Substantial resources have been committed over recent years to the development of the balance-of-payments system in Ireland in order to meet Eurosystem requirements and those of other international and national users. Further work on the provision of BOP/IIP statistics in respect of Eurosystem requirements will involve new initiatives in the years ahead, most notably concerning the implementation of a monetary presentation of BOP results and also in the area of consistency checking of BOP/IIP figures with money and banking and other relevant data.

## 1. Introduction

The purpose of this article is to provide an overview of the role and policy significance of national balance-of-payments (BOP) and international investment position (IIP) data within the context of EMU. It aims also to discuss some important implications for the compilation and analysis of BOP data in Ireland.

Balance-of-payments statistics are a primary instrument for the analysis of a country's external situation. Balance-of-payments concepts, however, derive largely from the existence of sovereign nation states endowed with their own national currency. Thus, in the case of Ireland and other euro-area countries, national balance-of-payments statistics would appear, *a priori*, to have lost much of their former relevance. In reality, they cover 'geographical parts' of the euro area and these parts do not have a currency of their own. The

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euro has replaced the national currencies of the 12 participating member states and this means for example that a balance-of-payments financing need can only arise for the euro area as a whole and not for individual euro-area countries.

Nevertheless, as will be discussed later, national BOP data compilation continues to have substantial conceptual and practical significance, especially as regards the conduct of monetary and exchange-rate policy for the euro area as a whole and also in relation to the compilation of national accounts and financial accounts data. In this context, EMU and other requirements have already exerted a major influence on the restructuring of balance-of-payments data collection in some euro-area countries, including Ireland, which hitherto had a comparatively under-developed BOP data collection system.

The remainder of the article is structured as follows: Section 2 describes the meaning of BOP and IIP statistics generally and outlines the 'normal' objectives of BOP data compilation at national level. The balance-of-payments environment has changed considerably for euro-area countries and Section 3 examines the nature and implications of these changes. This is followed in Section 4 by an outline of current EMU requirements for BOP/IIP data and also of Eurosystem<sup>2</sup> plans for achieving improved data quality. Section 5 discusses the impact of these requirements on the collection and compilation of balance-of-payments statistics in Ireland. Section 6 concludes.

## 2. General Meaning of Balance-of-Payments Statistics

In order to establish what are the main objectives of BOP compilation, it is useful in the first instance to present a broad understanding of the meaning of balance-of-payments statistics and of the analytical significance of the various BOP accounts. Thereafter, it can be seen that the balance of payments provides useful information across a broad spectrum of economic policy needs. There are of course some modifications of these objectives pertaining to BOP compilation in the context of EMU and these are discussed in Section 3.

Broadly speaking, the balance of payments summarises for a specific time period, be it a month, a quarter or a year, the economic transactions of an economy with the rest of the world. Transactions, essentially between residents and non-residents, consist firstly of those involving goods, services, income and current transfers. These are summarised by the BOP current account. Transactions covering capital transfers and the acquisition and disposal of non-produced,

<sup>2</sup> *Comprises the ECB and the national central banks of the member states that have adopted the euro in Stage Three of EMU. There are currently 12 national central banks in the Eurosystem.*

non-financial assets (patents, leases, etc.) are shown in the BOP capital account. Moreover, there are important categories of transactions on what is known as the BOP financial account. These concern changes in financial claims on, and liabilities to the rest of the world. As outlined in the current 5th edition of the *IMF Balance of Payments Manual (BPM5)*, the latter are broken down by functional type of investment as between direct investment, portfolio investment and other investment flows and also transactions in the official external reserves.

A summary balance-of-payments statement illustrating the above breakdown of BOP transactions for Ireland is shown in the following table. It can be seen that direct, portfolio and other investment transactions and movements in the official external reserves are covered in the BOP financial account. A few years ago, these would have been covered in the then BOP capital account as there was no requirement to show a separate BOP financial account<sup>3</sup>. A more detailed discussion of the improvements in BOP data compilation in Ireland will be presented later.

