CENTRAL BANK OF IRELAND

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Notes

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2. Unless otherwise stated, statistics refer to the State, i.e., Ireland exclusive of Northern Ireland.

3. Unless otherwise stated, amounts expressed in pounds (£) refer to Irish Pounds.

4. In some cases, owing to the rounding of figures, components do not add to the totals shown.

5. The method of seasonal adjustment used in the Bank is that of the US Bureau of the Census X-11 variant.

6. Annual rates of change are annual extrapolations of specific period-to-period percentage changes.

7. The following symbols are used:

e	estimated	n.a.	not available
p	provisional	. .	no figure to be expected
r	revised	—	nil or negligible
Q	quarter	f	forecast

8. As far as possible, data available at end-March 1999 are included in the Statistical Appendix (Section 3).

9. Updates of selected Tables from the Statistical Appendix concerning monetary and financial-market developments are provided in *Monthly Statistics* which is published on the first Thursday of every month. 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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Overview

The Irish economy continues to expand at a very rapid pace, although some signs of a modest deceleration are beginning to emerge. The volume of GNP is estimated to have grown by about 8 per cent. last year and further growth of about $6\frac{1}{2}$ per cent. is projected for 1999, with a similar rate of growth likely next year. The supply capacity of the economy has grown significantly in recent years reflecting strong foreign direct investment, flexible labour supply and high productivity growth, but there are clear signs that, with increasing constraints on the supply side of the economy, demand is putting pressure on prices. The strength of domestic expenditure, in particular, has led to significant increases in the prices of a range of services and assets such as residential property. There has also been a more general pick-up in wage growth, and, notwithstanding strong productivity growth, there is a risk that domestic prices and wages could overshoot their long-run sustainable levels. (Developments and prospects relating to prices, costs and competitiveness are dealt with in detail in the next chapter.)

One of the most striking features of recent developments has been the strength of household spending. This has reflected strong income growth due to the expansion of employment as well as significant increases in average earnings. Some of this increase in income reflects the growth of employment and earnings in high-productivity sectors of the economy, although faster wage growth has become more general. Declines in personal income taxes, while they have increased the incentive to take up employment, have also helped to boost the amount of money households have to spend. Furthermore, the general increase in confidence and the declines in interest rates have led to a tendency for savings to fall as a proportion of household income. Against this background, household expenditure has grown very rapidly and the prospects are for this to continue this year, with only a very modest deceleration, if any, likely.

Investment has also grown significantly, with construction activity boosted by strong private sector demand both for residential and commercial property. This has been driven by much the same range of factors supporting private consumption growth. While construction activity has increased sharply, it has been unable to keep pace with demand, with the inevitable consequence of significant upward pressure on both prices and wages in this area. Machinery and equipment investment has also grown strongly but it may be decelerating slightly, due to the weaker external environment which

1. Data for dates prior to 1 January 1999 have been notionally re-denominated in euros using the fixed conversion factor of 1EUR = £0·787564. This method of conversion preserves quantity, price and value changes as previously expressed in Irish pounds but comparisons of this type of data across countries are not valid. In particular, those relating to wage and cost developments have to take account of actual exchange rates for dates prior to 1 January 1999 and this is the basis of the relevant calculations referred to in this and the subsequent chapter.

2. The forecasts contained in these chapters were compiled at end-May and do not take account of data published subsequently. They also assume that interest and exchange rates remain unchanged. The estimates and forecasts relating to national accounts aggregates have been compiled on the partial ESA 95 basis introduced by the Central Statistics Office in 1996 and are not directly comparable with the full ESA 95 data due to be published at the end of June.

may be limiting investment growth by both indigenous and foreign firms.

The relatively weak international environment, particularly in continental Europe, has also begun to impact directly on exports, with signs of a deceleration beginning to emerge. This is likely to persist through much of 1999, with stronger growth in the euro area unlikely to manifest itself until later in the year. At a sectoral level, the deceleration is mainly manifesting itself as a slowdown in the rate of expansion of some of the high-technology sectors from the very high levels experienced in 1998. As already noted, this derives from some weakening in investment inflows as well as the direct effects of weaker external demand. Other exporting sectors may also experience a deceleration, although it may be more modest as their rates of growth tend to be less variable. In addition, the stronger than expected performance of the US and UK economies, as well as the weaker euro, may be serving to offset some of the impact of slower euro-area growth. Imports are set to decelerate, reflecting slower growth in imports of materials for export production, but the slowdown is likely to be less marked given the continuing strength of domestic demand. Overall, the contribution of net exports to growth is likely to diminish in 1999 with some downward pressure on the balance of payments surplus, reflecting a relative shift in the balance of demand towards more domestic sources.

Expenditure on Gross National Product 1997, 1998^{e} and 1999^{f} **Table 1**

	1997	% change in		1998^{e}	% change in		1999^{f}
	€million	Volume	Price	€million	Volume	Price	€million
Personal Consumption Expenditure	31,986	8½	2¼	35,507	8	2½	39,352
Public Net Current Expenditure	8,468	5	5½	9,380	3¾	3½	10,070
Gross Domestic Fixed Capital Formation	11,996	11½	6½	14,258	9	7	16,632
of which:							
• Building and construction	7,941	11¼	8½	9,579	10¼	9½	11,562
• Machinery and equipment	4,055	12	3	4,679	6¾	1½	5,070
Value of physical changes in stocks	685			580			535
Gross Domestic Expenditure	53,135	8½	3¾	59,725	7½	3¾	66,589
Exports of goods and services	51,569	22¼	2½	64,636	12½	2¼	74,352
Final Demand	104,704	15¼	3	124,361	10	3	140,941
Imports of goods and services	43,451	23½	2¼	54,878	12¾	2¼	63,268
Gross Domestic Product	61,253	9¼	3¾	69,483	7¾	3¾	77,673
Net factor income from rest of the world	8,027			9,747			11,474
Gross National Product	53,226	8	4	59,736	6½	4	66,199

Although overall output growth may slow somewhat this year, the expansion of employment is still likely to be significant, at about 3½ per cent., compared with an estimated increase of 4¾ per cent. in 1998. Labour supply has tended to respond relatively rapidly to improved labour market conditions, but there are signs that this responsiveness may be coming to an end. The results of the CSO's Quarterly National Household Survey for the third and fourth quarters of 1998 reveal a number of significant features in this regard. They suggest that unemployment is somewhat lower than had previously been estimated and may now be approaching 6 per cent. of the labour force. It is also clear that it is lower than this in certain regions of the country. Another feature worth noting is that the rate of increase in female participation in recent years appears to be slowing down. This, combined with the lower level of unemployment, suggests that the potential for the labour force to expand has diminished significantly in recent times. This is confirmed by the various measures of potential labour supply produced by the CSO (see box A on page 16). As a result, labour market pressures are likely to intensify in 1999 with unemployment set to decline further.

Domestic Demand

Personal Consumption

Consumption expenditure probably grew by about 8½ per cent. in volume terms last year. The factors lying behind such a rapid rate of growth have already been mentioned. Some of these relate to the actual increase in household disposable income, while others influence the behaviour of household in terms of whether such income is saved or spent. The increase in disposable incomes comes from three sources. The first of these is the significant increase in employment reflecting the output gains of the economy in recent years. The second is the increase in average earnings for those in employment, while a final component is the taxation of household income which has been generally reduced in recent Budgets. The combination of these influences has given rise to strong growth in the current disposable incomes of households. This is likely to persist in 1999, although the rate of employment growth may ease back somewhat as output growth in some manufacturing sectors moderates.

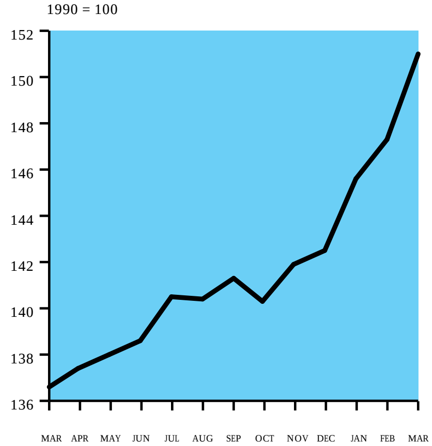
The other driving force behind consumption is a change in the allocation of disposable income between savings and consumption. The proportion of household income saved has declined significantly in recent years. One factor behind this development may be households' view of whether increases in income are transitory or permanent. In the initial stages of stronger growth, households may have been unsure whether increases in income through greater employment of family members, higher gross incomes or decreases in taxation were likely to be sustained. As time has passed, however, greater confidence has emerged with the sustained improvement in the performance of the economy and the better state of the government finances. This has probably led households to conclude that much of their improvement in disposable income is a permanent phenomenon and encouraged them to spend more. In addition, the decline in interest rates has tended to reinforce this trend. The price of assets held by households — most notably, but not exclusively, their own residential property — has also increased significantly, partly driven by higher income expectations and lower interest rates. Against this background, households feel wealthier and it is unsurprising that the household savings rate has declined significantly in recent years.

There may be some tendency for the savings rate to stabilise at a lower level now that the major reductions in interest rates have taken place. It would also be difficult for confidence to improve further from the present very high level revealed by the EU survey of consumers. As a result, a smaller fall in the savings rate and slightly weaker employment growth may be sufficient to offset continuing strong growth in nominal wages and further reductions in personal taxation. On balance,

CHART 1

Index of Volume of Retail Sales

THREE MONTH MOVING AVERAGE (seasonally adjusted)
1990 = 100



therefore, the volume of spending is likely to increase by much the same rate as last year, with growth of about 8 per cent. in prospect, marginally lower than the estimated 8½ per cent. outturn for 1998.

The available indicators give some support to this projection. The volume of retail sales grew by 8·8 per cent. on average last year, although the rate of growth in the second half of the year was slower at 7·9 per cent. Retail sales volumes seemed to accelerate again in the first quarter of this year, but this picture may be unduly influenced by the pattern of car sales. According to data produced by the Society of the Irish Motor Industry (SIMI), the latter were up over 24 per cent. in the first four months of the year compared with the same months of 1998, but this is likely to have reflected the ending of the scrappage scheme at the end of 1997 which will have lowered the base comparison. The year-on-year increase in car sales for the month of April was noticeably lower at just under 10 per cent. The underlying pattern of spending growth may not, therefore, be too different from last year. The projection of broadly unchanged or marginally slower growth in consumer spending is obviously subject to some upside risk in present circumstances. This relates both to nominal wage growth, which could accelerate if labour shortages intensify, and to the possible ongoing impact of wealth effects, operating through rising asset prices, which could depress the savings rate further.

Public Consumption

On the basis of the public authorities' present spending plans, an increase of about 3¾ per cent. in the volume of public consumption might be expected in 1999, following growth of about 5 per cent. last year. This projection may be altered as the year progresses and more information becomes available on emerging expenditure patterns. While the Government is committed to certain limits on spending, these apply to a wider category of spending which includes other substantial elements such as transfers and interest payments.

Investment

On the basis of available information, the volume of investment is estimated to have increased by about 11½ per cent. in 1998. Machinery and equipment investment increased by about 12 per cent. in real terms and the volume increase in building and construction investment is estimated at about 11¼ per cent.

Within the construction sector, the housing market was again very buoyant last year, with private housing completions up by 10·2 per cent. over 1997. An acceleration in the rate of private house completions in the second half of the year was reflected in a year-on-year increase of 15·8 per cent. in the December quarter. In contrast to the private sector, social housing completions declined by 3·7 per cent. in 1998, reflecting a sharp decline of 35·8 per cent. in the number of homes built by the voluntary/non-profit sector. Indicators of non-residential construction also point to a significant volume increase in 1998. According to survey data, the value of capital acquisitions of land and buildings by industry increased by 11·7 per cent. in 1998. Moreover, the value of spending under the Public Capital Programme, which has a large building and construction element, increased by an estimated 20·5 per cent. overall, and by 26·3 per cent. under the productive infrastructure sub-heading. The strength of activity in the construction sector was again reflected in an increase in employment in the industry in 1998. The monthly employment index for firms with 5 or more persons engaged was up by 8·7 per cent. during the year.

Indicators of investment in machinery and equipment also point to strong volume growth in 1998. The Capital Assets in Industry enquiry recorded an 18·9 per cent. increase in spending on machinery and equipment last year, and the value of capital goods imports increased by an estimated 33·1 per cent. Sales of light and heavy commercial vehicles increased by 38·4 per cent. and 20·9 per cent., respectively, in 1998, according to figures supplied by SIMI.

Early indicators of investment activity in the building sector in 1999 are very positive. First quarter data on house completions, recently announced by the Minister for the Environment and Local Government, show an increase of 24 per cent. and represent a continuation of the acceleration in the rate of expansion evident in the second half of 1998. Infrastructure investment will be sustained by a planned increase of 13·4 per cent. in the Public Capital Programme. Notwithstanding the somewhat weaker external environment, strong domestic demand and low nominal interest rates should sustain a significant increase in industrial and commercial building. Overall, building and construction activity is likely to increase by about $10\frac{1}{4}$ per cent. in 1999.

The weaker external environment and a corresponding expectation of slower growth in both exports and foreign direct investment underlie the forecast volume increase in machinery and equipment investment, which is expected to increase by about $6\frac{3}{4}$ per cent. this year. Overall, the volume of investment is forecast to increase by about 9 per cent. in 1999.

Stock Changes

Stock changes are set to make a small negative contribution to growth in 1999, with a somewhat smaller accumulation of stocks projected than in 1998. This mirrors the estimated outturn for 1998 and reflects a slightly lower build-up in voluntary holdings of stocks due to the projected deceleration in both the output of the exporting sectors and a mild slowdown in domestic demand.

Merchandise Trade and the Balance of Payments

The Current Account

Merchandise Trade

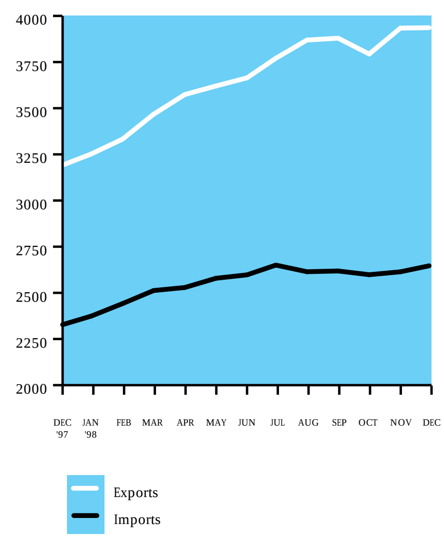
The volume of merchandise exports grew by 22·7 per cent. last year. This reflected very large increases in output by the leading high-technology sectors, although there was growth across a range of categories including food and live animals. Nevertheless, the projected deceleration in export growth due to the weaker external environment is showing signs of emerging. This is not yet evident in the monthly trade data but industrial production data show a noticeable deceleration, which is likely to gradually feed through to the trade statistics. Output in the manufacturing sector was 12·4 per cent. higher,

CHART 2

Value of External Trade

THREE MONTH MOVING AVERAGE (seasonally adjusted)

£ Million



year-on-year, in the first three months of this year, compared with an average annual increase of 16·7 per cent. in 1998. In spite of stronger than expected growth in the US and UK economies and the weaker euro, export production expectations also remain weak, according to the IBEC/ESRI survey, and some further deceleration in output growth may occur. Slower growth is likely to remain in place through much of this year, with any pick-up in euro-area growth only expected to have an impact towards the end of the year. On this basis, overall merchandise export volume growth will probably slow to about 12·9 per cent., on average, in 1999.

Merchandise Trade 1997, 1998 and 1999*f* **Table 2**

	1997	% change in		1998	% change in		1999*f*
	€million	Volume	Price	€million	Volume	Price	€million
Merchandise exports (adjusted)	46,353	22¾	2½	58,365	13	2¼	67,403
Merchandise imports (adjusted)	32,279	17½	2¼	38,816	11¾	2½	44,498
Trade balance (% of GNP)	14,074 (26½)			19,549 (32¾)			22,905 (34½)

Merchandise imports also grew strongly last year — by about 17·5 per cent. — reflecting the robust nature of domestic demand and a further expansion in imports of materials for export production. Import growth is likely to slow in 1999, mainly reflecting the somewhat weaker export performance which will dent the demand for imported inputs. Trade prices were under some upward pressure last year reflecting the weakening of the Irish pound in effective terms in 1997 and in the early part of 1998. This was reversed towards the end of last year as the Irish pound strengthened against a background of weak trade prices internationally. Nevertheless, merchandise export and import prices rose by 2·7 and 2·3 per cent., respectively, last year. While import prices began this year noticeably lower year-on-year, they will have come under upward pressure in the early months of the year as the euro weakened against other major currencies. On the basis of the technical assumption of unchanged exchange rates and commodity prices, these trends are likely to result in trade prices rising again in 1999 at a rate close to that of last year. Taking these volume and price changes together, the overall merchandise trade balance seems set to rise from €19,549 million or 32·7 per cent. of GNP in 1998 to €22,905 million or 34·6 per cent. of GNP this year.

Services, International Transfers and Net Factor Income Flows

The services balance deteriorated by more than expected in 1998, mainly due to the exceptionally strong growth of services imports by the multinational sector. The rate of growth of tourism earnings was also outpaced by tourism spending by Irish residents abroad, reflecting the general strength of household expenditure. It is likely that the services deficit will increase more modestly this year, as service imports may decelerate somewhat, which, in turn, reflects more moderate output growth from the exporting sectors. The tourism balance, although still positive, seems set to remain under continuing pressure due to strong overseas spending by Irish residents.

The surplus on current international transfers declined last year. The level of receipts remained broadly unchanged, but outward transfers increased reflecting, *inter alia,* a higher contribution to the EU Budget. While still remaining positive, some further decline in this balance is likely in 1999 and in following years, as the country receives less from, and contributes more to, the EU's finances. The substantial deficit on factor incomes is also likely to widen in 1999 following a significant increase last year, although the rate at which the deficit is increasing may ease, given slower growth in the profits of the foreign-owned sectors. Overall, it seems likely that the current account surplus will fall back somewhat this year to about €900 million or 1·4 per cent. of GNP from €1,329 million or 2·2 per cent. of GNP last year, with the more modest increase in the merchandise trade surplus being offset by the deterioration in other components of the account.

Balance of Payments 1997, 1998 and 1999*f* **Table 3**

€million	1997	1998	1999*f*
Current Account			
• Merchandise trade balance (adjusted)	14,074	19,549	22,905
• Services	–5,956	–9,791	–11,821
• Current international transfers	1,638	1,318	1,290
• Net factor income from rest of the world	–8,027	–9,747	–11,474
Balance on current account	1,729	1,329	900
(% of GNP)	(3¼)	(2¼)	(1¼)
Capital and Financial Account			
• Capital transfers	734	839	
• Official capital flows	–2,769	–1,594	
• Transactions of credit institutions	–385	5,523	
• Official external reserves*	957	–2,087	
• Private capital/residual	–267	–4,010	

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

The Capital and Financial Account

Substantial inflows were recorded on capital and financial account in 1998, mainly reflecting an increase in the net external liabilities of credit institutions. These were largely offset by private-capital outflows, associated with institutional portfolio outflows among other factors, and by official outflows resulting from foreign-currency debt repayments and a reduction in non-resident holdings of Government securities.

Following the introduction of the euro on 1 January 1999, the definition of official external reserves was changed to comprise foreign-currency (non-euro) denominated claims on non euro-area residents. Transactions in external assets denominated in currencies participating in the single currency, together with transactions in non-euro assets held within the euro area, are now recorded as balance of payments flows other than in reserve assets. Accordingly, the Bank's official external reserves now comprise gold, SDRs, the Reserve Position at the IMF and non-euro assets held outside the euro area.

While there are no official data available for 1999, it is likely that there was a deficit in current account in the first quarter, possibly of the order of €300 million, with a corresponding surplus on capital and financial account. There were substantial outflows on capital and financial account, particularly under the official capital heading. These were partially offset by a turnaround in the private-capital/residual item and inflows under capital transfers. The net result was a decline of €1,582 million in the official external reserves over the quarter to €4,853 million at end-March.

