Benchmarking Irish Private-Sector Credit

*By John Kelly**

ABSTRACT

Strong credit growth since the mid-1990s has resulted in a near doubling of Ireland's private-sector credit (PSC) to Gross Domestic Product (GDP) ratio. Household credit as a proportion of personal disposable income has risen even more rapidly; from 43 per cent in 1993 to 95 per cent in 2003. Since the start of EMU, PSC in Ireland has grown at annual rates roughly three times those of the euro area. These developments have led to concerns that Ireland may be becoming one of the most indebted countries in the euro area. In this article, consistent measures of PSC for all euro-area countries are used to provide a benchmark for the Irish position. A range of comparisons are employed. First, countries are ranked according to their PSC/GDP ratios. Second, the relative importance of lending to the household sector is examined, with particular emphasis on housing finance. Third, the cost of various categories of household credit in Ireland is compared with the euro-area average and with some other euro-area countries. The results are, on balance, reassuring. Ireland is not an outlier; on most rankings it is about midway in the euro area. While Ireland enjoys one of the lowest costs for housing finance at present, the high proportion of variable rate mortgages here leaves Irish borrowers more exposed to an increase in interest rates.

1. Introduction

The rapid growth in Irish private-sector credit (PSC) in recent years has given rise to some concerns that its level may now be excessive. If this is true, both banks and their customers may be incurring a degree of risk which could have negative implications for the stability of the Irish financial system and for the rate of economic growth in the future.

There are a number of alternative approaches to measuring whether the private sector is over-indebted. One approach, used by the International Monetary Fund (IMF), is to examine indicators of the private sector's ability to repay. A second method, used in a recent publication by Kearns (2004), is to develop a measure of 'debt at risk' for the household and corporate sector. A third approach, which is employed in this article, is to benchmark the level and structure of debt against other countries at a similar stage of development.

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The other countries in the euro area are an obvious set with which to compare Ireland. One of the main problems with inter-country comparisons of credit is that aggregate measures and definitions may not be consistent across all countries in the sample. This is overcome in the euro-area context by the fact that all Eurosystem countries compile credit data in accordance with common guidelines established by the European Central Bank.[1]

The article begins with a brief review of developments in PSC — that is both corporate and household credit — over the past decade, a period in which the ratio of PSC to GDP almost doubled. This provides the context for the next section, which contains the central comparison of the level of credit in Ireland at end-2003 with that in other euro-area countries. Two measures of credit are used for Ireland; headline PSC and PSC less lending to non-bank IFSC companies. Since much of the comment on credit levels is addressed to the personal (or household) sector, the article looks particularly at the importance of lending to households — both over time in Ireland and relative to other euro-area countries. In addition to its level, the cost of credit to the household sector is important in determining individuals' debt service burden. Recently published data on retail interest rates and household lending volumes make it possible to divide lending to households into housing and non-housing credit and to compare the cost of credit to these sub-sectors across the euro area.[2] Finally, some conclusions are drawn from the statistical analysis, and their implications for the Irish economy are discussed.

2. Trends in Irish Private-Sector Credit

The very rapid rise in PSC since the mid-1990s means that the Irish private sector is now highly indebted by historical standards. Concerns have been expressed that this may make Irish economic growth more susceptible to adverse shocks, and that credit institutions may be more vulnerable to sharp increases in unemployment and/or interest rates and to possible decreases in house prices (IMF, 2003). But a little over a decade ago, it was the weakness of credit growth, rather than its strength, which gave rise to concern about its impact on future economic growth. This was particularly so in the years leading up to and following the 1992-93 currency crisis. In these years, Irish interest rates were both high and volatile and worries about the future of the EMS Exchange-Rate Mechanism (ERM) created an uncertain financial environment. This and concerns about future borrowing

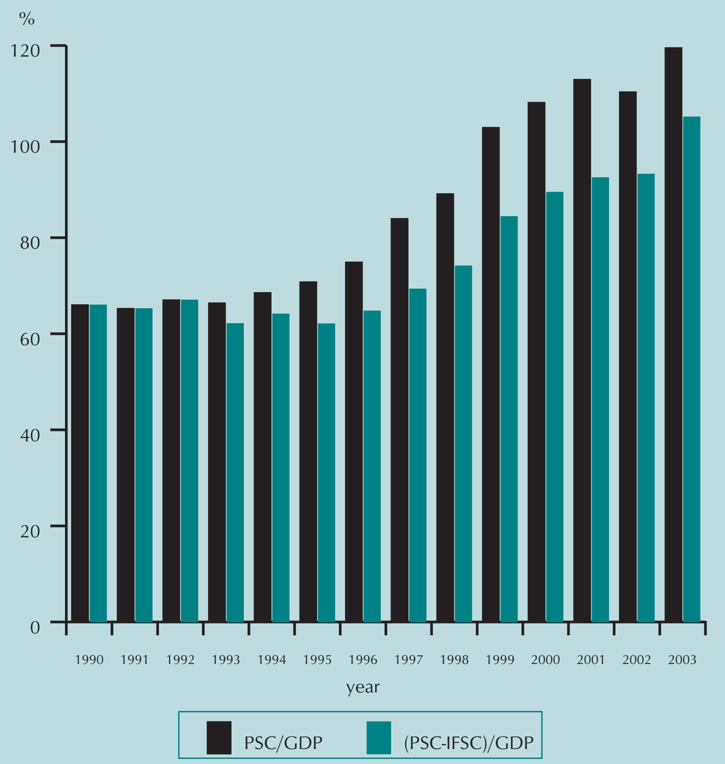
1 Individual country measures of PSC, published by national central banks, may differ slightly; for instance, in Ireland's case accrued interest is included in the national measure but is excluded from the ECB measure.

