

3911 Argyle Terrace NW
Washington DC 20011
202 723 2463

7/31/2003

The Basel Committee on Banking Supervision
The Bank for International Settlements
Basel
Switzerland

Dear Sir:

With the permission of the publishers, the Center for the Study of Financial Innovation, I am submitting the attached paper, entitled "A New General Approach to capital adequacy: A simple and comprehensive alternative to Basel 2" and a supplementary note, which clarifies and illustrates the paper, as a comment to the Basel Committee on Bank Supervision on the Third Consultative Document (CP3) of the New Basel Capital Accord.

Since the paper was written in December 2002 I have become the Director, Operational Risk Management at the Risk Management Association, in Philadelphia. This submission does not in any way reflect any position of the RMA or its members.

I greatly appreciate this chance to respond to the Third Consultative Document. If you have any questions about my comment, I would be happy to discuss it at your convenience.

Very Best Regards

A handwritten signature in black ink, appearing to be the initials 'CT' or a similar stylized name.

Charles Taylor

Comment on the Third Consultative Document

A New General Approach
to capital adequacy: A simple and comprehensive alternative to Basel 2

Supplementary Note
Clarifications and Illustrations
Thursday, July 31, 2003

The first purpose of this note is to clarify the paper, “A New General Approach to capital adequacy: A simple and comprehensive alternative to Basel 2” (the December paper). In explaining the December paper to different audiences over the past six months, it has become apparent that:

- the central idea could have been stated more simply;
- presenting the Approach as a way in which banks can set their own capital levels does it a disservice; and
- the Approach works perfectly well for small banks as well as large – a material selling point.

The purpose of the illustrations on Pages 3 & 4 is to show that calculations needed to make the Approach work are quite feasible – to refute the idea that the Approach is difficult or “academic.” On the contrary, it is practical, simple and straightforward. Because regulators have to take a view on how well highly complex risk management systems work in large, sophisticated institutions does not mean the capital regime has to be complex too. For policy-setting purposes, however, the estimates in this note could do with some refinement.

Clarification: The Capital Adequacy Ratio

The central idea in the Approach is that, rather than prescribing in detail with other bank regulators how all banks should calculate capital worldwide, each bank regulator should agree with each regulated bank how much capital it should hold in relation to its overall risks. For this purpose, these risks can be characterized usefully by a loss threshold below which actual quarterly losses are expected to stay most of the time.

It is important for the Approach to work properly that, if capital falls below the agreed capital threshold -- or if losses exceed the agreed loss threshold -- prompt corrective regulatory intervention predictably results. This is the case in the United States and in some other OECD countries, but not all. If this regulatory intervention is sufficiently serious and predictable, it will be a powerful incentive to a bank to keep its capital above and its losses below the corresponding thresholds.

To implement this combination of a capital and a loss threshold, the Approach suggests the regulator simply sets the level of capital for a bank in relation to this measure of risk – the ratio of the capital threshold to the loss threshold. We might call this the Capital

Adequacy Ratio.¹ Then, within limits, bank management can choose a capital threshold, and by implication, a loss threshold, within which it is reasonably confident it can live.

So for example a bank might reckon that its quarterly loss is likely to be below \$50mn 99% of the time, and it is comfortable with the prospect of prompt corrective intervention once in 100 quarters. Then if the regulator set the Capital Adequacy Ratio at 10 times losses, the bank would be required to have capital of ten times that loss threshold, or \$1bn. The deterrence against a bank opting for low-balling their capital threshold is of course the increased likelihood that the regulators will intervene in any given quarter, as the loss threshold is thereby lowered too.

The proviso of “within limits” is important. Although management should propose, regulatory approval would not necessarily be automatic. And, in particular, any large change in proposed capital or loss thresholds should be well explained before being accepted.

Clarification: Making Banks Set Two Thresholds is Tougher Than Regulators Setting One Capital Threshold for Them

When regulators tell a bank exactly how to calculate their risks and how much capital they should hold as a result, they are doing management’s job for them. That may be appropriate for a bank in trouble as part of a prompt corrective intervention, but it is not appropriate for a healthy institution.

For healthy banks, regulators should satisfy themselves through the process of examination that the bank is well enough managed and then should impose their solvency standard in terms of the level of overall capital in relation to overall risk – set the Capital Adequacy Ratio -- and leave to management the specifics of how risks are managed and measured.

