

The nature of risk: Deep impact – Basel in the European Union

Richard Barfield

Richard Barfield is a Director at PricewaterhouseCoopers (richard.barfield@uk.pwc.com).

Abstract Basel II will have a huge impact on the risk management of banks across Europe. The author assesses the findings of a survey from PricewaterhouseCoopers of what the likely results will be on the banking industry.

Keywords Banking, Financial services, Liquidity, Risk management

The scale of the change

Basel II is heading towards the European Union and will hit in 2007 and 2008. The balance sheets of some 7,000 banks in the EU are going to be affected. A PricewaterhouseCoopers study[1], published by the European Commission in April, estimates that bank capital could reduce by about €100 billion when the new rules arrive.

In round figures this represents a 5 percent reduction of the capital that underpins this critical sector of the EU economy. By measuring risks better the banks should need less capital – provided regulators and other stakeholders allow them to capture the benefits that they have been investing to secure.

Institutions are already spending vast sums to upgrade their risk management systems to comply with Basel II. The PricewaterhouseCoopers research indicates a cost of about 0.1 percent of assets spent over the five years to the end of 2006 – that is, between 30 billion and €50 billion. The larger banks are each spending in the order of €150 million. Even though it is difficult to estimate which costs are truly incremental, as opposed to accelerated or brought forward, the numbers are clearly significant.

Datamonitor's survey of nearly 100 larger banks at the end of 2003[2] indicated average IT budgets for Basel II and credit risk (i.e. not exclusively Basel II) of €100 million over the five years, demonstrating that IT budgets account for the lion's share of implementation costs.

Institutions, especially the advanced banks, are also anticipating much higher communication costs as they deliver more detailed information on risk to the market. So are the benefits likely to outweigh the costs?

The PricewaterhouseCoopers study is unique in providing a comprehensive assessment of the impact of the proposed changes in bank regulation. The study was requested by the European

Credit risk capital will reduce.

Council of Ministers, in response to concerns, notably that lending to the SME sector would become more expensive under Basel II. The study analyses in detail the expected capital changes, likely impact on bank profitability, behavior and the wider impact on the EU economy.

Impact on capital

The expected changes to bank capital are reasonably well known due to the three quantitative impact studies. The study team was privy to these at national level for most countries. The expected pillar 1 changes vary significantly country by country (see Figures 1 and 2), but there are common overall themes of reductions in capital for credit risk and increases for operational risk.

The report discusses the capital changes in some detail. The main findings are that credit risk capital for corporate, retail and SME exposures will reduce. Business mix and the Basel approach adopted both influence individual banks' positions which can vary significantly.

There are some interesting differences between the larger and smaller banks. Contrary to the generally held view that the larger banks will see greater reductions than the smaller ones, PricewaterhouseCoopers analysis demonstrates that the group 2 (domestic) banks should benefit more than the group 1 (internationally active banks) – see Table 1.

At the aggregate level, the biggest benefits flow to group 2 banks adopting the internal ratings-based approaches. Although group 1 banks often see reductions for their retail portfolios, these are frequently offset by increases in capital to support other exposures. The exposures of the group 2 banks are usually weighted to the retail and SME sectors with no comparable offsets.

An interesting consequence has been that in Germany, Austria and Spain some group 2 banks have clubbed together to share implementation costs and data. This allows smaller institutions to benefit from developments normally only possible in larger organizations. This could have

Figure 1 Expected change in capital requirements per country* – credit and operational risk