Output Trends and the Labour Market

Industry and Services Output

After growth of 16·6 per cent. in 1997, the volume of manufacturing output rose by a further 16·7 per cent. last year. As has been the case over the last number of years, the largely foreign-owned, high-technology sector continues to be the driving force behind the strong growth, with output from this sector being almost 23 per cent. higher than a year earlier. Within this sector, output growth from the pharmaceuticals (up 33·5 per cent.) and electrical engineering (up 26·5 per cent.) sectors was particularly strong last year. In the indigenous sector, output growth was much more modest, with growth of 2·7 per cent. being recorded last year, although this compares quite favourably with other countries.

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

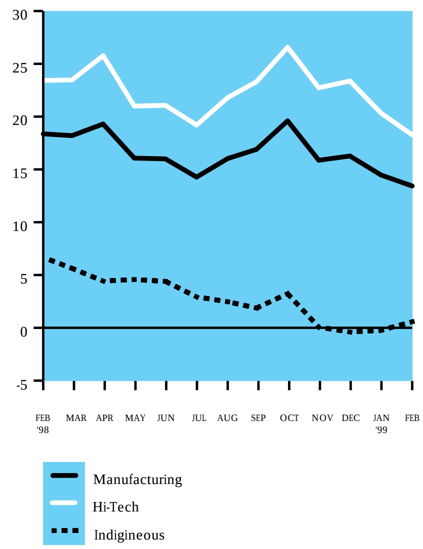
	Total	High-Technology*	Indigenous
1994	12·8	18·1	5·3
1995	20·1	28·9	6·3
1996	8·2	10·9	3·3
1997	16·6	21·9	5·7
1998	16·7	22·6	2·7
1999*f*	12	15	3
Average (1994-1999)	14½	19½	4½

*The 'high-tech' sector comprises the pharmaceuticals, office and data processing, other foods, electrical and instrument engineering sectors. Indigenous industry comprises the remaining sectors.

Manufacturing output growth is forecast to moderate this year, from the strong growth rates recorded in the last two years. Data for the first three months of the year, which show that output was 12·4 per cent. higher than in the same period last year, seem to support this. The monthly IBEC/ESRI surveys shows that, on a three month moving average basis, expectations for future production declined sharply in the final months of last year and the early months of this year. Furthermore, some slowdown in the level of inflows of foreign direct investment is expected this year, reflecting greater competition for inward flows internationally together with the emergence of skilled labour shortages in Ireland. As a result, the rate of output growth in the high-technology sector is expected to decelerate somewhat. In terms of the indigenous sector, the strength of sterling, together with buoyant domestic demand conditions, should continue to support modest growth. In this general environment, the volume of manufacturing output is forecast to expand by about 12 per cent. this year.

Building and construction output increased by an estimated 11¼ per cent. last year. Further strong growth is expected this year, with output expected to expand by about 10¼ per cent. Sustained levels of domestic demand, together with a continuation of strong employment growth, should continue to support strong growth in private service sector output, while public sector output growth is expected to remain subdued in 1999.

CHART 3
Volume of Industrial Production
YEAR-ON-YEAR % CHANGE 3 MONTH MOVING AVERAGE



Agricultural Output

Preliminary estimates from the CSO show that the volume of gross agricultural output declined by 0·4 per cent. in 1998. While the volume of livestock output was 1·9 per cent. higher than a year earlier, output declines in other sectors more than offset this. In particular, the volume of milk output declined by 2·2 per cent., reflecting poor weather conditions last year, while the volume of cereals output declined by 14·2 per cent. Usage of feeding stuffs and fertilisers increased substantially, again due to the poor weather, rising by 14·8 per cent. and 6·7 per cent. respectively. This resulted in an overall inputs rise of 12 per cent. in volume terms. In these circumstances, the volume of gross agricultural product declined by almost 11 per cent. last year. Livestock prices fell sharply in 1998, reflecting a combination of domestic and international events. Pig and sheep prices were particularly badly affected. These declines were partially offset by buoyant milk prices. Combined with an increase in subsidies, this resulted in an overall decline in agricultural incomes of 5 per cent. in nominal terms (7·4 per cent. in real terms) in 1998.

In terms of output, the outlook for 1999 is more benign. Assuming normal weather conditions, some increase in milk output is expected. Furthermore, some decrease in the volume of inputs is expected, again assuming normal weather conditions. In this general environment, the volume of gross agricultural product at market prices is expected to rise by about 12¾ per cent. With a small decrease in output prices expected, partly reflecting a less than optimistic outlook for milk prices, together with a reduction in subsidy payments, the overall level of agricultural income is expected to remain broadly unchanged (a decline of 1¾ per cent. in real terms) in 1999.

Summary of Agricultural Output and Incomes 1997, 1998[e] and 1999[f] **Table 5**

	1997	Percentage Change in			1998[e]	Percentage Change in			1999[f]
	€million	Value	Volume	Price	€million	Value	Volume	Price	€million
Gross Agricultural Output[a]	4,209	−1¾	−½	−1¼	4,139	1½	2	−½	4,208
Farm Materials and Services	2,095	6¾	12	−4¾	2,235	−5	−7¼	2¼	2,120
Gross Agricultural Product at Market Prices	2,115	−10	−12¾	3¼	1,905	9½	12¾	−2¾	2,086
Subsidies less Expenses	364				452				272
Income from Self-Employment	2,480	−5			2,355	0			2,358

a Including the value of stock changes.

The Labour Market

Results of the Quarterly National Household Survey (QNHS) for the third and fourth quarters of 1998 were released by the CSO in May. As a result, data for the full year of 1998 are now available.

Furthermore, the publication of fourth quarter data for 1998 means that it is now possible to compare year-on-year developments as measured by the QNHS for the first time.

The data confirm the expansion in overall employment levels. Total employment increased by 72,400 (4·9 per cent.) between the fourth quarter of 1997 and the same period of 1998. This strong growth was entirely attributable to increases in full-time employment, which rose by 76,700 (6·3 per cent.) over the period. The number of males and females in full-time employment rose by 52,400 (6·5 per cent.) and 24,400 (6·0 per cent.) respectively over the period. The incidence of part-time employment, on the other hand, declined slightly over the period. This evidently reflects some movement from part-time to full-time employment. This proposition is supported by a decline in the numbers of persons classifying themselves as being underemployed part-time workers, although some of this, in turn, is attributable to minor methodological changes in the survey.

On a sectoral basis, service sector employment rose by 53,500 or 5·3 per cent. over the period, with employment in private sector services once again the main driving force behind the strong employment growth. Within this sector, employment growth in the transport, storage and communications (up 12,100) and financial and other business services (up 16,000) sectors was particularly strong over the period. Elsewhere strong employment growth was experienced in the construction sector (up 14,600), partly reflecting buoyant conditions in the domestic housing market. Employment in agriculture actually expanded over the period (up 1,800), which seems somewhat surprising, given the downward trend of recent years together with the difficulties experienced in this sector during 1998.

Strong employment growth over the period resulted in a sharp fall in unemployment. In the fourth quarter of 1997, 171,600 were classified as unemployed, corresponding to an International Labour Office (ILO) unemployment rate of 10·4 per cent. Twelve months later, unemployment had declined by 65,500 to stand at 106,000, corresponding to a rate of 6·4 per cent. Some caution in interpreting these figures is required, however, given that the number of individuals, particularly females, recorded as seeking part-time employment in the fourth quarter of 1997 appears abnormally high. Long-term unemployment (unemployed for one year or longer) also fell sharply over the period, from 90,200 in the final quarter of 1997 to 51,700 in the same period of 1998. The long-term unemployment rate stood at 3·1 per cent. in the final quarter of 1998.

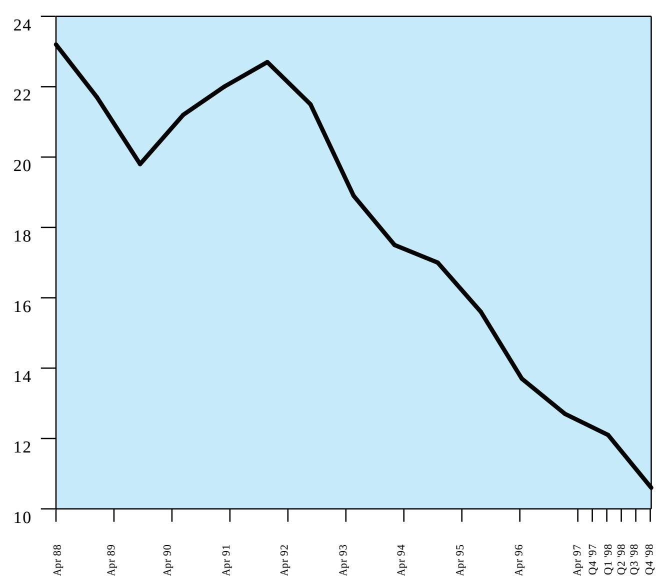
Interestingly, the size of the labour force was relatively unchanged in the twelve month period to the fourth quarter of 1998. With the working age population of both males and females rising by around 2 per cent., this resulted in a fall in participation rates for both males and females – in the case of females, this reverses the trend of recent years. It is possible that the decline in overall participation rates may, at least in part, reflect the changeover to the new survey in the fourth quarter of 1997. Nevertheless, it is also possible that the upward trend in female participation, which was an important source of labour supply in recent years, is levelling off. Indeed, in general, the various indicators of potential labour supply produced by the CSO (see Box A below) suggest that the rate of growth of the labour force is set to decelerate.

Employment and Unemployment 1997, 1998 and 1999^{f} — Table 6

(annual average '000)	1997	1998	1999^{f}
Agriculture	139	136	133
Industry	422	445	463
Services	889	940	980
Total Employment	1,451	1,521	1,576
Unemployment	156	125	101
Labour Force	1,607	1,646	1,677
Unemployment Rate	9¾	7½	6

For the year as a whole, employment averaged 1,520,600 in 1998, the first time employment exceeded 1·5 million. Unemployment averaged 124,900, corresponding to an unemployment rate of 7·6 per cent. Income tax receipts, together with trends in the Live Register, suggest that employment growth in the early months of 1999 remained strong. The service sector, and in particular the private service sector, is once again expected to be the main engine of employment growth. The expansion of employment in manufacturing may be somewhat slower than last year, given the projected deceleration in manufacturing output growth. As a result, overall employment is expected to expand by 55,000 or 3½ per cent. Further expansion of the labour force is also expected, reflecting the increase in the number of people of working age. Participation rates are not expected to rise significantly, however, and net inward migration may be constrained by rising housing costs. Unemployment levels are again expected to fall, although the magnitude of the decline may be lower than in recent years. An average unemployment rate of 6 per cent. for 1999 is forecast, with the rate at year-end being somewhat lower than this.

Figure A: Potential Labour Supply*



*(unemployed + marginally attached + others not in education who want work + under-employed part-time workers) expressed as a percentage of (labour force + marginally attached + others not in education who want work).

Box A:
Indicators of Potential Labour Supply

Sustained strong employment growth inevitably raises questions about the capacity of the labour force to expand further. In this context, new indicators produced by the CSO relating to sources of potential labour supply are useful. These indicators take account of those classified as unemployed together with those from outside the labour force who, in the survey, expressed some degree of interest in gaining employment. The latter category includes (depending on the indicator used) various combinations of those marginally attached to the labour force (i.e. discouraged workers and passive job seekers), as well as those who are not in education and want work, but who do not meet all the requirements to be classified as unemployed on an ILO basis.

The series 'S3' is the widest indicator of the potential labour supply, and its evolution since April 1988 is presented in Figure A. S3 consists of those mentioned in the previous paragraph plus under-employed part-time workers, expressed as a percentage of the labour force adjusted to include those marginally attached to the labour force and those not in education who want work. To this extent, it differs from the other measures, in that it includes some individuals who are in fact in employment, namely under-employed part-time workers.

According to the Labour Force Survey, the potential labour supply stood at 22·7 per cent. in April 1993. Buoyant economic conditions in the period since then resulted in moderate declines in the potential labour supply up to the final quarter of 1997, with S3 declining by 7·1 percentage points to 15·6 per cent. in the space of 4½ years (although some discontinuity exists relating to the changeover to the QNHS in the fourth quarter of 1997). This rate of decline corresponds to an annual average rate of decline in the potential labour supply of 1·6 percentage points per annum. In the twelve months up to the fourth quarter of 1998, the rate of decline in potential labour supply accelerated sharply. In this twelve month period, S3 contracted by 5·0 percentage points, from 15·6 per cent. to 10·6 per cent., providing strong evidence of the tightening of labour market conditions.

The Public Finances

The Exchequer Returns for end-March 1999 showed an Exchequer surplus for the first quarter of 1999 of €364 million, which compared with a surplus of €104 million for the corresponding period in 1998. Total current expenditure in the first quarter was €4,684 million (24·0 per cent. of the Budget target), or 13·8 per cent. higher than the corresponding figure in 1998. Central Fund Services expenditure was up 6·9 per cent., year-on-year, in line with expectations. Net Non-Capital Supply Services was 15·8 per cent., higher year-on-year. This was significantly higher than the 9·3 per cent. increase expected for the full year. The comparatively high year-on-year increase in current Supply Services spending was attributable to once-off technical and timing factors; the impact of such factors on current spending is not uncommon in the first quarter of the year. Once account is taken of those technical and timing factors, current Supply Services spending in 1999 remains in line with expectations.

Total current revenue in the first quarter amounted to €5,110 million, up 14·4 per cent. on the same period in 1998. Non-tax revenue came to €95 million or about 18·7 per cent. of the full-year target and was in line with expectations. Tax revenue at €5,015 million amounted to 22·8 per cent. of the Budget day target. The year-on-year increase in tax receipts was 13·3 per cent.

Income Tax was up 11·1 per cent. Value-Added-Tax showed a 15·9 per cent. increase, while Excise Duties were 16·5 per cent. higher. Unlike the first quarter of 1998 when Corporation Tax was up 118 per cent.

year-on-year, Corporation Tax fell 8·5 per cent. year-on-year. These contrasting inflows of Corporation Tax reflect the technical and timing factors that affect that tax category in the first quarter. A clearer picture relating to Corporation Tax does not become available until end-June, as the bulk of the yearly revenue under that tax category is received in the second quarter.

Exchequer Returns at End-March 1999 **Table 7**

	1998	1999 — Budget estimate		First Quarter		
	Outturn € million	€ million	% change	€ million	% change year-on-year	% of Budget estimate
Current Expenditure						
— Central Fund Services[a]	4,360	4,326	–0·8	1,003	6·9	23·2
— Non-Capital Supply Services[b]	13,940	15,229	9·3	3,681	15·8	24·1
Total	18,300	19,555	6·9	4,684	13·8	24·0
Current Revenue						
— Tax revenue	20,480	22,011	7·5	5,015	13·3	22·8
— Non-tax revenue[c]	475	509	7·2	95	134·3	18·7
Total	20,955	22,520	7·5	5,110	14·4	22·7
Current Budget Surplus	**2,655**	**2,965**		**427**		
Exchequer borrowing for capital purposes	**1,706**	**1,790**		**63**		
Total Exchequer Surplus	**948**	**1,175**		**364**		

a Debt servicing, judicial salaries and pensions and EU Budget contribution.
b Government current expenditure on areas such as Social Welfare, Health, etc.
c Central Bank surplus income, National Lottery surplus, interest and dividends, etc.

Overall, the difference between current revenue and current expenditure over the first quarter gave a current budget surplus of €427 million compared with a surplus of €349 million current budget surplus for the same period in 1998.

The capital budget deficit of €63 million at end-March 1999 compares with a deficit of €245 million for the first quarter of 1998. Capital supply issues in the first three months of 1999 amounted to €405 million compared with €326 million for the same period in 1998, a year-on-year increase of 24 per cent. This was mainly due to Environment and Local Government spending being €36 million higher than in the first quarter of 1998 reflecting the large increase in spending on roads in 1999 and €20 million being required by the Department of Health and Children to meet contract payments on capital projects. Capital resources at €345 million were significantly stronger than at the same time last year. This was due to the earlier payment of Sinking Funds and a higher drawdown of Cohesion Fund and ERDF receipts.

Even when allowing for the tax concessions in the Budget, tax revenue for the year as a whole now seems likely to significantly exceed the Budget target. With total spending broadly on target, this strong tax revenue growth suggests that an Exchequer surplus in excess of the €1,175 million Budget projection is in prospect at end-year.

Exchequer Financing

In the first quarter of 1999 the Government was a net borrower in the financial markets, i.e. it over-funded by €1,318 million which, in addition to the surplus of revenues over expenditures, resulted in an increase in Exchequer balances of €1,682 million. The Government raised €283 million in bonds listed on the Stock Exchange during the first three months. These comprise mainly long-term Government bonds. There was a repayment, however, of other medium- and long-term bonds to the amount of €496 million. The largest component of borrowing was in the form of commercial paper loans (e.g. euro and Exchequer notes, S69 bonds, etc.) and amounted to €1,678 million. Domestic credit institutions and non-Irish-residents increased their net holdings of Irish Government securities over the quarter, whereas the opposite was the case for other domestic holders, chiefly pension funds and life assurance companies.

The role of national savings schemes in Exchequer funding was minimal in the first quarter, i.e. negative but by less than €1 million, compared with almost €83 million raised in the corresponding period last year. Borrowing from ministerial funds was negative to the tune of €145 million.

Source and Application of Funds **Table 8**

€ million	**1 January 1999 to 31 March 1999**
1. Borrowing (–)/repayments (+):	**–1,318**
Irish Government bonds listed on the Irish Stock Exchange	–283
Other Irish Government public bond issues	439
EIB loans	60
National saving schemes	1
Commercial paper	–1,678
Miscellaneous debt	–2
Borrowing from ministerial funds	145
2. Increase (+)/decrease (–) in Exchequer deposits and other balances:	**1,682**
Increase (+)/decrease (–) in Exchequer balance	1,699
Increase (+)/decrease (–) in foreign deposits	2
Increase (+)/decrease (–) in other balances	–19
Exchequer Surplus (1+2):	**364**

Financial Sector Developments

Money and Credit

Ireland contributed 1·6 per cent., on average, to the euro-area broad money stock (M3) in the first four months of the year. At end-April, Ireland's share of euro-area M3 amounted to €75,600 million, an increase of €6,931 million since end-January. The bulk of the increase occurred in April, due in part to a large fall in Exchequer balances at the Central Bank. Around 80 per cent. of Irish M3 was denominated in euro currencies, with the remainder in currencies of non-EMU countries. Most of the increase in M3 between January and April was due to an increase in deposits. Although the great bulk of deposits with resident Monetary Financial Institutions (MFIs) are in euro currencies, most of the increase between January and April was denominated in currencies of non-EMU countries. Despite accounting for less than 3 per cent. of the total stock, debt securities issued by MFIs in Ireland with a maturity of up to two years accounted for about 13 per cent. of the increase in Irish M3 in the three months to end-April. As the M3 series is calculated on a different basis to the old M3E series, which has been discontinued, it is not yet possible to calculate year-on-year growth rates for Irish M3.

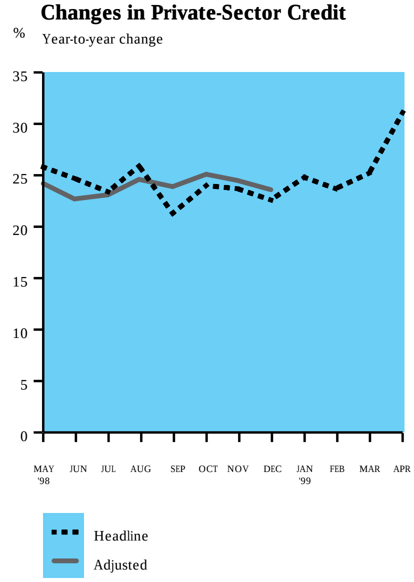
The annual rate of growth in credit advanced to non-Government Irish residents by credit institutions resident in this country fluctuated around an average of 24 per cent. from May 1998 to March of this year, having fallen back from a peak of over 30 per cent. in February 1998. There was a sharp acceleration in April, however, with the annual rate of private-sector credit growth rising to 31·1 per cent. In addition to a base effect, an exceptional item, relating to the merger between Irish Life and Irish Permanent, contributed significantly to the increase in April. Due to certain restrictions in the Building Societies Act, 1989, the merger was effected by means of an acquisition by Irish Permanent of shares in Irish Life. As a consequence, the transaction impacted on private-sector credit.

