



EUROPEAN CENTRAL BANK



**EU BANKS' MARGINS  
AND CREDIT STANDARDS**

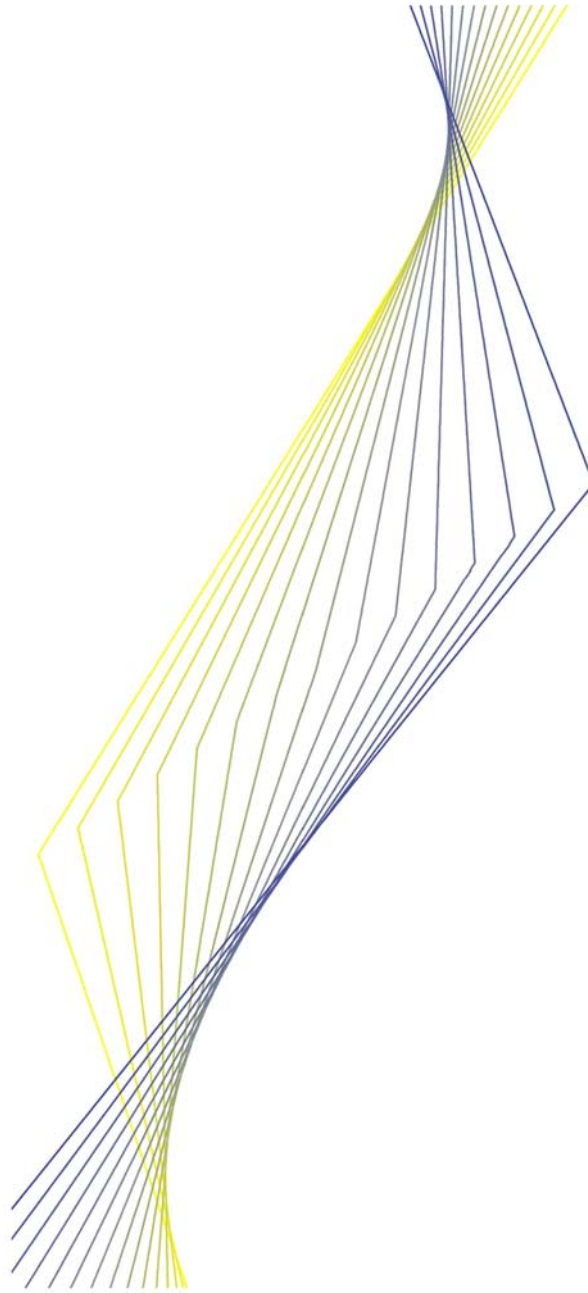
**December 2000**







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## Abbreviations<sup>1</sup>

BE	Belgium
DK	Denmark
DE	Germany
GR	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
LU	Luxembourg
NL	Netherlands
AT	Austria
PT	Portugal
FI	Finland
SE	Sweden
UK	United Kingdom

<sup>1</sup> *In accordance with Community practice, the EU countries are listed in alphabetical order, as indicated by the country names in the national languages.*

## Executive summary

The Banking Supervision Committee – in the context of the Eurosystem’s task of contributing to the smooth conduct of national policies on prudential supervision and financial stability – carried out an assessment of EU banks’ margins on lending and deposit taking, and of their credit standards. The reasons for embarking on this study were, first, the fact that EU banks’ margins have fallen significantly since 1997 on their new lending and, second, the fact that bank managers might have had incentives to expand businesses in order to maintain or improve profitability. In this environment an important question is whether banks are maintaining sound lending standards in a sufficiently forward-looking manner or whether they may be basing their decisions too much on the currently prevailing economic and asset price conditions.

The main findings of the report are as follows:

First, the analysis indicates that many factors other than changes in competition can affect the development of banks’ margins. However, it appears that there are good reasons to argue that, for a significant part, the narrowing of banks’ lending margins is indeed attributable to the ongoing tightening of pricing conditions owing to competition. It should be noted, however, that this conclusion is not so clear-cut for all countries. The narrowing of lending margins has affected banks’ interest revenues, but the widening of the margins on the deposits side has often compensated for this effect, and banks’ net interest income has tended to develop positively, also due to a growth in lending volumes.

Second, new entries into banking seem recently to have substantially intensified the competitive environment in a number of countries. The new entrants have included banking entities established by foreign banks, insurance companies, supermarket chains, and car dealers, often relying on “remote delivery technologies” (i.e. telephone and internet banking). As a result, the existing players have been forced to compete harder on price terms and to strive to

segment the market in order to keep the most profitable customers. New entrants have also stimulated the growth of “remote banking”. The establishment of internet banks was mentioned by most countries as one of the developments that could have the biggest impact on the competitive conditions in the personal sector. The entry patterns described in the report also suggest that regional cross-border competition is intensifying in Europe, with the Nordic countries and the UK and IE markets being the clearest examples.

Third, the soundness of banks’ credit risk management was assessed in order to see whether sound standards have been maintained in the environment of increasing competition. Certain cases were identified where aggressive pricing by new entrants had significantly shifted pricing in the market as a whole. The increasing demand for credit and favourable asset price development (until mid-2000) have also increased competition for market share in a number of countries. However, there is no clear evidence of dangerous “cut-throat” competition undermining risk-based pricing.

Fourth, the assessment of the EU supervisory agencies of banks’ lending standards is currently that they are mostly satisfactory. Some concerns have been expressed about higher loan-to-value ratios than before, concessions on price and less stringent collateral requirements. In general, supervisors are keeping a close watch on banks’ lending practices and they stress the importance of the (on-site) examination of banks’ risk assessment and pricing methodologies, and collateral management, rather than the adequacy of the exact interest rate margins applied by them.

Fifth, as reported by the supervisory authorities, banks’ internal systems for evaluating and pricing credit risk have generally undergone significant development, especially at larger institutions. However, there is evidence that banks’ customer-rating systems, in particular, are often significantly based on current conditions rather than rating or pricing on the basis of the evolution of asset quality over the business cycle. Hence, “a point in time” rather than a

“through the cycle” process often seems to be applied, as explicitly indicated for a number of countries.

Therefore, it is possible that if the economy, or asset prices, were to suffer a sharp downturn, the risk premium demanded by some banks could turn out to be inadequate. The same might apply to collateral coverage, particularly if high loan-to-value ratios were applied and collateral were frequently valued in terms of market prices. However, there are some examples of the opposite approach, and some banks may already be moving towards a more long term-oriented approach. Sectoral analyses and certain statistical methods for the classification of customers can also contribute

some forward-looking elements to banks’ risk management process.

Finally, supervisory authorities regard it as important to encourage banks to continue enhancing their methodologies for allocating economic capital according to their individual risk profile, and developing their internal risk management systems. They also stress that any structural decline in margins needs to be addressed by the banks themselves. The supervisors’ role is to examine the soundness of the asset quality, provisioning policies, risk management systems, cost control and capital adequacy, which are the basic conditions for the sustainability of the deterioration in banks’ lending margins.



## Introduction

This report examines the developments in the pricing of credit as well as deposits by EU banks. Moreover, it addresses the question of whether there are currently concerns about unsound relaxation of lending standards, or underestimation of risks on the part of banks. The issue is whether banks are basing their price and non-price credit terms too much on the current conditions with regard to asset prices and the cyclical situation, rather than the evolution of asset quality in the long-term, and the need to weather cyclical fluctuations. Input from the national banking supervisory authorities and central banks was collected in

order to obtain information to qualify statistics and to address the supervisory issues.

Section 1 examines the development of banks' margins in lending and deposit-taking from the third quarter of 1997 to the third quarter of 2000. Section 2 evaluates the reasons for the apparent tightening of competition at the same time. Section 3 reviews the feedback from supervisory authorities as regards banks' lending standards and highlights supervisory concerns and measures. Finally, Section 4 presents considerations related to the sustainability of banks' margin development over time.

## I Banks' margin developments

Since the focus of the analysis is banks' pricing behaviour, it is appropriate to focus on the margin earned by banks on their *new businesses*, based on contractual interest rates applied by banks, rather than on the spread earned on the whole stock of interest bearing assets and liabilities. The latter stock-based spreads (approximated from profit and loss and balance sheet information) significantly reflect past decisions, which depend on the relative importance of the use of variable rates in lending, this being particularly high for ES, PT, FI and SE. These measures change only gradually in response to the changes in market conditions owing to the slow turnover of the loan book, lock-in periods for fixed rate contracts and time intervals between the rate changes concerning variable rate items. The stock-based spreads are, however, indicative of profitability, as discussed in Section 4.

Hence, the *lending margin* is defined as the difference between banks' average contractual rates on new loans (flows) and a *reference rate*. The reference rate is the market interest rate of a corresponding average maturity representing the *financial opportunity cost* for banks. It is not intended to represent the (marginal) cost of funds for the bank. The *deposit margin* is defined similarly with regard to an appropriate reference rate, and the

*overall margin* as the average new lending rate minus the average deposit rate. The analytical basis for, and caveats related to, this approach are presented in Box 1, and the data in Box 2. The methodology follows the Klein-Monti modelling approach to banking competition and represents a useful way to distinguish between lending and deposit-taking activities for the purpose of analysing credit and deposit markets separately. Annex 1 reports the reference rates used in the calculations.

The margins are shown from the third quarter of 1997 to the third quarter of 2000 in Charts 1-6 (including non-euro area countries where data are available). *The data need to be reviewed very carefully and with caution*, as they are not harmonised across countries. Therefore, the data are not fully comparable across countries (see Box 2). Moreover, the methodology used to calculate margins may lead to problems of comparison across countries. The aggregated data are by their very nature quite rough, and it is difficult to take into account fully the average maturity (observing the variable rate versus fixed rate decomposition) given the data available. Nevertheless, the data represent a rare data set on the retail rates applied by banks, and they should be indicative and representative of broad developments in the pricing of credit and deposits.

## Box 1

### Analytical basis for the margin calculations

The separate investigation of the lending and deposit margins, as carried out here, follows the widely applied Klein-Monti model of banking competition (e.g. Freixas and Rochet, 1997). In this model, banks maximise profits in the current period and have capacity to set the price in both credit and deposit markets (i.e. banks have some pricing power in these markets). Banks cannot influence the interest rates in the interbank money market or long-term debt market, to which they resort when seeking a return on surplus liquidity or to borrow additional funds. This assumption is increasingly uncontroversial in the wide and deep euro area money and capital markets. Consequently, the market rates stand between the markets for credits and deposits as alternative yields on investment and cost of funds. Moreover, provided that costs are assumed separable by activity, and there is no cross-subsidisation, the interest rates on loans and deposits are determined separately and independently of each other. Under these conditions the calculation of the margins as carried out in this report is theoretically feasible.

