

# Risk-based capital requirements and their impact upon the banking industry: Basel II and CAD III

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## ABSTRACT

**KEYWORDS:** bank capital regulation, Basel II, CAD III

*The Basel Committee has proposed a new capital framework to respond to the deficiencies of the 1988 Capital Accord (Basel I). The 1988 Accord has been criticised for its crude assessment of risk and for creating opportunities for regulatory arbitrage. In principle, the new approach, often referred to as Basel II, is not intended to raise or lower the overall level of regulatory capital currently held by banks, but to make it more risk sensitive. The spirit of the new Accord is to encourage the use of internal systems for measuring risks and allocating capital (the Accord extends the use of internal models from market risk to credit risk). A number of issues have been raised, however, with regard to its complexity, its cost, its impact on procyclicality, the possibility that it can lead to competitive distortions if some coun-*

*tries do not apply it (some big emerging economies) or apply it differently to small and big institutions (the USA) and others. Banks in Europe will also be obliged to comply with the new Capital Directive, often referred to as CAD III, which is the means by which the EU will implement the new Basel Capital Accord. CAD III will apply to all credit institutions and investment firms and not only to internationally active banks, as Basel does. This paper presents a critical approach to these developments and examines their impact upon the banking industry.*

## INTRODUCTION

'The distinctive feature of the banker, says Ricardo, begins when he uses the money of others; as long as he uses his own money he is only a capitalist'.<sup>1</sup>

This paper is divided into six sections. The first section surveys the rationale of capital requirements as a core instrument of banking regulation and the limitations of such an approach. The second section surveys the reasons why capital adequacy has become a major strategic theme for bank managers. The third section provides a revisionist account of Basel I, including a brief survey of the adjustment techniques

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that banks have used to raise their capital standards to comply with the Basel formula. The fourth section discusses the Basel II proposals. The fifth section analyses the expected impact of the proposals upon the banking industry. The sixth section presents a comparison between the process in Basel and the process in Brussels, with regard to the adoption of CAD III (the proposed EC Directive that will incorporate the Basel II proposals into EU law).

### **CAPITAL ADEQUACY AND BANK REGULATION**

Banking is a risky business. But so are other businesses, financial and non-financial. The reasons why banking is a highly-regulated business are well known. The monetary nature of bank liabilities, the role of banks as payment intermediaries and providers of credit to the economy, the information deficiencies that surround the business of banking (historical cost accounting, bank secrecy and confidentiality) and others have been extensively studied in the literature. Despite the generalisation of the universal banking model, the rise of financial conglomerates and complex financial groups, the advances brought about by financial innovation and new technologies and the blurring of the frontiers between the various types of financial intermediaries, banks are still special.

The structure of the bank's balance sheet is characterised by three features:<sup>2</sup>

- low cash to assets (fractional reserve banking)
- low capital to assets (high leverage)
- maturity mismatch (combination of short-term liquid liabilities withdrawable on demand on a first-come-first-served basis and longer-term highly illiquid assets).

These three features which define the business of banking are also the source of financial fragility and the cause of regulatory

concern. Under a fractional reserve system, a bank will be unable at any time to honour the convertibility guarantee.

Capital regulation has become the principal regulatory response to deal with the problems of the bank's balance sheet structure. The use of capital requirements as a regulatory tool is no panacea however. It is not a 'cure for all' the banking problems. As the acronym CAMEL (used for supervisory purposes in the USA) indicates, capital is one of five elements that bank managers (and their regulators) need to take into account in order to preserve safe and sound banking: asset quality, management, earnings and liquidity are also important.

The bank's ability to generate profits through adequate investment and lending decisions is crucial.<sup>3</sup> Regulators often impose restrictions on banks' lending activities to avoid excessive or undue concentration of loans and to prohibit connected lending. Liquidity management cannot be ignored either, since it is an important tool to address the problems inherent in a fractional reserve system. Capital requirements do not take into account either the competence, depth and integrity of management. Indeed, the authorities rely on fiduciary rules to deal with the responsibilities of management. Furthermore, there are other instruments (inspections or examinations) and rules to preserve sound banking. But none of these instruments or rules have become as prominent as capital adequacy has in recent years.

Many economists identify banking regulation with capital regulation. Risk-based capital requirements have become the only true internationally accepted standards of bank soundness.

### **CAPITAL ADEQUACY AND BANK MANAGEMENT**

Capital adequacy is not only a core part of modern banking regulation. It has become a major strategic theme for bank managers,

one to which they devote an increasing amount of time and effort:

- capital provides a fund against which to charge unexpected or temporary losses, thus acting as a safety cushion for equity holders and debt holders
- capital is considered by competitors, customers and rating agencies as a proxy for soundness. It has become an indication of shareholders' value
- capital is costly. Pressures to increase or maintain return on equity and profitability are always an important consideration for bank managers. More capital means less return on equity for banks. Leverage has an important competitive effect. More highly-leveraged institutions can charge lower prices through less of a required spread, and earn the same return on capital as less highly-leveraged institutions. The right capital level is a fundamental strategic decision. Excess capital would not be good either, since there is a danger that capital would be under-utilised
- 'regulatory incentives' are provided to well-capitalised banks. There is a trend to link the intensity of supervision to the level of capitalisation, with better capitalised banks receiving less attention and undercapitalised banks subject to increased supervision, and the possibility of 'structured early intervention and resolution' (SEIR). These proposals known as prompt corrective action (PCA) rules, have become law in the USA through the enactment of the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991 and are likely to be implemented in Europe in the near future.<sup>4</sup> It is important to point out that the academic debate in the USA has linked capital adequacy and deposit insurance (capital acts as a buffer for the insurance fund and reduces moral hazard incentives).