Under the double-entry system for recording balance-of-payments transactions, the balance of payments should in principle balance. This means that a deficit (or surplus) on the current account should be offset by a surplus (or deficit) on the combined capital and financial accounts. In practice, however, not all transactions are captured accurately in the national BOP statement with respect to

### Summary Balance of Payments Statement for Ireland

€ million	1998	1999
Current account		
• Merchandise	17,771	22,732
• Services	-9,002	-10,697
• Income	-9,382	-12,677
• Current transfers	1,319	1,208
Balance on current account	706	567
Balance on capital account	840	560
Financial account		
• Direct investment	4,422	12,707
• Portfolio investment	-8,466	-14,042
• Other investment	7,459	-258
• Reserve assets	-2,280	1,746
Balance on financial account	1,135	153
Net errors and omissions	-2,681	-1,280

Source: *Balance of International Payments, Quarter 3 2000, CSO, 11 January 2001*

<sup>3</sup> Since 1948, the general methodology of the balance of payments has been embodied in successive editions of the *Balance of Payments Manual* compiled by the IMF. At the end of 1993, the fifth edition of this Manual was published, giving rise to the current presentation of balance of payments results.

coverage, valuation and timing. Accordingly, the 'balance' between the accounts has normally to be achieved with the inclusion of an errors and omissions item. This balancing item – which is usually taken as an important indicator of the quality and reliability of the BOP data compilation exercise – can reflect developments over all three BOP accounts. Consequently, the balancing errors and omissions item is normally shown as a separate item in its own right outside of the three BOP accounts.

Closely related to the flow-oriented balance-of-payments framework is the stock-oriented international investment position (IIP). Broadly speaking, the IIP is a statistical statement, compiled with respect to a specific end-period date (normally end-year), of the value and composition of an economy's claims and liabilities vis-à-vis the rest of the world. While IIP statements for Ireland have not been published to date, it is understood that the Central Statistics Office (CSO) – the national BOP compiler – will provide relevant data shortly. In this context, it is intended that IIP statements will be published annually, within nine months of the end-year reference date; ultimately a six-month publication schedule is envisaged<sup>4</sup>.

### – The Analytical Significance of the BOP Current Account

The current-account balance measures the difference between the value of exports and imports of goods, services, factor income flows and transfers. Ireland has a surplus on its current account in each year since the late 1980s. In the national-accounts framework, this broadly equates to an excess of domestic savings (S) over investment (I). Without going into too much technical detail, the relationship between the BOP current-account balance (CAB) and the national accounts can be summarised as follows:

$$\text{CAB} = \text{X} - \text{M} + \text{NY} + \text{NCT} = \text{S} - \text{I}$$

where

- X = exports of goods and services
- M = imports of goods and services
- NY = net income from abroad
- NCT = net current transfers from abroad

On the basis of the above, a current-account surplus implies that a country's domestic savings are more than sufficient to finance domestic investment expenditure. In this instance, the stream of surplus savings would generate a capital outflow, making the country a net lender (in flow terms) to the rest of the world. Viewed from the opposite perspective, an economy that does not generate sufficient savings to finance its own investment needs must attract surplus savings inflows from other countries, making it a net borrower from the rest of the world.

<sup>4</sup> Information on intended data dissemination is provided on the IMF Dissemination Standards Bulletin Board (Internet address is <http://dsbb.imf.org>).

The link between the domestic and external sectors can also be expressed in terms of the difference between gross national disposable income (GNDI) and expenditure on goods and services by domestic residents (A). These two variables are defined as:

$$\text{GNDI} = C + I + G + \text{CAB}$$

$$A = C + I + G$$

$$\text{thus CAB} = \text{GNDI} - A$$

where C = Private Consumption

I = Investment

G = Government expenditure

In this context, the current-account balance represents the difference between disposable income and the use of that income through expenditure (consumption and investment) by residents. Consequently, an improvement of the current-account balance implies that an economy's growth in expenditure is less than its growth in income, and vice versa in the case of a deterioration in the current account.

### – The Analytical Relevance of the BOP Financial Account

A country's ability to run a current-account deficit depends on residents' willingness to liquidate foreign assets or increase foreign liabilities vis-à-vis non-residents. Balance is achieved by variations in the terms (asset prices, exchange rates and interest rates) on which those assets/liabilities are held. Sustained or rising current-account deficits imply that the stock of foreign assets held by residents will decline and/or domestic assets held by non-residents will grow over time.