This simple model seems to be a natural starting point for considering banks' margins. However, one must be aware that some other models of imperfect competition in banking, or empirical considerations, may suggest different pricing behaviour. For example, in the "double Bertrand competition", the price of deposits (input) has an effect on the price of loans. Perhaps more plausibly (Chiappori et al., 1995), loan rates may be cross-subsidised from the deposit margin in order to attract borrowers, if deposit rates are regulated (providing extra benefits to banks operating in both markets) or if there are favourable consumer "lock-in" effects, once customers have been captured (i.e. "tying" of loan customers is possible). The latter effect may be fostered by regulations or contractual details applied by banks that restrict the possibilities for borrowers to change banks. For these reasons, the overall margin can also be informative concerning banks' pricing behaviour and competition. The core result from the literature on cross-subsidisation is that, in deregulated and increasingly competitive banking markets, cross-subsidisation is becoming more and more difficult (Mitchell, 1988). Hence, the pricing of loans would more and more often be independent of the pricing of deposits. Therefore the simple Klein-Monti model might be an increasingly appropriate characterisation of banking competition in the retail markets. It does not take into account, however, issues related to banks' role in transforming risk, evaluating and monitoring borrowers. Hence, it does not contain predictions as regards the appropriate pricing of credit risk.

## Box 2

### Description of the data used to calculate banks' lending and deposit margins

The data for this analysis are taken from the ESCB money and banking statistics (MBS).

**Basic data:** Four aggregated notional *retail interest rates* have been calculated for each euro area country individually, and also for the euro area as a whole, using the respective outstanding balance sheet items (BSI data) as weights. The same rates for the non-euro area EU countries have been calculated where data are available. Also, the lack of weighting information affects the calculation of the aggregated retail rates for the non-euro area countries. A full set of averages can be provided for SE and GR. The available BSI data from the non-euro area EU countries are to be considered as preliminary and may be subject to revisions. For UK only the aggregated deposit rate can be calculated, since no quarterly BSI data have been provided. The Bank of England has provided estimations for quarterly aggregates of retail lending rates to households, which are, however, not fully consistent with the BSI-based series for other countries. The Bank plans to publish enterprise lending rates from January 2002 onwards. DK has supplied proxies for the BSI weights and plans to start regular BSI reporting in January 2001.

The four notional rates are:

1. *aggregated retail deposit rate*: weighted average of the interest rates on overnight deposits, deposits with an agreed maturity of up to two years and over two years, and deposits redeemable at notice of up to three and over three months;
2. *aggregated retail lending rate*: weighted average of the interest rates on loans to enterprises of up to one year and over one year, and consumer and housing loans to households;
3. *aggregated retail lending rate to households*: weighted average of the interest rates on consumer and housing loans to households;
4. *aggregated retail lending rate to enterprises*: weighted average of the interest rates on loans to enterprises of up to and over one year.

The rates on the loan side refer to *new business*, while in the case of deposits they partly refer to the average rates on the respective deposit stocks. The only cases where the average rate is used on the loan stock are IT loans to enterprises with less than one-year maturity and the data set for SE.

The weighting structure for the *euro area aggregates* is based on the corresponding items on the aggregated balance sheet of the euro area Monetary Financial Institutions (MFI) sector or close proxies. The weights reflect the country-specific proportions of the relevant instruments within the euro area measured as outstanding amounts.

The **aggregated retail interest rates should be used with caution** and for statistical purposes only, primarily to analyse their development over time rather than their level. They are calculated as the weighted average of national interest rates provided by the national central banks. The national rates represent those rates that are currently available from national sources and which are judged to fit the standard categories. The weights are adjusted monthly, so that interest rates and weights always refer to the same month. These national rates rely in some cases on proxies and working assumptions due to the heterogeneity observed in the national financial instruments across Monetary Union (MU) Member States. Furthermore, the national interest rates are not harmonised in terms of their coverage (new business and/or outstanding amounts), the nature of the data (nominal or effective) or the compilation method. In some countries certain instrument categories may not exist or the respective quantities are negligible.

**With regard to margin calculations**, ideally, loan and deposit rates would be contrasted with market rates of exactly the same maturities, taking into account whether the loans are variable or fixed rate loans. This *reference rate* represents the corresponding yield *on alternative investment*. This is obviously not possible when dealing with aggregated statistics. Rather than choosing a single reference rate for calculating the *lending and deposit margins*, a reference rate is constructed separately for each of the three lending rates and the deposit rate, hence taking into account the different underlying maturity structures in different countries (shares of different maturities underlying the composite rates used in this analysis) and the broad role of variable as opposed to fixed rate lending. Information on the average maturity of mortgage loans, available from the European Mortgage Federation, was also applied in order to select the appropriate reference rates for household lending.

As a result of this procedure, one-year rates seem to be appropriate as the reference rate for deposits and lending to enterprises, and the five-year rates usually seem appropriate for loans to households (ten-year rates in the case of BE and FR, and three-year rate in case of GR). The reference rate for total loans is calculated as a weighted average (three-year rates for all countries except BE and FR, for which the five-year rate is applied). Because the majority of the loans (even those to households for housing purposes) are variable rate loans in ES, FI and SE, following short-term market rates, one-year reference rates are used for all lending in these cases. For PT even shorter rates are appropriate for loans and also deposits, owing to a high degree of dependency on short-term money market rates in banks' variable rate businesses.

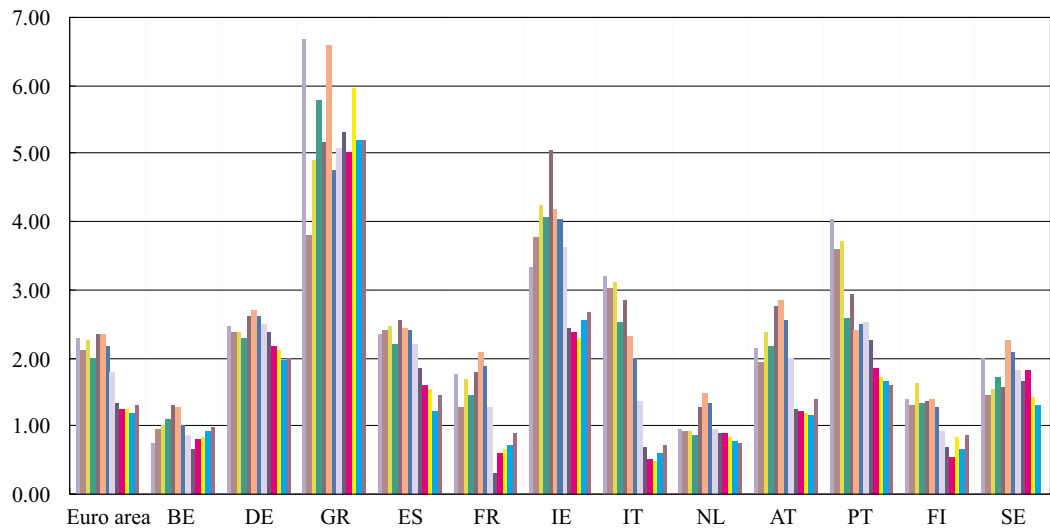
*Interest rate swap rates* were deemed to be the most appropriate basis for the reference, since they provide the common reference base for different maturities needed for the analysis. The recourse to swap rates is particularly useful for intermediate maturities (three and five years). The swap rates are usually close to the

money market rates and government bond yields, which are typical reference rates in this context. However, potential changes in the swap-to-government bond spreads may affect the comparisons over time to some extent, as the swap rates are not risk-free.

### Chart 1

#### Margin on total new lending

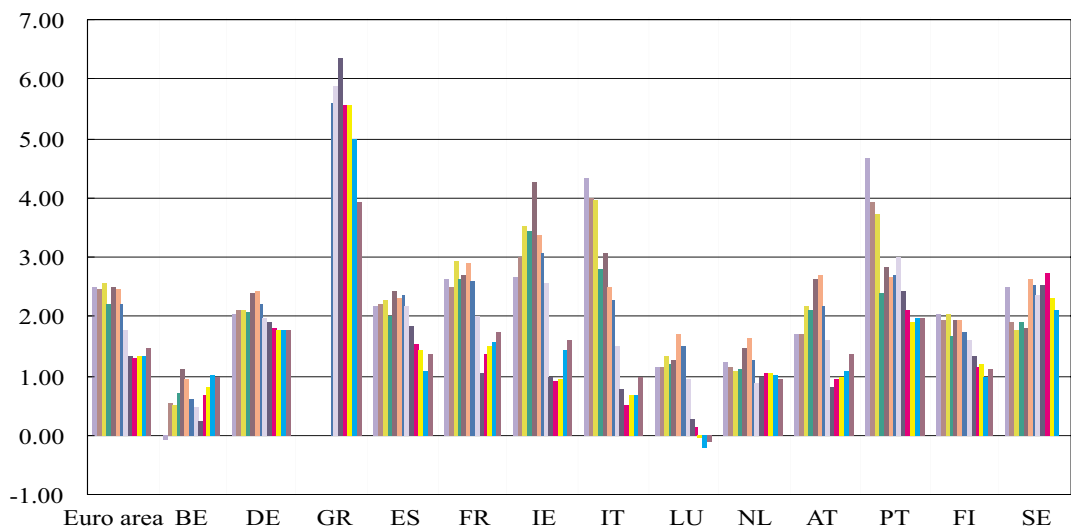
(1997 Q3–2000 Q3, percentage points)



### Chart 2

#### Margin on new lending to households

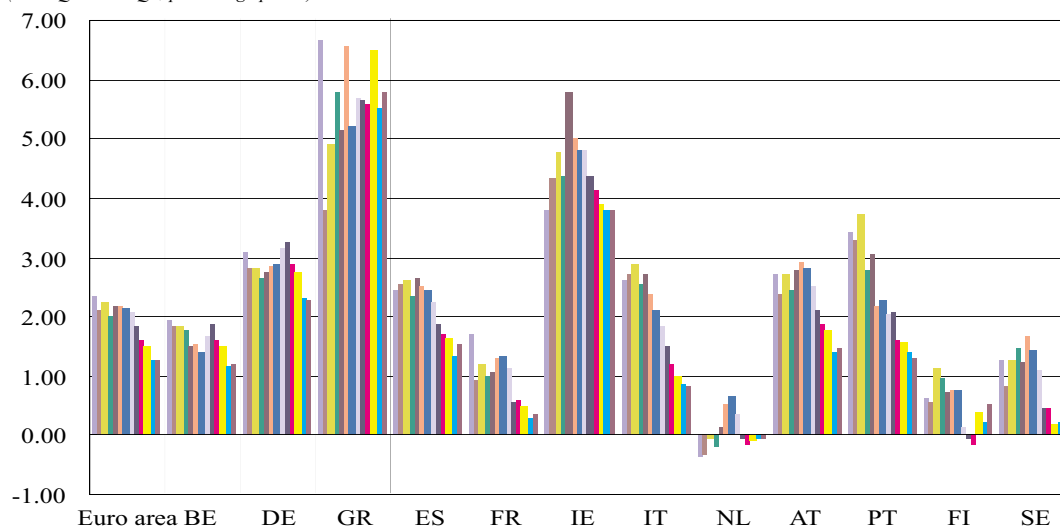
(1997 Q3 - 2000 Q3, percentage points)