This linkage, however, is not as strong in Europe, where banks typically enjoy 'minimalist' deposit insurance

- capital adequacy mirrors market and institutional developments. Increased risk sensitivity, use of internal models, reliance on market discipline are among some of the recent trends in finance which have influenced capital rules.

Is regulatory capital necessary or will market forces lead to an optimal capital ratio? In the absence of protective bank regulation, it could be argued that market forces would lead to an optimal capital ratio. But in the presence of regulation, externally imposed capital requirements are needed, since banks may have an incentive to hold an inadequate level of capital. (Although research on the financial structure of corporations focuses on the existence and character of an *optimal* structure, in banking the concern is whether the amount of capital is *adequate*.<sup>5</sup>)

Distortions in bank decision making occur when regulatory constraints determine a bank's choice of capital rather than market requirements. Economic capital and regulatory capital do not coincide. The divergence is further compounded by the difference between accounting standards and regulatory capital standards (since the accounting notion of capital as net worth does not coincide with the regulatory notion of capital).

Given this difference between the economic definition of capital and the regulatory definition of capital (one of the issues that Basel II addresses, as explained below), a simple leverage ratio of equity capital to total assets (one that does not take into account risk), as the 3 per cent leverage ratio that is applicable in the USA, should complement a risk-based capital ratio.

#### **BASEL I**

The genesis of Basel I can be traced back to

the aftermath of the debt crisis following Mexico's suspension of payments in 1982. Anxiety about the eroded capital levels of major international banks weakened through their exposures in Latin America and other less-developed countries, as well as concerns about competitive equality, whereby Japanese and French banks had benefited from 'under-pricing' international loans because of their low capitalisation, were the main rationales behind Basel I. The catalyst for the 1988 Accord was a US/UK bilateral agreement of 1986 regarding capital adequacy.

The 1988 Accord ('International Convergence of Capital Measurements and Capital Standards') is not a formal treaty nor a binding legal rule. It is a report issued in 1988 by the Basel Committee on Banking Supervision (an informal group of central banks and supervisory agencies of the Group of Ten countries plus Luxembourg and Switzerland, which meets in Basel under the auspices of the Bank for International Settlement). The Basel proposals are 'soft law', rules that have no legally binding force, but nonetheless have practical effects, since they are observed and implemented by national jurisdictions.

In its 1988 Accord, the Basel Committee

chose a capital to asset ratio, instead of a debt to equity ratio as a way of measuring capital. It also chose a risk-based capital ratio, taking into account credit risk, rather than a simple leverage ratio. The Accord was criticised for not considering other risks, such as market risk, interest rate risk, operational risk and liquidity risk.

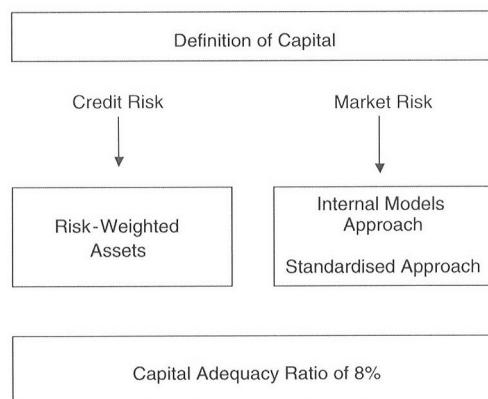
Basel I has been amended five times. Four of the amendments provide specific changes to the language of the original Accord. The fifth amendment which introduces parallel risks for capital requirements does not include language to amend the 1988 text. This amendment issued in January 1996 is published as 'Amendment to the Capital Accord to Incorporate Market Risks'.

#### Elements of Basel I

Basel I is a ratio of capital to risk-weighted assets. Capital (the numerator of the Basel formula) is divided into Tier 1 (equity capital plus disclosed reserves minus goodwill) and Tier 2 (asset revaluation reserves, undisclosed reserves, general loan loss reserves, hybrid capital instrument and subordinated term debt). Tier 1 capital ought to constitute at least 50 per cent of the total capital base. Subordinated debt (with a minimum fixed term to maturity of five years, available in the event of liquidation, but not available to participate in the losses of a bank which continues trading) is limited to a maximum of 50 per cent of Tier 1.<sup>7</sup>

The denominator of the Basel formula is the sum of risk-adjusted assets plus off-balance sheet items adjusted to risk. There are five credit risk weights: 0 per cent, 10 per cent, 20 per cent, 50 per cent and 100 per cent and equivalent credit conversion factors for off-balance sheet items. Some of the risk weights are rather 'arbitrary' (0 per cent for Organisation for Economic Co-operation and Development (OECD) government or central bank claims, 20 per cent