These figures are not adjusted for valuation effects and for the impact of foreign-currency lending to IFSC entities, as was done before the start of this year. This is because it is no longer possible to calculate an adjusted series on the same basis as previously: data are now collected on a euro/non-euro basis, whereas previously the breakdown was between Irish pound and foreign currency.

CHART 4

Changes in Private-Sector Credit

Year-to-year change



Private-Sector Credit: Annual Rates of Change (%) **Table 9**

		Residential mortgages	Total private-sector credit[a]
1998	January	20·6	28·6
	February	20·6	30·5
	March	20·7	28·1
	Apri1	20·8	26·1
	May	18·9	25·8
	June	19·5	24·7
	July	20·5	23·4
	August	20·7	25·9
	September	18·9	21·3
	October	19·6	24·0
	November	20·1	23·7
	December	18·8	22·6
1999	January	18·0	24·8
	February	19·0	23·7
	March	20·1	25·2
	April	20·7	31·1[b]

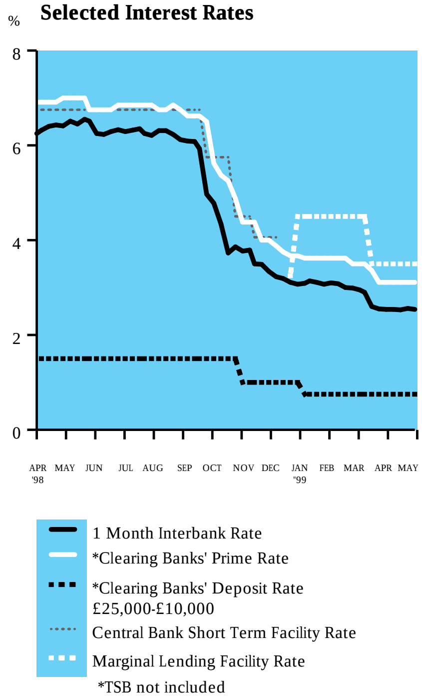
a Not adjusted for transactions between credit institutions and non-bank IFSC companies or valuation effects arising from exchange-rate movements.
b Includes exceptional item (see text).

Private-sector credit grew by €6·0 billion in the first quarter, representing an 8·6 per cent. increase over the end of 1998. This compares with an increase of 7·6 per cent. in the final three months of last year. Residential mortgage lending contributed €970 million to the first quarter increase. Lending in this category was relatively weak in January, but it accelerated somewhat in the following two months. The annual rate of residential mortgage lending was 20·1 per cent. in March, compared with 18·8 per cent. in December. Private-sector credit growth was strong in April, due in large part to the exceptional item described above. Residential mortgage lending, though weaker than in March, was stronger than in April of last year and the annual rate of growth rose to 20·7 per cent.

Financial Markets

CHART 5

Selected Interest Rates



On 8 April, the Governing Council of the ECB decided to reduce the interest rates on its monetary policy instruments, against the background of subdued inflationary pressures in the euro area. It was announced that the interest rate for the ECB's main refinancing operations would be set at 2·5 per cent. from the following week, down from 3 per cent. previously. In addition, the rate on the marginal lending facility was reduced to 3·5 per cent. from 4·5 per cent. and the rate on the deposit facility was cut to 1·5 per cent. from 2 per cent., both with effect from 9 April. The Governing Council said that its decision had been taken in a forward-looking perspective, focusing on the medium-term trends in inflation and the compatibility of these trends with the Eurosystem's definition of price stability.

Following the reductions cited above, retail banks lowered lending and deposit rates. There was very limited scope to reduce demand deposit rates, which by early May were in a range of 0·10 to 1·25 per cent. for the clearing banks. Maximum A and AA term loan and overdraft rates were reduced by up to 0·5 of a percentage point, with the reductions focused on rates charged to businesses. The clearing banks' prime rate, on which the cost of loans to many commercial borrowers is based, was in a range of 3·11 to 3·30 per cent. at end-April, compared with 3·50 to 3·62 per cent. at end-March. Standard variable mortgage rates were generally reduced by amounts ranging from 0·25 to 0·5 of a percentage point. By mid-May, this rate was in a range of 4·85 to 5·45 per cent. Table 10 provides a tentative indication of the average level of retail lending rates in the euro area. The rates are taken from the ECB monthly bulletin and they are provisional only, bearing in mind the difficulty in comparing different financial instruments across member states.

Euro-area Retail Bank Interest Rates (Provisional) **Table 10**

	Deposit interest rates		Lending interest rates			
	Redeemable at notice		To enterprise		To households	
% per annum: weighted averages	Up to 3 months	Over 3 months	Up to 1 year	Over 1 year	Consumer lending	For house purchase
1997	2·80	3·09	7·56	6·67	10·61	6·68
1998 March	2·74	3·32	7·00	6·07	10·30	6·21
April	2·71	3·30	6·89	5·99	10·12	6·08
May	2·71	3·33	6·80	5·95	10·07	6·07
June	2·58	3·34	6·72	5·91	10·06	6·01
July	2·56	3·29	6·60	5·85	10·03	5·88
August	2·55	3·30	6·55	5·77	10·03	5·81
September	2·53	3·21	6·54	5·66	10·01	5·67
October	2·49	3·14	6·46	5·53	9·81	5·50
November	2·48	3·12	6·33	5·44	9·69	5·45
December	2·44	3·03	6·16	5·12	9·62	5·30
1999 January	2·36	2·86	6·00	5·04	9·62	5·12
February	2·33	2·78	5·91	5·00	9·55	5·04
March	2·30	2·79	5·82	4·99	9·51	5·08

Source: ECB. 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.

The performance of Irish Government bonds in the first five months of the year was influenced by the bond exchange programme of the National Treasury Management Agency (NTMA), whereby existing bonds were consolidated into new, more liquid, benchmark issues. In general, Irish yields moved in line with those of Germany. Yields firmed a little in January and February, taking the lead from US Treasuries reflecting inflation concerns in that country. However, euro-area yields eased in the next two months as slow growth and a favourable inflation outlook caused the markets to anticipate a reduction in euro-area interest rates, which duly occurred in early April. Irish five-year yields remained very close to German levels throughout the period, with a negative differential for much of the time. The Irish yield reached a low of just under 3·1 per cent. in late April. Ten-year differentials with respect to German yields compared favourably with those of most other euro-area countries at around 0·2 of a percentage point or lower. Yields generally firmed in May following the US lead.

Domestic money-market liquidity conditions improved in the first quarter of the year, with cumulative flows of €1·8 billion. Net government transactions had a moderately positive impact but maturing foreign-currency swaps drained €1·4 billion. The main contributor to increased liquidity was net TARGET operations, especially with euro-area participants, largely reflecting cross-border interbank activity. In April and May government transactions, including net government expenditure and debt repayments, substantially added to liquidity.

Irish Government Bond Yields and Differentials **Table 11**

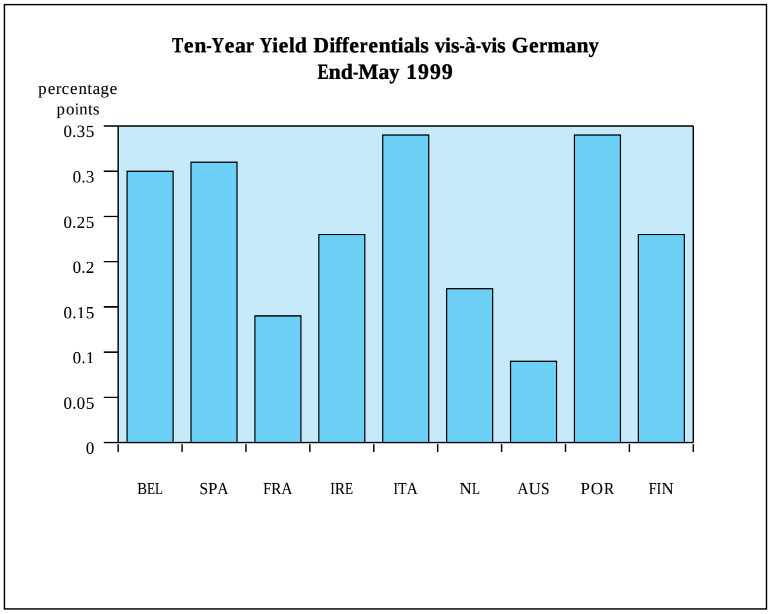
End-month		5-year Bond yield	Differentials against:			10-year Bond Yield	Differentials against:		
			Germany	UK	US		Germany	UK	US
1997	December	**4·95**	0·27	–1·58	–0·81	**5·48**	0·21	–0·87	–0·33
1998	March	**4·57**	0·22	–1·64	–1.13	**5·07**	0·21	–0·83	–0·69
	June	**4·66**	0·45	–1·82	–0·87	**5·00**	0·28	–0·86	–0·53
	September	**3·75**	0·21	–1·55	–0·65	**4·22**	0·29	–0·64	–0·29
	December	**3·21**	0·06	–1·38	–1·47	**3·99**	0·18	–0·44	–0·70
1999	January	**3·25**	0·04	–0·93	–1·33	**3·84**	0·21	–0·32	–0·84
	February	**3·47**	–0·03	–1·13	–1·72	**4·18**	0·19	–0·43	–1·09
	March	**3·33**	–0·01	–1·22	–1·73	**4·10**	0·12	–0·47	–1·09
	April	**3·07**	–0·09	–2·08	–1·74	**3·89**	0·04	–1·39	–0·84
	May	**3·72**	0·35	–1·88	–1·33	**4·34**	0·23	–1·36	–0·65

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

Financial Institutions

As part of the ongoing process of financial sector consolidation, a planned merger between Bank of Ireland, the second largest bank in the country, and Alliance and Leicester, a UK bank and former building society, was announced in May. However, the merger talks were unsuccessful and were abandoned in mid-June. The merger between

Irish Life and Irish Permanent to form Irish Life and Permanent became effective on 21 April, while Anglo-Irish Bank Corporation plc completed their take-over of Smurfit Paribas Bank Limited at the end of March.



Domestic Prices, Costs and Competitiveness

Overview

The outlook for inflation has deteriorated compared to that presented in the Spring Bulletin, reflecting a less benign external environment and in particular the increase in oil prices and the sharp decline in the value of the euro in recent months. Given the open nature of the Irish economy and the greater exposure to non-euro trade, the decline in the exchange rate is likely to lead to greater upward pressure on inflation in Ireland than in the rest of the euro area. This is occurring when Irish inflation is already ahead of the euro area average and prices for a range of assets and domestic services are continuing to rise rapidly.

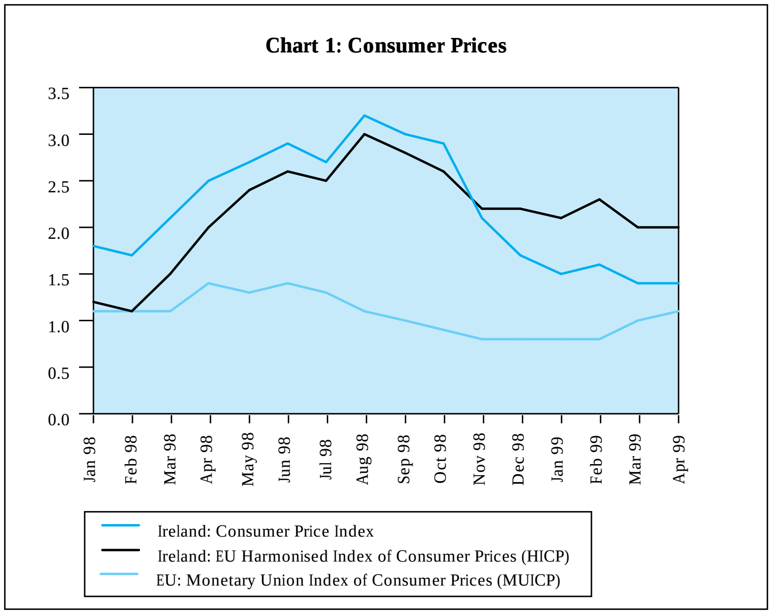
The stimulus to effective demand engendered by the combined effect of the decline in the value of the exchange rate and lower short-term interest rates comes at a time when the Irish economy is operating at, or perhaps beyond, the sustainable limits of available capacity. Most estimates of the output gap (the difference between actual and sustainable output), including those produced by the European Commission and the OECD, are strongly positive. One indication of the pressure on resources is the acceleration in wage inflation, which now appears to be running well above the rates prevailing in Ireland's major trading partners. In terms of firms trading with the UK, the decline in the value of the euro against sterling will, however, have a mitigating effect on any deterioration in Ireland's competitive position, while superior productivity growth in Ireland will continue to offset, at least in part, adverse wage developments vis-à-vis our euro area trading partners.

Allowing for the usual lags between changes in the exchange rate and their effect on consumer prices, it is likely that an exchange rate related acceleration in the rate of CPI inflation will begin to emerge in the latter part of this year and in the early months of next year. Accordingly, the projection for average CPI inflation in 1999 has been revised upwards by $\frac{1}{4}$ per cent. to $1\frac{3}{4}$ per cent. together with the likelihood of a significant carryover into the following year.

Consumer Prices

The rate of inflation eased significantly in the last quarter of 1998 and in the early months of 1999, reflecting a decline in the underlying rate and the effect of lower mortgage interest rates. The headline rate of inflation, as measured by the Consumer Price Index (CPI), declined sharply from a peak of 3·2 per cent. in August 1998 to 1·4 per cent. in April 1999. Roughly half of this decline was due to the effect of lower mortgage interest rates, with the remainder accounted for by exchange rate movements. Over this period, the annual rate of change in the

Harmonised Index of Consumer Prices (HICP), which does not include mortgage interest rates, slowed from 3 per cent. to 2 per cent.



Underlying the overall trend in consumer price inflation are divergent trends in the traded and non-traded sectors. Against a background of very strong domestic demand and a tightening of labour market conditions, there has been a gradual build up in wage pressures and in non-traded price inflation. By contrast, international inflationary pressures eased significantly during the latter half of 1998 and in the first two months of 1999, due to weak world demand and excessive productive capacity, and this has been reflected in the weak trend in industrial goods prices.

Since March, however, the external inflationary environment has become less benign. Oil prices rebounded sharply during March and April and, although they fell back a little during May, they remain well above the levels prevailing in the first two months of the year. In addition, non-oil commodity prices appear to have bottomed out, on average, and the prices of some commodities, such as metals for instance, have risen sharply. This increase in basic world prices will be exacerbated in the period ahead by the impact of the decline in the exchange rate in the first five months of the year. One offsetting factor, however, is the continuing weakness of world demand, and in particular, the slowdown in the UK market and the sluggish growth in some mainland European economies. In addition, the capacity overhang in Southeast Asia continues to depress the price of traded goods.

Turning to domestic factors, inflationary pressures remain evident. Strong domestic demand and tight labour market conditions continue to impact on wages and on non-traded inflation. Underlying services inflation, when adjusted for falling telecommunications prices and administered price changes, continues to be relatively high. In the housing market, prices continue to rise at a rate well in excess of wage inflation.

Producer prices

The trend in producer prices, which reflects price trends at the factory and farm gate level, is an important leading indicator of possible inflationary pressures at retail level. During most of 1998, there was a negative trend in both industrial and agricultural output prices. The manufacturing output price index (OPI) declined in each of the last three quarters of 1998 and was 1·4 per cent. lower, year-on-year, in the final quarter. By December 1998, seasonally adjusted agricultural output prices were 5·7 per cent. below their high point in the previous August, and were 3·9 per cent. lower, year-on-year, in the final quarter.

In the early months of this year, there has been an increase in manufacturing output prices related primarily to the decline in the exchange rate. In the three months to April 1999, the OPI increased by 1 per cent. compared to the previous three months but, reflecting previous weakness, remained 0·9 per cent. lower than in the same period last year.

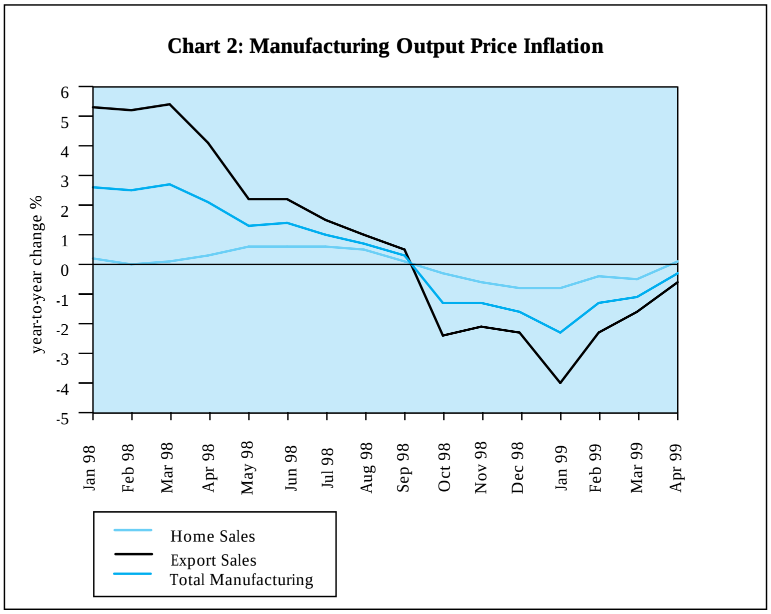
A useful disaggregation of the OPI is the breakdown between the home sales and export sales components. Following a protracted period of weakness during much of 1998, the export sales sub-index of the OPI rebounded sharply in early 1999. In the three months to April 1999, it increased by 1·9 per cent. over the previous three months, but reflecting the sharp cumulative decline in the last three quarters of 1998, prices were still 1·5 per cent. below their level of a year earlier. Trends in this sub-index are closely related to exchange rate movements, and its recent rebound was anticipated in the Spring Bulletin against a background of exchange rate weakness in the early months of 1999. Further increases in this index are likely in the coming months reflecting recent trends in the euro.

While the export sales sub-index has tended to be dominated by exchange rate effects, trends in the home sales sub-index of the OPI are less effected by external factors, and mainly reflect the influence of domestic inflationary developments. In April, the home sales sub-index increased by 0·9 per cent., which was its largest monthly increase since April 1995, but, reflecting its remarkable stability over the last three years, is just 0·1 per cent. higher than its level in April 1996.

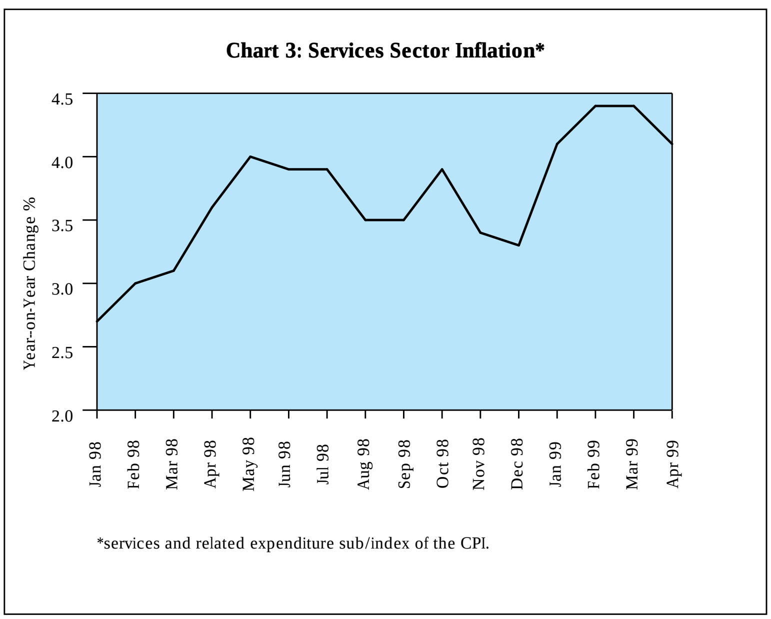
Agricultural prices relating to the first three months of the year, show that output prices remain weak. On a seasonally adjusted basis, output prices in the first quarter of 1999 were 1·6 per cent. lower than in the previous quarter, and 4·5 per cent. lower than in the same period of last year.