Clarification: Scope of Applicability

The Approach works well for all banks, whatever their size and sophistication.² A small bank with fairly simple risk management systems will be no less deterred from low-balling its capital threshold than a big bank with highly sophisticated systems. The large bank may cut it finer, so to speak, but only to the degree that it is confident it can manage its risk better. That seems appropriate. Otherwise, the capital standard is insensitive to the quality of risk management and does not incent improvement as it should.

¹ Most of the discussion in the December paper is in terms of something called the “loss parameter,” the reciprocal of the Capital Adequacy Ratio used here. The Capital Adequacy Ratio makes more intuitive sense.

² The December paper asserted that the Approach was applicable only to large, sophisticated institutions of that, under the terms of the Third Consultative Paper, would qualify to use the advanced approaches.

Illustration: The United States³

Table 1 shows estimates of the average Capital Adequacy Ratio for small banks and big banks in the United States. It suggests that today, regulators require small banks to hold less capital in relation to their risks than big banks. It is true that small banks have higher leverage ratios on average -- that they have more capital than big banks in relation to assets. But this analysis suggests that regulators require them to hold less capital in relation to risks.

Table 1: US Average Capital Adequacy Ratios (CARs)

	# Banks	Average
Over \$10bn assets	70	7.8
Under \$10bn assets	45	5.7
Total	115	7.7

Illustration: The G-10 Compared

Table 2 shows estimates of average Capital Adequacy Ratios for G-10 countries. At first glance, the ranking of countries looks odd. However, this may well be explained by differences in such things as how capital is measured and standards are enforced. It is a well known point that, for common capital standards to really level the playing field, they have to be implemented in a similar manner. The Table underlines how important this point is.

³ The data for these calculations came from the annual table in recent edition of "The Banker" magazine which listed the top 1000 banks worldwide and various reference data for 2002 for each of them. (http://www.thebanker.com/news/fullstory.php/aid/413/TOP_1000_World_Banks.html.) The Basel Ratio was used to calculate the CAR for each bank. Averages were estimated by weighting bank CARs by capital.

The method for calculating an individual bank's loss parameter is described in formula (1) on Page 21 of the December paper. To derive the estimates for all three illustrations, the reciprocal of formula (1) was used; that is $CAR = \chi / (\alpha / \kappa - 1)$. χ was assumed to be 4 throughout. α / κ was estimated as the Basel Ratio divided by 8%.

The data set we started with was the top 1000 banks worldwide, measured by asset size. Focusing on the G-10 countries -- defined as Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, The Netherlands, Spain, Sweden, Switzerland, the UK and the USA -- and banks with assets of more than \$1bn, institutions were removed for which no Basel Ratio was available or for which the Basel ratio was above 50%. That left a sample of 298 institutions. This included 65 of the top 80 institutions worldwide, ranked by asset size.

Table 2: G-10 Average Capital Adequacy Ratios (CARs)

	# Banks	Average CAR		# Banks	Average CAR
USA	115	7.7	Luxembourg	2	5.6
UK	13	9.1	Japan	61	13.3
Switzerland	11	4.2	Italy	21	19.4
Sweden	4	16.6	Germany	24	13.9
Spain	20	7.5	France	5	10.5
Portugal	4	12.1	Canada	7	7.7
The Netherlands	8	10.2	Belgium	3	8.2
			Total	298	10.3