Figure 1 Structure of the Basel Capital Accord 1988<sup>6</sup>



for OECD interbank claims, 50 per cent for residential mortgages, 100 per cent for all commercial and consumer loans). The weights represent a compromise between differing views, and are not 'stated truths' about the risk profile of the asset portfolio, but rather the result of bargaining on the basis of historical data available at that time on loan performance and judgments about the riskiness of certain parts of counterpart, guarantor or collateral. The risk weights have created opportunities for regulatory arbitrage.<sup>8</sup>

How much capital is enough? There is no strong theory for the 'target' ratio 8 per cent of capital (tier 1 plus tier 2) to risk-adjusted assets plus off-balance sheet items. Why was 8 per cent considered to be 'sufficient'? Eight per cent was the median in existing good practice at the time (US/UK 1986 Accord): the UK and the USA bank around 7.5 per cent, Switzerland 10 per cent and France and Japan 3 per cent . . .

Despite the rather 'arbitrary' nature of the definition of Tier 2 capital, of the risk weights and of the target ratio, Basel I was a simple ratio, a standard, broadly accepted by the industry and by the authorities in both developed and developing countries. In contrast, Basel II is 'absurdly' complex, combining standards, models and incentives, and both the banks and their regulators have been critical of it. The Basel II process has been protracted, with numerous consultations, drafting and redrafting.

### How can banks raise capital?

The Basel Accord has led to a general improvement in the capital position of banks around the world. Augmenting capital is not always easy, however. Banks have raised capital in 'traditional' and less traditional ways (related to the actual regulatory formulation) in order to meet the 8 per cent target ratio of the Basel I formula.<sup>9</sup>

Banks can *increase the numerator* of the Basel formula by selling shares, retaining

earnings (both of them are traditional ways of raising capital) or by increasing some of the elements of Tier 2 capital.

The sale of shares is often disfavoured on the basis that it dilutes the ownership of current shareholders (and if the bank is not profitable, this option is not viable, since there is no 'easy market' for the shares of such an institution). The increase in retained earnings is not without problem either, as increasing profitability means increasing risk, since the more profitable loans and investments are also the more risky (eg banks may extend riskier loans at higher interest rates). If banks are forced to reduce their dividends, they can create discontent among their shareholders: a reduction of dividends can also affect the share prices, impairing the bank's ability to attract new funds.

With regard to some of the elements included in Tier 2 capital (where the national authorities have been allowed some discretion), the problem of counting 'debt' as capital is that all debt has a maturity date and that interest payments on the debt represent a contractual obligation of the firm (as opposed to dividends on common stock which do not have to be paid and therefore provide the firm with greater flexibility in times of financial stress). Also, the danger of relying on unrealised gains on long-term holdings of equity securities (though subject to a discount of 55 per cent applied to the difference between historic cost value and market value) was evidenced during the stock market plunge in Japan at the beginning of the 1990s. During the first eight months of 1990, the Tokyo stock market, as measured by the Nikkei stock average, fell 15,000 points. For roughly every 1,000 point drop in the Nikkei index, the capital ratios of Japanese banks declined by 0.1 per cent, so that banks found themselves with a shortfall of 1.5 per cent in regulatory capital.

Banks can *decrease the denominator* by selling assets (and shedding corresponding liabilities), downsizing off-balance sheet exposures, and repositioning asset categories (or off-balance-sheet items) from higher to lower risk, through securitisation or other adjustment techniques.

Selling assets can prove a controversial way of improving the capital position of a bank since the market might only be interested in buying the bank's least risky assets. If banks sell their more liquid assets, the overall maturity of the asset portfolio will be lengthened. If banks are to shrink their size (contracting assets and deposits) and refrain from new activities, they may improve their capital standards, but often at the cost of reducing potential sources of profit.

Bank mergers are another way of improving capital standards (a lowly capitalised bank merging with a better capitalised one).

In practice, the changes in the asset portfolio through the repositioning of asset categories to lower risk has been a solution favoured by many banks. This has led to credit allocation, creating an incentive for the banks to be active participants in markets or instruments assigned a lower risk category, such as the market for securitisation, because of its favourable treatment (regulatory arbitrage).

Basel I had a specific effect in banks' strategies: they have rearranged their asset portfolio away from high-risk weighted assets and towards lower-risk weighted assets.

## **BASEL II**

In June 1999, the Basel Committee on Banking Supervision issued a proposal for a new capital adequacy accord (a first consultative paper). A second consultative paper providing detailed proposals was issued in January 2001 and a third and 'final' consultative paper was issued in

April 2003. On 11th May, 2004, the Basel Committee announced that consensus had been reached on the New Basel Capital Accord -- commonly referred to as Basel II -- and that it expects to publish the text of the new framework at the end of June, with a view to implementing the standardised and foundation approaches by 2006 and the advanced approach by the end of 2007. The Basel II 'package' comprises three parts: an overview, detailed proposals and supporting documents providing background information and technical details. The proposals are very extensive, prescriptive and complex.