The Services Sector

Services sector inflation, as measured by the services and related expenditure sub-index of the CPI, averaged 4·3 per cent., year-on-year in the three months to April 1999, up from 3·6 per cent. in the previous three months, and 3·2 per cent. in the same period last year. The acceleration in services sector inflation has coincided with an easing



of CPI inflation in recent months. Accordingly, the gap between the two measures has increased to 2·8 per cent. in the three months to April 1999 from 1·8 per cent. in the previous three months and 1·1 per cent. in the same period last year. In addition, the gap between services inflation and consumer inflation, excluding mortgage interest rates, has also widened, but to a lesser extent. In the three months to April 1999 this gap was 1·9 percentage points, up from 1·1 per cent. in the previous three months and 1·4 per cent. in the same period in 1998.



Services sector inflation is mainly influenced by conditions in the domestic economy. Given the current strength of domestic demand and the tightness of the labour market, it is not particularly surprising that price inflation in this sector has accelerated. However, since the increase in services sector inflation has been outstripped by the acceleration in underlying labour costs, it may be the case that margins have narrowed somewhat, with profits being sustained by increased turnover. If this is the case, services sector inflation may lag the trend in domestic demand and may continue to accelerate even after demand slows. In addition, headline services sector inflation understates the true underlying rate of increase, since it is being depressed somewhat by the effect of restructuring and deregulation of telecommunications charges. Adjusting for this factor, the underlying rate of services sector inflation, at close to 5 per cent., is considerably higher than the headline rate.

Asset Prices

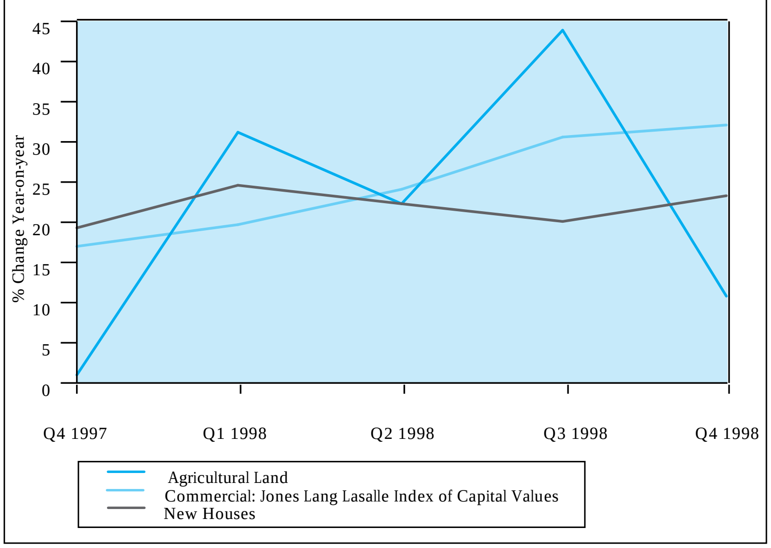
The strongest evidence of overheating in the domestic economy is to be found in asset markets where, with the exception of equities in recent months, prices continue to increase at rates considerably in excess of consumer price inflation. According to the Department of Environment and Local Government (DoE), average new house prices rose 22·5 per cent. nationally in 1998, while second hand house prices increased by 31·4 per cent. The highest rate of increase was in the Dublin second hand market, where prices increased by 34·9 per cent. DoE data for the first quarter of 1999 are not as yet available, but anecdotal evidence points to further strong growth in this period.

Commercial property values are also rising rapidly against a background of historically low vacancy rates, low nominal interest rates and high levels of business confidence. The Jones Lang Lasalle (JLL) overall index of commercial property capital values, which reflects the estimated change in the value of a representative portfolio, increased by 5·6 per cent. during the first quarter of 1999 and was 32·3 per cent. higher, year-on-year. The highest rate of increase was in the office sector, where values rose by 7·9 per cent. in the quarter and by 37·2 per cent. in the year to March 1999. Commercial rents are also rising rapidly according to JLL data. The estimated rental value of the JLL portfolio increased by 4·3 per cent. in the first quarter of 1999 and by 17·6 per cent. year-on-year. The highest increases were in the office sector where rents were 7 per cent. higher, quarter-on-quarter, and 22·9 per cent. higher, year-on-year.

Since the beginning of the current upswing in the market in 1994, the cumulative increase in both residential and commercial property prices in Ireland has been exceptional by international standards. Between 1994 and 1998, residential property prices (new house prices) in the country as a whole increased by a cumulative 71 per cent. compared to 27 per cent. in the UK, 19 per cent. in the US and minus 11 per cent. in Germany, according to recent data from the Bank for International Settlements. Over the same period, Dublin commercial property prices increased by 141 per cent. compared to 50 per cent. in New York, 32 per cent. in London and 5 per cent. in Frankfurt.

Agricultural land prices declined by 7·9 per cent. during the fourth quarter of 1998 but were 10·8 per cent. higher, year-on-year, according to CSO data. The data set has been adjusted to exclude atypical transactions and land sold for non-agricultural purposes such as

Chart 4: Fixed Asset Values



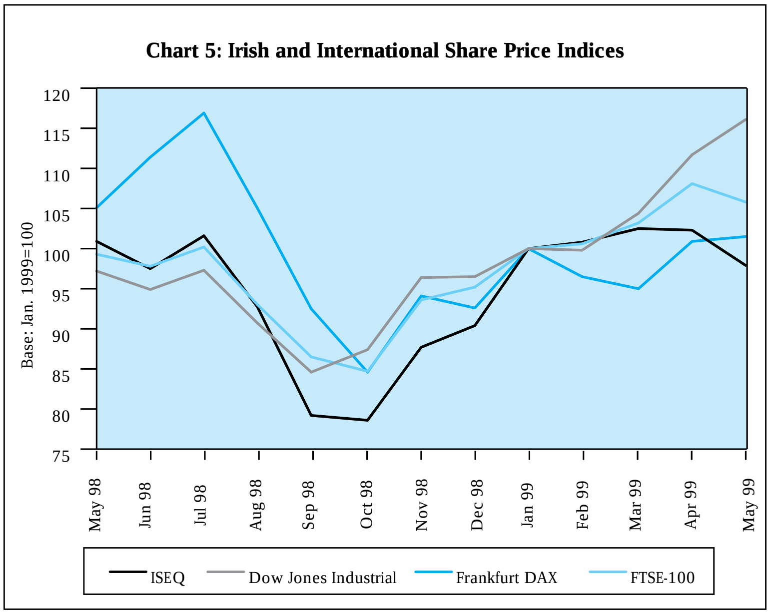
building land. The upward trend in the series is, therefore, quite surprising, given the rather weak market conditions prevailing in the agricultural sector.

In summary, fixed asset prices across a wide range of sectors are increasing rapidly, reflecting the strength of the domestic economy. The wealth effect on consumer demand and the danger of heightened inflationary expectations arising from the increase in asset prices, present significant dangers to the objective of price stability. The continued rapid increase in house prices is of particular concern, given the importance of housing in personal sector wealth and the capacity for house prices to exert upward pressure on wages.

Turning to financial assets, the average level of the Irish Stock Exchange Index (ISEQ) increased by 10·6 per cent. in January, and recorded a further cumulative gain of 2·4 per cent. in the following three months, before declining by 3·4 per cent., on average, in May. The average value of the ISEQ in May was 9·4 per cent. above its average of December 1998, but was down by 2 per cent. year-on-year. Between December and May, the ISEQ has been outperformed by the FTSE (+11·6 per cent.), the German DAX index (+10·6 per cent.) and the Dow Jones Index (+20·6 per cent.). In general, Irish bond yields moved in line with those in Germany in the first five months of 1999, with ten year differentials with respect to Germany averaging about 0·2 percentage points. A more detailed analysis of the bond market is contained in the previous chapter.

Pay

Official earnings data point to an acceleration in wage inflation during 1998. In the building and construction sector, hourly earnings rose by 8·8 per cent. in 1998, reflecting the shortages of labour in this sector. Indeed, the annual rate of increase was depressed to some extent by the deceleration in the year-on-year growth rate in the final quarter of the year, resulting from the base effect associated with the large

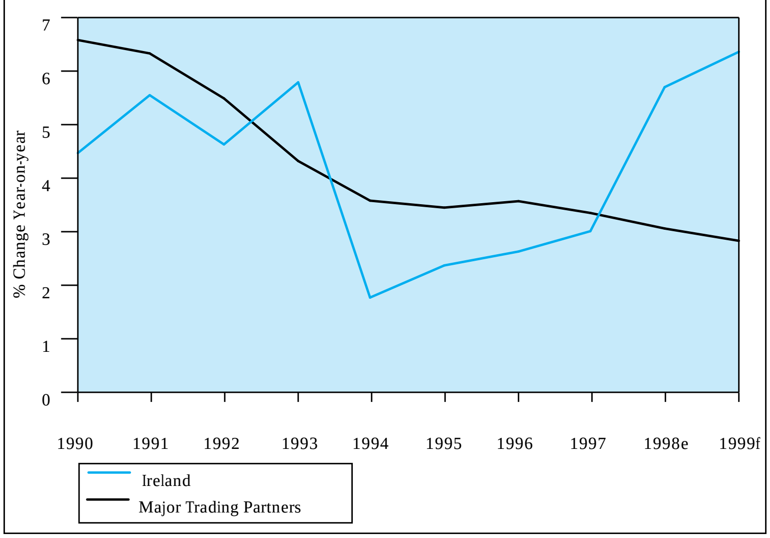


administered increase in hourly earnings in the final quarter of 1997. In the manufacturing sector, early estimates show that hourly earnings in the first three quarters of 1998 were 5·6 per cent. higher than in the same period a year earlier. This represents an acceleration from the 3·0 per cent. increase recorded in 1997. While weekly earnings in the financial sector rose by 3·7 per cent. last year, it is likely that increased job sharing and employment at the lower grades in the banking sector are depressing the overall rate of increase. In the insurance sector, by contrast, weekly earnings rose by 8·1 per cent. last year. In the services sector more generally, anecdotal evidence points to escalating pay pressures as employers find it increasingly difficult to recruit and retain staff.

The Exchequer pay and pensions bill rose by an estimated 9 per cent. in 1998, partly reflecting settlements made under the Programme for Competitiveness and Work. Taken with the sectoral trends outlined above, it is estimated that non-agricultural earnings per capita rose by about $6\frac{1}{4}$ per cent. last year. This compares with an estimated increase of $5\frac{1}{2}$ per cent. in earnings per capita in 1997. After adjusting for the increased incidence of part-time employment during 1998, it is estimated that non-agricultural employment rose by about $4\frac{3}{4}$ per cent. last year. As a result, it is estimated that the total non-agricultural pay bill rose by about $11\frac{1}{2}$ per cent. in 1998.

With another year of strong economic growth in prospect, it is likely that the demand for labour will remain strong in 1999. However, the pool of available labour has contracted sharply in recent months, so that employers are likely to find it increasingly difficult to fill vacancies. In these circumstances, further strong growth in earnings per capita is expected. In addition, anecdotal evidence relating to the early months of 1999 points to an escalation of pay pressures from various groups, particularly in the public service. Taking into account increased bonuses, overtime payments, and this general upward pressure of wages, it is forecast that earnings per capita will rise by about $6\frac{3}{4}$ per cent. in 1999. With non-agricultural employment forecast to expand by about $4\frac{1}{4}$ per cent., an increase of $11\frac{1}{4}$ per cent. in the non-agricultural pay bill is forecast for this year.

Chart 6: Hourly Earnings in Manufacturing



Competitiveness

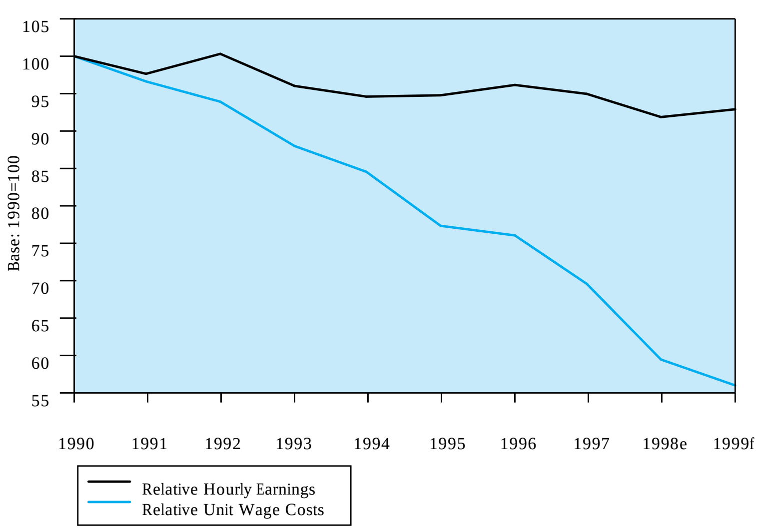
The concept of competitiveness is rather difficult to define due to the large variety of factors which affect it such as price, quality, speed of delivery, flexibility, design etc. In general terms, it refers to the capacity to secure adequate sales on domestic and external markets. On this basis, the impressive trading performance of Irish based firms, both foreign and Irish owned, in recent years points to a relatively strong competitiveness performance. Reflecting the difficulty in measuring many non-cost factors which influence it such as quality and design etc., competitiveness tends to be measured in practice in terms of cost or price developments.

Estimates produced periodically by Eurostat give an estimate of the price level in each Member State of the EU. On the basis of the most recently published data, the Irish price level for 1997 was 96 per cent. of the EU average. When compared to earlier estimates, this suggests that the gap between the price level in Ireland and other Member Sates has narrowed appreciably. Countries at a less advanced stage of development — as was the case with Ireland until recently — generally have a lower level of prices than in more advanced countries. Ireland's high growth rates in recent years have coincided with a narrowing of the gap between Irish and EU price levels generally. This is probably no more than might have been expected, especially in the context of arbitrage and the single market.

Data on earnings and productivity discussed below are more timely and point to a gradual improvement in Irish cost competitiveness in recent years. Looking ahead, however, the outlook for cost competitiveness gives some cause for concern in light of the high rate of wage inflation in Ireland compared to our main trading partners, notwithstanding the relatively high rate of productivity growth here.

Average hourly earnings in Ireland rose at a higher rate than in our major trading partners in 1998. However, when expressed in common currency terms, relative hourly earnings actually fell by about $3\frac{1}{4}$ per cent. last year, reflecting the weakness of the exchange rate during 1998. This implies an improvement in Ireland's cost competitive position. At the same time, productivity gains in Ireland were higher than in our major trading partners, implying a large fall of about $14\frac{1}{2}$ per cent. in relative unit wage costs. These productivity gains were largely attributable to the foreign-owned, high-technology sectors, whose scale of operations in Ireland has expanded significantly in recent years. In the remaining indigenous sectors of industry, productivity gains have been much lower.

Chart 7: Relative Hourly Earnings & Relative Unit Labour Costs



In 1999, average hourly earnings in Ireland are again expected to increase more rapidly than in our major trading partners. The decline in the value of the euro relative to sterling in the early months of the year will act as a short-term buffer against adverse pay developments for indigenous industry competing with UK firms. Nevertheless, it is likely that relative hourly earnings in common currency terms will increase slightly by about 1 per cent. in 1999, implying a modest disimprovement in competitiveness. This development, however, only very partially reverses the gradual but persistent improvement in wage competitiveness since the early 1990s. In the longer term, a persistently higher rate of wage inflation, unless offset by superior productivity performance, would have negative implications for export and import competing industry.

Summary

In summary, most measures of actual inflation are currently subdued. However, this reflects a number of special favourable factors whose effect is currently fading; these include the relatively strong exchange rate during the second half of 1998, weak commodity prices and the reduction in mortgage interest rates since last Autumn. Looking forward, the outlook is for some deterioration in inflation. Amongst the external factors contributing to this are the weaker value of the euro and a significant strengthening of commodity prices, together with, on the domestic front, stronger inflationary pressures in the labour market and the broad service sector. Asset price developments reinforce this less favourable outlook.

An Timpeallacht Gheilleagrach

Leanann geilleagar na tíre ag borradh ar aghaidh ar luas an-ard, cé go bhfuil comharthaí sóirt ann a léiríonn maolú measartha atá ag teacht chun cinn. Measadh gur fhás méid an OTN (Olltáirgeacht Náisiúnta) de thimpeall 8 faoin gcéad an bhliain seo caite agus tá tuilleadh fáis de 6·5 faoin gcéad fortheilgthe do 1999. Táthar ag súil le fás den mhéid céanna i 2000. Tá cumas soláthair an gheilleagar tar éis fás go mór le blianta beaga anuas, rud a léiríonn infheistíocht choigríche dhíreach, solúbthacht soláthar saothair agus fás ard táirgiúlachta. Ina dhiaidh sin is uile, tá comharthaí soiléir ann go bhfuil éileamh ag cur brú ar phraghasanna toisc sriantachtaí méadaitheacha ar thaobh soláthair an gheilleagar de.

Ceann de na gnéithe is suntasaí ó thaobh na gcúinsí deireanacha seo ná láidreacht caiteachas teaghlaigh. Léirigh sé seo fás láidir ioncaim toisc fairsingiú fostaíochta mar aon le méadaithe móra meán-tuillimh. Tá fás níos tapúla i bpá níos coitianta go ginearálta. Chabhraigh an meath i gcánacha ioncaim phearsanta le treisiú an méid airgid atá le caitheamh ag teaghlaigh, cé gur mhéadaigh siad ar an spreagadh chun oibre. Threisigh an fás ginearálta i muinín an ghnáth-phobail agus na híslithe i rátaí úis ar an gclaonadh do choigilteas titim mar chomhréir d’ioncaim theaghlaigh. Leis an gcúlra seo, tá caiteachas teaghlaigh tar éis fás go han-tapaidh agus tá an chosúlacht ann go leanfaidh sé i rith na bliana seo, le súl le maolú beag amháin ar an luas, más ann dó. D’fhás an infheistíocht go mór, agus bhí treisiú i ngníomhaíocht tógála de bharr éileamh láidir ón earnáil phríobháideach le haghaidh sealúchas cónaithe agus tráchtála. Tiomáineadh é seo leis an réimse céanna tosca atá mar bhonn le fás éileamh príobháideach.

Tá an timpeallacht lag, a bheag nó a mhór, tar éis a fheidhmiú go díreach ar onnmhairí na tíre agus tá comharthaí sóirt maolaithe ag teacht chun cinn. Leanfaidh sé seo ar an mórgcóir i 1999 agus ní dócha go soiléireoidh fás mór láidre i limistéar an euro go dtí níos déanaí sa bhliain. Chomh maith le sin, déanfaidh feidhmiú eacnamaíoch níos láidre ná mar a bhíothas ag súl leis i ngeilleagar an Ríochta Aontaithe agus sna Stáit Aontaithe, mar aon le euro níos laige, cúiteamh ar fás níos moille i limistéir an euro. Ar an mórgcóir, tá an dealramh ann go laghdóidh ranníocaíocht ó onnmharaithe glan ar fhás geilleagrach na tíre i 1999 le roinnt brú anuas ar bharrachas comhardú na níocaíochtaí, rud a léiríonn athrú coibhneasta in iarmhéid éilimh i dtreo foinsí intíre.

Léiríonn torthaí Suirbhé Ráithiúil Náisiúnta Teaghlaigh an Phríomh-Oifig Staidrimh don tríú agus don ceathrú ráithe i 1998 go bhfuil an dífhostaíocht níos ísle ná mar a bhíothas ag súl leis agus go bhfuil an ráta ag díriú i dtreo 6 faoin gcéad don lucht saothair. Is léir go bhfuil sé níos ísle i gceantair áiríthe na tíre. Tá an dealramh ar an scéal go bhfuil moilliú ag teacht ar ráta fáis i bpáirteachas lucht oibre baineann sa gheilleagar. Léiríonn sé seo, mar aon le leibhéal níos ísle dífhostaíochta, go bhfuil an poitéinseal do mhéadú sa lucht saothair íslithe go mór le tamaillín anuas. Dá bharr seo, is dócha go méadófar ar bhrúnna ar an margadh saothair i 1999 agus titfidh an dífhostaíocht dá réir.