2 New monthly retail interest rate statistics for the euro area and most individual countries were published for the first time on 10 December 2003. These statistics are based on a common methodology and, in contrast to the previous retail interest rates published by the ECB, are comparable across the euro area. For further details see McNeill (2003).

costs provided a less-than-ideal backdrop for additional personal or corporate borrowing.

In 1991, the slowdown in economic activity was accompanied by a decline of about 1 per cent in PSC. While some once-off factors contributed to this[3], there was speculation that a 'credit squeeze', with banks either unwilling or unable to lend, might be hampering growth. The Central Bank, however, found that there was no evidence to support this view. Banks were not generally constrained by capital requirements or liquidity conditions. The fall-off in credit appeared "to have been largely demand driven, with the financially sounder economic agents moving to reduce their indebtedness in the face of uncertain economic prospects", (Central Bank, 1992).

Chart 1: Private-Sector Credit/GDP Ratios for Ireland



In the event, interest rates in Ireland declined quite quickly following the realignment of the Irish pound on 30 January 1993, while the strains within the ERM reduced significantly following the widening of margins of fluctuation from ±2.25 per cent to ±15 per cent in August 1993. Growth in credit, however, remained modest until the mid-1990s, especially when lending to non-bank International Financial Services Centre (IFSC) companies is excluded.[4] The rationale for excluding such lending

3 PSC in 1991 was reduced as a result of the unwinding of £415 million in foreign-currency Section 84 lending to Shannon-Area companies, which had to expire by end-December under the 1989 Finance Act. Without this, PSC would have grown by about 2 per cent.

4 The decision to promote an international financial services centre in Dublin was taken in 1987 and was encouraged by the provision of fiscal incentives, including a 10 per cent rate of corporation tax. Lending to IFSC companies became important in the early 1990s and was identified separately in credit statistics. An adjusted growth rate for PSC, which excluded lending to non-bank (or non-Monetary Financial Institution) IFSC companies, was introduced in 1992 (see Box 1).

is that it largely reflects transactions between international banks and non-banks located in the IFSC and has little impact on the domestic economy.

Developments in the ratio of PSC to GDP from 1990 to 2003 are shown in Chart 1. In the early years of the 1990s the ratio was steady at around 65 per cent for total PSC but fell to close to 60 per cent in 1993 to 1995 when IFSC lending is excluded. From 1996 onwards, however, both measures accelerated, even though nominal GDP itself expanded at unprecedented rates during most of this period. This increase in the ratio was attributable to the fact that annual growth rates in PSC reached very high levels — as shown in Chart 2.

At first, the acceleration in credit growth was seen as a welcome catch-up from the slow growth experienced in the early 1990s. Then, as the decade progressed, expectations that Ireland would be amongst the first group of countries in Economic and Monetary Union (EMU) strengthened. This led to a belief that Irish interest rates would fall sharply and remain permanently lower than they otherwise would have been. In such a situation it became optimal for Irish households and firms to consume and invest more and to take on substantially more debt (see Nickell, 2003). Against a background of strong real growth, rising disposable income and expanding investment opportunities, annual growth rates in excess of 25 per cent were not unusual.

Box 1: The Adjusted Rate of PSC Growth

Financial analysts and economists are interested in both stock and flow measures of private-sector credit. The key stock measure is the aggregate level of credit on credit institutions' balance sheets, reported to the CBFSAI at the end of each month. This aggregate is published in Table A2 of the Monthly Statistics and the Statistical Appendix to the Quarterly Bulletin, together with two measures of year-to-year change. The unadjusted rate measures the actual change in the stock of credit. The adjusted rate seeks to present a truer picture of the *flow* of new credit to the domestic economy. Two adjustments are made to the original series to achieve this. First, changes in the outstanding stock of credit arising purely from the effect of exchange-rate changes in converting non-euro credit (mostly US dollar and sterling) to euro are calculated and added to/subtracted from the annual change in the balance sheet data. Prior to the introduction of the euro, this valuation effect involved a much wider range of currencies. Since foreign currency credit in DM, French francs, etc. became euro credit in January 1999, it is not possible to calculate an adjusted rate for 1999. The year-to-year adjusted growth rate to January 2000 is used as a proxy in Table 1. Second, lending to non-bank companies in the IFSC is excluded. This adjustment was introduced in December 1992, as lending to IFSC companies began to be an important component of PSC.