### Chart 3

#### Margin on new lending to corporations

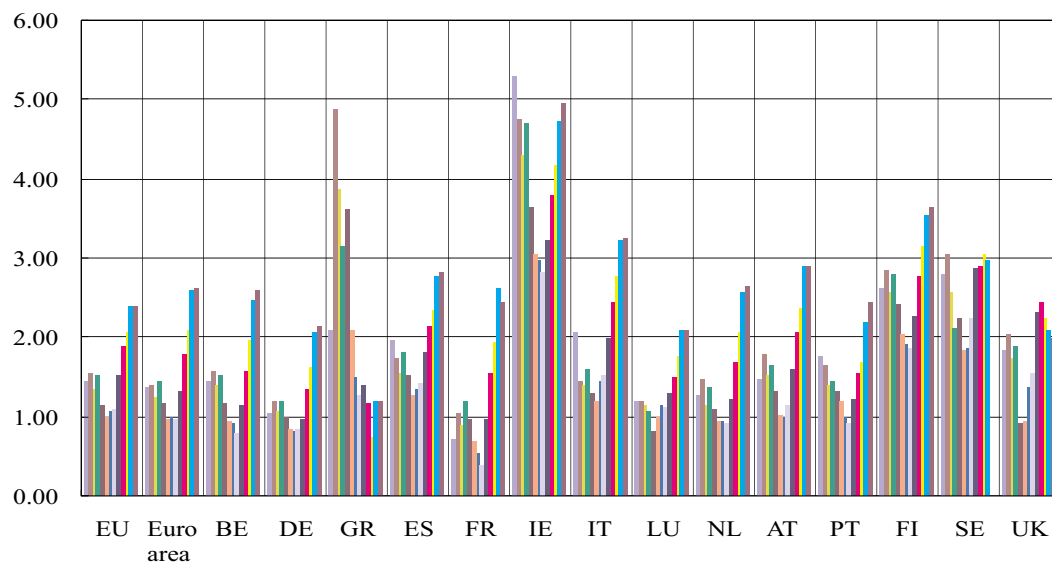
(1997 Q3 - 2000 Q3, percentage points)



### Chart 4

#### Margin on deposits

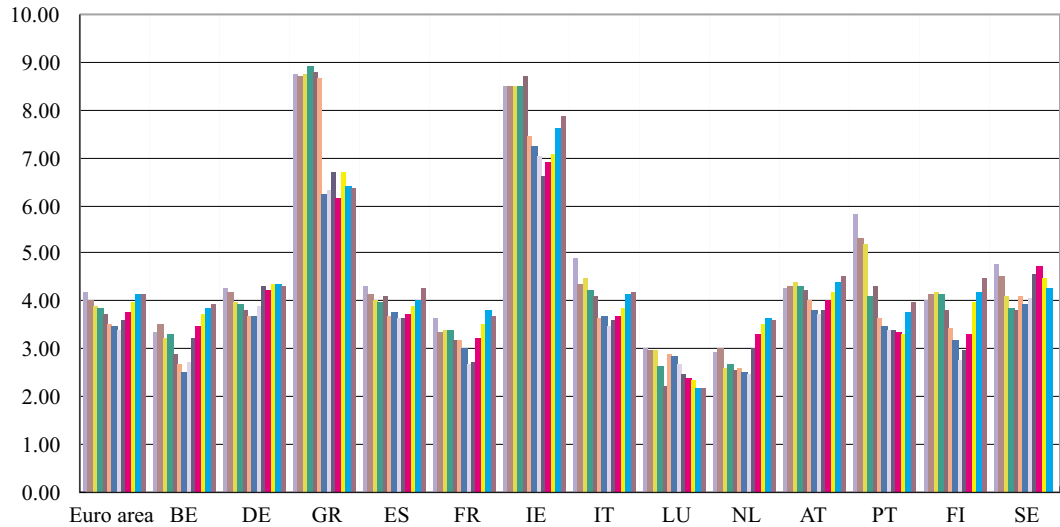
(1997 Q3 - 2000 Q3, percentage points)



## Chart 5

### Overall margin

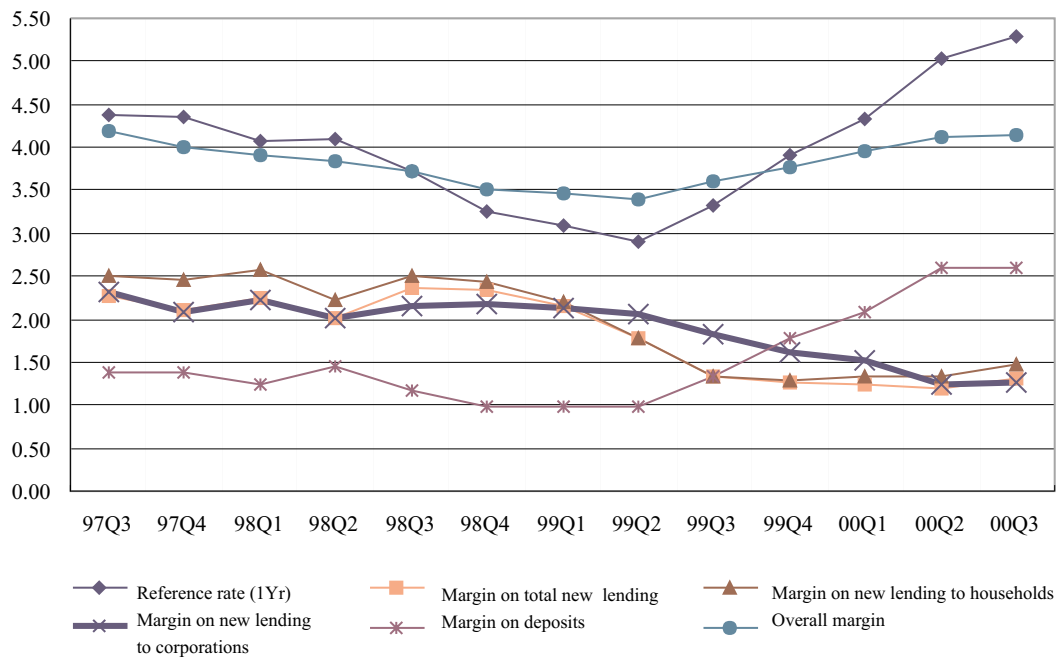
(1997 Q3 - 2000 Q3, percentage points)



## Chart 6

### Euro area banks' margins

(1997 Q3 - 2000 Q3, percentage points)



Source (Charts 1-6): ECB.

Due caution should be exercised when reviewing these data, as they are not harmonised across countries. Therefore, the data are not fully comparable across countries. Euro area (and EU) figures are weighted averages.

## 1.1 Main observations

Banks' margin on total new lending shows a significant reduction in all countries since approximately mid-1998 (but throughout the entire period for IT and PT). DE and NL data have been relatively stable (though also exhibiting reducing margins more recently); hence, the euro area average has fallen less than has been the case for the majority of countries (see Chart 1). The latest data for 2000 typically show a stabilisation in the margin. FR, PT, FI and SE have reported an easing of the pressures on banks' lending margins.

Reductions in the total lending margin are especially large in IE, IT and PT. This change in the pricing policy of banks seems to be related to the structural convergence of the market interest rates towards the common Monetary Union levels. To an extent, this also applies to GR. There is also some convergence in the margins throughout the period, as the countries exhibiting the widest margins at the beginning of the period tend to show the greatest reductions. Lending margins have usually diminished both with regard to the household and the corporate sector (see Charts 2 and 3), but the reductions have been more pronounced in absolute terms in the latter segment during late 1999 and the first two quarters of 2000.

Additional data for the non-euro area countries obtained from the respective supervisory authorities demonstrate a fall in margins as well, but are not provided owing to their lack of comparability. For DK and UK, the data show reductions in lending margins with regard to both the personal and corporate sector. In DK (as in SE) the reductions are more pronounced with regard to the corporate sector, while in UK the personal sector shows a more marked decrease.

There is evidence that banks' lending margins have been on a downward trend over a longer period of time. BE, DK, DE, ES, IT, SE and UK report a trend of decreasing margins through the 1990s,<sup>2</sup> i.e. that tendency is not peculiar to the time period covered. The country reports obtained from the authorities represented at

the Banking Supervision Committee make it possible to assess the development of different segments of the credit market. BE, IE, AT, PT and UK indicate that the most significant recent reductions in margins have taken place in the personal sector, i.e. the mortgage and consumer credit markets (for BE car finance and mortgages in particular, for IE mortgages, for PT longer-term financing, and for UK credit cards). FR, IT and SE report seeing the most significant changes within the corporate sector.<sup>3</sup> In other countries the margin development seems to have been quite similar across the different parts of the credit market.<sup>4</sup>

Household lending margins have been above the corporate margins in many countries. If it is assumed that credit risks are at least as high in the corporate segment, this implies significantly tighter competition concerning corporate rather than personal customers. This does not hold true, however, for BE, DE, ES and IE, where the aggregated household margins have been smaller than the corporate margins (for DE this holds true only for mortgages, and not for other personal lending). This suggests that when a high percentage of personal lending is mortgage lending with a low probability of insolvency the lending margins can be quite narrow.

2 BE reports a 10% reduction in the aggregated margin on mortgages and a 25% reduction in that on term loans from end-1996 to September 1999. DK data show a reduction in all lending margins since end-1995, the total lending margins falling from above 4 to close to 2 percentage points. DE reporting suggests a rather significant reduction in banks' lending margins from 1993-98 based on income considerations. ES reports that the biggest reduction in margins took place in the mid-1990s. IT indicates a significant reduction in banks' spread between lending and funding rates from 1993 to 1999 (in the short-term segment from 6 to 4 percentage points). The total lending margin of the SE banks (vis-à-vis short-term market rates) fell from around 3.5 percentage points to close to 2 percentage points from end-1992 to September 1999. UK reports a narrowing in the margin over LIBOR from around 1.4 to 1 percentage points from 1984 to 1999 in the market for mortgage loans. In PT, the biggest reduction in margins started in 1997. These findings are also corroborated by Mojon (2000) for BE, DE, ES, FR, IT and NL.

3 FR and BE report the largest reductions in the segment of major firms. FR also reports that margins on consumer credit have remained at a rather high level. LU reports as well significantly bigger changes in wholesale than retail activities.

4 UK is the only country to mention a specific industry, the construction industry, characterising significantly larger margin reductions than the average. IT notes that there are significant regional differences in the pricing of credit.

*Deposit margins* usually follow a U-shaped development over the sample period, and have significantly increased according to the most recent data (see Chart 4). This is largely related to the increase in the short-term rates as discussed in the next Section. The asymmetric evolution of loan and deposit margins is basically due to the differences in the sensitivity of lending and deposit rates to changes in market interest rates.