The International Economy

Overview

Uncertainty about the spillover effects from crises in emerging market economies abated somewhat in the period between early-March and mid-June. In particular, Brazil appears to have entered a period of some stability, while the Asian economies that were the first victims of the crisis are now starting to emerge from recession. Russia remains a source of international concern and a failure to institute coherent policies would worsen economic conditions significantly. However, even if conditions in these economies do deteriorate again, financial institutions have reduced their exposures sufficiently to limit spillovers.

The Kosovo conflict might have been expected to precipitate considerable disquiet in the financial markets. In the event, the limited economic links of the Balkan states to the global economy served to largely contain the effects of the conflict to the immediate region. It was only as the possibility of a ground war became greater that market reports suggested that the conflict was being cited as a reason to sell the euro. As soon as agreement was reached and the air strikes stopped, the euro strengthened.

Among the major economies, the US continues to grow ahead of expectations, as domestic demand has outweighed the effects of a weak external environment. However, the Federal Reserve Board has recently warned of potential inflationary pressures and has adopted a tightening bias towards monetary policy. The key question is whether interest rates will have to be raised to slow the economy, and if so, how will the stock market react? International forecasters are working on the basis that the US economy will achieve a soft landing with no dislocation in equity markets. In the event of a US slowdown, Europe and Japan will be left as the potential engines of growth. Although the outlook for Europe is for a slowdown in 1999, recently released data suggest that activity may not be as weak as expected. While Japan remains in a stagnant state, recent data paint a more positive picture. It is worth noting, however, that the buoyant Japanese first quarter data may be subject to some downward revision. A particular problem for Japan is the deterioration in the public finances as a result of a succession of fiscal stimulus packages. While these packages may boost growth now, they create a set of fiscal problems that may serve to slow future growth.

On the inflation front, depressed commodity prices have been a significant factor in dampening world inflationary pressures. In March, however, the OPEC countries agreed to limit oil production in an effort to raise oil prices. Initially this strategy was successful but overhanging oil stocks have served to limit the price increase. Non-oil commodity prices, however, appear to have bottomed-out in recent months and may start to rise. As a result, the outlook for global inflation is not as benign as at the start of the year.

World Economic Developments

Revised GDP data confirm that activity in the **euro area** slowed towards the end of 1998, leaving growth at 2·9 per cent. for the year. This slowing growth pattern is confirmed by monthly data, with industrial production showing an ongoing weakening. Although retail sales, which had been buoyant during 1998, are now starting to slow down, new car registrations continue to grow strongly. Confidence survey data are indicating that consumer confidence, although remaining strong, has deteriorated since the beginning of the year, while industrial confidence continues to be weak. The decline in the unemployment rate, evident over the course of 1998, stalled at 10·5 per cent. in the first quarter of 1999, but a decline to 10·4 per cent. was recorded in April. Annual changes in the Harmonised Index of Consumer Prices (HICP) show a small increase in inflation in March and April due largely to an increase in energy prices.

Growth forecasts for the euro area for 1999 have become more pessimistic over time and the outlook is for a slowdown, due principally to weak external demand. Domestic demand is expected to be buoyed by rising real disposable income, driven by an improved employment situation and wage rises. The OECD is projecting real GDP growth of 2·1 per cent. in 1999, while the IMF predicts growth of 2·0 per cent. – both of these projections are in line with Consensus estimates. The outlook for 2000 is for growth to rebound sharply towards 2·7 per cent. on the back of recovering global activity.

The **US** has displayed a contrasting performance with real GDP growth of 3·9 per cent. in 1998 and first quarter 1999 data showing an annualised increase of 4·1 per cent. Although inventory investment played an important role in the 1998 outturn, domestic demand was also underpinned by strong consumer spending growth. Consumer spending continues to show strong growth, driven by increasing employment and rising wages. Net exports are the key negative factor in US growth, having deteriorated dramatically due to weak export markets, US dollar appreciation and buoyant import demand. As export markets have started to show some recovery in recent months, US industrial production has picked up. Nevertheless, the ongoing decline in manufacturing employment continues, in sharp contrast to the increase in service sector employment. The unemployment rate fell to 4·2 per cent. in May, indicating a further overall tightening in the labour market. Despite the buoyant economic conditions and tight labour market, inflation has remained subdued until relatively recently. After hovering around 1·7 per cent. at the turn of the year, annual consumer price inflation jumped to 2·3 per cent. in April.

On the outlook for the US economy, the recent jump in the inflation rate caused the Federal Reserve Board to issue a warning on 18 May that there may be potential for a build up in inflationary imbalances in the economy and that it has adopted a tightening bias towards monetary policy. The buoyancy of the economy is reflected in consumer confidence which continued its rise in May, while the

National Association of Purchasing Managers (NAPM) composite index picked up further in May giving further credence to a recovery in the manufacturing sector. Similarly, the index of leading indicators continues to point to an economic expansion over the next six months. The latest OECD forecast is for growth of 3·6 per cent. in 1999, again broadly in line with the Consensus estimate. The outlook to 2000 is for the waning stock market wealth effect and damped investment, due to falling capacity utilisation, to ease growth towards 2·0 per cent.

Although the economic signals coming from **Japan** paint a very mixed picture, it appears that the downturn may be reaching a trough. While real GDP fell by 2·9 per cent. in 1998, on the back of weak consumer spending and a collapse in investment, data for the first quarter of 1999 suggest a recovery in growth of 1·9 per cent. quarter-on-quarter. These data must be treated with caution, however, as they are subject to revision and almost half of the increase was accounted for by government expenditure associated with recent stimulus packages. Of the remainder, consumer spending and investment were the main contributors to growth, with net exports remaining a negative influence. Although exports fell less than in the last quarter of 1998, imports rose markedly in the first quarter. Turning to monthly data, the picture is more mixed, with machinery orders and industrial production showing an increase on previous months, while price data remained very subdued. In the first quarter, consumer prices were broadly flat and wholesale prices recorded a decline in April. There are also reports that the tax rebates and ‘‘shopping vouchers’’ are having only a limited effect on consumer spending, as consumers use the measures to increase precautionary saving.

Looking forward, the effects of the November 1998 fiscal stimulus are expected to be felt in the second half of 1999, while the Bank of Japan’s Tankan surveys suggest that firms expect to see an improvement in economic conditions in the second half of the year and into 2000. Similarly, the leading indicators index suggests that the downturn in the economy may be levelling out, although the situation remains stagnant. Nevertheless, the OECD has revised down its growth projection and is now predicting a real GDP decline of 0·9 per cent. in 1999 and zero growth in 2000.

Economic Developments in Europe

Slow growth in Germany and Italy had detached them from the rest of the euro area, especially France, while growth in the UK economy has all but ceased. Recent data for Germany, however, point to an upturn in activity and a narrowing of the divergence, while the UK remains in a cyclical trough.

Real GDP growth in **Germany** was 2·0 per cent. in 1998, up from 1·7 per cent. in 1997. This upturn, however, masked a marked slowdown in activity towards the end of 1998. Recently released data for the first quarter indicate that the economy rebounded sharply from the weakening of late 1998. This recovery was driven by strong consumer spending and a recovery in investment. Although industrial output fell in the first quarter, monthly data suggest that the decline is slowing. The labour market has been characterised by gradually falling unemployment, although the data for April indicate that the

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

	Real GDP Growth		Unemployment Rate		Inflation[a]		Current Balance of Payments as a % of GDP	
	1998	**1999[e]**	**1998**	**1999[e]**	**1998**	**1999[e]**	**1998**	**1999[e]**
	%	%	%	%	%	%	%	%
Belgium	2·9	1·9	11·7	11·1	1·0	1·3	4·2	4·3
Germany	2·8	1·7	11·2	10·7	0·9	0·7	–0·2	0·0
Spain	3·8	3·3	18·8	17·4	2·0	2·2	–0·3	–1·4
France	3·2	2·3	11·8	11·3	0·3	0·7	2·8	2·6
Ireland	10·4	7·5	7·7	6·4	2·6	2·9	1·9	0·5
Italy	1·4	1·4	12·2	12·1	2·4	1·7	2·0	1·9
Netherlands	3·8	2·2	4·2	3·9	1·8	1·9	5·6	5·3
Austria	3·3	2·2	6·4	6·3	0·9	0·7	–2·1	–2·0
Portugal	3·9	3·1	5·0	5·0	2·8	2·5	–4·3	–4·5
Finland	4·7	3·3	11·4	10·6	0·7	1·1	5·8	5·8
Total Euro-Area	2·9	2·1	11·7	11·2	1·3	1·2	1·4	1·2
Denmark	2·9	1·6	6·3	5·7	1·7	2·3	–1·4	–1·5
Greece	3·5	3·0	10·1	10·2	4·7	2·7	–3·0	–2·9
Sweden	2·9	2·4	6·5	5·6	0·5	0·7	2·1	1·5
UK	2·1	0·7	6·2	6·7	2·1	2·4	0·1	0·1
Total EU	2·8	1·9	10·5	10·1	1·5	1·4	1·1	1·0
US	3·9	3·6	4·5	4·2	0·8	1·3	–2·7	–3·4
Canada	3·0	2·9	8·3	7·8	1·2	1·7	–2·1	–1·9
Japan	–2·8	–0·9	4·1	4·9	0·4	–0·3	3·2	3·0

a Private consumption deflators.
Source: OECD Economic Outlook, estimates and projections.

unemployment rate rose marginally to 10·6 per cent. from 10·5 per cent. in March. Inflation has remained subdued, with consumer price data showing an increase of 0·8 per cent. for April, which was slightly inflated by the introduction of energy taxes on 1 April.

For 1999, the ongoing weakening in exports is expected to slow the German economy. The expected pick up in global activity, allied to a favourable international competitive position, should allow the economy to enter a recovery phase later in 1999. Survey data also show positive expectations for the future on the part of consumers and industry. The latest OECD projection is for growth of 1·7 per cent. in 1999, rising to 2·3 per cent. in 2000 — broadly in line with the Consensus view.

Preliminary data suggest that real GDP growth in **France** slowed in the first quarter of 1999. Consumer spending slowed and exports fell further, after a decline in late 1998, while imports also fell but not as much as exports. The key growth factor was investment which increased by 2·2 per cent. over the previous quarter. Survey data suggest that activity is expected to increase and that investment is expected to continue rising in 1999, albeit at a slower rate. The improvement in unemployment generated by the economic strength of 1998 has continued into this year. The unemployment rate fell to 11·4 per cent. in April compared to an average of 12·5 for 1997 and 11·8 for 1998. Inflation remains subdued with HICP inflation running at about 0·5 per cent. year-on-year.

Three-Month Interest Rates **Table 2**

	Euribor	US Dollar	Japanese Yen	Sterling
	%	%	%	%
31 December 1998	3·24	5·00	0·25	6·11
29 January 1999	3·07	4·92	0·36	5·70
26 February 1999	3·10	4·95	0·17	5·33
31 March 1999	2·97	5·00	0·19	5·19
30 April 1999	2·58	4·99	0·15	5·19
31 May 1999	2·58	5·07	0·10	5·44

The French economy is expected to experience moderating growth in 1999, with continued strong consumer spending and revived exports restoring more rapid growth into 2000. The OECD projects growth of 2·3 per cent. in 1999, compared to 3·2 per cent. in 1998, rising to 2·6 per cent. in 2000 — Consensus estimates concur with this outlook.

Outside the euro area, the **UK** economy slowed down markedly in the latter part of 1998, with real growth falling to zero in the first quarter of 1999. Although there is weakness across a range of sectors, the services sector has performed better than manufacturing, which has displayed a significant decline in output. Consumer spending strengthened in the first quarter, driven by the timing of Easter and car purchases associated with the change in registration markings. Investment spending fell back in the first quarter, along with exports which were hit by the strength of sterling and weak external markets. With imports declining less than exports, net exports fell to a record low and exerted a negative influence on growth. Although the trade deficit appeared to close slightly during recent months, the improvement in March was due to the erratic category. Exclusion of this and the oil category uncovers an underlying widening of the deficit back to record levels. The labour market remains tight with the unemployment rate declining to 4·6 per cent. in the first quarter after a rise towards the end of 1998. Average earnings growth was 4·8 per cent. in the three months to March but remains weaker than the 5·7 per cent. peak in mid-1998. Across sectors, unit labour costs for the whole economy rose sharply at the end of 1998, while manufacturing unit cost growth has shown a decline in recent months.

Recent survey data suggest a marked improvement in orders and output expectations in coming months. The outlook is for growth in the UK economy to slow markedly in 1999 before picking up into 2000, with activity being dampened by depressed investment, slowing consumer spending and weak export demand. The OECD is projecting growth of 0·7 per cent. for 1999 and 1·6 per cent. for 2000, although Consensus estimates suggest a much stronger rebound in 2000.

On the basis of the outlook for the global economy, growth in Ireland's main trading partners is projected to decline to 1·6 per cent. on a weighted basis from 2·5 per cent. in 1998.

International Price Developments

The external inflation environment facing the Irish economy has deteriorated somewhat since the beginning of 1999 but remains broadly favourable. Aggregate demand in most of Ireland's external markets, with the exception of North America, remains weak and this is reflected in very low consumer price inflation and, in many cases, falling producer prices. In addition, an industrial capacity overhang continues to suppress traded goods price inflation. However, during March and April there was a sharp rebound in crude oil prices, although they fell back somewhat during May. In addition, non-oil commodity prices have shown signs of bottoming out in recent months. The sharp decline in the value of the euro exacerbated the effect of these increased external inflationary pressures on the Irish economy. It is this last factor which poses the greatest threat to price stability in Ireland in the coming year.

The sharp fall in oil prices during the final quarter of 1998 and in the first two months of 1999 was quickly reversed during March and April. According to the Economist dollar index, the price of North Sea Brent Oil increased by 33·3 per cent. in the month to the end of March and increased by a further 7·6 per cent. in the following month. Although prices subsequently declined, by the end of May they remained over 10 per cent. higher, year-on-year. Non-oil commodity prices appeared to bottom out, on average, during April and May and in some cases there were significant increases. Nevertheless, reflecting the cumulative decline in previous months, the Economist dollar index of non-oil commodities was 11·8 per cent. lower, year-on-year, at the end of May.

Consumer price inflation remained relatively weak in most of Ireland's major trading partners during the early months of 1999. The year-on-year increase in the HICP averaged 0·9 per cent., in the euro area and 1 per cent. in the EU as a whole in the first quarter. Over the same period, year-on-year consumer price inflation was 1·7 per cent. in the US while in Japan consumer prices declined by 0·4 per cent., year-on-year, in March. Producer price inflation was negative during the first quarter in most euro area countries and averaged –2·3 per cent., year-on-year, in March for the euro area overall. In Japan, producer prices declined by 1·9 per cent., year-on-year, in April but they increased by 1·1 per cent. over the same period in the US.

In summary, despite recent developments in commodity markets, the international inflationary outlook remains relatively benign. However, the sharp decline in the value of the euro since the beginning of the year is likely to lead to significant upward pressure on traded goods inflation in the latter half of this year and in the early months of 2000.

Monetary Developments

Since early-March there has been a further easing of concerns that the economic and financial crises in a number of emerging market economies would cause spillovers into other financial markets. The focus shifted to the possibility of a monetary tightening in the US in response to its strong economic performance and of monetary easing in Europe to shore up the weakening economy. Consequently, market expectations about official interest rate movements in the major economies continued to be divergent. US interest rates are expected to rise more strongly than those elsewhere over the coming year.

On 9 April 1999, the ECB Governing Council effected a monetary easing in the **euro area** when it lowered the interest rate on the main refinancing facility from 3·0 per cent. to 2·5 per cent. At the same time, the interest rate on the minimum lending facility was lowered by 1 percentage point to 3·5 per cent. and the rate on the deposit facility declined from 2·0 to 1·5 per cent. This decision was taken on the basis of a weakening economic situation in the euro area and a judgement that there are no significant medium-term inflationary pressures. Although monetary aggregates have been growing slightly ahead of the 4·5 per cent. reference rate, the Governing Council judged that this did not signal any upcoming inflationary pressures.

Market interest rates at both overnight and three month maturities have continued their downward trend. The three-month EURIBOR fell from 3·09 per cent. in early-March to stand at 2·6 per cent. in early-June. Although market rates had fallen in anticipation of the monetary easing, the three-month EURIBOR declined by a further 24 basis points on 9 April, indicating that the cut in ECB interest rates was greater than expected. In the light of the cut, futures rates have also fallen and suggest no further interest rate movements this year. At longer maturity, 10 year bond yields have been affected by both euro area and non-euro area factors over the period in question. During April 1999, expectations of an interest rate cut, weak economic data and, subsequently, the larger than expected ECB rate cut served to push yields down by roughly 15 basis points over the month, decoupling euro area bond yields from those in the US. During May, however, external factors reasserted their dominance, with spillovers from the US bond market pushing up European yields by over 20 basis points. Nevertheless, the spread between US and euro-area 10 year yields has widened to over 150 basis points, suggesting that there has been no fundamental change in expectations about euro-area performance.

After a period of easing, monetary policy in the **US** has been held steady for some months, with the Federal Funds target rate being held at 4·75 per cent. In the wake of strong inflation figures for April, however, the Federal Reserve Board issued a statement on 18 May warning of potential inflationary pressures and indicating that it would be adopting a tightening bias in monetary policy. This warning, combined with strong economic data releases, precipitated a rise in US interest rates, as market expectations of a near-term interest rate increase were heightened. This is reflected in US 10 year bond yields, which marked time in March and April before rising rapidly in May to stand about 50 basis points higher than at the start of March.

Monetary policy in **Japan** was eased further over the period. In mid-February the Bank of Japan announced that it would guide overnight call rates down to a target of 0·15 per cent.; in addition, the emergency lending facility for banks was halved. In the event, the Bank of Japan pushed overnight call rates down to near zero during March and has held them there since. Commercial banks, however, have been reluctant to cut lending rates on the grounds that profits would be adversely affected. After a period of volatility at the start of the year, relative calm returned to the Japanese bond market over the period. Yields declined from the beginning of March to mid-May on worries about deflation and ongoing recession, combined with a monetary policy stance facilitating short-term borrowing at low cost to finance higher yielding longer term assets. More recently, expectations that a

CHART 1

Selected Official Interest Rates

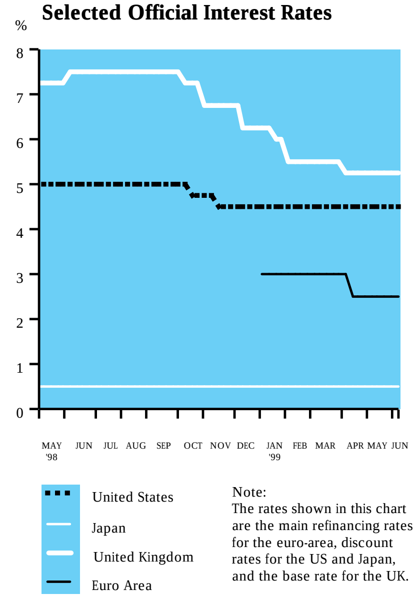
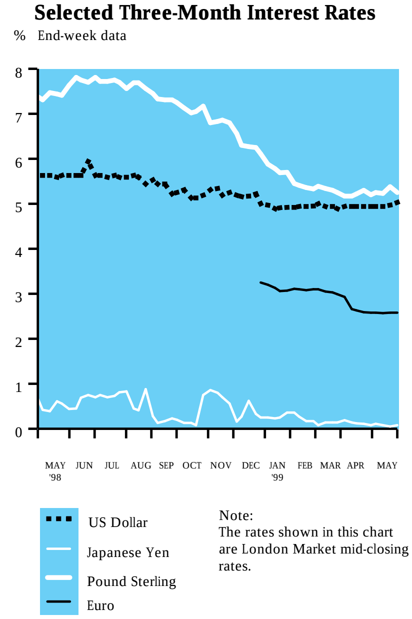


CHART 2

Selected Three-Month Interest Rates



further stimulus package may be introduced have pushed bond yields up on concerns about the sustainability of the Japanese public finances.