Chart 2: Private-Sector Credit Growth in Ireland (y/y%) 1993-2003

Note: break in adjusted rate in 1999, due to changeover to the euro

Trends in *unadjusted* and *adjusted* credit growth over the period 1993 to 2003 are shown in Chart 2, where it can be seen that they follow broadly similar paths for most of the period, with the latter recording somewhat lower rates. Since 2002, however, there has been a marked divergence between the series, with the adjusted measure growing at a faster rate. The reasons for this stem from the two elements of the adjustment (see Box 1). First, since mid-2001, the euro has appreciated strongly, particularly against the US dollar but also against sterling.[5] This has caused the euro value of credit denominated in these currencies to fall. Since the adjusted series excludes changes due to valuation effects, it therefore increased at a faster rate. Second, the gap between the two series is accentuated by the fact that credit to IFSC companies has been falling for most of this period. In the year to end-December 2003, total lending by credit institutions to IFSC companies contracted by almost €2.6 billion to €19.3 billion (Table A2, Statistical Appendix).

As well as resulting from high real growth rates from the mid-1990s onwards, it is likely that rapid credit growth itself may have been a factor contributing to the 'Celtic Tiger' experience. Earlier work on business cycle indicators showed a strong link between PSC and economic activity, with real PSC having one of the largest weights in a 'Composite Coincident Indicator' for Ireland (Fagan and Fell, 1992). A recently published NBER Working Paper (Ranciere et al., 2003) lends weight to this view. This study,

5 Between October 2000, when it reached its lowest level against the US dollar, and end-December 2003, the euro appreciated by 52.2 per cent against the dollar and by 22.1 per cent against sterling.

which examined the experiences of 52 countries, concluded that there is a trade-off between steady growth in bank lending and economic growth over time. Many of the fastest growing countries experienced lending booms; countries in which credit growth was smooth, by contrast, exhibited the lowest real growth rates. Overall the analysis suggests that countries where credit expanded rapidly grew by two percentage points a year more, on average, than those where credit growth was stable, with banks' lending growth accounting for about one percentage point of this. The downside, of course, is that rapid credit growth can also contribute to financial fragility and many countries which have experienced lending booms have also experienced occasional crises. So far, Ireland has only experienced the beneficial growth effects. But if, in the process, we have become one of the most highly-indebted countries in the euro area, perhaps the risks to the stability of the financial system may also have increased.

3. Private-Sector Credit in Ireland and the Euro Area

Since the start of EMU in 1999, PSC in Ireland has grown at annual rates roughly three times those of the euro area as a whole (see Table 1). But given that borrowing levels here were relatively low by EU standards in the mid-1990s, the main question now is, has the rapid growth in recent years led to Ireland becoming an outlier within the euro area?

Table 1: Private-Sector Credit Growth Rates — Ireland and the Euro Area

End Dec		1999	2000	2001	2002	2003
Ireland:	Unadjusted annual % change	33.5	20.6	16.5	10.1	12.4
	Adjusted annual % change	28.8[a]	21.3	15.1	15.0	17.9
Euro Area:	Annual % change	10.5	10.3	6.7	4.7	5.7

a Year to end-January 2000.
Source: CBFSAI and ECB.

In order to address this question, it is necessary to obtain a measure of PSC to domestic residents for all euro-area countries constructed in a consistent manner. Data from the ECB and the IMF International Financial Statistics were used for this purpose. The standardised measure of PSC used here is the sum of private sector loans, securities and shares (see Box 2) at end-2003. The ratio of PSC to GDP is used as the basis for comparing credit levels between countries.[6] In benchmarking Ireland's position, two measures of Irish PSC are employed in Table 2; the standardised measure and this measure less IFSC lending. This second measure is further adjusted by adding to it outstanding

6 GDP is the preferred measure of economic activity as it is almost universally used in EU comparisons. Use of GNP would result in a somewhat higher ratio for Ireland but the general picture would be unchanged.

securitisations of residential mortgages (see Box 3 in Section 4) in order to provide an upper bound measure of PSC to the domestic economy.