The Basel Committee has also published since April 2001 several quantitative impact studies (QIS) to assess the impact of the proposals on a wide range of banks. In May 2003, it published the results of its third QIS, involving 360 banks from over 40 jurisdictions.<sup>10</sup>

In principle, the new approach (Basel II) is not intended to raise or lower the overall level of regulatory capital currently held by banks, but to make it more risk sensitive. The spirit of the new Accord is to encourage the use of internal systems for measuring risks and allocating capital. The new Accord also wishes to align regulatory capital more closely with economic capital. Banks may hold significant amounts of economic capital for a variety of strategic and reputational reasons, such as to finance mergers and acquisitions or future business expansions, or to satisfy rating agencies prior to expanding into other markets and to allow flexibility in decision making.

## **Elements of Basel II**

The new capital framework (Basel II) consists of three pillars: minimum capital requirements, supervisory review process and market discipline.

Basel II requires the calculation of the total capital required (the sum of credit,

market and operational risks) to be more risk sensitive and reflective of the way institutions are really managed. While market risk has not been changed (still standardised approach or value at risk (VaR) — similar to CAD II), credit risk has been changed and operational risk has been introduced for the first time. Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems (as well as legal risk) — or from external events (terrorist threats and others).

Basel II provides three approaches, of increasing sophistication, to calculate [credit] risk-based capital. The first approach, and the most basic, is the standardised approach, which relies on external ratings. The second approach is the foundation internal ratings-based approach, which allows banks to calculate their credit risk-based capital on the basis of their internal assessment of the probability that the counterparty will default. The third and most sophisticated approach is the advanced internal ratings-based (IRB) approach, which allows banks to use their own internal assessment not only of the probability of default, but also the percentage loss suffered if the counterparty defaults and the

quantification of the exposure to the counterparty.

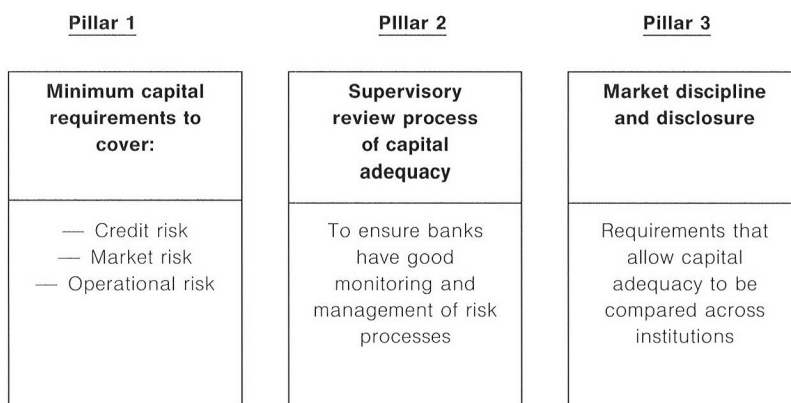
The standardised approach refines the risk categories of the Basel I formula. For instance, risk weights for corporate credits (100 per cent under Basel I) will range from 20 per cent to 150 per cent depending on their external rating. Sovereign debt risk weights will no longer be dependent upon whether a country is member or not of the OECD, but rather on the external rating identified for the country.

The internal ratings-based approach (both foundation and advanced) extends the use of internal models that was adopted in 1996 with regard to market risk to credit risk. The onus of responsibility falls on management. The Committee sets out the criteria that institutions need to meet to be eligible to use the IRB approach and specifies the elements that ought to be taken into account in the models.

There are four key inputs that are needed under the IRB approach (both foundation and advanced):

- PD: probability of default of a borrower
- LGD: loss given default, the estimate of loss severity

Figure 2 The structure of the proposed new Basel Accord<sup>11</sup>



- EAD: exposure at default, the amount at risk in the event of default
- M: the facility's remaining maturity

The bank is required to provide PD in both the foundation and the advanced approaches. LGD, EAD and M are provided by supervisors in the foundation approach, but must be provided by banks operating under the advanced approach (subject to supervisory review). In order to calculate the capital charge under the IRB approach, banks have to break down their portfolios into five categories: corporate, retail, bank, sovereign and equity.

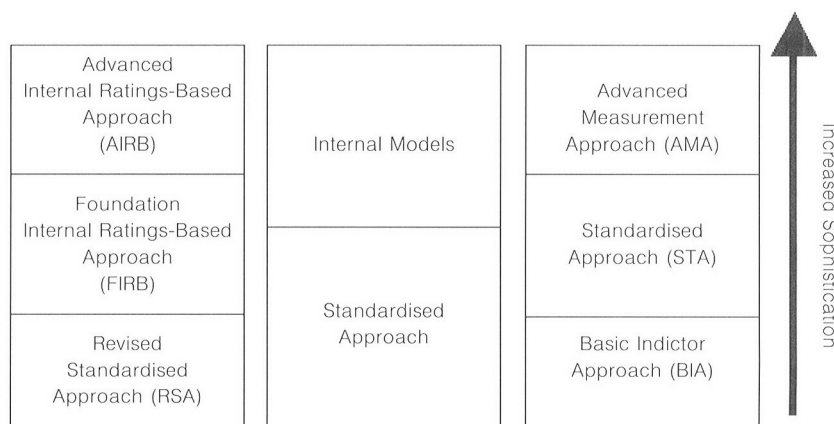
There are additional considerations that banks may have to take into account when determining the capital charge to credit risk: credit risk mitigation and the treatment of asset securitisation.