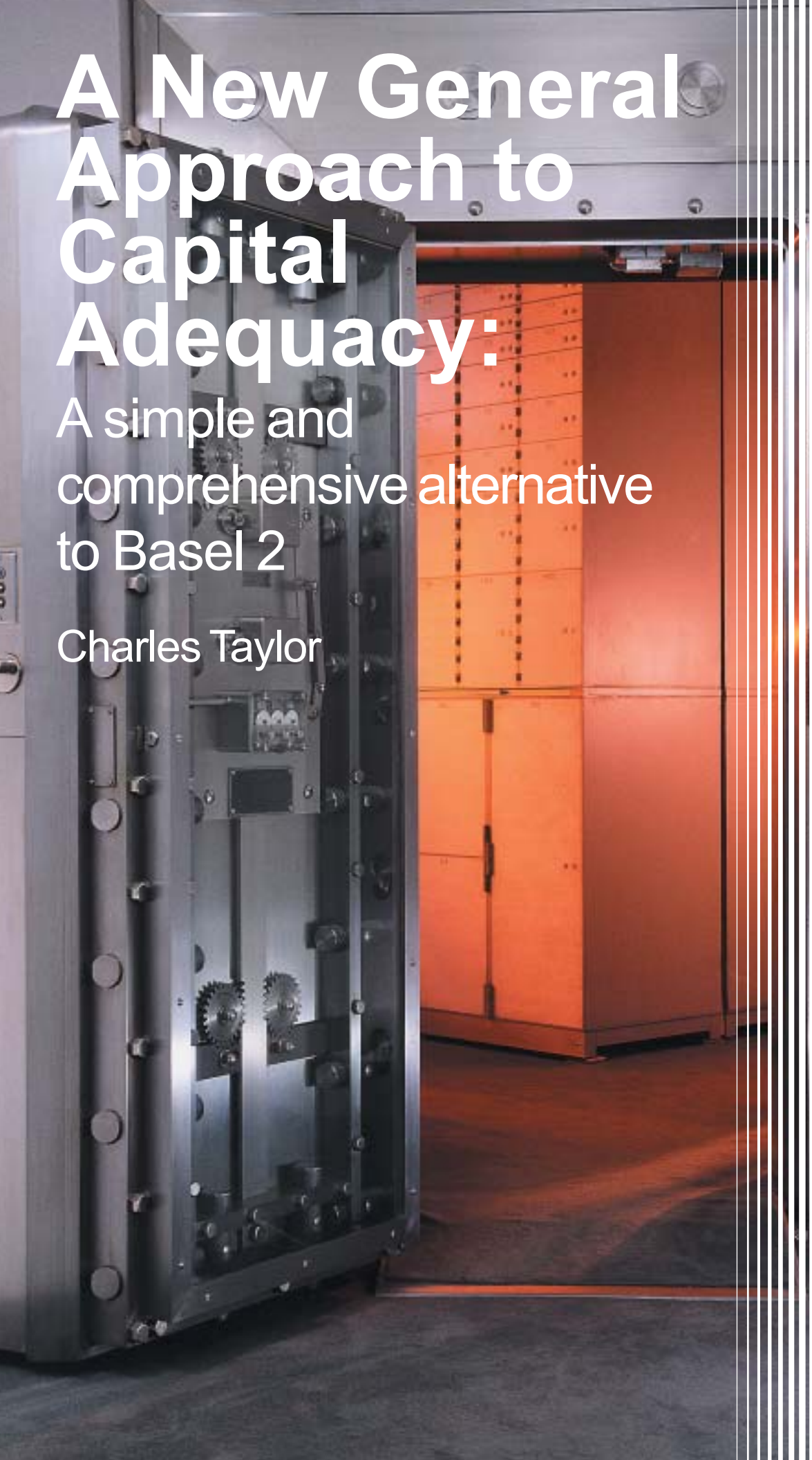
Illustration: Variation within each G-10 Country

Table 3 shows the variation in capital adequacy within the sample of banks in each country. The case for reform of Basel I is supported here, to the extent the Table highlights that current capital standards often vary greatly in relation to the risks banks take. The ranking of countries by variation is also suggestive: a low value of σ may be indicative of greater regulatory consistency than average.

Table 3: The Variation in Capital Adequacy Ratios in G-10 Countries

	Average	Max	Min	σ
USA	7.7	15.2	1.4	2.9
UK	9.1	20.0	1.8	4.7
Switzerland	4.2	16.8	na	22.2
Sweden	16.6	24.6	11.4	5.9
Spain	7.5	16.8	2.5	3.3
Portugal	12.1	18.8	6.7	5.2
The Netherlands	10.2	12.8	1.7	3.3
Luxembourg	5.6	6.4	4.9	1.1
Japan	13.3	160.0	na	40.4
Italy	19.4	80.0	4.7	20.6
Germany	13.9	26.7	6.2	4.9
France	10.5	15.2	8.6	2.5
Canada	7.7	9.7	5.7	1.5
Belgium	8.2	11.9	5.6	3.3
Total	10.3	160.0	na	20.8

Notes: "na" signifies a negative entry, meaning that some banks in the sample had capital below 8%. Japan had 4 banks with capital adequacy ratios of 100 or over -- 100.0, 103.2, 106.7 and 160.0 -- and 8 banks with negative CARs. Switzerland had one bank with a negative CAR.

A photograph of an open metal safe. The safe is dark grey or black with a heavy-duty door on the left side, showing internal mechanical components like gears and bolts. The interior is lined with bright orange shelves and drawers. The lighting is dramatic, with the orange interior glowing against the dark exterior.