Finally, the falling margins in lending have produced a reduction in banks' *overall margin* up to the second quarter of 1999. However, more recently this tendency has clearly reversed due to the increases in the deposit margins (see Chart 5). This recovery has also supported banks' net interest income. The overall margin is still however significantly smaller in GR, IE, IT, LU, PT and FI than at the start of the period. The average overall margin in the euro area has instead returned to about the same level (see Chart 6). Overall margins are a useful summary measure, since in some countries banks might have tighter lending margins to some extent because they rely on higher deposit margins.

In FR a significant reason for the overall margin reduction until mid-1999 was that a large part of the deposits of the credit institutions consist in "administrative savings", which bear an inflexible cost. These financial products are mainly offered by the mutual and co-operative banks. AT mentions savings banks (Sparkassen) and industrial co-operative banks (Volksbanken) as recording the strongest reductions in total lending and overall margins. The smallest reductions were observed in the sectors of joint stock banks and rural co-operative banks. By contrast, DE and IT indicate the biggest reductions for major commercial banks rather than smaller savings banks (or credit co-operatives in DE). In other countries significant differences across banking groups cannot be observed, while in IE the banks specialising in the mortgage market have been most affected (and the two major domestic banks less so). Hence, based on the evidence collected, more pronounced margin reductions in a specific part of the banking sector cannot be detected at the euro area or EU level.<sup>5</sup>

## 1.2 Factors affecting banks' margins

For the majority of the countries, the *tightening of banks' pricing* owing to increasing competition is reported as a major reason for the observed reduction in lending margins. To mention the cases where this conclusion does not seem to be so clear-cut, DE emphasises the impact of the interest rate level, and BE, ES, NL, PT and DK stress other factors as well. All countries recognise, however, that competition has significantly tightened over the longer term, as a consequence of deregulation and other basic tendencies generating more competition in the banking industry. The other important factors, related to market interest rates, inflation, pricing structures, operating costs and regulations, are reviewed below.

First, *changes in the market interest rates* have a strong impact on the *short-term* development of margins, because banks may not wish to change all lending and deposit rates immediately after a market rate change.<sup>6</sup> The sluggish reaction of banks may be a result of the costs of changing customer rates, attempts to capture or retain market share, or interest rate expectations (e.g. a market rate fall may be deemed only temporary by banks). The quantitative measurement of this effect is discussed in Box 3.

Because of the sluggish reaction of banks with regard to changing their own rates in response to changes in market interest rates, lending margins tend to react *temporarily* upwards (downwards) when market rates fall (rise), as banks continue to enjoy high lending rates that are not rapidly adjusted downwards (upwards). This is also evident in our sample: the very short-term correlation between quarterly changes in the

<sup>5</sup> In NL and FI the average new lending rate to enterprises has sometimes been even lower than the corresponding reference rate. If banks' funding costs (e.g. EURIBOR rates) were used instead of the yield on alternative investments, negative margins would probably not be observed.

<sup>6</sup> The sluggish reaction of banks to the rates they apply in their new businesses finds support in the DE, IE, NL and AT country reports. The speed of the transmission of changes in the market rates to lending rates in each country may also depend on the relative importance of fixed or variable rate lending. Hence, changes in the lending margin do not necessarily reflect changes in banks' pricing strategies. A return to equilibrium can be expected in the medium term.



reference rates and lending margins is significantly negative. On average for the countries covered, the correlation coefficient is around -0.70 for household lending and -0.60 for corporate lending.<sup>7</sup> This indicates, in line with other evidence that banks change the rates charged to firms more rapidly than those applied to the personal sector. In the *longer term*, the margins should remain *unaffected* by the shocks to the level of the market interest rates, once time allows banks' new lending rates to react in full. In fact, the longer-term correlation between the reference rate and margin changes is small (actually very close to zero for corporate lending). In any event, the reference rates were falling until the first or second quarter of 1999 and, hence, this cannot be a factor in the tightening of banks' lending margins, since the exact opposite should occur in the short run.

To take an example of the impact, according to the results given in Box 3, the sluggish reaction of banks could explain on average around 60% of the substantial fall in household lending margins during the third quarter of 1999, a period in which the longer-term rates increased significantly. After that the long-term rates have remained quite stable, and thus not

producing effects on banks' margins. The effect of the increase in the short-term rates should be much smaller on the corporate lending margins, since the corporate rates tend to be adjusted quite fast in line with the market interest rate developments. Nevertheless, the recent rises in short term interest rates could have contributed to the narrowing of banks' corporate lending margins. The speed of adjustment is also influenced by the prevailing type of contracts (fixed or variable rate).

The interest rate level appears to have the greatest impact on deposit margins, since deposit rates represent the least market rate-sensitive component of banks' pricing. Hence, a rise in short-term rates could explain up to 80% of the one-quarter increase in banks' deposit margins. The asymmetric (i.e. slower) reaction of deposit margins compared with the lending margins is reflected in the estimates of elasticity with regard to changes in market interest rates as described in Box 3.

7 It is shown in the literature that the more competitive the banking market, the faster the pass-through of market rates to banks' interest rates. See, for example, Berger and Hannan (1991). Hence, a sluggish reaction on the part of banks is actually a sign of imperfect competition in banking.

### Box 3

#### Measuring the short-term impact of market rates on banks' margins

In order to grasp the quantitative significance of the short-term effect of changes in market rates on banks' margins a well-developed econometric analysis is needed. The analysis needs to take into account important auxiliary determinants (cyclical conditions, etc.) and assess the equilibrium level of retail rates, to which the rates converge, once banks have fully adjusted to the new level of interest rates. The short time span of the data contained in Box 2 prohibits this analysis, but Mojon (2000) presents estimates for BE, DE, ES, FR, IT and NL, using an appropriate error correction model and basing the estimations on information obtained from national central banks. The information base is quite heterogeneous across countries as to which products are covered, but it tends to cover representative interest rates charged by banks. In addition, other studies exist for samples of EU countries, but they tend to use data which are somewhat too old for the purposes of this report (e.g. Cottarelli and Kourelis, 1994, Borio and Fritz, 1995).

Taking Mojon's results for 1990-98, the three-month elasticity of the short-term credit rates with regard to market rate movements ranges from around 0.5 to 1.00. These results mean that a 100 basis point increase in the market rate (reference rate) would in one quarter reduce banks' lending margins by between 50 and 0 basis points, because of the fact that it takes time for banks to adjust to the new level of market rates. In other words, a change in money market rates would explain from 50% to 0% of the quarterly change in banks' margins. Mojon's results indicate that the changes in the money market rates explain significantly less of the short-term development of banks' corporate lending margins. However, they are a much stronger

explanatory factor for long-term credits, especially mortgages, and deposits, since the estimates of the three-month elasticities are typically around 0.4 for mortgages and 0.2 for deposits (except for IT, where they are significantly higher). It should be noted that the elasticity estimates can differ across countries. Finally, Mojon's analysis of the determinants of bank retail rate elasticities shows that competition among banks and disintermediation reduce the ability of banks to smooth out the impact of market rate changes on their margins.

The sluggish reaction of banks' lending and deposit rates to market interest rate changes also finds support in the case of PT, according to the estimates of the Banco de Portugal, but in this case deposit rates may adjust faster than credit rates. This is markedly different to the typical findings for other countries. However, it should be stressed that the results for PT refer to a period when market interest rates showed a clear downward trend, and an asymmetric adjustment of credit and deposit rates cannot be ruled out.

As banks, with time, are able to raise their lending rates, the decrease in margins should be redressed to some extent. It might, however, be more difficult for banks to raise lending rates than to lower them and, hence, the pass-through might remain imperfect over a longer period of time in the case of increases rather than decreases in market interest rates. Some evidence of this is shown in Charts 1 and 2, while the most recent data may indicate that credit margins can return to the previous level after an adjustment lag.

Finally, the major disinflationary processes under way in some countries, together with the consequent fall in nominal interest rates, may also have contributed to a decline in banks' margins. This structural development, related to the EMU convergence process, was noted as being especially important for IE, IT and PT. In these cases, margins do not remain unaffected in the long-term, but there is a convergence towards a more competitive environment.

Second, the *level of the market interest rates* can have an effect as well. Namely, the higher the market rates, the easier it may be for banks to transmit changes in market rates to customer rates.<sup>8</sup> However, this issue might be of significant importance *only* on the deposit side and when market rates are low and deposit rates are zero or close to zero, since banks cannot offer negative interest rates. Hence, the shift in market interest rates to a lower level until early 1999 might explain part of the reduction in deposit and overall margins owing to the insensitivity of the deposit rates downwards.

The *changes in the term structure of interest rates* should *not* have an impact on the lending margins as such. There is no bias in the calculation of margins, as long as the reference rate is appropriately defined. As an effort has been made to find reference rates as close as possible based on the underlying average maturity structure (also allowing for country-specific effects, such as the dominance of variable rate lending, see Box 2) the bias should not be too severe. However, a flattening (steepening) of the yield curve may have lowered (increased) banks' overall margins and, hence, net interest income, since banks tend to lend more long-term than they borrow.<sup>9</sup>

Third, a *shift towards charging explicit fees for services connected with bank accounts* would allow a narrowing of banks' margins as the margins would need to cover a smaller part of banks' overhead operating expenses with the same level of risk premia. Hence, the shift towards more fee-based pricing of payment and account keeping services (less cross-subsidisation from the deposit margin), reported by BE, FI and SE, can be an important factor generating a narrowing in banks' deposit and overall margins, especially over the longer term. In SE this has taken place in conjunction with increasing competition from niche players, which do not offer payment services, only loans or deposits. ES has also witnessed a steady increase in banks' income based on the

<sup>8</sup> The ES report mentions evidence in favour of this effect.

<sup>9</sup> Until 1999 Q1 there was a slight flattening of the yield curve in the most countries, except for ES, IE, IT and PT, which experienced a slight steepening of the yield curve owing to the more prominent decrease in short-term rates.

fees they charge on their customers; this is in fact one reason why banks might price loans more aggressively, namely to lock in profitable account customers. Banks can be increasingly focusing on the profitability of the entire business related to a single customer. There are no indications in the country reports that increasing fees associated with credit operations could have led to a narrowing of banks' lending margins.<sup>10</sup>

Fourth, by *securitising loans* (intermediating loans as securities away from the balance sheet), banks could afford somewhat lower margins owing to the lower capital cost. However, since securitisation is still quite limited in the EU, this effect should not be significant in general.