With regard to the capital requirements for operational risk, there are also three different approaches according to the level of sophistication of the bank's risk management techniques: a basic indicator approach (a percentage of gross income), a standardised approach and an advanced measurement approach.

Pillar 2 deals with supervisory review, given that not even complex rules can capture the risk profile and business strategy that determine the soundness of a particular banking institution. The inclusion of pillar 2 is an acknowledgment of what Litan eloquently stated back in 1986,<sup>13</sup> that a capital charge does not address the most important element of a bank's balance sheet: the quality of the asset portfolio. The problem with Pillar 2 is that it will probably lead to a differential implementation across countries. Also, while in some countries there is a fluid dialogue between supervisors and bank managers, in other countries such communication is less fluid.

Pillar 3 focuses on market discipline via disclosure. Market discipline can also, however, be fostered via other mechanisms. Calomiris and other members of the US Shadow Financial Regulatory Committee have advocated supplementing the Basel capital standards with an additional subordinated debt requirement to promote greater market discipline. This is because subordinated debt holders (Calomiris has in mind the US model, where depositors are insured, and where there is a sophisticated

Figure 3 Approaches to the Minimum Capital Requirement available under the new Accord<sup>12</sup>





secondary market for all sorts of debt instruments) have an incentive to monitor the risks incurred by a bank, since they have a fixed income claim and are not entitled to share in upside gains by the bank (contrary to equity holders).<sup>14</sup>

## IMPACT OF BASEL II UPON THE BANKING INDUSTRY

'In my view the complexity generated in Basel II goes beyond what is reasonably needed to implement sensible capital regulation.'<sup>15</sup>

Basel II has significant economic and structural consequences that cannot be underestimated. Basel II will lead to a substantial redistribution of capital requirements. Banks need to take the following issues into careful consideration.

*Cost:* Basel II is costly to implement, complex to understand and prescriptive in its numerous recommendations.<sup>16</sup> Basel II favours active risk management and in preparation for its adoption banks are improving their internal models. The costs of compliance with the IRB approach are significant, ranging from investments in data collection and IT systems to training and recruiting staff. Credit Suisse estimates the initial cost to be around \$100m just to implement the system, plus substantial ongoing costs.<sup>17</sup> A survey of industry preparations for Basel II, suggests that the Basel II programme will cost anywhere between £6m to £125m and indicates the importance of the involvement of senior management in its implementation.<sup>18</sup>

'The combination of a global IT project and the mathematical complexity of modeling multiple financial risks has made things hideously complicated for IT directors and their boardroom colleagues. (...) Banks also have to ensure they have historical financial and

customer data going back a minimum of two years — a task in itself that will take banks between 18 months and three years, according to experts.'<sup>19</sup>

The *incentive* for banks to make these investments in risk management and new technologies is that banks will try to use models to *reduce* the overall amount of *regulatory capital*<sup>20</sup> and increase their return on equity.<sup>21</sup> According to one calculation, 'for a large bank with risk weighted assets of Euro 500 billion, cutting the amount of capital by just 0.5 per cent would save Euro 2.5 billion'.<sup>22</sup> Banks are ready to make investments in Basel II in the hope that their overall amount of regulatory capital will be reduced, and hence resources can be freed up to apply against new business. The overall reduction in the amount of capital is, however, contrary to the stated objective of the Basel process, the stability of the banking system.

*Commercial lending* will be affected by Basel II.<sup>23</sup> Basel I provides only one risk weight category for ordinary corporate lending: 100 per cent; whereas Basel II will provide four categories: 20 per cent, 50 per cent, 100 per cent and 150 per cent, with these risk weights refined by reference to a rating provided by an external rating agency. High quality loans will attract a higher external rating and a lower capital charge, which will result in more attractive pricing of such loans.

*Retail lending* will benefit from the Basel II rules, in particular mortgage lending which will be reduced from 50 per cent to 35 per cent risk weightings. Credit card business and other consumer loans will also enjoy a drop in weightings from 100 per cent to 75 per cent. This reduction in risk weightings will be an incentive for banks to push more capital into retail activities.<sup>24</sup>

Basel II is expected to *affect securitisation negatively*. The Basel Committee has developed a complex framework of capital

charges for securitisation exposures both for banks using the standardised and the IRB approaches. This could discourage banks from actively managing their credit risk portfolios. In the USA the size of the securitisation market is an impressive \$2.7trn.<sup>25</sup> The actual impact of the proposal on the industry is not known yet however. The Basel Committee recognises that asset securitisation can serve as an efficient way to redistribute credit risks of a bank to other banks or non-bank investors (risk diversification). The Committee, however, is concerned with the use of structured financing or asset securitisation to avoid minimum capital commensurate with their risk exposures (regulatory arbitrage). This may result in an overall risk-based capital ratio that is nominally high but which may obfuscate capital weakness in relation to the actual risks inherent in the bank's portfolio (difference between regulatory capital and economic capital).