A New General Approach to Capital Adequacy:

A simple and comprehensive alternative to Basel 2

Charles Taylor

CSFI
Centre for the Study of
Financial Innovation

The Centre for the Study of Financial Innovation is a non-profit think-tank, established in 1993 to look at future developments in the international financial field - particularly from the point of view of practitioners. Its goals include identifying new areas of business, flagging areas of danger and provoking a debate about key financial issues. The Centre has no ideological brief, beyond a belief in open and efficient markets.

Trustees

Minos Zombanakis (Chairman)
David Bell
David Lascelles
Sir Brian Pearse

Governing Council

Sir Brian Pearse (Chairman)
David Bell
Rudi Bogni
Robert Bench
Manny Bussetil
Peter Cooke
Bill Dalton
Professor Charles Goodhart
John Heimann
Henry Kaufman
John Langton
Dame Judith Mayhew
John Plender
David Potter
Sir Brian Williamson
Minos Zombanakis

Staff

Director - Andrew Hilton
Co-Director - David Lascelles
- Fleur Hansen

Published by the
Centre for the Study of Financial Innovation (CSFI)
5 Derby Street
London W1J 7AB UK

Tel: 020 7493 0173
Fax: 020 7493 0190
E-mail: info@csfi.org.uk
Web: www.csfi.org.uk

Unless otherwise stated, CSFI publications can be purchased through Central Books.

E-mail: mo@centralbooks.com

Telephone: 0845 458 9910

© CSFI 2002

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of the Centre.

Printed in the United Kingdom by Heron, Dawson & Sawyer.

ISBN 0-9543145-5-7

Cover image:

Sincere thanks to those who provided encouragement and/or comments on an earlier draft including Joan Affleck-Smith, Robert Bench, Brandon Davies, Bert Ely, Charles Goodhart, Richard Herring, Andrew Hilton, Paul Kupiec and Mary Ellen Taylor. CT

A New General Approach to Capital Adequacy: a simple and comprehensive alternative to Basel 2

Charles Taylor

Foreword

Assuring the safety and soundness of banks has long been one of the principal functions of governments, both to prevent systemic financial risk from infecting real economies and to protect government from excessive costs arising from the guarantee of bank deposits. Since 1988, when the Basel Committee on Banking Supervision developed its original international proposal for capital adequacy, that regime has become the cornerstone for assuring safety and soundness in over one hundred countries.

The Basel Committee was shooting at a moving target, however: new financial instruments and strategies constantly pose new challenges to national regulators. The Committee itself recognized that its initial standards were crude and accounted only for the credit risks of individual loans and off-balance sheet commitments. Moreover, the particular “risk weights” adopted to account for different risks of different types of creditors were so rough and ready that over time they encouraged banks to retain lower quality loans and sell higher quality ones, not something that regulators really wanted to see happen.

In the mid-1990s, the Basel Committee launched a major effort aimed at overhauling these standards to expand the types of risks covered and do a better job of encouraging banks to improve how they manage risk. The Committee issued a series of consultative and explanatory documents describing its thinking, and solicited comments from the private sector and the academic community.

In trying to respond to specific criticisms and in trying to model additional risks with greater precision, the proposed rules have grown progressively more and more complex. With some of the fundamental problems of this approach still unsolved, many observers now wonder if the benefits of a new regime will outweigh the costs.

In this manuscript, Charles Taylor proposes an innovative way for the Committee to rethink the way it’s going. The approach he outlines is based on the “precommitment” notion initially proposed by two economists with the US Federal Reserve System as a way of setting capital standards for market risk. They had suggested that a bank rather than its regulator should choose how much capital to earmark - and, if capital later fell short because losses exceeded this amount, it would be fined accordingly.

Taylor has revised and extended this notion in several ways. He generalizes it and applies it to the *entire* balance sheet (and off-balance sheet commitments) and to all the income of banks. He extends it to all risks. He proposes replacing financial penalties with a system of supervisory responses like the US FDICIA “prompt corrective action” regime. Like other critics, he recommends updating the definition of capital. He has pulled apart the simple capital standard of the earlier scheme into a capital threshold and a separate loss threshold which both continue to be set by each bank, and he has inserted a new concept between them, a loss parameter, that is set by their regulators.