Fifth, banks might transfer some of the *reduction in operating costs* to customers in the form of lower margins, especially if there is effective competition. This might be a significant explanatory factor over a longer period of time for certain countries as to the reduction in banks' margins, and would represent a favourable impact in terms of an increase in banking system efficiency. From 1995 to 1998 banks' aggregate operating costs per income, which is a usual measure of *cost efficiency*, show an improvement for BE, DK, GR, ES, IE, IT, PT, UK and especially FI.<sup>11</sup> The euro area and EU aggregates, however, depict a quite stable development. With reference to the most recent developments, cost reductions were mentioned as a significant factor behind the lending margin reductions by ES and FI.<sup>12</sup>

Finally, *fiscal or regulatory changes* could have a bearing on banks' margins if there is a change that allows banks to engage in more competitive pricing. However, such changes have not usually taken place over the period covered (except in FI),<sup>13</sup> as regulations generating floors for loan rates or ceilings for deposit rates had already been abandoned in the past. Over the long term, deregulation has naturally been one of the major reasons for the more competitive pricing of loans and deposits.

As to the remaining regulations, in BE there is still a special type of savings accounts ("carnet de dépôt"), the interest income on which is tax exempt up to a maximum amount of BEF 56,000 and to the extent that the interest rate does not exceed the stipulated threshold (currently 4%). In FI there was a similar kind of a system for deposits yielding below 2%, which was abolished in July 2000. Particularly when market rates are high, these fiscal regulations can be binding and lower banks' cost of funds. A large-scale regulation of savings products still characterises the FR banking system: there is restricted distribution of certain tax exempt savings accounts (notably "Livret A"). These regulations have an impact on the development of banks' deposit and overall margins.<sup>14</sup>

### 1.3 Conclusion of the section

The analysis in this section has shown that a number of factors other than changes in competition can affect the development of banks' lending and deposit margins. In particular the evolution of the market interest rates affects banks' margins, so that the recent increases in short-term rates have tended to squeeze banks' lending margins and widen banks' deposit margins. For example, the latter effect has been so strong that banks' overall margin tended to widen from mid-1999 until the third quarter of 2000. However, it appears that there are good reasons to argue that, for a

<sup>10</sup> LU accounting rules take no account of the nature of income, as "interest-substituting" fees have to be booked under interest income rather than non-interest income (such as management and commitment fees).

<sup>11</sup> Based on the ECB publication entitled "EU banks' income structure", April 2000.

<sup>12</sup> If one drops the Klein-Monti approach and allows for the linkages from the funding costs to credit pricing, reductions in the cost of funds might allow for narrower lending margins. Given the narrowing of the deposit margins until recently as well as the fact that the share of market-based funding has tended to increase, a reduction in funding costs does not seem to be a key reason for the reduction in lending margins. AT and UK reports, however, give some support to this effect.

<sup>13</sup> In FI a stamp duty on bank loans was abolished in spring 1998, which increased competition since it became less costly for customers to renegotiate loan contracts and switch from one bank to another.

<sup>14</sup> Some recent reforms in FR have been aimed at bringing price formation closer to market conditions: although savings banks maintained their monopoly on the "Livret A" under their new legal status (1999), a committee was established in 1998 to limit the deviation of the administrative interest rates from market conditions.

significant part, the narrowing of banks' lending margins is indeed attributable to the *ongoing tightening of pricing conditions due to competition*, while this conclusion is not so clear-cut in all cases. This is also supported by the qualitative judgement in the majority of the responses from national supervisory authorities.

Reasons for margin reductions other than competition seem to be significantly stronger for deposit and overall margins, i.e. margins on new lending seem to be the "cleanest" indicator of

competition. However, the pricing of loans covers banks' costs, provisions for expected risk and returns to shareholders (which could be decreasing in response to the level of competition). Hence, banks' margin development across countries may not only reflect competitive pressures or cost efficiency, but also differences in collateral practices and levels of risk. Moreover, in a longer-term perspective, banks' margins have clearly narrowed because of influential structural changes, such as deregulation and internationalisation.

## 2 Reasons for changes in the competitive environment

The characterisation of margin developments in Section I draws on the experience since September 1997. Some of the underlying reasons analysed in this Section might have their roots in more distant periods.

Although the ongoing tightening in competition seems to be a common phenomenon, three different kinds of explanations of the origins of this development emerge from the country reports: (1) *recent new entries* to the banking markets (especially IE, UK, and also BE, DK, GR, DE, FR, IT, FI and SE); (2) *other country-specific structural developments* (DE, IE, IT, NL, AT and PT); and (3) *cyclically-related changes* in market conditions (especially NL and also IE, ES, FR, PT, FI and SE). The fact that these factors overlap to some extent demonstrates that a number of important developments underlie the changes in banks' pricing.

### 2.1 New entries into banking

*New entries into banking* seem recently to have substantially tightened the competitive environment in IE (foreign banks) and UK (insurance companies, supermarket chains, foreign banks). In some cases this change could already have started some time ago, such as in UK in 1995-96. As a result, the existing players have been forced to compete harder on price terms and to strive to segment the market in order to keep the most profitable customers.<sup>15</sup> Box 4 gathers together the reported major

recent entries into the domestic banking markets.

New entry has also been mentioned as tightening competition to some extent in BE (car financing subsidiaries of car companies), DK (telephone or Internet banks in the personal sector and foreign banks in the corporate sector) and DE (telephone or Internet banks) and IT and FI (foreign banks in the mortgage and corporate markets, respectively). In SE mortgage institutions, banks, retail companies and insurance firms have entered various parts of the retail banking arena (also a BE-based Internet bank offering mortgages), and in FR new direct banks (Internet banking operations) have been established. Some recent entries have occurred in ES and PT as well, but the market impact appears to have remained modest. GR reports the entry of a number of co-operative banks with a limited overall market impact owing to their locality and small size, and few recent entries of banks operating in niche

<sup>15</sup> IE reports that in August 1999 the entry of the Bank of Scotland into the IE mortgage market, pricing very aggressively, resulted in a lowering of the mortgage rates in that market by as much as 1.25 percentage points. The entry of Northern Rock, a UK building society, has significantly increased competition for customer funds. In UK a number of new players, both domestic and foreign, have entered all segments of the banking market. Supermarket banks have been active in the personal credit and deposit markets, as well as insurance companies (Standard Life, Prudential), which also have direct banking operations. In the corporate credit market, the biggest changes have taken place in the commercial property market, where the entry of DE banks, accepting the thinnest margins, had an impact on margins of around 20%.

markets. Given the already internationally oriented nature of the LU market, especially in the corporate sector, new competitive pressure from abroad has not taken place (nor from other entrants). Furthermore, domestic lending activities such as mortgages have not come under pressure either. The entry patterns described suggest that *regional cross-border competition* is tightening in Europe, with the Nordic countries and the UK and IE markets being the clearest examples.

As to future entry patterns, the establishment of *Internet banks* was mentioned in most country reports as one of the developments that would have the biggest impact on the competitive conditions in the personal sector. In this area, incumbent banks providing both traditional and Internet-based access are also effectively participating in the competition. For example, in the Nordic market, several players have announced that they are going to invest heavily in Internet banking. These new competitors might face lower barriers to entry than entrants using traditional branch-based supply, since traditional branch networks are quite extensive and this represents a barrier to entry. *Mutual funds* are expected to increase their share of depositors' funds, but this business seems to remain quite firmly in the

hands of the incumbent banking groups. It seems that the competitive impact is most significant when *new delivery channels* are developed, able to challenge the traditional branch-based banks by virtue of lower operating costs and by allowing customers to compare prices offered by banks other than those that have branch offices nearby.

The new entrants, seeking to acquire market share, have prompted responses from the existing players, for example attempts to segment the market. New entrants may also have exerted an influence on the development of the industry. By way of an example, in UK the advent of insurance company banking subsidiaries has stimulated the growth of telephone banking generally.

Although the new entrants are operating on narrower margins, they may also be "*cherry-picking*" the best quality customers. This seems to have taken place in some consumer and corporate credit markets, and could increase the average risks of the remaining institutions. Moreover, the latter institutions might be encouraged to underprice their risks in order to keep their market share. Not all entrants necessarily succeed in "*cherry-picking*" and may end up with the worst customers instead.

## Box 4

### Major recent new entries into banking

	Mortgages	Personal sector Consumer credits	Deposits	Corporate loans
BE		Car companies		
DK	Internet banks			Foreign banks
GR	Co-operative banks and niche credit institutions			
DE	Direct banks (telephone and Internet banking operations)			
ES			Foreign banks New domestic institutions	
FR	Direct banks (Internet banking operations)			
IE	Foreign banks		Foreign banks	
IT	Foreign banks			
LU	No significant recent entries			
NL	No significant recent entries			
AT	No significant recent entries			
PT	Foreign and domestic credit institutions			
FI	Foreign banks			Foreign banks
SE	Domestic mortgage institutions	Domestic and foreign banks	Domestic banks, retail and insurance companies	Domestic banks
UK	Insurance companies (direct banking operations) Supermarket banks Internet banks Foreign banks			Foreign banks

Source: Banking Supervision Committee.

The new entrants might be able to undercut the prices of the existing institutions owing to their *cost advantages*, or they may engage in *predatory* (i.e. below-cost) *pricing* to win market share. There might be an additional explanation, however. If customers perceive quality differences between the entrants and incumbents, possibly because they are unfamiliar with the entrants and their products, or because the existing banks have a quality advantage owing to a wider range of services or familiarity with local conditions, the market structure may exhibit *vertical differentiation*. In such a market, an entrant needs to set lower prices than the existing banks to attract any customers, since at equal prices all customers

would simply prefer the existing institutions. Hence, the low prices of entrants may not necessarily reflect unduly aggressive behaviour. The presence of customer *switching costs*<sup>16</sup> would further encourage aggressive pricing policies on the part of the entrants.

These two factors (vertical differentiation and switching costs) can also constitute a barrier to entry. Also the “psychological aspects” of consumer inertia may help to maintain the

<sup>16</sup> *Switching costs refer here to all possible costs that a client may incur when he or she shifts his or her banking affairs from one bank to another. Switching costs make customers relatively insensitive to price differentials. Switching costs should be decreasing in importance, since automated information processing makes it easier and easier to shift information to another banks.*

dominance of the incumbents. Namely, there can be a large stock of customers or businesses that are less interest rate sensitive. The business referred to includes, for example, non-interest-bearing current account deposits. In general, these advantages of the incumbents have been undermined as a consequence of competitive pressure, pressure by consumer groups and perhaps also adverse press coverage.

Indeed, NL mentions the service quality of domestic banks, offering a wide range of solutions, as a major reason why there has *not* yet been significant entry by foreign players or telephone or Internet banks. This stresses the point that price is not the only relevant variable in competition. FR report suggests the same explanation for the lack of entry by foreign banks. Increasing *disintermediation*, also boosted by the introduction of the euro, is mentioned as the major factor behind change in the corporate credit segment. In addition to the increasing volumes of capital market finance by firms, new methods of finance have also been adopted, such as mezzanine finance.

## 2.2 Other structural developments

Certain other country-specific structural developments may also have had a significant impact on banks' pricing. IT stresses that the impact of the deregulation process is still considered to be generating increased competition, for example IT banks have been allowed to distribute products through other channels more freely. DE stresses the longer-term structural changes such as disintermediation, etc. as a major factor driving margin development. In NL independent agents (intermediaries) have gained importance and simulated competition in the mortgage market.<sup>17</sup> For AT it is mentioned that some banking groups, especially those conducting a large part of their business in rural areas, have a comparatively cheap source of funding at their disposal and are therefore able to offer loans at rather favourable conditions.