Box 2: Measuring Credit

One of the problems inherent in comparing credit across countries is that confusion can often arise between different measures of credit and the items included in each. The three main credit aggregates are **domestic** credit, **private-sector** credit and **personal** (or household) credit. Total domestic credit (DC) encompasses all credit advanced by Irish credit institutions to Irish resident entities, both the general government (GG) **and** the private sector (PSC). PSC, in turn, is simply all lending by credit institutions to the non-bank public, excluding Government. It includes **personal** credit (PC), credit to **non-financial corporations** (NFC) and credit to **other financial intermediaries** (OFI). Put schematically:

1. **DC = GG + PSC**
2. **PSC = PC + NFC + OFI**

Another source of confusion is that credit is sometimes equated with loans. While loans are the largest component of PSC, it also includes credit institutions' holdings of securities and shares and other equity issued by private-sector Irish residents. Since the personal sector does not issue securities or equity, personal credit will invariably be comprised of loans.

A common difference between countries in the measurement of PSC is whether accrued interest is included or not. In Ireland's case accrued interest forms part of PSC (Table A2: Statistical Appendix) but in the ECB's measure of euro-area PSC it is excluded. The standardised measure of PSC for euro-area countries used in this article excludes accrued interest.

Table 2: PSC/GDP Ranking for the Euro Area[a]

2.1: Ireland, PSC			2.2: Ireland, PSC-IFSC		
Country	**PSC/GDP (%)**	**Rank**	**Country**	**PSC/GDP (%)**	**Rank**
Netherlands	154.8	1	Netherlands	154.8	1
Portugal	146.2	2	Portugal	146.2	2
Ireland	**120.1**	**3**	Spain	119.2	3
Spain	119.2	4	Germany	117.3	4
Germany	117.3	5	Luxembourg	114.8	5
Luxembourg	114.8	6	**Ireland-IFSC**	**105.7**	**6**
Austria	104.7	7	Austria	104.7	7
France	90.8	8	France	90.8	8
Italy	85.3	9	Italy	85.3	9
Belgium	76.7	10	Belgium	76.7	10
Greece	71.9	11	Greece	71.9	11
Finland	63.9	12	Finland	63.9	12

a On the basis of December 2003 PSC and 2003 GDP estimates from Eurostat.
Source: CBFSAI, ECB, IFS and Eurostat.

The rankings in Table 2 clearly confirm that Ireland is not an outlier. In terms of an unadjusted standardised measure of PSC, Ireland is placed third, well below the Netherlands and Portugal and with a ratio only slightly higher than that of Spain, Germany and Luxembourg. When IFSC credit is excluded, Ireland drops to sixth position, with a ratio just fractionally above Austria's. Adding securitisations of residential mortgages increases Ireland's ratio to 109.1, but its rank in Table 2.2 is unchanged.

In general, a correlation exists across countries between levels of income and credit/GDP ratios. Those with higher levels of income can afford to service higher levels of debt and also tend to have higher levels of wealth. From the mid-1990s onwards, as Ireland's PSC/GDP ratio increased substantially (see Chart 1), real GDP growth here outstripped that in most other euro-area countries by a significant margin. As a result of this, Ireland climbed steadily up the European ladder in terms of GDP per capita. The outcome, as shown in Table 3, is that we rose from ninth position in 1993 to second place in 2002. In becoming one of the highest income countries in the euro area, it would have been surprising if our PSC/GDP ratio had not risen.

Table 3: Euro Area GDP per Capita 1993 and 2002 (€000s)

1993			**2002**		
Country	**GDP/Capita**	**Rank**	**Country**	**GDP/Capita**	**Rank**
Luxembourg	29.9	1	Luxembourg	50.2	1
Germany	20.6	2	**Ireland**	**33.1**	**2**
Austria	20.1	3	Netherlands	27.5	3
France	19.0	4	Austria	27.1	4
Belgium	18.3	5	Finland	26.9	5
Netherlands	18.2	6	Germany	25.6	6
Italy	14.9	7	Belgium	25.2	7
Finland	14.6	8	France	24.8	8
Ireland	**11.9**	**9**	Italy	21.7	9
Spain	10.9	10	Spain	17.2	10
Greece	7.7	11	Greece	12.9	11
Portugal	7.4	12	Portugal	12.5	12

Source: Eurostat and ECB Monthly Bulletin.

4. The Importance of Lending to Households

If the PSC/GDP ratio in Ireland is not out of line with that in other euro-area countries, perhaps it is the proportion of personal (or household) credit in this aggregate which is giving rise to concern. Residential mortgage lending has been expanding much faster than PSC in recent years and worries are expressed from time to time that individuals may be taking on unsustainable levels of debt. If this were true, then households might be forced to cut back on consumption in the event of a significant increase in interest rates or an extended slowdown in economic growth, thus exacerbating that slowdown.