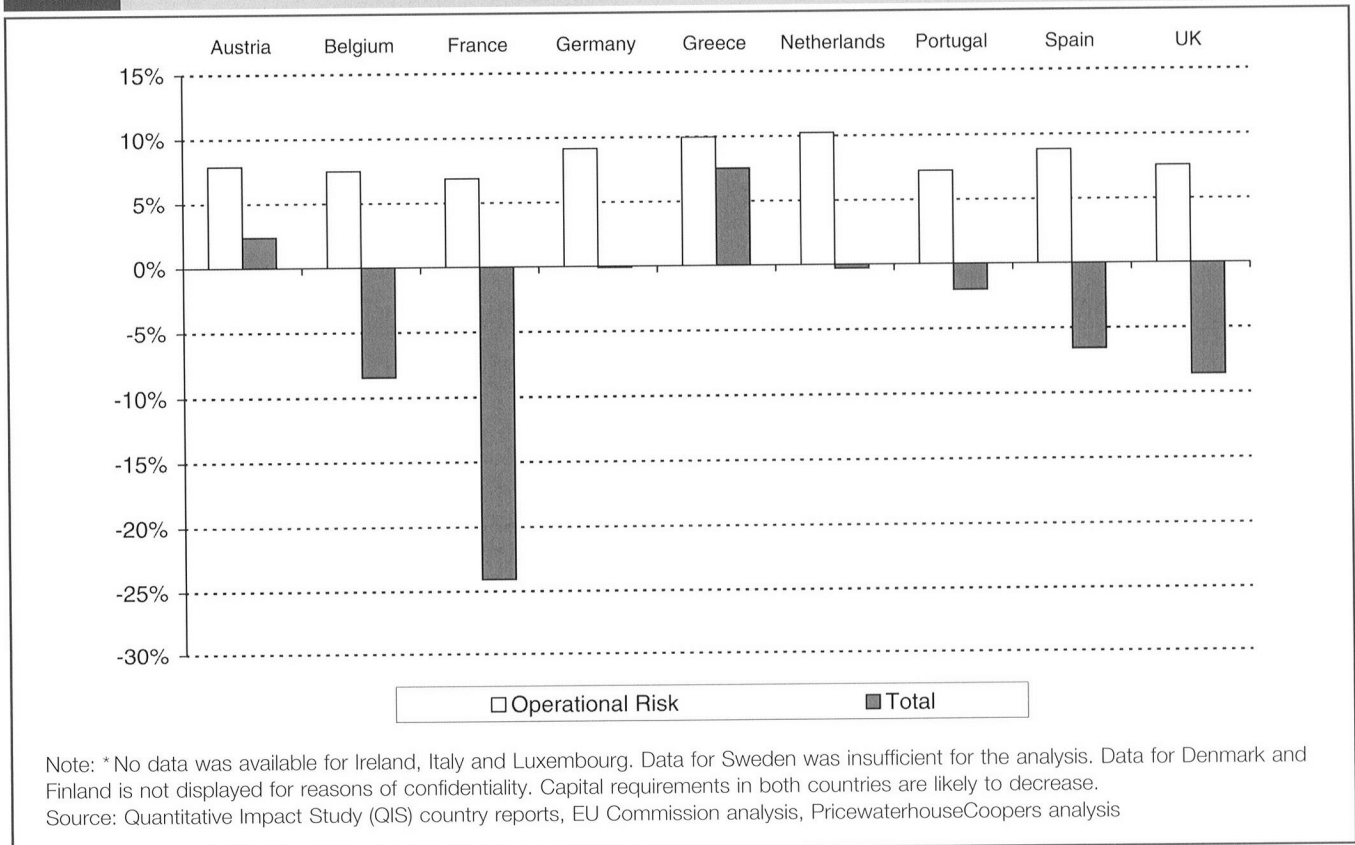
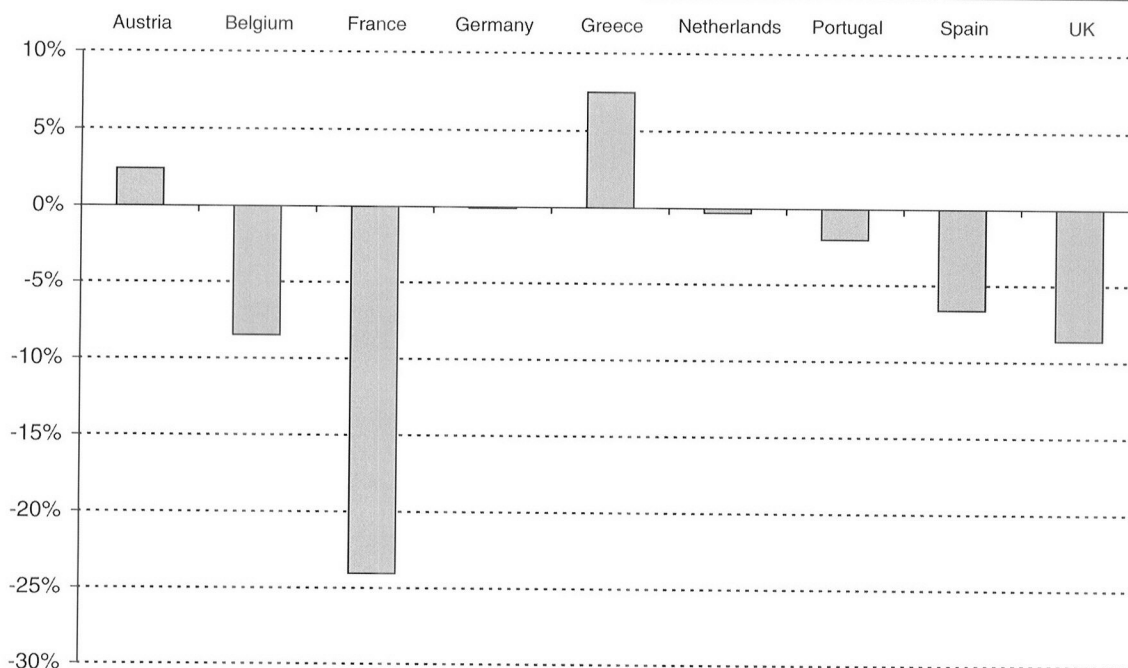