This parameter turns out to be powerful. It prevents gaming, a telling criticism of the original proposal. Moreover, it is a tool for tailoring capital standards to the different circumstances and conditions of individual banks. And it means

that his approach can overcome the concern with the Committee's current proposal that it may deepen recessions by encouraging banks to tighten lending excessively during downturns.

Perhaps the most important things about Taylor's alternative are its simplicity and generality. It focuses on the outcome of good risk management – solvency – and not on the details of how individual risks are managed, which is first and foremost the responsibility of bank managements. Because his approach is general it would be durable, an advantage over the new standards as currently conceived by Basel Committee - which it is widely recognized will need revision even before the ink is dry.

Taylor sketches a plan for implementing his new generalized approach while exploring its costs and benefits. In the process, he takes the debate over the future direction of bank capital standards in a promising new direction. All of the participants in that debate – including financial actors in the private and public sectors – should consult this excellent work.

Robert E. Litan *Vice President and Director of Economic Studies*
The Brookings Institution

1. Introduction

For the past six years, the Basel Committee on Banking Supervision has been developing a new capital adequacy standard for internationally active banks. The Committee's goal is for this new standard to reflect the risks that banks take and how well they manage them, and for the scheme as a whole to be so structured as to give banks incentives to improve their risk management over time. The New Basel Accord, or "Basel 2" as it is informally known, updates a much simpler capital standard, Basel 1, originally disseminated by the Committee in 1988 and amended in 1996.

Basel 2 has attracted a good deal of comment from the industry, academics and other commentators and, while the Basel Committee has been responsive and has taken many outside suggestions for improvement, deep concerns remain.

Basel 2 uses an old framework for risk management, which is well behind best practice. By the time it is finalized and introduced fully in 2006, it is likely to be even further behind. And although the Basel Committee recognizes that the Basel 2 standard is a temporary one and has issued assurances that it will update it continuously in the future, it is hard to imagine how the Committee will address this concern about methodology without a complete rework.

Perhaps more important than this methodological point is a criticism many observers have made about its complexity. Most critics have pointed to the implications this has for implementation costs. But there is a more serious issue: Basel 2 may have the unintended consequence of undermining bank governance.

It is the business of bank managements to manage risk and capital, and of their boards to oversee and review their performance. Regulators have a responsibility so to craft the environment for banks that the externalities arising from moral hazard and systemic risks are taken care of as well as possible; but they are not responsible for how banks are managed in detail (except when one of them gets into trouble). For a healthy bank, the regulator should be concerned only with the question, is there enough capital in relation to the risks of this bank? The regulator should not ask. Does risk management confirm to my blueprint? That would be regulatory preemption of a bank management's prerogative - and, as a consequence, it would dilute responsibility rather than reinforcing it.

This paper outlines an alternative to Basel 2. Along the way, it discusses these and other fundamental problems with the Basel Committee's proposals, and shows how the alternative overcomes most of them.

According to this alternative – the New General Approach (NGA) – the process of setting a capital standard would require that any qualifying sophisticated bank would propose a capital threshold generally for all its business lines combined. It would commit to keeping its total capital above that threshold. Regulators would set a "loss parameter" for relating that threshold to a loss threshold below which the bank would be required to keep its losses in any given period. Greater supervisory attention or mandated bank management actions would result from a shortfall in capital or an excessive loss — with more intervention for bigger transgressions.

This proposal has several advantages over Pillar 1 of Basel 2, the pillar that actually sets capital adequacy rules. (Pillars 2 and 3 deal with supervisory practices and market disclosure respectively.)

Chief among these is that it does not undermine good governance, because it focuses regulatory attention on the *end* that is of public policy importance – bank solvency – rather than the *means* – the risk management approaches and calculations that banks need to make. In addition, and in contrast to Basel 2, the NGA:

- is durable and would not require any methodological changes for the foreseeable future;
- avoids encouragement of herd behavior, because it accommodates diversity in risk tolerances, measurement and management practices;
- neutralizes rather than exacerbates the tendency of risk-based capital adequacy regimes to deepen economic downturns;
- will accommodate non-banks relatively easily as the European Union extends the scope of capital standards;
- encourages best practice improvements, since the incentive for a bank to invest to improve its capital and risk management indefinitely would not be weakened by the need to maintain a parallel Basel 2-compliant system;
- increases fairness between banks and non-banks; and
- incorporates operational risk flexibly and appropriately.