Rapid growth in household debt has been relatively common in most developed countries over the past two decades, with most of the increase coming from borrowing for housing. While the timing and extent of the increase varied considerably across countries, two common causal factors have been identified: lower interest rates, both real and nominal; and an easing of liquidity constraints, arising from financial deregulation. Lower real interest rates reduce the real cost of borrowing and encourage households to take on more debt. Lower nominal rates, in addition, reduce debt servicing costs and may increase

the maximum amount which a credit institution will lend at a given income level (Wadhwani, 2002). The easing of liquidity constraints, which accompanied the financial deregulation of the past two decades, has enabled households to improve the structure of their consumption spending over the life cycle by taking on more debt at an earlier stage (Debelle, 2004).

Both of the above influences have been at work in Ireland during the 1980s and 1990s. Credit 'guidelines' and restrictions on interest rates had forced banks to impose credit rationing in the past. These constraints began to be relaxed in the mid-1980s, when the Central Bank discontinued its formal guidelines for bank lending. Additional resources were released to fund higher lending when reserve ratios were reduced in the early 1990s. The banks' **primary liquidity ratio** was progressively cut from 10 per cent in 1991 to 3 per cent in 1994, while the requirement to hold Government stocks — the secondary ratio — was abolished (Kelly, 1994). The 'interest-rate cartel' gave way to a more flexible system of maximum interest rates for given categories of loans which in turn was abolished in the run up to EMU membership, in a much more competitive environment. Competition was at its most intense in the residential mortgage market, where deregulation facilitated new entrants which both increased the availability of housing finance and reduced its cost. In addition, as already mentioned, EMU membership itself heralded a move to permanently lower interest rates.

Annual growth in household credit began to accelerate from the mid-1990s onwards, although initially at a somewhat slower pace than PSC. This is, in part, a reflection of the very rapid increase in lending for 'Financial Intermediation' (including non-bank IFSC companies) during this period, which powered the growth in headline PSC. In order to take account of this, a range of measures of household credit and housing finance are examined in Table 4, which is based on data from the sectoral distribution of advances (Table C8: Statistical Appendix).

A number of points emerge from Table 4. Looking at personal credit first in Table 4.1, it is clear that the share of PSC going to the personal sector has risen significantly in recent years — from about 35 per cent in 2000 to almost 43 per cent last year. A longer view, however, presents a different picture and over the past decade there has been a small decline, with the personal share falling by one percentage point, from 43.7 per cent in 1993 to 42.7 per cent in 2003. A somewhat different picture emerges when lending to financial intermediation is deducted from PSC. The share of personal credit in the remainder was steady from 1993 to 2001 but showed significant gains in 2002 and 2003.

Table 4: Personal (Household) Credit as a Percentage of PSC[a] and Disposable Income

4.1	Personal Credit (€ million)	% of PSC	% of PSC-Fin. Int.	% of Personal Disp. Income
1993	12,504	43.7	51.8	43.3
1994	13,812	43.7	52.5	46.5
1995	15,624	43.1	52.6	48.1
1996	18,115	42.5	52.6	51.8
1997	21,911	40.3	52.6	56.9
1998	26,129	38.9	51.5	60.3
1999	32,935	35.7	53.3	67.3
2000	39,231	35.3	51.7	71.3
2001	45,594	35.2	51.9	74.1
2002	56,403	39.5	55.0	82.9[c]
2003	68,539	42.7	55.4	95.3[c]

4.2	Housing Finance[b] (€ million)	% of PSC	% of PSC-Fin. Int.	% of Personal Disp. Income
1993	9,475	33.1	39.3	32.8
1994	10,606	33.6	40.3	35.7
1995	12,030	33.2	40.5	37.1
1996	14,038	32.9	40.7	40.2
1997	16,787	30.9	40.3	43.6
1998	20,151	30.0	39.7	46.5
1999	24,936	27.0	40.3	50.9
2000	30,048	27.0	39.6	54.6
2001	34,705	26.8	39.5	56.4
2002	44,120	30.9	43.0	64.8[c]
2003	55,189	34.4	44.6	76.7[c]

a The credit data refer to end-November from 1993 to 1998 and to end-December from 1999 onwards.
b Items 15.1 and 15.2 from Table C8: Statistical Appendix.
c Personal disposable income data for 2002 and 2003 are internal CBFSAI estimates.
Source: CBFSAI and CSO.

Housing finance is examined separately in Table 4.2 and here a somewhat similar trend is evident. The proportion of housing finance in total PSC falls progressively from 1994 to a low point in 2001, before rebounding sharply to over a percentage point above its 1993 share in 2003. Housing finance also accounts for a steady proportion of PSC less financial intermediation until 2001 and then rises sharply. Implicit in these figures is the fact that housing now accounts for a somewhat higher proportion of personal credit than it did a decade ago; it has, in fact, increased its share by five percentage points, from 76 per cent in 1993 to 81 per cent in 2003. This suggests that for many households, their mortgage may be their only or dominant debt. It is also reassuring in that it confirms that widespread borrowing for consumption was not a factor behind the expansion in credit in recent years.