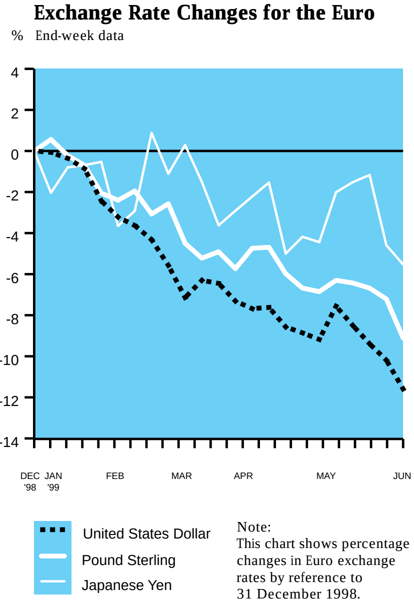
UK monetary policy eased further over the period since the start of March, in response to ongoing concerns about the weakening of the economy. Bank base rates were lowered by a quarter of a percentage point on 8 April with a further quarter point cut to 5 per cent. on 10 June. These reductions followed several sets of weak economic data and the Bank of England cited the risk of undershooting its 2·5 per cent. inflation target as the reason for easing policy further. The most recent cut was not expected and futures markets responded by revising upwards the predicted interest rate increase for next year. Prior to the April interest rate cut, UK ten year yields had fallen from earlier levels; however, the rate cut pushed yields up. After the last cut, 10 year yields rose slightly to stand at 5·1 per cent. on 10 June, making the UK yield curve almost flat.

Exchange Rate Developments

As noted above, interest rate expectations continue to diverge across the major economies. This factor and differing economic performance are reflected in the evolution of the exchange rate of the euro, which has depreciated markedly since the start of the year.

CHART 3

Exchange Rate Changes for the Euro



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

The euro continued to weaken against the **US dollar** over the period, falling from 1·08 dollars to euro on 4 March to stand at 1·05 on 10 June. Since 4 January, the start of trading, the euro has weakened by 11 per cent. against the US dollar. Aside from the effects of the Kosovo conflict, the recent strengthening of the US dollar reflects the strong growth performance of the US economy combined with low inflation, and ongoing market expectations of higher interest rates in the US relative to the euro area. **Sterling** moved broadly in line with the US dollar, appreciating from 0·67 to the euro on 4 March to 0·65 on 10 June. This contributed to an 8·0 per cent. appreciation against the euro since 4 January, again driven by divergent interest rate expectations. The **Japanese yen** remained relatively volatile against the US dollar and the euro, fluctuating between 124 and 134 to the euro over the period, before closing at 125 on 10 June 1999. Uncertainties about the economic outlook and the growing fiscal deficit appear to have been the main factors behind the volatility.

Section 2

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.

Derivatives Markets Activity in Ireland: An Overview

by Jim Nugent[1]

Introduction

A recently published report by the Bank for International Settlements[2] (BIS) highlighted the continued rapid growth in over-the-counter (OTC) derivatives markets activity in most countries which participated in the survey, including Ireland. Indeed, in many industrialised countries, the expansion in derivatives markets often outstrips that of regular financial markets (e.g., the foreign exchange market). The increasing recourse to financial derivatives by financial institutions, corporate entities as well as government bodies, is of direct relevance to central banks both from a supervisory, and a monetary policy, perspective. For example, in recent years, the high profile Barings Bank debacle and the case of Long-Term Capital Management, highlight the urgent need for improving transparency and the monitoring of the use of derivatives markets instruments by credit institutions and investment intermediaries.

According to a study by the International Monetary Fund,[3] in economies with well developed derivatives markets, such as the United Kingdom, the transmission mechanism of monetary policy is speeded up. This is because large-scale derivatives usage leads to greater market efficiency (via hedging, leveraging, and ease of substitution between different assets). In addition, transactions costs are lowered relative to underlying markets. These effects result in policy changes being transmitted to some asset prices more quickly.

Against this background, the results for Ireland confirm the trends evident from other statistical sources that growth in the use of derivatives has been substantial in the three year period from 1995 to 1998. For example, average daily turnover of OTC instruments in Ireland rose by 63 per cent. Other notable characteristics include an apparent shift in the composition of derivatives instruments, e.g., away from forward rate agreements (FRAs) and towards interest rate swaps, currency options as well as currency swaps. Activity appears to remain mainly confined to these so-called ‘plain-vanilla’ instruments — due to liquidity reasons no doubt. There is a relatively high degree of concentration of derivatives usage among the main credit institutions (compared with the large international financial centres). Finally, while measures of credit exposure obtained from the survey appear to suggest that institutions are taking some small open, as opposed to hedged, positions, the OTC derivatives data take no account of netting and the role of collateral. Furthermore, OTC activity may be entered into to hedge exposure in some other part of an institution’s business.

Turnover of OTC Derivatives

The focus of the analysis throughout this section is on OTC derivatives which comprise the following instruments:[4] forward rate agreements (FRAs), interest rate swaps, interest rate options, currency swaps and

1. The author is an economist in the Monetary Policy and Statistics Department. The views expressed in this article are the sole responsibility of the author and not necessarily those of the Bank. I wish to thank colleagues at the Bank who provided comments on earlier drafts of this paper.

2. Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1998, Basle, May 1999.

3. Vrolijk, C. (1997). ‘Derivatives effect on monetary policy transmission’, IMF Working Paper WP/97/121, September.

4. The amounts outstanding section also collected data on equity, commodity and credit derivatives.

currency options. The 'traditional' foreign exchange market instruments, namely, spot, outright forwards and FX swaps are not covered. For a detailed description of the BIS Survey and Methodology see Annex 1. In addition, Annex 2 contains a list of the definitions of the financial derivatives. In comparing the results of the 1995 and 1998 Irish turnover surveys, one should note that:

(i) the data are expressed in US dollars to facilitate international comparisons; hence dollar fluctuations in the intervening period need to be accounted for, and

(ii) the number of credit institutions in the sample has risen significantly; consequently the growth in the use of derivatives instruments may not necessarily imply 'organic' growth among existing institutions.

Figure 1 compares the breakdown of turnover by instrument type for the 1998 and the 1995 surveys. As can be seen, total average daily turnover, adjusted for double counting by local reporting dealers[5] increased by 63 per cent. The most striking features to note, however, are the sharp drop in the share of activity in the FRA market and a corresponding growth in interest rate swaps, as well as currency swaps and currency options (albeit both from a low base). Although FRAs remain the largest OTC derivatives instrument traded, there was a contraction in total FRA turnover (average daily turnover fell by almost 17 per cent.). This arose from a general lack of volatility and low interest rates on money markets which made trading in FRAs less attractive to market-makers. In addition, it is notable that turnover in Irish-pound FRAs grew more than three-fold over the three-year period, which was more than outweighed by a fall in the turnover of FRAs denominated in foreign currencies. The reason for this fall-off in activity is that there is a trend among participants in the marketplace to shift away from FRAs and into interest rate futures.[6]

Growth in the interest rate segment of the OTC markets was driven by swaps with turnover more than 300 per cent. higher than in the previous survey. Much of this was driven by swaps denominated in the 'other EMS currencies' category[7] and, to a lesser extent, Deutschemark-denominated swaps (with average daily turnover up almost 875 per cent.) with cross-border reporting dealers. As the BIS[8] (1998) points out, there was a similar expansion in DM-denominated swaps globally, and these were often counterparts to cash and derivatives transactions involving other EU countries (as well as a euro-proxy). The period covered is also a factor explaining the high volume of swap transactions, as it was near the announcement of euro conversion rates for pending monetary union members and was accompanied by a flattening of the main European swap curves. With regard to Irish pound-denominated swaps, growth in average daily turnover was also rapid (at 144 per cent.) reflecting the continued popularity of fixed rate mortgages.

Another interesting development apparent from the trends presented in Figure 1 is the extremely rapid rise in turnover in both currency swaps and currency options – albeit from a very low base at the time of the 1995 survey. With regard to currency swaps, the vast bulk of trading during the month (89 per cent. of total turnover) was with

5. i.e. each single transaction is reported by both parties. This adjustment is termed 'net-gross'.

6. It is possible to construct a hedge, or take a speculative position, that exactly 'mimics' the behaviour of a FRA. Interest rate futures, despite obvious drawbacks in terms of lack of flexibility etc., possess the advantage that they are 'cleaner' instruments, i.e. the buyer/seller is dealing directly with an exchange, it is easier to obtain price quotes at times of market volatility (with FRAs these quotes are often difficult to obtain, and when available, are often uncompetitively priced).

7. i.e. currencies other than Deutschemark, French Franc and Pound Sterling.

8. Bank for International Settlements (1998), *International Banking and Financial Market Developments* Quarterly Review, November. Also contained in press release of 19th October 1998.

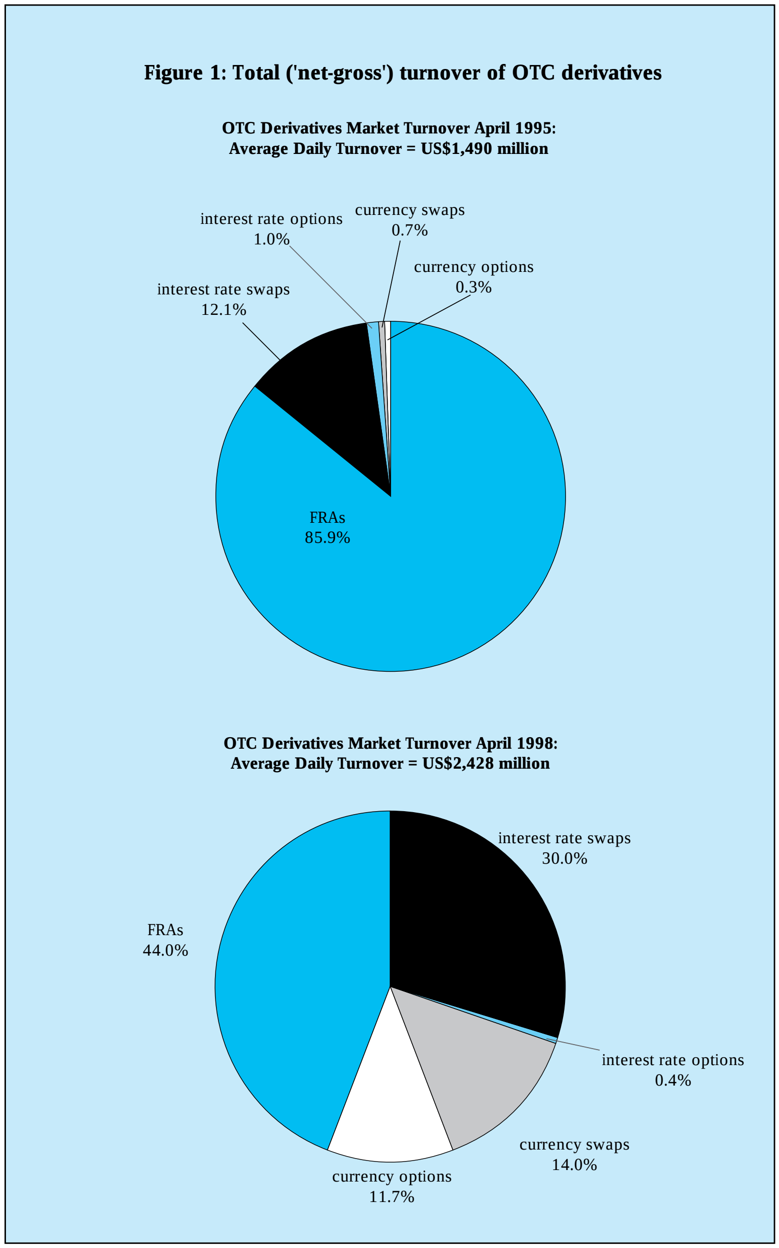


Figure 1: Total ('net-gross') turnover of OTC derivatives

reporting dealers located abroad. In other words, there was little local inter-bank market-making (the risk aspect associated with currency swaps is discussed later). In addition, currency swaps involving the US dollar were easily the most actively traded with 90 per cent. of total turnover. This perhaps reflects a combination of the liquidity of the market in question (i.e., for proprietary risk-taking motives) as well as a significant Irish corporate presence in the US and vice-versa (i.e., this would generate hedging activity). A hypothetical example, presented in Annex 3, illustrates the process involved in a typical currency swap between a bank and a corporate entity.

In the case of currency options, this market has grown over the past three years in tandem with the development of more liquid currency futures markets in the US. Turnover in this instrument was almost entirely (99 per cent.) with cross-border reporting dealers and contracts involving the US dollar and Deutschemark accounted for almost all turnover (52 per cent. and 47 per cent., respectively). Options of this type are generally used by investors or traders who want to take the opportunity to gain if a currency moves in their favour at times of volatility, but who wish to be protected at the same time against adverse exchange-rate movements.

Some International Comparisons

A glance at Table 1 reveals that London has firmly consolidated its position as the leading world centre of the OTC derivatives industry with a share of 36 per cent. of cent. of global turnover during April 1998 following an increase of 131 per cent. in turnover over the three year period. The second biggest market, the US, also registered significant expansion in activity over the period (71 per cent.), although its market share declined marginally. Perhaps unsurprisingly, due to the prolonged slump in Japanese economic activity, absolute growth in turnover was relatively sluggish: its relative share declined sharply from 12·2 per cent. of global turnover to 8·9 per cent. (the French market now has the third highest turnover globally). As mentioned above, Irish OTC derivatives turnover rose by a significant 63 per cent. over the period, boosted *inter alia* by rapid growth in swap activity. This volume was generally less robust than was the case in many of the major international financial centres. As a result, the Irish share of global turnover actually declined slightly from around 0·6 per cent. to 0·5 per cent. in the three year period despite the influence of newly established operations at the International Financial Services Centre (IFSC) and the buoyant domestic economy.

OTC Derivatives ('Net-Gross') Turnover* — International Comparisons **Table 1**

Daily averages in US$ million	April 1995	% share of global market	April 1998	% share of global market	% change 1995-1998
UK	73,816	27·5	170,777	36·0	131
USA	53,136	19·8	90,936	19·2	71
France	22,269	8·3	45,848	9·7	106
Japan	32,800	12·2	42,051	8·9	28
Ireland	1,490	0·6	2,428	0·5	63
Global 'net-gross' total	268,902	100·0	474,179	100·0	76
Euro-area 'net-gross' total	60,704	2·5†	112,080	2·2†	85

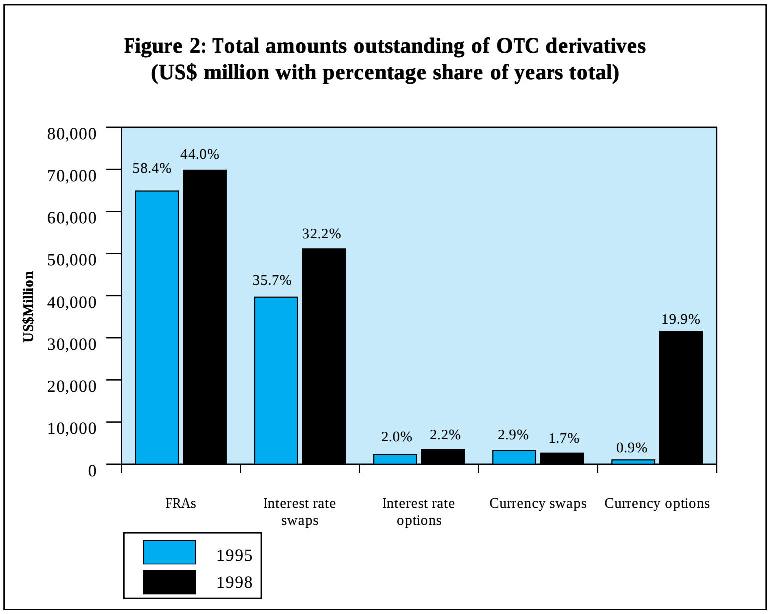
* OTC derivatives comprise: FRAs, interest rate swaps, interest rate options, currency swaps, and currency options. The amounts outstanding section, discussed later, also includes equity, credit and commodity derivatives. The turnover data is adjusted for local dealer double-counting — termed 'net-gross'.

† Ireland's share of euro-area turnover. Euro-area comprises Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland.

Amounts Outstanding of OTC Derivatives and Gross Market Values

— Notional Amounts Outstanding

Nominal or notional principal amounts are used as a reference in calculating cash flows under individual contracts and the associated potential transfer of risk. Figure 2 shows that interest rate instruments accounted for approximately 78 per cent. of total amounts outstanding of OTC derivatives instruments in Ireland at end-June 1998 (down from 96 per cent. at end-March 1995). As in the case of the turnover part of the survey, the largest single instrument remained FRAs followed by



swaps. The share of both types of instrument as a percentage of the total have diminished, however, compared to the previous survey (particularly in the case of FRAs). The main factor underlying this development has been the substantial growth in the use of currency options which was discussed earlier. An apparent inconsistency exists between the trends evident for turnover and amounts outstanding of currency swaps in Figures 1 and 2, respectively. This can be explained by the different reporting basis in the two parts of the survey. In the turnover section, reporting of new contracts during April 1998 was on a location basis whereas data for the amounts outstanding for end-June 1998 was compiled on a consolidated basis. A number of foreign credit institutions located in Ireland were active in the currency swap market during April but would not have appeared in the end-June figures due to consolidation (the data would have been reported by their parent institution to the central bank where the parent institution has its head office). The breakdown of currency swaps by counterparty was broadly-based with the largest share, at over 45 per cent., involving non-financial customers, i.e., corporate entities and the government/National Treasury Management Agency. Other reporting dealers, i.e., dealers located in the G-10 group of regular reporting countries, accounted for almost 37 per cent. of the total.

As currency swaps involve the exchange of principal unlike interest rate swaps, their market value is particularly sensitive to price fluctuations in the underlying assets. There are additional capital requirements associated with currency swaps relative to derivatives which are ‘off-balance sheet’ as the former give rise to higher counterparty credit risk. Possibly as a result of this, Irish credit institutions seem to engage in little ‘market-making’ in this type of instrument (only the large international financial institutions engage in ‘warehousing’ currency swaps). A market for currency swaps exists in Ireland largely through demand from non-financial institutions, e.g., the corporate sector and the NTMA.

Table 2 presents figures for notional amounts of the broad classes of foreign exchange[9] and single currency interest rate derivatives, as well as data collected for equity, credit and commodity derivatives. In addition, Tables 3 and 4 provide a breakdown by maturity, counterparty and currency for notional amounts outstanding of both classes of derivative contracts. As shown in Table 2, amounts outstanding of derivatives instruments were almost evenly divided between single currency interest rate derivatives (almost 49 per cent. of the total) and foreign exchange contracts (at almost 50 per cent.). This compares with 67 per cent. and 33 per cent. in the previous survey. The 1998 survey also showed that equity derivatives accounted for just over 1 per cent. of the total while credit derivatives amounted to a mere 0·1 per cent.; there were no commodity derivatives contracts outstanding.

Amounts Outstanding and Gross Market Values by Instrument **Table 2**

US$ million	End-March 1995				End-June 1998			
	Notional amounts	Gross market value (GMV)	*of which:* Positive GMV	Negative GMV	Notional amounts	Gross market value (GMV)	*of which:* Positive GMV	Negative GMV
Interest-rate contracts[a]	**106,761**	3,452	2,044	1,408	**124,338**	1,260	618	642
FRAs	64,849				69,792			
Swaps	39,655				51,104			
Options	2,257				3,442			
FX contracts	**51,606**	1,827	1,003	824	**126,347**	6,281	3,299	2,982
Outright forwards and FX swaps	47,368				92,200			
Currency swaps	3,226				2,621			
Currency options	1,012				31,526			
Equity contracts					**3,294**	918	843	75
Credit linked contracts					**219**			
Commodity contracts					—			

a Single currency interest rate derivatives only.

According to the BIS,[10] market participants expect equity- and credit-derivatives will experience the most rapid expansion in activity over the next few years. A number of factors which have been driving the demand for equity derivatives include the uncertainty over equity market valuations and the increasing popularity of long-maturity guaranteed savings products (e.g., tracker bonds) as investors substitute out of low interest-bearing fixed income products.