The rest of this paper is divided into five more sections:

- *Background*, which sketches (lightly) the history of multilateral attempts to create capital standards, the current stage of development of Basel 2 and the intellectual antecedents of the NGA;
- *The proposal*, which describes the NGA in more detail, with examples;
- *Evaluation*, which reviews the benefits, costs and risks associated with the NGA;
- *Implementation*, which addresses NGA implementation issues and whether or not it would be sensible to go ahead with Basel 2 anyway; and
- *Conclusion*.

It is very dangerous for regulators to micro-manage banks on a continuing basis. This undermines the responsibilities and erodes the accountability of bank management. Supervisors do need to step in expeditiously in some circumstances, but in the normal course of events, they should not be over-prescriptive. This is the most serious unintended consequence of Basel 2, and a major reason why, as currently conceived, it is such a mixed blessing.

2. Background

The modern history of cooperation among bank supervisors begins with the effort by the Bank of England and the Federal Reserve Bank of New York to contain the effects of the collapse of Herstatt Bank in 1974. Herstatt was a relatively small institution whose bankruptcy left several banks in the United States with large unsettled foreign exchange exposures. Among the lessons of that episode was that internationally active banks had to be able to depend on their counterparties in other countries to have enough capital. The Bank of England and the Federal Reserve led in establishing the Basel Committee on Banking Supervision of the G-10 central banks¹ in 1975.

¹ There are 12 members of the G-10: Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, The Netherlands, Sweden, Switzerland, the UK and the USA.

From the outset, the Basel Committee focused on ensuring as far as it could for each national banking system that internationally active banks based in foreign jurisdictions were properly capitalized. It aimed to raise the level of capital such banks had in relation to the risks they took. Earlier views had been that the amount of bank capital should be related to its assets – the so-called leverage ratio that supervisors still use as a point of reference in thinking about capital.

The Accord that they produced in 1988, Basel 1 as we refer to it here, did not attempt to relate capital and risk precisely, but it was a great step forward nonetheless. Banks in the 1980s were only beginning to grow in complexity themselves and these rough and ready risk-based standards were good enough for the job and have been enormously successful. Over 100 countries have adopted Basel 1. The European Community has used it as the basis for the development of its own Capital Adequacy Directives, which are applied to all institutions covered by its Investment Directives, banks and non-banks alike. The Basel Committee should take much of the credit for the fact that the world's financial system has withstood several shocks in the past 15 years, ranging from Baring's collapse, the Asian, Russian and LTCM crises of the late 1990s, to last year's 9/11 attack.

Basel 1

Basel 1 concentrated solely on the ratio of capital to a measure of the credit risk of a bank's assets. It defined capital in two tiers:

- Tier 1 consisted of equity and disclosed reserves; and
- Tier 2 consisted of undisclosed reserves, revaluation reserves, general loan loss reserves, and some qualifying hybrid debt capital instruments and subordinated term debt.

The measure of credit risk used was the sum of the values of various classes of assets, weighted using a table of risk weights that were zero, 10, 20, 50 and 100%, depending on the type and country of the borrower, the maturity of the instrument, the currency of the obligation and the quality of any collateral, security or guarantees. Off-balance sheet exposures were brought into the scheme mostly by applying a set of credit conversion factors to the nominal exposures of different categories of instrument and transaction, and treating the resultant amount as though it was an on-balance-sheet credit. Basel 1 then set the minimum value for the ratio of capital to the sum of these risk-weighted assets at 8%, of which the Tier 1 capital element had to be at least half, or 4%.

Basel 1 was modified in January 1996 in the Market Risk Amendment.² This added to the capital that banks were required to hold to cover interest rate and equity risks in the trading account and to cover foreign exchange and commodity risks wherever they arose. It represented a major change in the way capital standards were set, not only because of the extension of scope that resulted but also because it introduced different approaches for banks at different levels of sophistication. Less sophisticated banks were required to apply a formula to the face value of the instruments in their trading portfolio to derive the minimum capital requirement for market risk. For more sophisticated banks, however, which could measure their risk using internal models — the internal models approach (IMA) — the internal estimate of risk could be used as the basis for setting the capital standard. To qualify, a bank had to have a sufficiently sophisticated risk management system with sufficient oversight over model use, and it had to

² "Amendment to the capital accord to incorporate market risks." Basel Committee Publications No. 24 (January 1996, modified in September 1997).

operate within appropriate guidelines for data management, risk measurement, stress testing and model validation.