The final columns in Tables 4.1 and 4.2 show personal credit and housing finance as a percentage of personal disposable income. Here a striking change has occurred over the period. Personal sector credit has more than doubled relative to personal disposable income, rising from about 43 per cent in 1993 to over 95 per cent in 2003.[7] The increase in the stock of housing

7 The IMF in its 2003 Article IV Report noted that the average household debt to income ratio in Ireland, while rising rapidly, was not high by international comparison (IMF, 2003). This was on the basis of 2001 data, however, when Ireland's ratio was 74 per cent; by end-2003, that ratio had risen to over 95 per cent.

finance is even more marked; from 33 per cent of disposable income in 1993 to 77 per cent in 2003. While lower interest rates mean that the burden of debt service has not increased as much, the larger stock of personal debt has important macroeconomic implications. In particular, it increases the sensitivity of household expenditure to fluctuations in income, especially arising from unemployment, interest rates and house prices.

Although there has been no trend increase in the share of personal sector credit in total Irish PSC over the past decade, it now accounts for a larger proportion of the remainder of credit, i.e. PSC less financial intermediation. This increase has been driven by strong growth in housing finance, a development common to some other EU countries. In view of this, it is useful to compare the Irish position at end-2003 with other euro-area countries, in order to benchmark the present situation.

This cross-country comparison is provided in Table 5. The ECB definition of PSC is used for Ireland — i.e. accrued interest is omitted — and no adjustment is made for lending to financial intermediation, as it would be impossible to identify this sector consistently across all countries. Once more, Ireland is placed towards the middle of the rankings, this time in seventh position in the euro area.

Table 5: Lending to Households as a Percentage of PSC — Euro Area[a]

Country	% of PSC	Rank
Finland	57.4	1
Germany	57.1	2
Netherlands	48.1	3
Spain	46.1	4
Belgium	44.7	5
Portugal	43.6	6
Ireland	**43.3**	**7**
France	41.4	8
Luxembourg	37.7	9
Greece	36.2	10
Austria	28.4	11
Italy	27.9	12

a In the data used in this table, households are defined in accordance with ESA 95. This definition is broader than the CBFSAI personal category and includes loans to self-employed and partnerships and to non-profit institutions serving households. As a result, Ireland's household share in PSC is a little larger than in Table 4.
Source: Internal CBFSAI data for December 2003.

Given the predominance of housing finance in personal credit and the fact that residential mortgage lending is adjusted for securitisations to reflect the full indebtedness of individuals for house purchase (see Box 3), it is also interesting to look at Ireland's position with securitisations added in. This increases Ireland's ratio to 44.9 per cent, which would move it up two places to fifth position in Table 5, just ahead of Belgium.[8]

8 Residential mortgage securitisations, which amounted to €4.63 billion at end-December 2003, are included in both lending to households and PSC in this calculation.

Box 3: Residential Mortgage Securitisations

Securitisation is defined as a "process whereby finance can be raised from external investors by enabling them to invest in parcels of specific financial assets. It involves credit institutions selling loans to third parties, which use these loans to back the issue of securities" (ECB/2003/2). A mortgage securitisation refers to a block of residential mortgages that are sold to investors. The third party involved in this transaction is known as a Special Purpose Vehicle (SPV) or a Financial Vehicle Corporation (FVC). While SPVs are usually set up by credit institutions, they are classified as other financial intermediaries (OFIs), which are part of the private sector, rather than Monetary Financial Institutions (MFIs).

Typically, a mortgage securitisation takes place as a 'triangular' operation, with the aim of the credit institution being to release resources by selling loans to the SPV. The SPV finances the purchase via the issue of securities backed by the loans. The transactions are reflected in the respective balance sheets as follows:

A	Cred. Inst.	L
−100 Loans		
+100 Cash		

A	SPV	L
+100 Loans		+100 Debt securities issued

When a securitisation occurs, the mortgages are removed from a credit institution's balance sheet. This reduces the level of residential mortgage lending shown in the monthly credit aggregates. But nothing has changed for borrowers. To take this into account, the outstanding stock of securitised mortgages is added to the balance-sheet level of residential mortgages to give an adjusted series. This series is seen as a more meaningful economic indicator as it gives a more accurate measure of personal sector indebtedness for housing.

If adding securitisations to residential mortgage lending improves the information content of that series, it might be argued that they should also be included in the adjusted measure of PSC. A problem, however, arises in that this could lead to double counting. Since residential mortgage securities are issued by SPVs, which are OFIs, their purchase by any MFI reporting to the CBFSAI would be included in PSC. Given the diversity of the population of Irish MFIs, secondary market purchases of mortgage securities cannot be ruled out. Hence, adding the full stock of securitisations to PSC could artificially inflate this figure.