In this context, the flow of financial transactions on the financial account can be analysed in order to learn say, how a current-account deficit (and the net balance on the capital account) has been financed by means of net financial inflows and by movements in reserve assets. Alternatively, in the case of a surplus on the current account, the financial account shows how a country accumulated wealth abroad and/or repaid external liabilities. In Ireland, for example, it can be shown that the current-account surpluses recorded over recent years were reflected partly in direct repayments of government foreign-currency debt. They were also reflected in substantial private-capital outflows, mainly portfolio investment outflows<sup>5</sup>.

### – Overall Objectives of BOP Compilation

The provision of detailed information on the various components of the balance of payments enables policy-makers to monitor trends and helps in the design of policy measures to remedy undesired

<sup>5</sup> The latter development should not necessarily be interpreted negatively; income generated on the stock of outward portfolio investment benefited the exchequer and residents alike and can be seen in a sizeable income inflow on the BOP current account (mainly IFSC-related).

imbalances. Accordingly, the objectives of balance-of-payments compilation are two-fold: firstly, balance-of-payments compilation provides useful information on developments in the external sector, mainly:

- a) the foreign flows position, particularly in the case of external imbalances in the current account and the overall current-account balance;
- b) components of the current account, mainly elements of visible and invisible trade, income flows and transfers;
- c) the structure of financing of the current-account balance via the BOP financial account; and
- d) the direction, magnitude and structure of financial flows on the BOP financial account, including direct foreign investment and portfolio investment flows.

Secondly, balance-of-payments compilation enables usage of the data as an important tool:

- a) for domestic policy-makers to determine causes and appropriate adjustment measures to alleviate actual and avert impending external imbalances; and
- b) for economists and other interest groups for estimating and projecting economic variables, and for monitoring and analysing developments in the external sector.

It is useful in this context to note that monetary policy plays an important role in balance-of-payments adjustment in the case of a country or region with its own currency. For instance, a persistent external current-account deficit could be financed, in part, by a decline in reserve assets through Central Bank intervention in the foreign-exchange market. This would lead to a reduction in the monetary base and therefore to a tightening in monetary conditions. The more restrictive monetary policy stance tends to correct the payments imbalance through higher interest rates that dampen domestic demand and also make domestic assets more attractive over time to investors. In EMU of course, monetary policy decisions are based on developments in the entire euro area, rather than in a specific country or region.

### **3. Overall Significance of National BOP Statistics in EMU**

At a simple accounting level, the description of the balance of payments presented earlier applies as much to individual euro-area member states as it does to a country with its own national currency. The balance of payments still records transactions between residents and non-residents. In a country with its own currency, these transactions will typically involve conversions of currencies whereas in a monetary union scenario, currency conversions are less frequent. However, from a pure BOP perspective, the currency in which

transactions are denominated is not in itself material as the balance of payments essentially measures all transactions between residents of an economy with the rest of the world regardless of currency denomination.

The variable that often plays a crucial role in financing external payments imbalances in countries that have their own currencies, namely, international reserves, is either completely absent or at least severely constrained for individual euro-area countries. Autonomous intervention in the foreign-exchange market by individual national central banks is no longer admissible. To the extent that central bank interventions in the foreign-exchange market might occur (applied only in exceptional circumstances<sup>6</sup>), they can be undertaken by or on behalf of the ECB. This serves to ensure that interventions in the foreign-exchange market relating to the euro are in line with the single monetary policy and exchange-rate policy.

Thus, it is reasonable to argue that with the adoption of the euro as the common currency, the natural economic area for judging balance-of-payments and reserve strength is the euro area as a whole rather than individual member states. Indeed from the perspective of a change in external reserves, the balance of payments for the euro area offers an overview of the causes (in statistical terms) of the change in reserve assets. It no longer seems appropriate to employ the same analysis in respect of individual euro-area countries, even though BOP transactions would, in practice, continue to add up to the change in reserves. This is because in EMU, balance-of-payments financing in member states is invariably met by the union-wide financial system with no impact on the official external reserves. Both the public and private sectors will be able to attract capital inflows from other union members, reflecting the absence of exchange-rate risk in addition to free capital movements.

Moreover, the meaning of a current-account surplus or deficit for individual euro-area countries has changed fundamentally following the inception of the single currency. For example, a surplus or deficit of one country, say, Ireland, vis-à-vis another euro-area country, say, Germany or France, should have no impact on the euro exchange rate. Only surpluses or deficits vis-à-vis non-euro-area countries, such as the UK and the US, can affect payment imbalances for the euro-area as a whole. The key issue here is the influence of extra-MU flows as intra-MU surpluses and deficits should, when aggregated across euro-area countries, effectively cancel one another out and thus do not exert an influence on the euro exchange rate.