Kupiec and O'Brien

The industry debate that produced the market risk amendment was a lively one, where some of the most radical thinking emanated from the research departments of the different central banks involved. In the forefront of this new thinking, two researchers at the Federal Reserve Board in Washington – Paul Kupiec and James O'Brien — developed a “pre-commitment” approach, whereby a bank would propose its own level of regulatory capital for market risk. How it came to this number would be up to its management. But, in the event that they used more capital than they had pre-committed to their market risks in any given period, they would have to make a penalty payment to their regulators. This was the incentive to allocate a reasonable amount of capital in the first place.

The bulk of their seminal paper was a rigorous mathematical exploration of the properties of the associated equilibria.³ They concluded that, in terms of the economic analysis they had done, a pre-commitment approach would have been far more efficient than the IMA in the sense of controlling “excessive market-risk-taking behavior at a substantially smaller economic cost”.

They faced four problems in selling their ideas. First, they presented them in very academic language that was difficult for non-mathematicians to understand. Second, the idea of imposing a penalty payment on a bank when it had just suffered a major loss did not sit well with practical supervisors, who saw it as a way to worsen things for a bank and for the system as a whole. Third, there was a concern that depending on a bank to set its own capital standard created a real risk that the bank would get it seriously wrong — and then what could the regulator do? And, finally, it was probably the case that their underlying idea, simple and elegant as it was, came too late in a debate in which the supervisors felt they were already making major concessions to theorists by considering internal models – and it was too radical to shoehorn in at the last moment.

While the NGA is definitely a lineal descendent of Kupiec and O'Brien, it has evolved a good deal since their proposal. Aside from the expansion of scope to cover all risks, the NGA teases apart their notion of capital and loss – they did not need to discriminate between them in their analysis – and inserts the “loss parameter” between them, reflecting the fact that banks need capital for the long haul, not just the ability to sustain one period of losses. This parameter then becomes the vehicle for dealing with several major issues that bedevil Basel 2. Furthermore, the NGA moves away entirely from financial penalties. And, finally, it incorporates a much less mechanical application of these basic concepts.

This line of thinking, derived from Kupiec and O'Brien, could have been explored years ago. The fact of the matter is, however, that their work was largely ignored by the Basel Committee after it settled down to re-write international capital standards in the late 1990s.

³ “Regulatory Capital Requirements for Market Risk and the Pre-Commitment Approach” by Paul H. Kupiec and James M. O'Brien, Federal Reserve Board paper, September 1997.

Basel 2

Basel 2 is not finished. Its progress can be measured in publications and pronouncements. A first comment document, “A New Capital Adequacy Framework” was published in June 1999. A second more comprehensive document, “The New Basel Capital Accord” was published in January 2001, with several supporting documents. In July 2002, a further pronouncement⁴ elucidated various points, including the timetable ahead. In parallel with the development of principles, an effort is underway to calibrate the many parameters that are needed to implement Basel 2 – three quantitative impact surveys (QISs), large and challenging documents in their own right.

The main objective of Basel 2 is to refine Basel 1 so that: capital requirements more accurately reflect credit risks after the effect of various forms of risk mitigation are taken into account (market risk is largely left untouched from 1996); operational risks are included alongside credit and market risks, making the capital standard more comprehensive; and improvements in risk management are encouraged. At the same time, Basel 2 aims to keep the amount of capital in the world’s banking system largely unchanged – a principal aim of the parameter calibration exercise.

Basel 2 recognizes that it is important for any capital regime to be imbedded in a larger regime of supervision and public disclosure. Accordingly, the high-level architecture of Basel 2 has three parts or Pillars:

- Pillar 1: dealing with minimum capital requirements;
- Pillar 2: dealing with the supervisory review process; and
- Pillar 3: addressing public disclosure and market discipline.

For both credit and operational risk, Pillar 1 applies the Market Risk Amendment’s idea of different approaches for banks with different levels of sophistication. So, for credit risk, the spectrum of sophistication begins with a “standardized” approach and continues with a “foundation” and an “advanced” internal rating-based (IRB) approach. For operational risk, also with three levels of sophistication, the levels are dubbed “basic indicator,” “standardized” and “advanced measurement approach” (AMA).⁵

Pillar 2 is there to guide supervisors in ensuring that banks have adequate processes in place to measure and manage risk and capital. And Pillar 3 requires that banks disclose publicly a good deal more information than they have in the past about what their risks are and how they are measured and managed, so as to bring market discipline to bear and to incentivize good risk management practices.