*Overcapacity* is also mentioned for AT as a significant determinant in the ongoing stiff

competition for market share. Hence it seems possible that banks might strive to expand capacity utilisation by increasing the volume of business, rather than cutting costs. Finally, the introduction of the euro might already have contributed to some extent to increased competition, as it has become easier to borrow and invest abroad.

IE, IT and PT should also be mentioned in this context owing to the convergence in the nominal interest rate levels.

## 2.3 Cyclical considerations

During a *cyclical upswing*, with increasing demand for credit, some banks may try to expand market share by competing heavily for new customers entering the market or for customers of the competing banks expanding their demand for credit. This market share competition might even take place at the expense of short-term profitability if banks count on consumer lock-in effects, i.e. being able to extract greater rents from the new customers they have captured. NL reports signs of this development during the high growth in lending; this also tightens banks' deposit margins, since banks have been forced to increase competition for deposits in order to finance the lending growth. Furthermore in IE, FI and PT heavy lending growth in the mortgage market, in particular, is associated with narrowing margins (as well as, to a smaller extent, in ES). In IT the growing segment of "small borrowers" (households and mortgages) has also seen new entry.<sup>18</sup>

FR and SE seem to have undergone a somewhat contrasting development: weak demand for bank credit until recently is even quoted as a reason for increased competition, and the market pickup is now easing pressures on banks' margins. Clear signs of a reversal of

<sup>17</sup> These agents sell mortgages on a commission basis, on behalf of banks and also insurance companies and pension funds.

<sup>18</sup> IT reports that banks that have gained market share have charged rates that averaged nearly 50 basis points below the rest of the banking system. In addition, DK reports evidence that in the past cycles (boom 1984-86 and recession 1987-93), banks' pricing of credit was significantly tighter during the boom as opposed to the recession.



banks' margins cannot yet be observed, but this anecdotal evidence demonstrates that the effect of the business cycle on competition can in fact be ambiguous. In SE competition is reported to have been particularly severe after the banking crisis in the early 1990s.

Another channel of cyclical influence is that lending rates might be decreasing with the amount of *collateral* pledged. With rising asset prices, it is easier for borrowers to pledge more collateral. The important question is then whether banks bear in mind the possibility of an asset price reversal.

#### 2.4 Conclusion of the section

The country reports indicate that there have been clear cases where the aggressive pricing by new entrants (or other structural

developments) have significantly driven pricing in the market as a whole. One might suspect that this could jeopardise the appropriate risk-based pricing in the credit markets in the already quite competitive environment. However, there is no clear evidence of unsound predatory pricing. Moreover, ES provides evidence that a phase of very aggressive competition need not necessarily be disruptive, and may be beneficial in the long term.<sup>19</sup> Conflicting evidence exists, however, for example from Scandinavian countries in the late 1980s. The increasing demand for credit and favourable asset price development have also tightened competition for market share in a number of countries (while there are conflicting indications for two countries). The ease of pledging collateral may have significantly increased the ability of firms and households to borrow, and might also have lowered the cost of borrowing.

### 3 Assessment of banks' lending standards

The assessment by the EU supervisory agencies of banks' lending standards is currently *mostly satisfactory*, despite the increase in competition; supervisors are mostly content with the price or non-price lending standards applied by banks. Some concerns have, however, been expressed about concessions on price and less stringent collateral requirements. NL reports possibly relaxed standards in mortgage lending and some consumer credits, and ES some softening in the pricing of certain mortgage loans. AT and UK do not rule out a dilution in banks' lending policies either. As surveyed in the report "Asset prices and banking stability" (published by the ECB in April 2000), there is also anecdotal evidence that competition has driven up loan-to-value ratios in mortgage lending in some countries (FR, NL and UK).

Supervisors are keeping a close watch on banks' lending practices. However, the issue of the adequacy of banks' *risk premia* is quite difficult to assess. In addition, any general assessment is intricate, since lending practices differ between banks; for example because of

differences in risk tolerance and ability to withstand losses. Indeed, supervisory authorities stress the importance of the (on-site) examination of banks' *risk assessment and pricing methodologies*, rather than the adequacy of the exact interest rate margins. A positive feature quoted by the supervisory authorities is that banks' internal systems for evaluating and pricing credit risk (*rating systems, RAROC (Risk-Adjusted Return On Capital) and credit scoring models*) have generally undergone significant development, particularly at larger institutions.

However, there is evidence that banks' internal customer rating systems, in particular, are often (but not by all banks) significantly based on *current conditions rather than rating or pricing on the basis of the evolution of asset quality over*

<sup>19</sup> During the 1980s there was very aggressive competition linked to the establishment of foreign banks in ES. During the 1990s, competition took place among domestic banks, first with regard to deposits, where banks tried to gain market share by offering high rates on current accounts, which had traditionally been non-remunerated, and thereafter with regard to credit, in particular residential mortgage lending. In both cases, the final result was not disruptive, and the banking system became more efficient.



the business cycle. Hence, “a point in time” rather than a “through the cycle” process seems often to be applied, and the internal rating would reflect an assessment of the borrower’s condition over the course of the short time horizon over which the rating is expected to be valid.<sup>20</sup> Therefore, the internal rating would change as the borrower’s condition changes over the business cycle, rather than attempting to foresee changes in credit risk as a result of cyclical or asset price fluctuations. The “point-in-time” approach could imply that, from a short-term (or ex ante) perspective banks’ assessment of the credit risk and the appropriate risk premium might be appropriate, but not necessarily from a long-term (or ex post) perspective. Past evidence suggests that loan deals that stand up to scrutiny in favourable economic conditions can look much weaker during the downswing.

Hence, banks might be currently basing their pricing decisions and other lending terms on the benign cyclical and asset price conditions to a significant extent (although loan pricing may not always fully follow the credit risk management process). This is indicated explicitly for DK, ES, NL, PT and UK.<sup>21</sup> Therefore, it is possible that if the economy, or asset prices, were to experience a downturn, the risk premium demanded by at least some banks could turn out to be inadequate. The same might apply to collateral coverage, particularly if high loan-to-value ratios were applied and collateral was frequently valued in terms of current market prices.

### 3.1 Evolution of risk measurement and pricing tools

The development of internal risk management and pricing systems has the benefit of aligning the pricing of credit more closely to the risk inherent in the loan proposal. Hence, it is possible that the pricing more accurately reflects credit risk in increasingly competitive banking markets. The formalised systems are also better able to recognise mitigating factors in credit risk such as netting and hedging arrangements.

In the personal segment (mortgages and consumer credit) credit scoring techniques are

increasingly used, being associated with a more streamlined and centralised processing of information. In general, supervisors need to ascertain that the automation of the loan appraisal process does not lead to a weakening of the tests applied to ensure whether a borrower has the capacity to repay. UK notes that there seems to be some relaxation in credit standards linked to the adoption of these systems, particularly at those banks that have an undeveloped or unsophisticated approach to credit scoring. As to corporate customers, there seems to be a wide range of rating systems applied by banks, allotting firms to risk categories depending on the default probability, and so determining the appropriate risk premium. The report from the Models Task Force, however, identifies a number of common features.

While the potential problem of “short-sightedness” has been recognised for a number of countries, some banks seem to be following a more long-term approach to their credit risk systems. Moreover, some supervisors (particularly ES and PT supervisors) have been active in stimulating an appropriate long-term approach to credit risk (Box 5). It should be noted that banks are also making constant progress in their internal models, and some banks may already be moving towards a more long term-oriented approach. Once banks’ methodologies are based on a data set stretching over a longer period of time, the cyclical aspects may also be taken into account to some extent. While a certain amount of cyclicality in banking seems inevitable, supervisory authorities could play an important role in promoting a more forward-looking approach to internal risk management systems.

<sup>20</sup> The report published by the Basel Committee (prepared by the Models Task Force), entitled “Range of Practice in Banks’ Internal Rating Systems”, January 2000, also indicates that “...banks’ rating systems generally evaluate risk on a point in time basis”, with a “majority of banks describing the time horizon [the rating is expected to be valid] as one-year” (but longer horizons were also reported). Under this approach, an internal rating reflects an assessment of the borrower’s current condition and most likely future condition over the course of the chosen time horizon. Hence, the internal rating would change as the borrower’s condition changes over the business cycle. The report was based on a sample of around 30 large (and sophisticated) banks.

<sup>21</sup> AT indicates some similar concerns, possibly concerning some banks, but the concerns are significantly moderated by the fact that asset prices have tended downwards in AT.

### 3.2 Supervisory measures

Indeed, some supervisory authorities have made specific efforts to ascertain whether banks' price and non-price terms are too lax (Box 5). The efforts seem to have been most significant where credit has expanded the fastest (ES, IE, NL, PT, FI). The efforts include specific on-site examinations, surveys of practices across banks, discussions with bank

management, control of advertising, and even the institution of new provisioning rules (ES) to take into account the latent loss in the loan portfolio once the operation is granted (acting as a cyclical stabiliser). Some supervisory authorities may have not undertaken specific action, since after investigating the matter they came to the conclusion that no action was required for the moment being.

#### Box 5

##### Specific efforts by supervisory authorities as regards the appropriateness of banks' credit terms

**BE.** No specific efforts have been made.

**DK.** No specific efforts have been made. However, concerning the potential relaxation of lending standards in a period of high lending expansion, banks with high growth rates received a letter from the Danish Financial Supervisory Authority informing them of the potential credit risk involved.

**DE.** No specific efforts have been made. The issue of banks' sound credit (risk) management is dealt with on a case-by-case basis by analysing auditors' reports on lending practices. The reports set out the risks that were identified, and whether and to what extent value adjustments or provisions for liabilities and charges were made to cover them and, if so, were adequate. The supervisory analysis is also based on figures and other information reported by the individual banks.

**GR.** Supervisory response has focused on monitoring banks' lending standards, including pricing rules and risk measurement tools, in view of the pressure on margins and the possible effects on banks' lending policies.

**ES.** The Banco España has set a new complementary provision focused on the statistical risk of non-impaired assets, which is designed to act as a "cyclical stabiliser". The Banco de España, in its capacity as prudential supervisor, has made public warnings to banks on the necessity of being cautious even in the current good cyclical conditions. Bad loans and specific provisions in Spain are strictly defined in the regulations and very tightly controlled via on-site inspections. Additionally, there is also a general provision (0.5% of any mortgage portfolio and 1% for the rest) applicable on non-impaired assets; this provision does not form part of regulatory own funds, as a "general banking risk provision". Furthermore, the Banco de España has recently (December 1999) decided to set a new complementary provision only in the event that the other provisions do not reach a minimum level based on the historical performance of loan losses. The statistical provision will accumulate when the cyclical position is quite good, and it will be recovered in bad times when impaired assets grow. The same norm increases provisioning on impaired loans in particular operations (i.e. commercial mortgages). The Banco de España is also stimulating the use of internal models for measuring and managing credit risk. In particular, it is encouraging banks to gather historical data on non-performing loans and recoveries in order to calculate adequately expected default frequencies and expected losses.