<sup>6</sup> In December 1997, the European Council reaffirmed the principle of restraint in exchange-rate policy. In a resolution, it drew attention to the fact that it would exercise the option of issuing general orientations for exchange-rate policy in relation to non-Community currencies only in exceptional circumstances, such as clear misalignments. Such general orientation must respect the independence of the ECB and be consistent with the primary objective of the ESCB of maintaining price stability.



### – Justification for National BOP Data Collection/Compilation

Notwithstanding the above caveats, strong practical justifications exist for the compilation of national BOP statistics in EMU. These refer mainly to national accounts requirements and to the compilation of euro-area aggregates:

#### *National Accounts Requirements*

Although euro-area countries have ceded authority over elements of domestic economic policy, they remain independent sovereign states and continue to have national responsibilities pertaining to domestic price stability, fiscal policy, labour-market conditions and so on.<sup>7</sup> National balance-of-payments data, particularly current account estimates, are a vital element within national accounts statistics generally which, in turn, provide essential background information for effective surveillance of economic conditions and the co-ordination of economic policies among member states. National accounts data, including sectoral and financial accounts data, are also a legal requirement under the European System of National and Regional Accounts (ESA95).

#### *Compilation of Euro-Area BOP/IIP Aggregates*

National BOP statistics are required by the ECB for the compilation of euro-area BOP aggregates. This reflects the decentralised way in which euro-area statistics are constructed. Euro-area BOP/IIP data are compiled by aggregating cross-border transactions of euro-area residents vis-à-vis non-euro-area residents as reported by each of the 12 participating countries. This approach provides for net changes in assets and liabilities for the main items of the BOP financial account to be shown separately, thereby facilitating an in-depth assessment of BOP balances that affect the monetary and exchange rate conditions of the euro area.<sup>8</sup>

In this context, it is important to note that availability of statistics for all euro-area countries is essential. A high degree of harmonisation in national data compilation across countries is also necessary relating to the conceptual methodology being used and the convergence of practices concerning timetables, revisions, seasonal adjustment, and so on. The quality of euro-area aggregates is totally dependent on the quality of national data.

#### *IMF Requirements for National Data*

Individual country statistics, including BOP data, are still required by the International Monetary Fund (IMF); the IMF Articles of

<sup>7</sup> This differentiates euro-area economies from the situation say in the US, where, broadly speaking, there are common national fiscal and other economic policies and there is no necessity for full inter-state national accounts and balance-of-payments data.

<sup>8</sup> The euro-area BOP aggregates could also be compiled, in principle, by adding up the net BOP of the individual member states. For this approach to succeed, intra-euro-area transactions should net out. In practice however, bilateral data do not entirely match, thus resulting in significant discrepancies at the euro-area level and this necessitates the breakdown of national BOP to show an EMU/non-EMU geographical split.



Agreement cover only sovereign states as members, not dependent territories or supranational unions such as the European Union (EU) or currency areas such as the euro area. In this context, the IMF looks at economic developments in individual economies based, in part, on information provided by national BOP data.

#### *Information on Foreign Direct Investment Flows*

National BOP data are needed to show by how much and from where foreign direct investment (FDI) inflows are coming and similarly in respect of foreign direct investment outflows. Ireland, for example, has substantial net FDI inflows whereas there are significant net outflows for the EU as a whole. The analysis of FDI flows across the EU, based on national BOP data, is likely to remain an important issue for national and also euro-area policy.

#### *Information on Foreign Trade Flows*

Foreign trade statistics are needed to provide information on the geographic pattern of merchandise trade flows. This is particularly useful for market share analysis and also in observing relevant changes over time in an economy's reliance on particular foreign markets. Foreign trade statistics are also useful for the derivation of national competitiveness indicators.

## **4. Outline of National BOP/IIP Statistical Requirements within EMU**

While transactions between participating and non-participating member states affect the euro-area BOP, cross-border transactions within the euro area are not generally of direct interest to the ECB, except to the limited extent that they are used in compiling the euro-area aggregates. Eurosystem requirements for BOP and IIP statistics are documented under a legally binding Guideline vis-à-vis central banks of the member states of the euro area<sup>9</sup>.