5. The Cost of Household Credit

The above comparison with other euro-area countries shows that Ireland is not untypical in terms of either its PSC/GDP ratio or the proportion of credit going to the household sector. A further aspect concerns the cost of household credit. If interest rates in Ireland were higher than elsewhere, it could mean that debt-servicing costs for Irish households would be above the euro-area norm even if credit levels were not.

Since January 2003, the national central banks (NCBs) of the euro area have collected data for new harmonised interest-rate statistics.[9] These statistics show the *average* retail interest rates

9 The data are collected under Regulation ECB/2001/18, which was adopted by the ECB in December 2001.

applied by banks to a range of deposit and loan instruments.[10] Lending to households is identified separately from lending to non-financial corporations and, within the household category, average interest rates on three maturity categories of loans for house purchase and consumer/other credit are calculated. These data were published by the ECB and a number of NCBs for the first time in December 2003. Their availability makes it possible to compare interest rates across euro-area countries on a consistent basis. This is done in Table 6, which shows the average interest rates on the two sub-categories of lending to households, namely, house purchase and consumer credit and other loans, broken down by the term of the loan. Overdraft rates for households are also included. Since the data are not published in the same level of detail by all NCBs, euro-area average rates are shown together with those in a number of other, mainly smaller, countries. The percentage of household lending accounted for by each loan category is also shown for Ireland and the euro area as a whole. Rates and volumes are for outstanding amounts; these rates are less volatile from month to month than rates on new business.

Table 6: Average Interest Rates on Loans to Households — December 2003[a]

Country	Bank Overdraft	For House Purchase: Up to 1 year	For House Purchase: 1-5 years	For House Purchase: Over 5 years	Consumer/Other Credit: Up to 1 year	Consumer/Other Credit: 1-5 years	Consumer/Other Credit: Over 5 years
Austria	7.75	5.08	4.33	4.81	7.60	5.77	5.16
Belgium	10.63	4.47	4.84	5.37	8.20	7.24	5.99
Finland	6.48	3.35	3.54	3.55	7.79	4.81	4.09
Germany	10.48	5.55	5.01	5.79	8.89	6.35	6.28
Greece	14.08	5.75	6.20	5.16	13.07	11.18	8.43
Ireland	**12.93**	**3.90**	**3.98**	**3.65**	**9.97**	**6.93**	**4.67**
Luxembourg	–	–	–	3.64	3.50	5.31	–
Netherlands	6.69	4.01	4.84	5.29	6.62	8.14	5.59
Portugal	9.80	–	–	3.82	8.89	7.84	6.73
Euro Area	**9.70**	**4.96**	**4.88**	**5.14**	**8.04**	**7.05**	**6.00**
Percentage of Total Household Lending[b]							
Ireland	**–**	**1.4**	**3.5**	**72.7**	**5.6**	**7.6**	**9.2**
Euro Area	–	0.5	1.9	64.6	7.3	7.9	17.8

a Rates refer to outstanding amounts for house purchase and for consumer credit and other loans.
b Overdraft volumes are included in consumer credit up to one year. Use of ESA 95 definitions in this table, as in Table 5, explains the difference in the percentage share of housing in household credit from that implicit from Table 4.
Source: ECB and Eurosystem NCBs.

Ireland emerges in a particularly favourable light from the comparison of interest rates charged for house purchase in Table 6. Across all terms of loan, Ireland is one of the cheapest countries in which to borrow. In the key "over five years"

10 In calculating averages, interest rates are weighted according to volume, at the level of reporting agents, the NCBs and the ECB. For an illustration of the process see Klein et. al (2003), page 115.

category, which accounts for 73 per cent of all household lending here, average interest rates are 1.5 percentage points below the euro-area average and are just ten basis points above Finland's, which are the lowest. The position regarding consumer and other credit is not so clear cut; Ireland is the second most expensive country in the table for short-term credit (up to one year) but the second cheapest for long-term credit of over five years. Rates on bank overdrafts are also amongst the highest here and at end-December 2003 were over three percentage points above the euro-area average. The categories where Irish interest rates are among the highest, however, account for a relatively small proportion of household lending. Consumer/ other credit up to one year, which includes overdrafts, is only 5.6 per cent of the total.

The favourable picture which emerges with regard to the relative cost of credit for house purchase in Ireland must be qualified by one important caveat; a high proportion of this credit is at variable interest rates. CBFSAI data show that about 80 per cent of residential mortgages are at variable rates (Table C13; Statistical Appendix)[11], while an analysis of lending for housing during 2003 yields similar results; some 78 per cent of new business was at variable rates. Moreover, two-thirds of fixed-rate mortgages are fixed for a relatively short duration of one to three years. This means that a high proportion of mortgages are exposed to the risk of interest rate increases if and when the ECB tightens monetary policy.