**FR.** Prudential authorities have alerted credit institutions of the dangers of excessive competition over the past years. As early as 1995 a warning by the Governor of the Banque de France (Chairman of the Commission bancaire) was issued, and the Commission bancaire has alerted credit institutions to the behaviour of certain individual institutions. A white paper on "measuring the profitability of banking

activities” was published in 1998, and a regulation on internal control (97-02) was issued to prevent permanently impaired operations. In 1998 and 1999 the Commission bancaire issued several credit institutions with official warnings.

**IE.** In light of the continuing high level of growth in lending to the private sector and the increase in asset prices, the primary prudential focus of the Central Bank of Ireland remains credit risk. The Central Bank of Ireland continues to monitor developments in this area closely and has emphasised the need for credit institutions to maintain good credit standards and to continue to apply prudent loan loss provisioning policies in the current benign economic environment. The Central Bank of Ireland has warned institutions against a dilution of underwriting standards and inspections are being carried out to ensure that institutions continue to adhere to prudent lending policies. Since June 1999 the Central Bank of Ireland, as part of its ongoing assessment of this area, has asked credit institutions to carry out two sensitivity analyses on their financial positions based upon a given hypothetical scenario showing the effects on lending levels, loan portfolios, recoverability of loans, liquidity, earnings, profit and capital. The analysis is based on annual growth rates in the economy, market interest rates, a fall in house prices and a squeeze in lending margins.

**IT.** The Banca d’Italia has constantly drawn the attention of banks’ managers to the relevance of the effective credit risk conditions in defining loan pricing policies. Particular attention has been devoted to the setting-up of effective procedures for internal credit risk controls. During 1999, specific instructions were issued to this end. A “collective bargaining agreement” was reached in 1999 and is considered to be the main tool for achieving more efficiency in the banking system. Higher levels of profitability can only be made if banks define greater flexibility in personnel management and a closer correlation between employee compensation and bank performance.

**LU.** The Commission de Surveillance du Secteur Financier (CSSF) has constantly drawn attention on the implementation of sound risk management techniques. These efforts are required not only with hindsight to banks’ provisioning policy (ex post measures) but also to the pricing and underwriting process. Banks’ risk exposures are also monitored vis-à-vis certain debtors which could exert their bargaining power and force the bank to loosen its pricing and underwriting policy. In order to implement this, the CSSF has considerably enhanced the frequency of its on-site inspections, which are complemented by external auditors’ reports. Furthermore, the attention of banks has been drawn to the need to continue to improve specific data gathering on the creditworthiness of the borrowers.

**NL.** After discussions with banks and having sought publicity on the issue of strong lending growth in NL, De Nederlandsche Bank has investigated both mortgage and corporate lending practices. On several issues, the Bank has followed up these investigations, both publicly and through supervision. As far as the latter is concerned, the Bank has asked, for instance, individual banks to remedy weaknesses in their internal control systems. Credit pricing was not specifically addressed. A further plan is to stimulate banks to analyse their credit portfolios more frequently and more thoroughly, particularly by means of scenario analyses and stress tests.

**AT.** This issue is analysed and discussed with the bank management during on-site examinations.

**PT.** Frequent on-site inspections have been carried on credit quality (corporate, consumer and housing), credit pricing, evaluation of assets, localisation of credit risk and credit incidents. Particular attention has been paid to the advertising of cheaper credit. Banks have been required to explain the new and/or better conditions offered. In the event of a risk of future losses for banking industry owing to the *presumable* weak ex ante price of credit risk, PT banking supervisors would increase the value of the solvency ratio (8% is standard at this time) on a case-by-case basis according to the evaluation of the amount of possible and/or probable losses, and the own funds necessary to cover the losses. There has been no case until now.

**FI.** The Financial Supervision Authority (FSA) only audited household housing loans during 1999. The FSA has discussed the pricing matters with banks and banks appear to be paying due attention to the solvency of the debtor in the long run and to collateral. The FSA announced the results of the audit to all banks and stressed the importance of solvency of the debtor in the long run and also the matter of pricing credits and assessing collateral. The FSA has sent a public note to credit institutions warning about the potential growth in credit losses inherent in the swift increase in new lending. The FSA recommends that credit institutions prepare for future credit losses either by increasing provisioning or own funds. The FSA considers important that these measures take place immediately during the good economic conditions.

**SE.** For a number of years, Finansinspektionen has been discussing the pricing of credit risks with bank executives during annual meetings held in conjunction with banks' annual reports. Questions about the extent to which banks consider customers' ability to pay in the long run are also taken up. Finansinspektionen also requires routines and organisational structures for handling credit risk.

**UK.** The Financial Services Authority conducted a survey of residential mortgage lending in autumn 1999 to improve supervisors' understanding of mortgage risks and controls. This followed a review of the major financial trends in business lending in mid-1999. A project is being devised to institute procedures for monitoring UK credit conditions, in particular to identify benchmarks in terms of loan quality, and credit policies and processes, across main market segments.

Source: Banking Supervision Committee.

## 4 Sustainability of margin development

### 4.1 Impact on the total spread

The *total spread* reflecting the difference between the average rate on the interest bearing assets and liabilities (stocks) would be the most relevant margin indicator for assessing the development of banks' net interest income and hence profitability. The calculations of the total spread in Box 6 suggest that there has indeed been a substantial reduction in profitability related to interest earning assets. The results should be taken as illustrative only, since the coverage differs across countries and all countries are not covered owing to a lack of data. It should be noted that the concept of banks' spread used in Box 6 differs markedly from the margins presented in Charts 1-6. As they refer to the full balance sheet, the spreads tend to be lower than the overall margins in Chart 5, which refer only to a sub-set of the balance sheet (loans and deposits).

Both the *spread* between the yield on interest earning assets and the cost of interest bearing

liabilities, and the *endowment effect*, owing to the fact that some assets can be financed with zero interest liabilities (disregarding the cost of equity), seem to have substantially narrowed since 1991. This is particularly true for those countries that have experienced significantly lower inflation and long-term interest rates. These general findings are corroborated by the indications from the country reports of BE, DE, ES, FR, IT and UK concerning banks' spreads.

The narrowing of the total spread naturally hurts banks' profitability. However, owing to the apparent capability of banks to diversify into *non-interest income* generating activities, and to generate cost savings in some instances, major concerns about ongoing solvency have not emerged. Supervisors also seem to be generally content that banks' cost saving efforts will begin to show more strongly in their profit and loss statements. In addition, banks' current profitability is often satisfactory or good in aggregated terms. Nevertheless, supervisors are exercising constant vigilance to monitor developments, partly in view

of the apparently quite optimistic stance taken by many banks with regard to credit risk pricing and management.

## 4.2 Conditions for sustainability

As noted above, supervisors generally regard the banking situation as able to withstand deterioration in the economic climate. The following are what they consider to be the major conditions for this to continue to hold true despite the narrowing spreads earned from “on-balance sheet” activities:

1. Continued diversification into non-interest income generating activities (e.g. new products in the field of asset management and investment banking);
2. Rigorous cost control and further reductions in costs;
3. Sound profit dissemination policies (provisions, dividends);
4. Further development of internal risk management systems;
5. A reasonable pricing of loans, which covers all costs; and

6. Maintenance of the necessary capital adequacy to absorb *unexpected* losses.

A steady rate of economic growth is an important guarantee of the soundness of banking developments. From a more supervisory perspective, a distinction can be made between qualitative and quantitative conditions for sustainability. As regards quantitative conditions, an adequate *level of capital* plays a leading role in absorbing unexpected losses (not covered by provisions).

In addition, banks should be encouraged to continue enhancing their methodologies to allocate economic capital commensurate with their individual risk profile. As regards qualitative conditions, banks’ internal risk management systems should be further developed, preferably towards a longer-term “through the cycle” approach. Finally, supervisory authorities stress that any structural decline in margins needs to be addressed by banks themselves. Supervisors’ role is to examine the soundness of the asset quality, provisioning policies, risk management systems, cost control and capital adequacy. In doing so supervisors should enable banks to compete in a prudent manner and to contract the declines in margins. Sound competition is naturally beneficial and should not be obstructed.

### Box 6

#### Indications of banks’ total spread on interest earning assets and liabilities

The IBCA’s Bankscope data can be used to approximate the development of banks’ *total spread (TS)* on interest earning assets and liabilities in the following way:

$$total\ spread = (Y - C) + \left( \frac{IEA - IBL}{IEA} \right) * C = spread + endowment\ effect$$

- IEA = interest earning assets (total loans and advances to all sectors + total other earning assets (net of non-performing assets));
- IBL = interest bearing liabilities (total deposits and total other interest bearing funding);
- Y = average yield on IEA (total interest revenues per IEA);
- C = average cost of IBL (total interest expenses per IBL).

The *spread (S)* measures the gain owing to the difference between the yield on IEA and cost of IBL. The *endowment effect (E)* measures the gain from the fact that some part of IEA does not have an interest cost. *Total spread* is the sum of the two, and represents the full impact of the yield differential between assets and liabilities. This calculation disregards the cost of equity capital.

The following results were obtained for those countries that have more than two banks in the database so that the above calculation can be carried out (the number of banks covered is shown in parentheses). The results apply to the larger banks of these countries, but the sample should be fairly representative as to the broad trends in income and asset development

<b>AT(5)</b>	<b>TS</b>	<b>S</b>	<b>E</b>	<b>FR(26)</b>	<b>TS</b>	<b>S</b>	<b>E</b>
1991	1.89%	1.54%	0.36%		N/a	N/a	N/a
1992	1.83%	1.51%	0.33%		3.21%	1.58%	1.63%
1993	1.92%	1.61%	0.31%		3.06%	1.43%	1.63%
1994	1.90%	1.64%	0.26%		2.79%	1.54%	1.25%
1995	1.84%	1.53%	0.31%		2.72%	1.39%	1.33%
1996	1.66%	1.41%	0.26%		2.60%	1.70%	0.90%
1997	1.59%	1.35%	0.24%		2.39%	1.64%	0.74%
1998	1.37%	1.12%	0.25%			N/a	N/a
<b>DE (27)</b>	<b>TS</b>	<b>S</b>	<b>E</b>	<b>IT (33)</b>	<b>TS</b>	<b>S</b>	<b>E</b>
1991	1.70%	1.33%	0.38%		3.46%	N/a	N/a
1992	1.69%	1.31%	0.39%		4.11%	N/a	N/a
1993	1.62%	1.35%	0.27%		3.98%	N/a	N/a
1994	1.73%	1.46%	0.27%		3.17%	N/a	N/a
1995	1.54%	1.26%	0.28%		3.31%	N/a	N/a
1996	1.48%	1.24%	0.24%		3.15%	N/a	N/a
1997	1.35%	1.12%	0.23%		2.80%	N/a	N/a
1998	N/a	N/a	N/a		N/a	N/a	N/a
<b>ES (18)</b>	<b>TS</b>	<b>S</b>	<b>E</b>	<b>PT (8)<sup>22</sup></b>	<b>TS</b>	<b>S</b>	<b>E</b>
1991	5.13%	4.38%	0.75%		4.38%	3.09%	1.29%
1992	4.57%	3.96%	0.61%		3.90%	3.00%	0.89%
1993	4.35%	3.88%	0.48%		3.43%	2.30%	1.13%
1994	3.98%	3.61%	0.37%		2.75%	2.17%	0.57%
1995	4.24%	3.45%	0.79%		2.24%	2.06%	0.18%
1996	4.03%	3.27%	0.76%		1.86%	1.79%	0.07%
1997	3.88%	3.37%	0.51%		2.11%	2.10%	0.00%
1998	3.57%	3.25%	0.32%		1.79%	1.73%	0.06%

22 The 1998 TS value for PT is rather low as compared with the computations made for the PT banking system as a whole by the Banco de Portugal (around 2.05 percentage points).