Under the Guideline, it is a matter for member states to make all necessary arrangements to meet Eurosystem data requirements. These cover four distinct but related areas:

- i) monthly BOP covering key items affecting EMU monetary conditions and foreign-exchange markets; to be transmitted to the ECB by the 30th working day following the end of the month to which the data relate;
- ii) a more detailed quarterly BOP Statement; to be transmitted to the ECB within three months of the end of the quarter to which the data relate;

<sup>9</sup> ECB Guideline on the "Statistical reporting requirements of the ECB in the field of balance of payments (BOP), international reserves template and international investment position (IIP) statistics" (ECB/2000/4) of 11 May 2000, which replaced the Guideline of 1 December 1998 (ECB/1998/17). This covers the relevant statistical reporting obligations of national central banks to the ECB, the required breakdown of BOP/IIP transactions, the concepts and definitions to be used, data timeliness and data transmission standards.

- iii) the international investment position of the euro area - assets and liabilities outstanding at end-year; to be transmitted to the ECB within nine months from the end-of-year; and
- iv) international reserves of the Eurosystem and related items, following the IMF/BIS template on reserve assets and foreign-currency liquidity; to be transmitted to the ECB within three weeks after the end-of-month. Furthermore, reserve assets series are needed for the IMF *International Financial Statistics* (IFS) publication one week after the end-of-month in order to allow the ECB to contribute to the IFS publication with euro-area aggregates.

Having regard to each of these requirements, it is important to note that BOP compilation systems of participating member states must provide for a geographic and sectoral analysis of balance-of-payments transactions. This has a major impact on data collection and reporting burdens generally.

### – Future Statistical Needs and Developments

The ECB, through relevant technical working groups and task forces, is also interested in acquiring a better understanding of developments behind the movement in the net external positions of euro-area monetary financial institutions (MFIs), which, in turn, contribute to the analysis of developments in the money-supply aggregate. The required breakdown of the BOP into transactions of MFIs and transactions by other residents - the so called 'monetary presentation' of the BOP - relates changes in the net external assets of MFIs to the BOP transactions of the other residents of an economy (non-MFIs)<sup>10</sup>. The monetary presentation is also used as an input into the compilation of Monetary Union Financial Accounts (MUFA) statistics<sup>11</sup>. Ultimately, there should be improved harmonisation between monetary statistics, financial accounts and balance-of-payments statistics.

Apart from the need to develop a monetary presentation of balance-of-payments statistics, more work is being scheduled on consistency checking between BOP and related areas of statistics - particularly money and banking statistics - in order to enhance BOP data quality. A considerable amount of new work will also be undertaken as regards the estimation of portfolio investment inflows and outflows on the financial account of the balance of payments. This is linked to plans for the setting up of a common euro-area securities database, to

<sup>10</sup> The net change in the external transactions of the MFI sector equates essentially to the sum of the BOP current and capital balances plus the external balance of financial transactions of the non-MFI sector plus the BOP errors and omissions item.

<sup>11</sup> Covering sectoral financial flows and a statement of sectoral financial assets and liabilities. The main sources for the sectoral data are the euro-area aggregated MFI balance sheet, balance of payments and national accounts, as required under the European System of Accounts (ESA95).

be designed and implemented by both the balance-of-payments and the money and banking divisions of the ECB Statistics Directorate.

In addition, a broad debate is taking hold at international level (sponsored by Eurostat and the ECB) on the need for a common approach to BOP data collection across the EU. This is centred on possibilities for the more efficient processing of cross-border payments in the medium term and also on the establishment of dedicated survey-based reporting for multinational enterprises. In the long run, it is envisaged that there will be less dependence on reporting by banks of cross-border payments and receipts on behalf of their customers (the current situation in most euro-area countries) and more reliance on direct reporting by enterprises and on the use of sample surveys.

## 5. Implications for Ireland

The primary conclusions that can be drawn from the earlier discussion are:

- national BOP data are required for specific national purposes, most notably concerning the compilation of economic and financial accounts statistics. They also continue to have a high degree of conceptual and analytical relevance in their own right;
- national balance of payments are needed with respect to the compilation of EMU BOP/IIP aggregates, largely because the euro-area aggregates are themselves obtained as a by-product of the data collected/reported for national BOP statistics;
- BOP data compilation at EMU level is imperative in the context of EMU monetary and exchange-rate policy with the latter being dependent on the provision of comprehensive and reliable data from member states;
- ECB legislation governs Eurosystem requirements for BOP/IIP data. By itself, statistics legislation is not a guarantee of data quality or that the required data will be forthcoming. However, it underscores the importance being attached by the ECB to these objectives; and
- national BOP data are required to meet specific policy and data needs of other international institutions, notably the IMF.