Table 7: Percentage of Mortgages At Fixed or Variable Interest Rates

Country	Interest rate arrangements[a]	Usual length of contracts
Austria	n.a.	n.a.
Belgium	F (75%), M (19%), V (6%)	20 years
France	F/M (86%), V (14%)	Over 5 years
Finland	F (2%), V (97%)	15-20 years
Germany	Mainly M and F	Up to 30 years
Greece	F (5%), M (15%), V (80%)	15-20 years
Ireland	**V (70%), M (30%)**	**n.a.**
Italy	F (28%)	10 to 25 years
Luxembourg	V (90%)	20 to 25 years
Netherlands	F (74%), M (19%), V (7%)	10 years
Portugal	Mainly V	25-30 years
Spain	V (more than 75%)	15-25 years

a Per cent of all new mortgage loans.

Note: F=Interest rate fixed for more than five years; M=Interest rate fixed for more than one year and up to five years; V=after one year, interest rate is negotiable or tied to market rates. Data refer to 2001.

Source: ECB, *Structural Factors in the EU Housing Markets*, March 2003.

ECB data also confirm that Irish borrowers are more exposed to changes in short-term interest rates than those in the rest of the

11 Variable-rate mortgages include mortgages with rates fixed for up to and including one year, as these give only limited protection from interest-rate changes. Some studies, however, may include one-year fixed-rate mortgages in the 'fixed' category.

euro area. Despite some integration in banking markets since the start of EMU, a study of the housing market shows that the proportion of mortgages contracted at variable interest rates still differs significantly across euro-area countries (ECB, 2003). Data from this study are reproduced in Table 7, where it is clear that fixed-rate contracts dominate in most of the larger countries. As might be expected, those countries currently enjoying the lowest rates, such as Finland, Luxembourg, Ireland and Portugal, are also the countries with a high proportion of variable-rate mortgages.

6. Conclusions

In the years immediately before and after EMU membership, Ireland experienced very high rates of growth in PSC. This was a logical outcome in a situation of strong growth in real GDP and a move to a regime which was seen as bringing about a permanent reduction in real interest rates. While very rapid credit growth naturally raises concerns about the stability of the financial system, it may also have had beneficial effects in terms of real economic growth. The challenge is in keeping the balance right.

The results from the benchmarking of Irish PSC against other euro-area countries are, on balance, reassuring; Ireland is not an outlier. The central comparison with the rest of the euro area, in terms of the ratio of PSC to GDP, found that we are part of a mid-ranking group of countries which includes Austria, Germany, Luxembourg and Spain. Nor is the proportion of credit going to households excessive. On the euro-area benchmark, Ireland still ranks seventh in terms of the share of PSC accounted for by households. This suggests that at the overall level risks in Ireland are no greater than elsewhere. Some individual borrowers, and perhaps lenders, may be behaving imprudently and developments must be monitored, so as risks in these areas can be identified.

A favourable position emerges in terms of the present cost of credit to the household sector. Two factors influence this: first, in Ireland a high proportion of personal credit is secured on residential property; and, second, a large portion of lending for housing is at variable interest rates at a time when short-term interest rates are at historically low levels. This latter point contains the ‘sting in the tail’. It means that the exposure to interest-rate changes is greater here. If and when short-term interest rates rise, the cost of household borrowing in Ireland would be expected to increase more quickly than that in many other euro-area countries.

The vulnerability of Irish households to higher interest rates is amplified by the marked rise in the ratio of household credit to personal disposable income in recent years. Aggregate personal indebtedness is now approaching 100 per cent of disposable

income and rising fast. The larger stock of personal debt means that consumer expenditure will be more sensitive to fluctuations in income, especially arising from unemployment and interest rates. While the greater vulnerability of the Irish economy to increases in short-term interest rates is not of immediate concern, as debt levels increase in absolute terms so do the risks to growth from either a tightening in monetary policy or a slowdown in economic activity. Certain areas of the housing market have been identified by the IMF as being particularly exposed to such developments (IMF, 2003). This underlines the need for vigilence and prudent lending practices if the beneficial effects of past credit growth are to be retained.

The acceleration in the growth of PSC in recent months is also of concern. Following modest growth in 2002, the annual adjusted rate of PSC growth strengthened last year and reached 19.3 per cent in February 2004, over three times the euro-area rate of 5.8 per cent. While our end-2003 position within the euro area was comfortable, there is a limit to the extent that Ireland can sustain rates of credit growth which are a multiple of the euro-area average. If such differences were to persist, Ireland could become an outlier within a few years.

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