*Level playing field:* the implementation of Basel II raises at least four issues of fairness in competition:

- banks and non-banks: Basel II applies only to banks, which can place them at a competitive disadvantage with non-bank competitors which can move into some areas of bank business, such as asset management and payments processing
- large banks and small banks: the use of models (as in the foundations and advanced IRB approaches) is expected to lead to a lower capital charge. This could put smaller institutions that rely on the standardised approach at a competitive disadvantage
- the different implementation of Basel II in the USA and in Europe (related to the size of the bank and its level of sophistication in risk management): The US regulatory authorities issued an ANPR or 'Advanced Notice of

Proposed Rulemaking'<sup>26</sup> announcing that Basel II will only apply on a mandatory basis to the top ten or 12 largest internationally active banks in the USA, though another ten banks are expected to adopt it voluntarily. This limited application is further restricted by the intention of the US authorities to only adopt the advanced internal ratings-based (AIRB) version of Basel II with regard to credit risk (*not* the other two variants: the standardised and the foundations IRB approaches) and the advanced measurement approach (AMA) with regard to operational risk. The rest of the banks (numbering around 7,000) are expected to stay under the Basel I regime. The authorities have said that the new Accord would be too complex for the majority of banks in the USA and for them to supervise

- emerging economies and developed countries: Some large emerging economies, such as the People's Republic of China and India, have expressed their intention not to adopt Basel II. As well, countries in Latin America are concerned about implementing Basel II, on the basis that neither the banks nor supervisors might be ready for this substantial change in the region.<sup>27</sup> There are concerns that Basel II will exacerbate the already high volatility of capital flows to emerging economies (issues of procyclicality that are discussed below).

*External rating agencies* will have a key role in determining risk weights in the revised standardised approach to credit risk (eg with regard to commercial loans, and sovereign loans). The importance and influence of rating agencies will increase, but also add to the demands made of them.<sup>28</sup> The role of eligible external credit assessment institutions (ECAIs) is given

prominence in Basel II. External ratings can help reduce the amount of capital; claims on banks of very high quality according to the rating would receive a lower risk weight while claims on banks with a low rating would receive a higher risk weight. In the light of their increasing demands and given that internationally there are just a handful of recognised rating agencies,<sup>29</sup> it would be sensible, in the author's opinion, to allow new competitors to enter the market. In the USA, the status of 'Nationally Recognised Statistical Rating Organization' (NRSRO) is confined to Standard & Poor's, Moody's Investors Service, Fitch and Dominion Bond Rating Service. In the EC, rating agencies need to be recognised as eligible External Credit Assessment Institutions by the national competent authorities. The problems with rating agencies is that though they are lightly regulated and lack accountability, investors, lenders, supervisory authorities and market participants rely on them heavily.<sup>30</sup> Ratings are qualified 'opinions' not official seals of approval. Ratings are tools for differentiating credit quality. (Standard & Poor's defines a rating as an opinion on the general creditworthiness of an obligor, or with respect to a particular debt security or other financial obligations.) In terms of incentives, the rating agencies have an interest in keeping things going, given that their fees are paid by the companies that they rate.

*Operational risk:* a novelty of Basel II is that there will be a capital charge against operational risk, which is expected to represent on average 10–15 per cent of the total minimum regulatory charge.<sup>31</sup> This risk has often hit the news headlines: rogue traders, settlement failures, lapses in internal controls, poor accounting and others. The problem is that operational risk is best dealt with not with equity capital but with effective corporate governance, adequate internal structures,

audit, compliance and insurance.<sup>32</sup> John Hawke, Comptroller of the Currency in the USA, in his Congressional testimony of 27th February, 2003 suggested that any charge for operational risk should be committed to the discretion of bank supervisors, under Pillar II of the proposal, rather than being calculated through a formulaic approach under Pillar I.

*Bank consolidation:* Basel II appears to be to the benefit of larger and more sophisticated banks. Small or unsophisticated banks facing an increase in their capital charge could be bought by more sophisticated banks.<sup>33</sup>

*Procyclicality:* procyclicality refers to the factors that exacerbate the swings in the economic cycle, increasing volatility. Though a degree of cyclicality is acceptable (one could say unavoidable), excessive procyclicality is not. Capital rules intensify procyclicality if they aggravate or accelerate downturns (eg by creating credit crunches as banks have less capital available to lend to borrowers) or if they magnify upswings (eg by creating an incentive to overlend). The opposite of procyclical is countercyclical, or anticyclical, ie measures that help smooth or moderate the swings. It has been suggested that Basel II will increase procyclicality, since banks will require more capital when companies are downgraded. Raising regulatory capital during a recession (when actual levels of capital are falling) is very tricky. The Basel Committee has taken some steps to reduce procyclicality. It requires banks to carry out 'stress tests' under Pillar 2 by calculating how much capital would be needed in a crisis. It has also been suggested that dynamic provisioning (as applied by the Banco de España<sup>34</sup>) could be a helpful tool to reduce procyclicality, with provisions built up in good times in order to enhance the resources available to deal with bad times (the Biblical image of the years of fat cows and good harvests

followed by thin cows and bad harvests comes to mind).