Figure 2 Expected change in capital requirements per country – overall



Source: QIS3 country reports, EU Commission analysis, PricewaterhouseCoopers analysis

Table I Impact on group 1 and group 2 banks

	Capital change (%)		Capital change (€ billion)		Total
	Group 1	Group 2	Group 1	Group 2	
Standardized	+2	+2	-	+7	+7
Foundation IRB	-2	-15	-11	-53	-64
Advanced IRB	-3	-34	-10	-23	-33
Total	-3	-9	-21	-69	-90

Source: QIS3, PricewaterhouseCoopers analysis

longer run implications for outsourcing and shared services to deliver these capabilities to other institutions, potentially cross-border.

However, it is not all good news. For example, in practically all countries, exposures to banks attract higher capital requirements than under the present regulatory regime. This is not surprising, given that the existing Basel II risk-weight basis, which differentiates between banks in terms of their incorporation in OECD or non-OECD countries, is seen as not reflecting the true economic risks of these exposures.

However, the effect on overall capital requirements is relatively low due to the small proportion of EU bank exposures and the low level of risk-weighted assets for this type of lending. Countries with particularly high increases in risk-weighted assets for bank exposures include Spain, The Netherlands, Sweden and Greece. Potentially this could have implications for the pricing of inter-bank funding (notably from group 1 lenders to group 2 borrowers) but the impact is not expected to be large.

All of the above needs to be considered in the context of widely differing national markets.

EU banking markets – a satellite view

Figure 3 brings together some of the major differences between the various markets in the original 15 EU member states. (The data from the report is for 2002 and remains valid).

Finland is at one extreme in terms of concentration (measured in terms of share of the top institutions), where the three biggest banks account for 90 percent of the banking sector. At the other extreme is Germany, where the top four banks account for only about 16 percent of total assets.

In terms of total assets, there are also large differences. Germany, UK and France account for 62 percent of EU banking assets. Germany is the largest banking market with banking assets of approximately €6,300 billion (at the end of 2002). The UK and France had banking assets of about €5,600 billion and €4,200 billion respectively.