In Table 3, the breakdown by maturity reveals that the vast bulk of foreign exchange contracts are of short duration, i.e., less than one year, with the exception of currency swaps (these make up the remaining 4 to 5 per cent.). Table 4 shows that for single currency interest rate derivatives, however, the maturity profile is skewed towards longer maturity instruments with contracts between one and five years amounting to 42 per cent. of the total (short-term contracts make up around 55 per cent.). In terms of currency distribution, contracts with Irish pound and sterling legs, have a significantly higher

9. Foreign exchange contracts comprise outright forwards and FX swaps, currency swaps and currency options. Single currency interest rate contracts are composed of FRAs, interest rate swaps, and interest rate options.

10. International Banking and Financial Markets Developments, Bank for International Settlements, Basle, August 1998.

Amounts Outstanding and Gross Market Values broken down by Counterparty, Maturity and Currency **Table 3**

US$ million Foreign exchange contracts[a]	Notional amounts (end-June 1998)	Gross market value (GMV)	*of which:* Positive GMV	Negative GMV
Total contracts:	**126,347**	**6,281**	**3,299**	**2,982**
by counterparty				
– Other reporting dealers	90,718			
– Other financial institutions	20,800			
– Non-financial customers	14,829			
by maturity				
– up to 1 year maturity	120,421			
– 1 to 5 years maturity	5,283			
– Over 5 years	643			
by currency				
– US dollar	57,568	2,964	1,561	1,403
– Deutschemark	15,832	339	160	179
– Japanese yen	781	78	50	28
– Sterling	22,061	593	265	328
– French franc	628	31	30	1
– Swiss franc	408	26	16	10
– Irish pound	22,037	551	307	244
– Other	7,032	1,699	910	789

a Includes outright forwards, FX swaps, currency swaps and currency options.

share of amounts outstanding for single interest rate derivatives than is the case for foreign exchange derivatives (see Table 3 and 4). For contracts with a US dollar leg, the opposite is the case.

— Gross Market Values

Nominal or notional principal amounts outstanding is a good indicator of the risk the derivatives contract is exposed to in relation to price movements in the underlying asset. A more accurate indicator of counterparty credit exposure and payment obligations, however, is provided by gross market values (GMV), which are the replacement values of the derivative instruments evaluated at market prices at the reporting date. These values arise from a number of factors such as

Amounts Outstanding and Gross Market Values broken down by Counterparty, Maturity and Currency **Table 4**

US$ million Single currency interest rate contracts[a]	Notional amounts (end-June 1998)	Gross market value (GMV)	*of which:* Positive GMV	Negative GMV
Total contracts:	**124,338**	**1,260**	**618**	**642**
by counterparty				
– Other reporting dealers	94,028			
– Other financial institutions	28,493			
– Non-financial customers	1,817			
by maturity				
– up to 1 year	67,806			
– 1 to 5 years	52,603			
– over 5 years	3,930			
by currency				
– US Dollar	23,226	206	123	83
– Deutschemark	10,941	92	52	40
– Japanese Yen	1,063	8	5	3
– Sterling	32,627	384	158	226
– French Franc	622	15	8	7
– Swiss Franc	889	11	2	9
– Irish Pound	37,077	483	237	246
– Other	17,893	61	33	28

a Includes FRAs, interest rate swaps and interest rate options.

market volatility, e.g., the more volatile the market in the underlying asset the higher the gross market value of the derivative instrument.

The GMVs for single currency interest rate derivatives amounted to 1 per cent. of notional amounts compared to 5 per cent. for foreign exchange contracts at end-April 1998[11] (see Table 2). Given the caveats associated with comparing the results of the 1998 and 1995 surveys, it is nevertheless valid to compare the ratios of gross market values to nominal amounts in both years. In the case of interest rate contracts, GMVs were 3·2 per cent. of notional amounts in 1995 and foreign exchange contracts 3·5 per cent.[12]

This is the opposite to what occurred globally, where there was a sharp decline in the ratio for foreign exchange contracts and a rise in the ratio for interest rate contracts between the two periods. According to the BIS, the global pattern can be explained by the fact that there was greater volatility in the underlying markets in the period up to March 1995 (the US dollar depreciated sharply vis-à-vis the Yen and Deutschemark) than in run up to June 1998. In addition, there was a shortening in the maturities of foreign exchange contracts (i.e., there was less time for GMVs to accumulate). Finally, the difference in the ratio of GMVs to nominal amounts between foreign exchange contracts and interest rate contracts can be explained by the fact that most foreign exchange contracts involve an exchange of principal as well as exposure to exchange rate as well as interest rate risks. These factors would explain why GMVs for foreign exchange contracts make up a larger percentage of *total* GMV in the derivatives markets than their corresponding share of *total* notional amounts outstanding.

As a measure of current credit exposure, gross *positive* market values tend to be used. In Tables 2, 3 and 4, these values are presented for foreign exchange contracts and single currency interest rate contracts,[13] respectively. Expressed as a proportion of gross nominal amounts, the current credit exposure of foreign exchange contracts has risen to 2·6 per cent. from 1·9 per cent. in the previous survey. This is lower, however, than the global position reported by the BIS of 3·1 per cent. For single currency interest rate derivatives, current credit exposure is very small (0·5 per cent.) compared to 2 per cent. globally and 1·9 per cent. at end-March 1995. Once again, the higher share of total gross positive market value due to foreign exchange derivatives contracts is due to the fact that the exchange of principal at maturity, etc., gives rise to greater sensitivity of market values to changes in the prices in the underlying markets. Expressed as a proportion of total risk-weighted assets in the banking book of participating institutions, credit risk amounted to 4·8 per cent. in the case of foreign exchange contracts and 0·9 per cent. for single currency interest rate contracts.

It is notable that some deviation of gross positive market values from negative market values is quite common among individual institutions. While this suggests that reporting institutions appear to be taking small open, as opposed to hedged, positions in OTC contracts, the data take no account of netting and the existence of collateral.[14] Furthermore, OTC activity may be entered into to hedge exposure in some other part of an institution's business. Examining GMVs in isolation can, therefore, provide only a partial assessment of the risk which firms are

11. A small number of institutions participating in the survey, however, failed to submit GMV data, either due to lack of resources or possibly due to a failure to understand the meaning of the concept, so this imparts a downward bias to the total GMV figures.

12. Overall, however, total GMV (i.e. the sum of GMVs for foreign exchange plus single currency interest rate contracts) remained unchanged at 3·3 per cent. between the two periods.

13. There is no adjustment for double counting between local reporting dealers.

14. For the purposes of calculating position risk requirements under the Capital Adequacy Directive (CAD), firms are permitted to net out their trading book positions in instruments which are the same. A trading book is defined as a position in any financial instrument which is held for resale or for benefitting in the short-term from variations in prices or interest rates.

exposed to. In addition, GMVs provide no indication of future credit exposure and merely give a 'snapshot' at a point in time.

In addition to the reasons given above, the figures in this section should be interpreted with a degree of caution as a (small) number of institutions which participated in the survey omitted data on GMVs. This was either due to a lack of resources to comply with the reporting burden or, possibly, a lack of understanding of the meaning of the concept perhaps. The latter is unlikely, however, as such information is routinely produced by dealers as part of reporting to regulators.

Conclusions

The second combined survey on foreign exchange and derivatives markets activity, conducted by the Bank on behalf of the BIS, has confirmed earlier indications that activity in OTC derivatives markets remains confined primarily to 'plain vanilla' instruments. There has been a shift in the composition of the most popular instruments, however, e.g., while FRAs remain the most popular in terms of turnover and amounts outstanding, there has been a large increase in the share of some other instruments, notably currency options. In addition, activity is relatively more concentrated than in the larger and more developed markets. Furthermore, the data on gross market values suggest that institutions appear to be taking small open positions in OTC contracts although the ability to hedge using netting and other arrangements has not been taken into account in the survey. A number of additional caveats associated with using the GMV measure in isolation, however, were highlighted.

More generally, given the nature of OTC derivatives markets, aggregate information on OTC activity is less accessible (i.e., in terms of timeliness and reliability) than it is for exchange-traded activity. The latest data, however, indicate that notional amounts of OTC derivatives contracts were almost five times the level of exchange-traded derivatives. Furthermore, counterparty credit exposure is more of an issue in OTC markets than in exchange-traded derivatives markets (i.e., due to margin calls, etc. in the latter). Issues such as these underline the importance of the BIS survey for central banks and regulators generally.

ANNEX 1

The BIS Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1998 — Methodology

The Bank conducted a survey of credit institutions in Ireland during 1998 as part of the internationally co-ordinated survey carried out by the BIS. The main objective of the survey is to obtain reasonably comprehensive and internationally consistent information on the size and structure of foreign exchange and over-the-counter (OTC) derivatives markets. Transactions of exchange-traded derivative instruments were excluded from the survey. The first time the joint survey was undertaken was in April 1995. In total, 43 countries participated in the 1998 survey (compared with 26 in the 1995 survey).

All credit institutions were requested to provide information on turnover volumes for the 20 business days in April 1998. Details were requested on transactions by instrument (interest rate swaps, forward rate agreements, etc.), by type of counterparty (i.e. other reporting dealers, other financial institutions, and non-financial institutions), by maturity, by currency breakdown, etc. A smaller number of institutions were also asked to submit data on notional amounts and gross market values outstanding at end-June 1998. The reason for the difference in coverage was that the turnover part of the survey sought to measure the unconsolidated transactions carried out by resident offices of all credit institutions (i.e. on a location basis — the overseas branches of Irish institutions were not covered by the survey, while offices of foreign banks located in Ireland were included). In the case of notional amounts outstanding, data were compiled on a consolidated basis, i.e. amounts outstanding vis-à-vis branches and subsidiaries of the same institution, both at home and abroad, were netted out. The institutions participating in the survey were, however, also requested to submit a memorandum item detailing all arms-length transactions with its own overseas branches and subsidiaries.

The data in the 1998 survey are not, strictly speaking, comparable with the results of the 1995 survey for a number of reasons. First, the number of credit institutions surveyed for the turnover section is significantly larger: 71 in 1998 and 47 in 1995. Second, data on amounts outstanding (both nominal amounts and gross market values) were collected for on a consolidated basis for end-June 1998 in contrast to recording on a book basis at end-March 1995. When deals are recorded on a book basis, it refers to where the deals are processed. The reporting date was altered in order to be consistent with the new bi-annual statistics on derivatives markets in the G-10 countries.

A Glossary of Terms

Turnover is defined as the gross value, i.e. there is no netting of sales and purchases, of all new deals contracted in a given period, and is measured in terms of the nominal/notional amounts of the contracts. It provides a measure of market activity and is also a rough indicator of market liquidity.

Nominal or notional amounts outstanding are defined as the gross nominal or notional value of all deals concluded but not settled at the reporting date. This concept gives an indication of market size, and is a proxy for the potential transfer of price risk in derivatives markets. It also provides a comparable measure of market size in related underlying cash markets.

Gross market values are defined as the sums of the absolute values of all open contracts with either positive or negative replacement values evaluated at market prices prevailing at the reporting date. This concept provides information about the scale of gross transfer of price risks in, as well as the size of, the derivatives markets.

ANNEX 2

Derivatives Instruments Definitions

Forward rate agreement (FRAs) is an agreement between two parties wishing to modify their exposure, either by hedging or speculating, to movements in future interest rates. FRAs are off-balance sheet as there is no exchange of principal; interest flows are based on a notional principal. Under an FRA, the buyer/seller agrees to borrow/lend a specified notional principal amount denominated in a specified currency at a fixed rate of interest for a specified period (e.g. over 6 months) to begin at an agreed date in the future (e.g. 3 months from now). The buyer is protected against an increase in interest rates, though he must pay if rates fall (the opposite occurs for the seller). This payment is known as the 'settlement sum' and compensates each party to the difference between the original agreed rate of interest and that prevailing when the FRA matures.

Interest rate swap is an agreement between two parties to periodically exchange a stream of cash flows based on a notional principal amount (but calculated on different bases) denominated in the same currency on a predetermined set of dates in the future. There is no exchange of principal either at the beginning or the end of the contract. The standard interest rate swap can take the form of pay fixed/receive floating, pay floating/received fixed or pay floating/receive floating interest streams.

Interest rate option gives the buyer/seller of the option contract the right, but not the obligation, to lock into a predetermined interest rate either at maturity (European option) or at a time of the institution's choice up to the maturity of the option (American option). Examples of interest rate options include interest rate caps (an option which pays the difference between a floating interest rate and a cap rate), interest rate floors (pays the difference between the floor rate and a floating interest rate) and interest rate swaptions (an option to enter into an interest rate swap contract, purchasing the right to pay/receive a pre-determined fixed rate).

Currency swap is an agreement between two parties to exchange a stream of cash-flows, like an interest rate swap, but denominated in different currencies calculated on different, or similar, bases. Another difference is that there is always an exchange of principal at maturity and there is optionally an exchange of principal at the effective date (i.e. the commencement of the contract).

Currency option the purchaser of such an option has the right (but not the obligation) to buy/sell a pre-determined amount of a currency at a fixed exchange rate, as specified in the contract, during a specific period.

Equity derivatives are financial products whose underlying instrument is an equity security or a stock index. Examples include stock index options (gives holder the option to buy/sell a predetermined amount of an equity index at a pre-arranged price), and equity swaps (a swap which exchanges the returns on an equity index, plus/minus a spread, for a stream of payments usually based on short-term interest rates).

Credit derivatives allow market participants to hedge/sell credit risk or assume credit exposures. Examples include credit spread options (gives the holder the right to receive a cash payment if a spread, i.e. the difference between two financial assets, widens beyond an agreed strike level during a specific period) and credit swaps (commits two parties to exchange a periodic fee in exchange for a payment contingent on a default occurring or a change in credit quality of a reference asset for an agreed period of time).

ANNEX 3

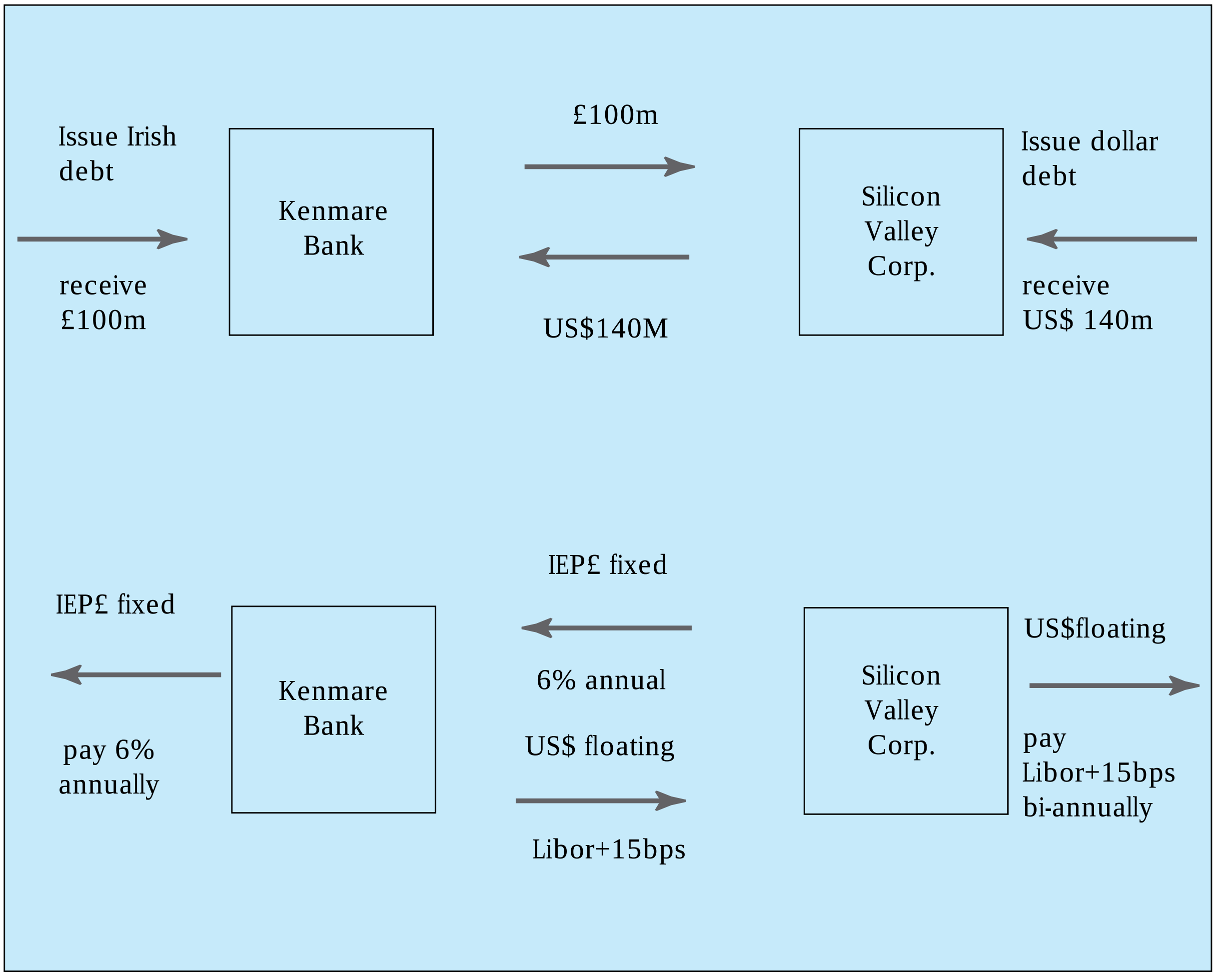
A Hypothetical Example of a Currency Swap between a Bank and a Non-Financial Firm

In the early 1990s, Silicon Valley Corporation, a US multinational, wanted to finance expansion at its Irish subsidiary. While it had easy access to short-term markets in the US it wanted to borrow at fixed-rate in Irish pounds. It contacted Kenmare Bank, a wholly-owned Irish bank, who have access to plenty of funding at fixed-rates in Irish pounds and were willing to transform part of it into LIBOR-based US dollar funding (as the loans of its American branch are normally priced on a floating-rate basis). The US corporation found that the prices Kenmare Bank were quoting were the most reasonable in the market. They agreed, therefore, to swap six-month LIBOR against fixed Irish pound for five years based on a principal of IEP£100 million which, at an exchange rate of US$1·40/IEP, amounted to US$140 million. It should be noted that by accessing the swap market, both parties avail of cheaper funding than would be the case if they tried to borrow in the absence of a swap market.

At the initiation of the swap, Kenmare Bank issue a five-year Irish pound bond receiving £100 million. At the same time, the US firm raises US$140 million. Under the terms of the currency swap, they agree to exchange the principal amounts up-front, Silicon Valley Corp. will pay Kenmare Bank 6 per cent. in Irish pounds every year in return for Kenmare Bank paying Silicon Valley LIBOR +15 b.p.s. every six months.

Silicon Valley now has received the funding it required for its expansion plans.* When Kenmare Banks' Irish pound interest payments fall due, Silicon Valley pays 6 per cent. and likewise Kenmare pays Silicon Valley the US dollar LIBOR rate plus 15 basis points when payment falls due every six months. As can be seen from the diagram both parties has a net payment that suits its preference, whether it be fixed or floating obligations. In the final year of the swap, the principal amounts are re-exchanged so that the debts, which were raised originally, can be repaid.