Notwithstanding its small contribution to euro-area output, Ireland has a significant impact on the development of the euro-area BOP/IIP. This reflects the relative openness of the economy and the geographical breakdown of foreign trade and investment flows vis-à-vis non-euro-area countries, particularly the UK and the US. The rapid growth in IFSC-related investment transactions is also a significant contributory factor. In 1999, for example, Ireland accounted for about 17 per cent of portfolio investment outflows from the euro area and some 19 per cent of portfolio investment

inflows into the euro area, with most of the Irish data being IFSC related. Given the general magnitude of our BOP inflows and outflows, especially on the BOP financial account, the ECB has a strong interest in the quality and timeliness of Irish BOP/IIP data, despite the fact that Ireland accounts for only about 1 per cent of euro-area output.

The CSO responded to Eurosystem and other requirements for BOP/IIP statistics by effecting a complete overhaul of Ireland's BOP collection system<sup>12</sup>. This involved the design and implementation of detailed BOP surveys, directed to both financial and non-financial companies, as well as the redesign and upgrading of existing surveys. It incorporated considerable extra detail, in particular with regard to a geographic breakdown of stocks and flow information and the integration of both of these in a common survey design format. Extensive consultations took place with the financial services industry (particularly relating to the IFSC) whereby a range of new surveys, customised according to individual activities undertaken, was introduced.

Consequently, and commencing with data for Q1 1998, Ireland now has a considerably more detailed quarterly BOP statement than heretofore, with the data being provided on a euro-area and non-euro-area basis as well as with an EU/non-EU geographic split. Preliminary IIP data are also being compiled by the CSO for inclusion in euro-area aggregates and as noted earlier, it is envisaged that official IIP data will be published shortly. The results of the restructuring of the national balance-of-payments system have underpinned the production of national BOP/IIP statistics needed by the ECB and Eurostat while the needs of other international organisations, such as the IMF, are also being catered for.

The Central Bank contributed to this process by undertaking to compile detailed monthly BOP estimates for the ECB on a temporary basis<sup>13</sup>. The methodology developed by the Bank for the compilation of these estimates - based largely on an interpolation of trends from the quarterly BOP system - is now firmly established, albeit subject to refinement over time. In line with ECB requirements, virtually all of the monthly series are sub-divided into flows between countries participating in Monetary Union and extra-Monetary Union flows. This is based essentially on the corresponding split in the quarterly data supplied by the CSO to the ECB and Eurostat.

<sup>12</sup> The central objectives were to strengthen sectoral and enterprise coverage in basic data collection, to adopt best international methodological practice and to provide for a geographical analysis of the results. In this, a strong emphasis was placed on the full implementation of the recommendations contained in the 5th edition of the *IMF Balance of Payments Manual (BPM5)*, where considerable importance is attached to harmonised BOP methodology and also to the linkage of the balance of payments with the national accounts.

<sup>13</sup> Reflecting its position as official national BOP compiler, the CSO has agreed in principle to take over responsibility for the compilation of the monthly balance-of-payments statistics. A timetable has not been established to date.

Consequently, the current BOP/IIP reporting requirements relating to the Eurosystem are being implemented in full by Ireland. A summary is shown below. It is also intended that new reporting requirements will be implemented over the next year or so regarding the monetary presentation of the balance of payments. In practical terms, these mean the inclusion of an MFI/non-MFI sectoral split to the direct and portfolio investment items within the BOP financial account.

A considerable amount of ancillary work was also undertaken in support of national BOP/IIP data compilation for the ECB. In this context, the euro-wide definition to be applied at the start of 1999 with respect to reserve assets was implemented on schedule. The Bank also implemented a monthly reporting system concerning the new IMF/BIS template on reserve assets and foreign-currency liquidity - a project approved by the Governing Council early last year<sup>14</sup>. A chapter dealing with the Irish BOP compilation system was finalised by both the CSO and the Bank for inclusion in the November 2000 issue of the *ECB Balance of Payments Methods Book*<sup>15</sup>. This can be accessed on the ECB website (<http://www.ecb.int>).