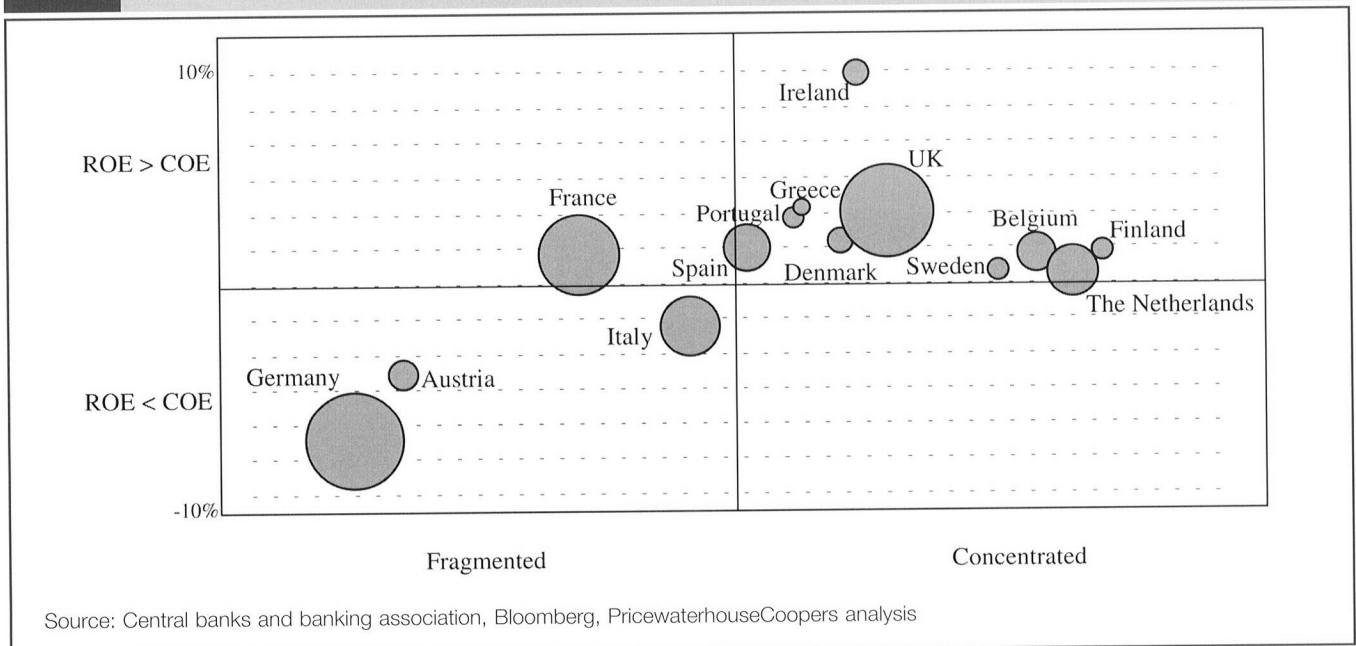
Comparing return on equity (ROE) with cost of equity (COE), Germany, Austria and Italy were generating negative returns for investors (ROE being less than COE). For these three countries, this can be partly explained by market fragmentation and a large number of small banks, many of which are cooperative institutions that do not see ROE maximization as a primary objective. Germany's position is also affected by recent adverse economic conditions.

Concentration and competition are not necessarily negatively correlated. For example, although The Netherlands has a high-level of concentration, retail and mortgage banking are competitive and ROE is relatively low. By contrast, although France has a highly fragmented market, it generates positive returns for investors, partly due to lower credit costs and lower effective tax rates.

Impact on bank behavior

The introduction of Basel II is a process and not an event. Already Basel II and CAD3 are stimulating important qualitative changes to the management of the banking industry. One of the most important effects has been to increase focus on improving risk management. A more risk-sensitive approach to capital allocation, regardless of the specific approach used by individual banks and investment firms is likely to benefit the financial system as a whole. While it is impossible to quantify these effects, the qualitative impact of the new capital framework may eventually dominate the quantitative impact of the change in capital requirements.

Figure 3 EU banking markets – some of the major differences between the various markets in the original 15 EU member states



Already we are seeing the industry develop the beginnings of a common risk language which regulators, rating agencies and other standard setters have welcomed. The title of the new framework, "International Convergence of Capital Measurement and Capital Standards," speaks volumes of the industry changes of which Basel II is both a part and a stimulus. In larger banks, the role of the chief risk officer has become stronger and risk management budgets larger. For other, less advanced, institutions, Basel II is an opportunity to catch up with current industry best practice.

For all banks the relationship with their regulators is also beginning to change as the implications of pillar 2 and pillar 3 become apparent.

But it is the quantitative impacts that have received most coverage. If the regulator allows the pillar 1 capital reductions to flow through, the interesting question is how bank behavior might be affected. Will the banks retain the benefit themselves? Will customers benefit from lower prices? Will impacts vary from country to country?

The assessment of potential quantitative impacts is not straightforward and varies from market to market (which differ considerably). In order to arrive at conclusions PricewaterhouseCoopers considered bank profitability, market competitiveness, customer demand, and the influence of cooperative banks, among other issues. For example, in a competitive market (or one where the cooperative sector has a strong influence) customers are more likely to benefit from a capital reduction. However influences may have counterintuitive effects. In a market where demand is strong, benefits may be more likely to be passed on to customers as banks and new entrants (who are attracted by the growth prospects – for example in credit cards) compete for share (depending on the market structure).

Based on analysis country by country, PricewaterhouseCoopers high level conclusions were that benefits would tend to be shared as follows:

- banks – Finland, Greece, Portugal;
- customers – Austria, France, Germany, Italy, United Kingdom; and
- either – Belgium, Denmark, Ireland, Luxembourg, The Netherlands, Spain, Sweden.

Credit risk capital reductions for mortgage and retail lending are often the main sources of capital decreases, but market structures and bank profitability tend to dictate how they might be shared. PricewaterhouseCoopers sees monoline or focused retail banks as likely to be among the major beneficiaries of Basel II.