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## ANNEX I

Interest rate swap rates and money market rates used as reference rates

BE					GR				
	1 year	3 years	5 years	10 years		1 year	3 years	5 years	10 years
97Q3	3.92	4.57	5.07	5.80	97Q3	10.80	10.16	9.94	N/A
97Q4	4.10	4.69	5.06	5.59	97Q4	14.58	11.55	10.44	9.16
98Q1	3.87	4.35	4.68	5.16	98Q1	13.24	10.66	9.69	8.55
98Q2	3.98	4.40	4.67	5.08	98Q2	12.10	9.74	8.66	7.57
98Q3	3.61	3.79	4.05	4.59	98Q3	12.61	10.12	8.80	7.81
98Q4	3.24	3.39	3.66	4.31	98Q4	10.51	8.00	7.11	6.56
99Q1	3.08	3.31	3.68	4.39	99Q1	9.24	6.97	6.07	5.85
99Q2	2.89	3.48	3.94	4.70	99Q2	8.77	6.25	5.83	5.91
99Q3	3.31	4.25	4.77	5.52	99Q3	8.82	6.65	6.44	6.61
99Q4	3.90	4.62	5.00	5.57	99Q4	8.46	6.38	6.18	6.32
00Q1	4.33	4.95	5.28	5.77	00Q1	6.81	5.88	5.89	6.15
00Q2	5.03	5.36	5.53	5.79	00Q2	6.63	5.96	5.93	6.05
00Q3	5.28	5.50	5.65	5.89	00Q3	6.05	5.77	5.82	5.98

DE					ES				
	1 year	3 years	5 years	10 years		1 year	3 years	5 years	10 years
97Q3	3.74	4.50	5.03	5.78	97Q3	5.10	5.17	5.53	6.15
97Q4	4.04	4.68	5.06	5.59	97Q4	4.68	4.93	5.24	5.70
98Q1	3.83	4.35	4.68	5.16	98Q1	4.24	4.50	4.77	5.22
98Q2	3.94	4.40	4.67	5.08	98Q2	4.26	4.51	4.74	5.12
98Q3	3.61	3.79	4.05	4.59	98Q3	3.84	3.89	4.11	4.63
98Q4	3.24	3.40	3.66	4.31	98Q4	3.26	3.41	3.67	4.31
99Q1	3.08	3.31	3.68	4.39	99Q1	3.08	3.31	3.68	4.39
99Q2	2.89	3.48	3.94	4.70	99Q2	2.89	3.48	3.94	4.70
99Q3	3.31	4.25	4.77	5.52	99Q3	3.31	4.25	4.77	5.52
99Q4	3.90	4.62	5.00	5.57	99Q4	3.90	4.62	5.00	5.57
00Q1	4.33	4.95	5.28	5.77	00Q1	4.33	4.95	5.28	5.77
00Q2	5.03	5.36	5.53	5.79	00Q2	5.03	5.36	5.53	5.79
00Q3	5.28	5.50	5.65	5.89	00Q3	5.28	5.50	5.65	5.89



FR					IT				
	1 year	3 years	5 years	10 years		1 year	3 years	5 years	10 years
97Q3	3.78	4.44	4.93	5.68	97Q3	6.16	5.77	5.99	6.47
97Q4	4.03	4.64	5.02	5.55	97Q4	5.29	5.18	5.40	5.79
98Q1	3.87	4.35	4.67	5.15	98Q1	4.78	4.72	4.92	5.30
98Q2	3.93	4.40	4.67	5.07	98Q2	4.53	4.61	4.81	5.16
98Q3	3.61	3.79	4.05	4.59	98Q3	4.06	3.98	4.17	4.67
98Q4	3.23	3.39	3.65	4.30	98Q4	3.26	3.40	3.67	4.32
99Q1	3.08	3.31	3.68	4.39	99Q1	3.08	3.31	3.68	4.39
99Q2	2.89	3.48	3.94	4.70	99Q2	2.89	3.48	3.94	4.70
99Q3	3.31	4.25	4.77	5.52	99Q3	3.31	4.25	4.77	5.52
99Q4	3.90	4.62	5.00	5.57	99Q4	3.90	4.62	5.00	5.57
00Q1	4.33	4.95	5.28	5.77	00Q1	4.33	4.95	5.28	5.77
00Q2	5.03	5.36	5.53	5.79	00Q2	5.03	5.36	5.53	5.79
00Q3	5.28	5.50	5.65	5.89	00Q3	5.28	5.50	5.65	5.89

IE					NL				
	1 year	3 years	5 years	10 years		1 year	3 years	5 years	10 years
97Q3	5.68	5.56	5.68	6.25	97Q3	3.86	4.55	5.04	5.75
97Q4	5.12	5.12	5.34	5.75	97Q4	4.05	4.69	5.05	5.58
98Q1	4.68	4.65	4.84	5.23	98Q1	3.81	4.34	4.67	5.15
98Q2	5.09	4.83	4.91	5.16	98Q2	3.93	4.39	4.67	5.07
98Q3	4.00	4.03	4.19	4.66	98Q3	3.59	3.78	4.05	4.59
98Q4	3.21	3.40	3.65	4.31	98Q4	3.23	3.39	3.66	4.30
99Q1	3.08	3.31	3.68	4.39	99Q1	3.08	3.31	3.68	4.39
99Q2	2.89	3.48	3.94	4.70	99Q2	2.89	3.48	3.94	4.70
99Q3	3.31	4.25	4.77	5.52	99Q3	3.31	4.25	4.77	5.52
99Q4	3.90	4.62	5.00	5.57	99Q4	3.90	4.62	5.00	5.57
00Q1	4.33	4.95	5.28	5.77	00Q1	4.33	4.95	5.28	5.77
00Q2	5.03	5.36	5.53	5.79	00Q2	5.03	5.36	5.53	5.79
00Q3	5.28	5.50	5.65	5.89	00Q3	5.28	5.50	5.65	5.89

AT					FI				
	1 year	3 years	5 years	10 years		1 year	3 years	5 years	10 years
97Q3	3.85	4.52	5.03	5.79	97Q3	3.90	4.80	5.37	6.10
97Q4	4.13	4.71	5.07	5.60	97Q4	4.14	4.76	5.15	5.65
98Q1	3.88	4.36	4.68	5.16	98Q1	3.76	4.34	4.68	5.16
98Q2	3.94	4.40	4.67	5.08	98Q2	3.99	4.42	4.69	5.09
98Q3	3.65	3.79	4.05	4.59	98Q3	3.62	3.80	4.05	4.60
98Q4	3.20	3.39	3.66	4.31	98Q4	3.25	3.40	3.66	4.31
99Q1	2.96	3.31	3.68	4.39	99Q1	3.08	3.31	3.68	4.39
99Q2	2.93	3.48	3.94	4.70	99Q2	2.89	3.48	3.94	4.70
99Q3	3.34	4.25	4.77	5.52	99Q3	3.31	4.25	4.77	5.52
99Q4	3.90	4.62	5.00	5.57	99Q4	3.90	4.62	5.00	5.57
00Q1	4.33	4.95	5.28	5.77	00Q1	4.33	4.95	5.28	5.77
00Q2	5.03	5.36	5.53	5.79	00Q2	5.03	5.36	5.53	5.79
00Q3	5.28	5.50	5.65	5.89	00Q3	5.28	5.50	5.65	5.89

PT					SE				
	Weighted average of short-term rates	Weighted average of 3 and 6 month rates	6 month rate	Weighted average of 6 month and 1 year rates		1 year	3 years	5 years	10 years
97Q3	5.36	5.40	5.32	5.31	97Q3	5.00	5.78	6.17	6.67
97Q4	5.09	5.13	5.05	5.03	97Q4	5.41	5.97	6.15	6.36
98Q1	4.46	4.54	4.40	4.39	98Q1	4.94	5.31	5.46	5.69
98Q2	4.30	4.34	4.26	4.25	98Q2	4.48	4.81	5.03	5.32
98Q3	4.16	4.22	4.10	4.09	98Q3	4.51	4.92	5.18	5.50
98Q4	3.59	3.61	3.56	3.55	98Q4	3.67	4.07	4.42	4.90
99Q1	3.01	3.03	3.00	3.00	99Q1	3.38	3.79	4.21	4.84
99Q2	2.65	2.63	2.67	2.68	99Q2	3.55	4.45	5.00	5.60
99Q3	2.99	2.91	3.05	3.07	99Q3	4.17	5.63	6.14	6.57
99Q4	3.48	3.45	3.51	3.54	99Q4	4.47	5.55	5.89	6.24
00Q1	3.78	3.72	3.83	3.87	00Q1	4.97	5.84	6.07	6.26
00Q2	4.51	4.45	4.56	4.60	00Q2	4.88	5.65	5.93	6.08
00Q3	4.97	4.92	5.02	5.04	00Q3	4.75	5.42	5.75	6.06

UK				
	1 year	3 years	5 years	10 years
97Q3	7.56	7.19	7.13	7.15
97Q4	7.78	7.12	6.93	6.74
98Q1	7.61	6.92	6.68	6.40
98Q2	7.86	7.10	6.73	6.27
98Q3	7.08	6.47	6.31	6.02
98Q4	6.04	5.56	5.52	5.43
99Q1	5.36	5.35	5.33	5.34
99Q2	5.44	6.04	6.13	5.90
99Q3	6.18	6.83	6.79	6.49
99Q4	6.62	6.94	6.79	6.38
00Q1	6.73	6.87	6.73	6.35
00Q2	6.57	6.63	6.56	6.40
00Q3	6.43	6.45	6.49	6.44

Source: ECB.

PT rates are money market rates, others are swap rates. LU rates are the same as BE rates. Please also refer to Box 2.