### Summary of Current National BOP/IIP Data Requirements

Required from:	Data required:	Data from:	Compiler:
Mid-March 1998	Monthly BOP – national aggregates	January 1998 (with a 6-week delay)	Central Bank
Mid-March 1999	Monthly BOP with an intra euro-area and extra euro-area geographic split	January 1999 (with a 6-week delay)	Central Bank
End-June 1999	Quarterly BOP with an intra euro-area and extra euro-area geographic split	First quarter 1999 (with a 3-month delay)	CSO (data transmitted to ECB through Central Bank)
September 1999	Annual IIP external assets and liabilities – national aggregates	December 1998 (with a 9-month delay)	CSO (data transmitted to ECB through Central Bank)
May 2000	Template on reserve assets and foreign-currency liquidity	May 2000 (with a 3-week delay)	Central Bank
September 2000	Annual IIP with an intra euro-area and extra euro-area geographic split	December 1999 (with a 9-month delay)	CSO (data transmitted to ECB through Central Bank)

<sup>14</sup> The aim of this project is to ensure a harmonised presentation of international reserves across euro-area countries as well as a proper consolidation of the Eurosystem's international reserves and reserve-related liabilities. The data for Ireland are disseminated on the Central Bank website (<http://www.centralbank.ie>).

<sup>15</sup> The fourth (latest) edition of the publication entitled "European Union Balance of Payments/International Investment Position Statistical Methods" was published in November 2000. It provides detailed information for users of these statistics including a standardised BOP/IIP compilation guide, describing in detail the underlying methodology used for each BOP/IIP data category, as well as county-specific chapters on BOP data compilation in individual member states.

## 6. Summary and Assessment

With the adoption of the euro as the common currency, autonomous intervention in the foreign-exchange market by individual euro-area central banks is no longer admissible. The natural area for judging balance-of-payments and reserve assets strength for monetary and exchange-rate policy purposes is the euro area as a whole rather than individual member states. In that sense, national balance-of-payments statistics have lost part of their former policy significance. Given that they feed directly into the compilation of EMU BOP/IIP aggregates, national balance-of-payments statistics are nevertheless essential for the conduct and assessment of euro-area monetary and exchange-rate policy. In this context, the Eurosystem has similar needs to national monetary authorities in the euro area in the past, and to other monetary policy authorities responsible for large economic areas (for example, the United States). National BOP data are also needed for specific national purposes, most notably for the compilation of the national accounts and financial accounts statistics. In each of these areas, they continue to have a high degree of conceptual and analytical relevance in their own right.

In general, high quality statistics are of key importance in ensuring that the correct monetary-policy decisions are taken. Should policy mistakes arise due to an incomplete or unreliable statistical base, these can result in lower output and employment than would otherwise have been the case. It has already been contended by some financial market participants that problems concerning a lack of timely and reliable euro-area statistics relative to the availability of statistics in the US, contributed (among other factors) to negative market sentiment vis-à-vis the euro. Fortunately, this criticism did not apply to BOP/IIP statistics, reflecting improvements made in this area by euro-area countries, including Ireland.

The CSO has responded to Eurosystem and other demands for more comprehensive, timely and better quality BOP statistics, by effecting a complete overhaul of the Irish balance-of-payments system. In this context, substantial resources and effort were deployed to strengthen sectoral and enterprise coverage, to improve the methodology used for measuring BOP transactions and to provide for a geographical analysis of the results. The Bank also increased its contribution, mainly by undertaking the compilation of monthly BOP estimates (on a temporary basis) and by implementing Eurosystem data requirements pertaining to reserve assets and related-foreign transactions of the Central Bank.

Consequently, ECB balance-of-payments reporting requirements are being implemented in full. There has also been a considerable resource commitment by both institutions in terms of their participation on relevant international committees, technical working groups and task forces dealing with conceptual and practical issues relating to BOP/IIP data compilation.

Work on the provision of BOP/IIP statistics for the ECB will involve new initiatives in the years ahead, most notably concerning the implementation of a monetary presentation of BOP results and also in the area of consistency checking of BOP figures with money and banking data. In addition, a considerable amount of new work is required to be undertaken as regards the estimation of monthly portfolio investment flows on the financial account of the balance of payments, possibly involving a co-ordinated implementation with other euro-area countries of a common securities database.

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