The impact on SMEs is important. SMEs account for 99 percent of all companies and two thirds (66 percent) of employment in Europe. Overall capital supporting lending to SMEs is also likely to reduce. Therefore, although Basel is likely to encourage fairer pricing for risk, removing cross-subsidization and creating winners and losers among customers, overall it should be beneficial to the SME sector. Some SME lending, classified as corporate lending, is expected to see a smaller decrease in capital requirements (and in some cases a small increase) than that classified as retail.

In some countries banks lending to SMEs may benefit. SMEs typically rely on one major banking relationship and have less propensity to switch (unlike major corporates that tend to have multiple relationships). In addition, the profitability of SME lending varies significantly between banks and national markets. Whereas some banks already price for risk and have strict lending criteria, banks in countries such as Germany have been hit by defaults in the SME market and have suffered losses. PricewaterhouseCoopers believes that in some markets the introduction of Basel may create opportunities to "repair" SME margins.

Impact on pricing

A key issue is whether changes in regulatory capital requirements will feed through into pricing. Many factors affect pricing decisions, which means that regulatory capital may often not be the most important.

The adoption of economic capital models by some banks has allowed them to quantify risks better and to arbitrage Basel I capital. Their development has enabled banks to price risk more

accurately. However, even where economic capital models are used as a pricing tool, they are not applied mechanically: pricing decisions for a particular product or customer depend on whether the bank is a price-taker or a price-setter as well as on relationship considerations.

The PricewaterhouseCoopers analysis assumes that the changes in capital requirements from Basel I to Basel II will lead to corresponding changes in capital assigned to the type of lending in question. This is due to the fact that even if a bank is a sophisticated user of economic capital, regulatory capital will still be a constraint. While this may not always be considered at business unit or transaction levels it will ultimately have an influence on the institution's overall level of capital.

Impact on merger activity

In some cases, the capital released may be used to fund expansion in another area of the bank's business or possibly to support acquisition activity. The argument (put forward by some equity analysts) that larger banks might be able to release capital from smaller institutions is equally valid in the current Basel I world. Smaller institutions (both in the EU and in the US) tend to carry relatively more capital than larger, diversified institutions. This is due to the lack of diversification, management's smaller appetite for risk and supervisory prudence.

PricewaterhouseCoopers does not believe that capital and risk management advantages in advanced institutions will generally be primary drivers of merger activity (for example to release capital from an institution using the "standardized approach"). The time and management effort needed to integrate acquisitions mean that such a strategy is unlikely to be worthwhile, unless justified by a strong business rationale. However, risk-based capital assessment is an extra consideration that banks will need to factor into their capital allocation decisions. It is possible that small institutions will seek to acquire other small institutions to benefit from scale economies in systems and data.

Impact on the macro economy

To assess the impact on the wider EU economy for the study, PricewaterhouseCoopers economics team worked in partnership with the National Institute for Economic and Social Research who used their well-regarded NIGEM model to evaluate the effect on GDP.

The opportunity benefit created by the flow through of the pillar 1 reduction of €100 billion (just over 5 percent of EU bank capital) is estimated to lead to a potential increase of just under 0.1 percent of EU GDP with slightly larger impacts in the UK and France.

The modeling demonstrated that greater benefits to GDP will be realized in those cases where any reduction in capital results in a lower cost of lending to the corporate or SME sectors. Benefits of reductions in consumer lending or mortgage rates will provide a temporary boost to consumers but tend to be shorter-lived. Basel II should also result in better pricing for risk and more efficient allocation of capital in the EU economy.

The politicians were right to respond to concerns from their SME constituents. However, as we have seen, the detailed analysis undertaken by PricewaterhouseCoopers indicates that the overall impact of Basel II on SMEs is likely to be positive from the SMEs' perspective.

The realization of the potential, ongoing economic benefits depends on whether the banks will be allowed to reduce their capital. This, combined with the remaining uncertainties as to how pillar 2 will be implemented in the EU, means that any reductions are likely to be implemented gradually and the benefits realized slowly. One thing is certain: there will be strong pressure from the banks that have invested heavily in risk management systems to be rewarded with the promised capital reductions.

Notes

1. "Study on the financial and macroeconomic consequences of the draft proposed new capital requirements for banks and investment firms in the EU", April 2004.
2. Datamonitor, "Credit risk management and Basel II in European financial services", December 2003.