### THE PROCESS IN BASEL AND IN BRUSSELS

The European Commission is expected to publish proposals to change the existing capital adequacy rules for banks, credit institutions and investment firms in 2004. The European Commission will propose a new capital directive, known as CAD III, whose contents are expected to be aligned with Basel II. There are, however, two fundamental differences between Basel and Brussels:

- differential impact: 'hard law' versus 'soft law'. The Basel proposals are 'soft law'. EC law is hard law, and imposes a legal obligation on member states to modify their national legal systems. The Community timetables are important considerations for all EC countries. Thus, while a country may be reasonably relaxed with the Basel rules, regulatory convergence becomes a matter of critical importance at the EC level. Enforcement is the key element to distinguish between 'hard law' and 'soft law'. The work of the Basel Committee reflects a trend in banking and finance to develop international financial standards or codes of good practice
- scope of application: EC capital rules are designed to apply to credit institutions and investment firms, while the Basel rules target internationally active banks on a consolidated basis.

The current EU rules on capital adequacy are the Own Funds and Solvency Ratio Directives, now incorporated into the Consolidated Banking Directive, CAD I and CAD II. In 1993, market risk was introduced in the first Capital Adequacy Directive (CAD I) but was later amended in 1998 (CAD II) to allow for the use of VaR models, which had been proposed in

the Basel rules for market risk (the 1996 Amendment to the Basel Accord).

This is an interesting example of what happens when the process in Basel and in Brussels do not go in parallel. Given the informal role of the Basel Committee as international bank regulator, any new EC Directive on capital needs to be aligned with the Basel proposals. Therefore, in terms of timetable for CAD III<sup>35</sup> there will be no new Directive (in the author's opinion) until Basel II is adopted. And there is a strong probability (in the light of the US Congressional and regulatory debate on the subject) that Basel II will be delayed again.

Another issue to be considered in the EU is the possible adoption of the Lamfalussy process for CAD III so as to speed up the time it takes for the legislative proposal to be agreed. According to this so-called Lamfalussy process, framework principles are adopted via Directives (regular co-decision), while technical rules are adopted by a Committee/Committees.<sup>36</sup>

### CONCLUDING REMARKS

Capital regulation has become a prominent feature of banking regulation and a major strategic theme for bank management. Basel I has contributed to the convergence in capital standards in banks around the world. Basel I, however, has become outdated and no longer provides internationally active banks with a meaningful measure of the capital that they should hold against the risks of their investments. Basel II has been the subject of much criticism and protracted negotiations. Delays may still occur in its implementation. Whether the new capital adequacy regime will be in the end Basel II, Basel III or Basel 1.5 remains to be seen.

### POSTSCRIPT

On 26th June, 2004, the Central Bank governors and heads of bank supervisory

authorities issued a press release and endorsed the publication of the revised Basel II capital framework.

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- (2) See Kaufman, G. (2000) 'Banking and currency crises and systemic risk: A taxonomy', *Financial Markets, Institutions and Instruments*, Vol. 9, pp. 69–131.
- (3) 'The most important aspect of a bank's balance sheet, the quality of the asset portfolio is difficult to assess at any given time. Perhaps, in recognition of those limitations, federal regulators are increasing capital requirements.' See Litan, R. (1986) 'Taking the dangers out of bank deregulation', *The Brookings Review*, Fall.
- (4) FDICIA provides especially severe treatment for critically undercapitalised depository institutions (those whose leverage ratio is less than 2 per cent of total assets) as opposed to depository institutions that are merely undercapitalised.
- (5) Modigliani and Miller argued in their seminal contribution that the value of any corporation, including a bank, is the present discounted value of its expected future earnings stream. How claims on this earnings stream are divided between debt and equity does not matter. See Modigliani, F. and Merton M. (1958) 'The cost of capital, corporate finance and the theory of investment', *The American Economic Review*, Vol. 48, No. 3, pp. 261–297.
- (6) HM Treasury (UK) (2003) 'The New Capital Adequacy Directive, CAD 3: The transposition of the new Basel Accord into EU legislation', Consultation Document, December, available at [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk).
- (7) On the one hand, subordinated term debt carries a repayment obligation that is just as real as an uninsured deposit, so it is not actually a permanent source of funds. On the other hand, debt which is legally subordinate to deposits is a source of funds that does not place an immediate repayment burden on the institution and thus offers a quasi permanence similar to equity capital. Subordinate debt holders serve as an important monitor of an institution because they stand to lose if a bank takes excessive risks.
- (8) Ferguson, R. (2003) 'Testimony of the Vice Chairman of the Federal Reserve Board of Governors, before the Subcommittee on Domestic and International Monetary Policy, Trade and Technology of the Committee on Financial Services of the US House of Representatives,' 27th February, p. 2. If the market believes that the capital charge on residential mortgages (risk weight of 50 per cent) and on credit cards (risk weight of 100 per cent) is higher than the real risk, that facilitates the securitisation and sale of a large volume of such loans to other holders (capital arbitrage).
- (9) Lastra, R. (1996) 'Central banking and banking regulation', Financial Markets Group of the London School of Economics.
- (10) The reports of the Basel Committee are available at [www.bis.org](http://www.bis.org)
- (11) HM Treasury (2003) *op. cit.*
- (12) *Ibid.*
- (13) Litan (1986) *op. cit.*
- (14) The statement of the US Shadow Financial Regulatory Committee are available at [www.aei.org](http://www.aei.org)
- (15) John Hawke, US Comptroller of the Currency, 27th February, 2003.
- (16) As reported in the *Financial Times* of 2nd March, 2004, by Jane Croft and Charles Pretzlik, in an article entitled 'Global red tape saddles HSBC with \$400 million', HSBC expects the burden (of complying with different regulatory regimes around the world) to rise further, as new regulations, such as the Basel II rules on bank capital come into force. The FT noted

that this was the first time a bank had given such a precise indication of the costs of regulation.