***Note:** *Kenmare Bank has US$140 million for which it has no immediate need. The Bank chooses to off-load it's 'long' position in US dollars on the spot market. Naturally, the Bank wishes to make a profit on this transaction by receiving a superior rate to what it got when exchanging the principal with Silicon Valley. The other dealers on the spot market sell this amount on. The foreign exchange risk associated with the dollar holding may eventually be borne by some other financial institution such as a fund management operation for either speculative purposes or to hedge an existing position. After several transactions, the turnover volumes generated indirectly by the initial exchange of principal can easily exceed £1 billion in a relatively short space of time (as each time the spot deal is transacted, turnover volume rises by US$140 million). This illustrates how foreign currency risk management, and prudent treasury operations generally, can generate large volumes of foreign exchange turnover.*


Issue Irish debt
receive £100m
Kenmare Bank
£100m
US$140M
Silicon Valley Corp.
Issue dollar debt
receive US$ 140m
IEP£ fixed
pay 6% annually
Kenmare Bank
IEP£ fixed
6% annual
US$ floating
Libor+15bps
Silicon Valley Corp.
US$floating
pay Libor+15bps bi-annually

Recent Developments in Services Inflation

by Aidan Meyler[1]

1. Introduction

Despite unprecedented recent economic growth, Irish inflation rates have remained relatively subdued. However, a clear dichotomy is evident between services inflation and goods inflation. Goods prices, driven primarily by international price trends and commodity prices, have been essentially stable since 1996,[2] whereas some inflationary pressures have been observed in the services sector. Furthermore, it is felt that the most serious risk to the inflation outlook for the near future comes from the services sector. This is because of the non-traded and labour-intensive nature of most service items.

Analysing services inflation is useful because it captures inflationary pressures arising within the domestic economy. It strips out to a large extent the impact on prices of exchange rate changes, international price trends and commodity prices. If the current level of economic activity in the domestic economy does give rise to inflationary pressures it is most likely that they will be observed in the services sector initially.

Aggregate services account for 34 per cent. of the overall Harmonised Index of Consumer Prices (HICP). It is important to note, however, that traded goods at the point of sale also incorporate a large service element, although this is not explicitly measured. Also some services include a traded goods element. Services in the HICP include, *inter alia*, alcoholic drink out[3] (32·9 per cent.), meals out (14·2 per cent.), holidays (9·7 per cent.), personal services (7·9 per cent.), telecommunications (6·1 per cent.), housing rents (5·8 per cent.)[4], entertainment (5·3 per cent.) and travel fares (4·9 per cent.). The weight for each component is derived from the Household Budget Survey that takes place every seven years.

Some items in the Consumer Price Index (CPI) are excluded from the HICP. For example, various types of insurance premia — such as motor and home insurance — account for 0·8 per cent. of the HICP services component. Health insurance premia and the non-service element of motor and house insurance, while included in the CPI, are not in the HICP. Aggregated insurance premia account for 4 per cent. (or 12 per cent. of the services element) of the CPI. The reason for exclusion of certain items from the HICP is due to methodological and structural differences in various EU countries. Thus, to ensure an index that is truly harmonised across all EU states, items for which it was impossible to ensure consistent measurement across all countries are excluded. Some of these previously excluded items will be included in the HICP from January 2000, following agreement on methodological issues concerned. This paper focuses exclusively on the HICP.

1. The author is an economist in the Economic Analysis, Research and Publications Department.

2. The ECB defines price stability as annual inflation of less than two per cent.

3. Alcoholic drink out measures the price of alcoholic drink served in pubs, restaurants, etc. It does not include the price of drink sold in off-licences.

4. Mortgage interest payments are excluded from the HICP.

It is immediately noticeable that services are not a homogenous group. The services component of the HICP encompasses a wide range of activities. Thus, attempts to forecast overall services inflation could be hampered by different economic pressures acting on different areas. This paper considers the issue of decomposing the overall services index into a manageable number of subcomponents, where the elements within each subcomponent are driven by common economic forces.

Four subcategories are identified. These are as follows: **administered services**, domestically contested services (further subdivided between **general domestically contested services** and **alcohol-related services**) and **services in transition**.[5] An explanation of each category is outlined below. The domestically contested services category was sub-divided into two sub-categories (general domestically contested services and alcohol-related services) because of the significance of alcohol-related services (33 per cent. of the overall HICP services index) and the sector specific issues relevant to the licensed sector (i.e., licensing laws and excise duties).

Services inflation, as measured by the HICP index, has, given continued strong domestic demand, been below expectations in recent months. However, when the heterogeneity of services inflation is taken into consideration, the underlying picture changes significantly. It was found that over the last six months, general domestically contested services inflation has remained strong despite a slight weakening in overall services inflation.

2. Inflation in a Small Open Economy

Inflation in a small open economy, such as Ireland, is essentially driven by two forces: external price developments and domestic demand. For goods that are traded or potentially tradable, prices generally obey the relative purchasing power parity (PPP) relationship. The relative PPP relationship holds quite well for traded goods in Ireland.[6] For example, the appreciation of sterling against the Irish pound in late 1997, showed up in an acceleration of inflation during 1998.[7] The strengthening of the Irish pound in the latter half of 1998 resulted in a slowdown in the rate of inflation in late 1998. It is possible that the recent weakness of the euro against sterling and the dollar could give rise to another increase in the rate of inflation during 1999.

Services on the other hand are generally non-traded. Therefore, the process determining services price inflation is significantly different to that determining traded goods price inflation. Another distinguishing feature of most services is the high labour content required in their provision. Services inflation is often modelled as being a function of wages and productivity changes. Thus, potential labour market shortages and associated wage developments could impact significantly on services inflation.

The non-traded nature of, and high labour content of, most services has meant that services prices have evolved considerably differently to goods prices. Figure 1 plots the gap between the annual rate of services inflation and goods inflation since 1994. On average, annual services inflation was 1·4 per cent. higher than goods inflation over the

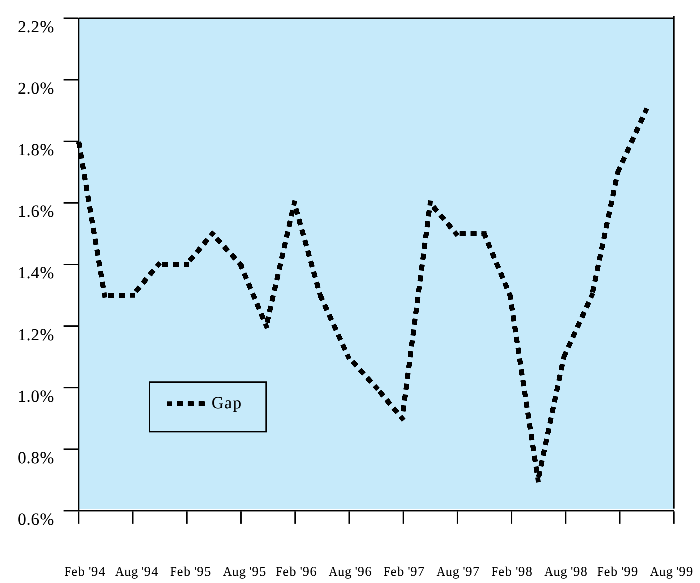
5. Two additional categories were considered (internationally contested services and non-contested services). However, these categories were discarded as they were either too small or too difficult to differentiate to warrant inclusion.

6. Kenny and McGettigan (1996) formally test and accept the hypothesis that relative PPP held for traded goods in Ireland. ''Non-Traded, Traded and Aggregate Inflation in Ireland'', Central Bank of Ireland Technical Paper 3/RT/1996.

7. However, the extent of exchange rate pass-through was limited on this occasion, possibly as sterling had moved away from its long-run value against most currencies and not just the Irish pound. See FitzGerald and Shortall (1998) for a more detailed analysis of this issue. ''Exchange Rate Changes and the Transmission of Inflation'', *ESRI Working Paper No. 96*.

entire period, although this gap was not constant. The gap has increased in recent months to approximately 2 per cent.

Figure 1: Gap Between Services and Goods Inflation, 1994-1999



3. Why is Services Inflation Generally Higher Than Goods Inflation?

Higher services inflation than goods inflation is not a phenomenon unique to Ireland. In the United States services inflation was, on average, 1·6 per cent. above goods inflation over the period 1970-1990.[8] Three alternative reasons have been put forward for explaining higher services inflation.

The first point is that services inflation may be mismeasured. Therefore, it is argued that, higher services inflation than goods inflation is merely a construct of the data and does not reflect the true picture. The main problem lies in accounting for quality changes. The quality of services can usually only be determined simultaneously with their consumption. On the other hand, goods are usually available for inspection prior to, and often after, consumption and frequently have identifiable tangible features that enable quality comparisons to be made. If adjustments are not made for quality improvements, then the price index will have an upward bias. Goods prices are usually easier than services prices to adjust for changes in quality. One example cited in the United States is that whilst medical care equipment is quality adjusted for the purposes of the US consumer price index, the price of medical care services in the index is not adjusted for quality changes.[9]

Second, it is maintained that, because services are generally non-traded and have a high labour content, that productivity gains in services have generally not been as large as in the traded sectors. Thus the significant productivity gains achieved in many goods industries have resulted in declining or relatively stable real unit costs despite increases in real

8. Kroch (1991). ‘‘Tracking Inflation in the Services Sector’’, Federal Reserve Bank of New York Quarterly Review, Summer, pp. 30-35.

9. See Kroch (1991, *op. cit.*). Kroch reports that prices of medial care goods (mainly pharmaceuticals) and services, which are not quality adjusted, have both risen faster than medical care equipment which is quality adjusted. For recent work on price indexes for medical care in the United States, see Berndt *et al* (1998). ‘‘Price Indexes for Medical Care Goods and Services: An Overview of Measurement Costs’’, NBER Working Paper Series No. 6817.

wages. In services industries wages have also been increasing, in part to maintain differentials with goods industries. However, it is argued that the increases in productivity in services have not been sufficient to keep pace with those in goods industries, giving rise to increasing unit costs and higher services inflation. Unfortunately, as with quality, it is often very difficult to measure productivity in the services sector.

A third explanation is that the demand for services has been increasing in most developed economies relative to goods. For example, services employment in 1998 was 921,000 (or 62 per cent. of overall employment in Ireland), up from 638,000 (or 57 per cent. of overall employment) in 1990. If this argument is correct, then perhaps as the share of services in overall economic activity stabilises, the gap between services inflation and goods inflation should narrow.

It is important to note that, regardless of which of the above arguments is considered most realistic, the catch-all classification 'services' does not represent a homogenous group of activities but covers a wide range of heterogeneous activities. Thus, to understand further the recent development of services inflation in Ireland and to forecast future services inflation more accurately, overall services activity is divided into a manageable number of separate subcategories each being driven by common economic forces.

4. Decomposing the Services Index

The first category considered is '**administered services**'. This category includes services for which the price is either explicitly or essentially under public control. Such items include health insurance, education, licence fees, public transport, taxis, local authority housing and charges, etc..[10] Economic analysis of this series is difficult, as it often reflects the decisions of policy makers and not economic forces.

The second category is '**general domestically contested services**'. This contains the largest number of items. Examples of such items are personal services, repair and maintenance, entertainment, etc.. Modelling this subcomponent might be most successful using wages and productivity (i.e., the wage mark-up model). If wage pressures do develop in the economy due to labour shortages, the effects on inflation would most likely be noticed first in this sub-sector.

The '**alcohol-related services'** component is separated from domestically contested services, due to the significance of excise duties, the current licensing system and the possibility of regulatory reform in this area. As will be shown below, this alters the understanding of the evolution of the services component of the HICP in recent months.

The fourth category refers to services that are in '**transition**' from being protected/administered services to being contested services. At present the only items that warrant inclusion in this category are telecommunications services. It is quite probable that continued price decreases will be observed in this area, especially as the domestic telephony market has been opened up to competition. Purchasing power parity (PPP) or wage mark-up models would be unsuitable for modelling this component, at least during the transition phase. It is

10. Some of the items listed, such as health insurance and education, are not in the HICP at present but may be included at a later date. The composition of the HICP will be revised in January 2000.

possible that other items could be included in this category at a later date, for example, if the public transport (bus), taxi or electricity sectors are deregulated.

Thus, a simple four category decomposition is recommended (namely, [1] administered services, [2] general domestically contested services, [3] alcohol-related services, and [4] services in transition). Assessing the first and fourth subcomponents is difficult, as they essentially reflect the decisions of policy makers and market regulators. However, the domestically contested services element could be analysed probably using a wage cost mark-up model as outlined above.[11] This decomposition of overall services inflation should assist in understanding the dynamics underlying services inflation and allow overall services inflation, as well as the individual subcomponents, to be forecast more accurately. Table 1 summarises the decomposition of the overall services index.

Table 1

	Services Subcomponents
(1)	Administered
(2)	General domestically contested
(3)	Alcohol-related
(4)	Transition
	Overall Services

Table 2 illustrates the relative importance of each of the categories for each base period of the HICP. Considering the 'November 1996 = 100' base period, it can be seen that the most important component is general domestically contested services with a base weight of 51·6 per cent. of overall HICP services. Alcohol-related services account for 32·9 per cent. of the HICP services weight (and 11·4 per cent. of the overall HICP). Administered services account for 9·4 per cent. of the HICP services index. Services in transition account for 6·1 per cent. of the HICP services. However, as indicated below, the scale of the price decline in this category is sufficiently large to impact on the overall HICP services index, despite its relatively small weight.

Table 2 — Weight of Services Subcategories in Overall HICP Services Index, per cent.

	Base Nov. 1996	Base Nov. 1989	Base Nov. 1982	Base Nov. 1975
Administered	9·4	9·2	7·7	16·4
General Domestically Contested	51·6	51·4	49·0	40·1
Alcohol-Related	32·9	34·6	39·8	41·4
Transition	6·1	4·8	3·5	2·1
Overall Services	100·0	100·0	100·0	100·0
Services as a percentage of the overall HICP	*34·5*	*31·3*	*26·4*	*24·7*

There has been some change in the weights over time. The big drop in the administered services weight between 1975 and 1982 was due primarily to the abolition of local authority rates. Alcohol-related services have fallen in relative importance over the entire period, while services in transition (telecommunications) have increased in relative

11. Bradley *et al* (1991) find that, for market services, prices are set as a mark-up on costs in the long-run, but short-run pricing decisions can be affected by capacity utilisation. ''The Irish Market Services Sector: An Econometric Investigation'', *The Economic and Social Review*, Vol. 22, No. 4, July, pp. 287-309.

importance. Since 1982 there has been a slight increase in the importance of administered services and general domestically contested services.

5. The Recent Evolution of Services Inflation

This section describes the recent behaviour of overall services inflation and its subcategories. Table 3 presents the year-on-year percentage change in each of the services subindexes. There is considerable variation in the trends in each item. For example, although there was a decline in the year-on-year inflation rate in overall services between February 1996 and February 1997 from 2·7 per cent. to 1·5 per cent., the rate of inflation in general domestically contested services increased from 2·1 per cent. to 3·2 per cent. The difference was accounted for primarily by developments in the administered services and services in transition categories. This highlights the importance of recognising the heterogeneity of service activities. The overall year-on-year rate of services inflation has increased to 4·0 per cent. to February 1999. General domestically contested services inflation has increased even more rapidly to 5·2 per cent.[12]

Table 3 — Year-on-Year Inflation in Services Components, per cent.

	Overall Services	Administered	General Domestically Contested	Alcohol-Related	Transition
Feb. 1999	4·0	7·2	5·2	3·2	–7·9
Feb. 1998	1·5	–7·8	3·2	2·9	–5·3
Feb. 1997	2·7	3·4	2·1	4·0	–1·2
Share in overall services	*100·0*	*9·4*	*51·6*	*32·9*	*6·1*

Note: The share of each subcomponent in overall services is derived from the 1994-95 CSO Household Budget Survey.

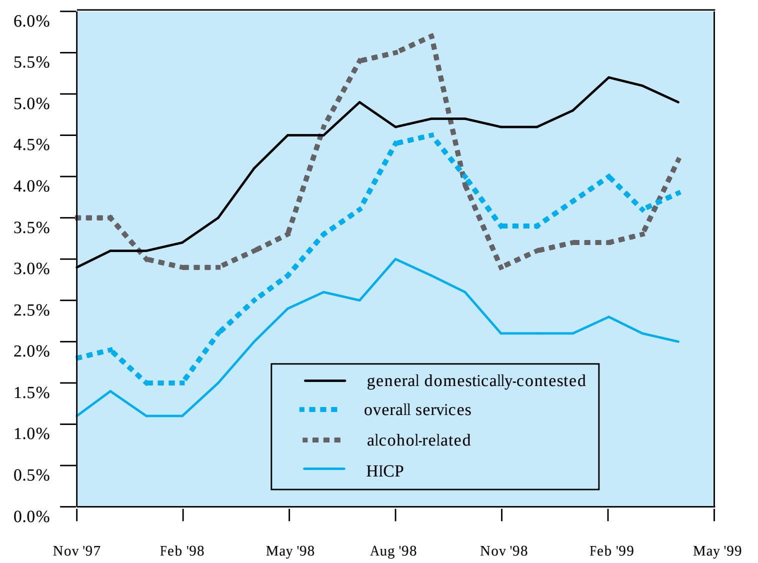
The services in transition component fell by 7·9 per cent. year-on-year to February 1999. Despite the small weight of the services in transition component, it has had a significant influence on the overall services index due to the extent of the fall in telecommunications prices. It is likely, given the recent introduction of competition in the domestic telephony market, that telecommunications prices will continue to decline in the near future.

The administered services index follows a volatile path. The year-on-year fall to February 1998 is mainly due to a reduction in local authority charges. Since then the year-on-year rate has increased, due primarily to a basing effect. The price level of administered services still remains below its November 1996 level.

Figure 2 focuses on the overall services, general domestically contested services and alcohol-related services inflation rates. The overall HICP is shown for comparative purposes. General domestically contested services inflation remained relatively high, reflecting buoyant domestic demand, at 4·9 per cent. year-on-year to April 1999 (relatively constant since July 1998, having increased steadily since November 1997). General domestically contested services inflation appears to reflect underlying economic conditions more closely than the overall services index which is subject to distortionary impacts. For example, the more

12. Examining the most recent data available for April 1999 does not alter the picture significantly. General domestically contested services inflation was 4·9 per cent. to year-end April 1999. Overall year-on-year services inflation fell slightly from 4·0 per cent. in February to 3·8 per cent. in April. The gap between year-on-year goods inflation and services inflation is now 2·7 per cent.

Figure 2: Year-on-year Inflation in Selected Subcomponents of HICP, November 1997-April 1999



volatile alcohol-related services inflation fell from 5·7 per cent. year-on-year to September 1998 to 2·9 per cent. year-on-year to November 1998 and has risen again to 4·2 per cent. year-on-year to April 1999. The impact of the alcohol-related services in dragging down the overall HICP services inflation rate in the last quarter of 1998 can be seen quite clearly in Figure 2. Future developments in alcohol-related services inflation may be determined by tax and regulatory issues.

It is possible that the recent decline in overall services inflation was a temporary phenomenon, that may unwind as the impact of the fall in alcohol-related services inflation diminishes. Furthermore, inflationary pressures in general domestically contested services have remained strong in recent months. Any further increase in the inflation rate in this area would lead to a widening of the gap between services inflation and goods inflation. This could have significant implications for the competitiveness of the economy in the medium-term.

6. Conclusions

The above analysis highlights the dichotomy between goods inflation and services inflation. Since 1994 services inflation has been, on average, 1·4 per cent. per annum higher than goods inflation. This may be due to difficulties in accounting for changes in quality or alternatively it may arise from differing competitive pressures in the traded goods and services sectors.

It is also recognised that services are not a homogenous group of activities. A decomposition of the overall services index into a number of subcomponents driven by different economic factors yields additional insights into the underlying dynamics of services inflation. For example, stripping out the distortionary impacts of telecommunications services, administered services and alcohol-related services, clearly the underlying pressures in services sector inflation remain strong despite the decline in the overall services index in the latter half of 1998. Year-on-year inflation has reached five per cent. for the general domestically contested services subindex. This is clearly a reflection of strong domestic demand and labour shortages in specific areas. Deepening labour shortages and continued strong demand could see even further increases in services inflation. If this trend continues it could have negative implications for the balance between the traded and non-traded sectors of the economy. Weak international price developments and commodity prices have helped to restrain the overall Irish inflation rate somewhat in recent years. Developments in the services sector must be closely monitored to ensure that the economy does not become unbalanced.

The decomposition of overall services inflation should also facilitate a more accurate forecast of services inflation in the future. Furthermore, attempts to explain the behaviour of services inflation should perhaps focus on the general domestically contested services index rather than on the overall HICP services index, in order to abstract from distortions to underlying economic forces.