- (17) Bischofberger, A. and Rybach, M. (2003) 'Basel II implications for banks and banking markets', Credit Suisse Economic and Policy Consulting, Zurich, p. 11, available at [http://research.credit-suisse.ch/de/publications/spotlight/pdf/spotlight\\_20030730\\_ss\\_e.pdf](http://research.credit-suisse.ch/de/publications/spotlight/pdf/spotlight_20030730_ss_e.pdf)
- (18) Gandy, T. (2003) 'A risky business? A survey of industry preparations for Basel II', *The Financial World*, September issue, special report, pp. 25–29. With regard to the results of the survey of industry preparations, Gandy writes: '90 per cent of the respondents already have a Basel coordinator and implementation team in place. Project sponsorship for Basel II tends to come from very senior sources. Project leadership can come from the finance director, chief risk officers, chief executive or deputy. With the Basel II programme costing anywhere between £6 million to 125 million to implement and with potential capital savings running into billion of pounds for some major institutions, senior leadership is essential to the success of a Basel II programme.'
- (19) See generally Huber, N. (2003) 'Banks wake up to risk management challenge: Basel II', *Financial Times*, 7th May, p. 10.
- (20) See Rodriguez, J. L. (2002) 'International banking regulation: Where's the market discipline in Basel II?', Cato Institute Policy Analysis No. 455, pp. 1–27, 15th October, available at <http://www.cato.org/pubs/pas/pa455.pdf>. 'For all the added complexity, it is not yet clear that even the best-managed banks with the most sophisticated risk-management models will have lower capital charges. For banks, the incentive to adopt those costly models is that, insofar as they provide a more accurate picture of the risks taken, they could lead to lower capital charges.'
- (21) In its 2003 Annual Report, HSBC states: 'It is HSBC's policy to maintain a strong capital base to support the developments of its business. HSBC seeks to maintain a prudent balance between the different components of its capital. (...) Capital generated in excess of planned requirements is paid up to HSBC holdings normally by way of dividends (...) HSBC recognizes the impact on shareholder returns of the level of capital employed within HSBC and seeks to maintain a prudent balance between the advantages and flexibility afforded by a strong capital base and the higher returns on equity possible with higher leverage. In the current environment HSBC uses a benchmark tier 1 capital ratio of 8.25 per cent in considering its long-term capital planning.' See HSBC Holdings plc (2004) 'Annual Report and Accounts: 2003', HSBC, London, available at <http://a248.c.ama-net/7/248/3622/a88d726492b742/www.img.ghq.hsbc.com/public/group-site/assets/investor/hsbc2003ara0.pdf>
- (22) See generally Suiter, J. (2003) 'Overhaul of banking rules could cost up to euro 200m', *Financial Times*, 11th May.
- (23) See ref. 17 above.
- (24) *Ibid.* at p. 10: 'Banks specializing in areas such as asset management and custodial services will be among the main losers of the New Accord, whereas banks focusing on retail and lending to SMEs are likely to benefit the most'.
- (25) *Ibid.*, pp. 9 and 10. The use of ratings by eligible external credit assessment institutions for setting capital charges for asset securitisation is introduced in Basel II. The proposal primarily addresses transactions that result in a special purpose vehicle (SPV) issuing paper secured on a pool of assets. The Committee proposes that securitisation tranches be risk weighted at 20 per cent, 50 per cent, 100 per cent, 150 per cent depending on the rating by an ECAI.
- (26) US banking agencies must publish notice and seek comments from all interested parties on any proposed regulation, and must fully consider those comments before adopting it in final form, according to the Administrative Procedure Act (APA), 5 USC 551 *et seq.*

- (27) See Statement No. 2 of the Latin America Shadow Financial Regulatory Committee, available at [www.aei.org](http://www.aei.org).
- (28) See ref. 17 above, p. 12.
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- (30) See Fuller, J. (2004) 'Credit rating groups need greater scrutiny', *Financial Times*, 13th April.
- (31) See Hawke, J. (2003) 'Testimony of the Comptroller of the Currency before the Subcommittee on Domestic and International Monetary Policy, Trade and Technology of the Committee on Financial Services of the US House of Representatives', 27th February.
- (32) See statement No. 16 of the European Shadow Financial Regulatory Committee (ESFRC) of 12th May, 2003, at [www.ceps.be](http://www.ceps.be)
- (33) See ref. 17 above, pp. 10, 12 and 23.
- (34) The Banco de Espana introduced a new solvency provision in December 1999, the so-called statistical or dynamic provisioning, which started to be applied in July 2000. See [www.bde.es](http://www.bde.es)
- (35) On 1st July, 2003, the European Commission (Internal Market DG) published its third consultation paper on the 'Review of capital requirements for banks and investment firms', [www.europa.eu.int](http://www.europa.eu.int). The European Commission has also published its own Quantitative Impact Studies (QISs) available also at [www.europa.eu.int](http://www.europa.eu.int)
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