Although Basel 2 is unfinished, it is widely believed that its basic outline is set.⁶ The broad content of the three pillars is unlikely to change. The approach of having three different regimes for both of credit and operational risk, depending on a bank’s sophistication, is also firmly in place. The “buckets” approach (adding risk-weighted capital components together, as opposed to a portfolio

⁴ “Basel Committee reaches agreement on New Capital Accord issues,” published July 10, 2002.

⁵ The terminology “advanced measurement approach” replaced the “internal measurement” class in 2002.

⁶ “The new Basel Accord – has the time come to act?” (*The Journal*, PriceWaterhouseCoopers, July 2002) provides a fuller progress report and assessment of the likely shape of the final document.

approach to risk) is apparently set in concrete. The qualitative concerns with Board responsibilities and risk management in Pillar 2 and the emphasis on disclosure in Pillar 3 are both likely to remain intact. What may change – short of the more radical rethink proposed in this paper – is the detailed calibration of Pillar 1; a new approach to retail and SME lending is also said to be in the works. Nevertheless, while there is pressure to simplify the regime, the specificity and complexity of the final version of Basel 2 will probably continue to be high: the page count (variously estimated at 600 or 1,000 pages to date, depending on what you include) may be lower, but not by much.⁷

It is probably worth taking a moment to say why we think the Basel 2 framework is behind best practice.

Even today, market leaders have plans that far surpass the most “sophisticated” Basel 2 options. In particular:

- credit risk models are already displacing buckets for measuring and managing credit risk – except where the number of buckets is growing so large as to constitute a practically continuous yardstick anyway;
- asset weighting and calculating asset equivalencies are an outdated way of aggregating risk – the source of a great deal of Basel 2 complexity;
- risks should be measured and managed as a portfolio – within and across major categories;
- liabilities carry risks too, and liability risk is not addressed by the standard;
- liquidity risk is left unaddressed;
- capital is defined in terms of book value, which is really not relevant – unless it is adjusted to the point where it begins to approximate “true” capital (discussed below); and
- operational risk is only weakly related to the size of a bank’s balance sheet, and much of it should not be subject to a capital charge of any kind.

The Basel Committee confirmed its timetable for finalizing Basel 2 in July 2002. It planned to:

- launch a Quantitative Impact Survey (QIS 3) on October 1, 2002, which will allow banks to perform a concrete and comprehensive assessment of how the Committee’s proposals will affect each of them;
- ask banks to submit their findings by December 20, 2002;
- release of an updated revision of its proposals for public comment in the second quarter of 2003;
- finalize Basel 2 in the fourth quarter of 2003; and
- target implementation of the new framework in each major country by year-end 2006.

Why now?

We must concede that there are reasons not to consider a different approach now. An enormous amount of effort from regulators and risk managers has already been spent in developing Basel 2. Regulators, quite naturally, want to build on the success of Basel 1. Costs have been sunk and a great deal of momentum has built up.

But there are stronger reasons to pause and take stock. It is clearer today than it was even six months ago that Basel 2 will be expensive to implement. Given how detailed it is, many are

⁷ What may yet change are some simplification that will result in greater national discretion for regulators in how the new Accord is implemented and the precise calibration of parameters as a result of the third Quantitative Impact Survey (QIS).

beginning to question whether it really will be possible to garner any enthusiasm to refine it after it is implemented in 2006. That means that the deep concerns about the out-of-date framework, its pro-cyclicality, the encouragement it may inadvertently give to herd behavior and its implications for governance are likely to go unaddressed for a long time.

To be meaningful, stocktaking must consider choices – and, for choices, there must be alternatives. Many technical alternatives have been proposed for piecemeal improvements, and no doubt they could make a difference. But there should be room for a more fundamental alternative to be considered this time round – such as the NGA.

3. The Proposal

The NGA applies to banks whose risk management systems are sophisticated enough to qualify to use both internal models for market risk under the 1996 Market Risk Amendment and the most sophisticated approach for credit, interest rate and operational risk under the new Basel 2 scheme. For any qualifying bank, it would apply generally to all its businesses and risks taken together, replacing what is currently planned under Basel 2 and currently in place under the Market Risk Amendment.

Principles

Under this approach, a qualifying sophisticated bank would propose two thresholds for all its business lines combined: a *capital threshold*, κ , and a *loss threshold*, τ . If the regulators accepted these thresholds, the bank would commit to keeping its total capital above κ and losses in any given reporting period below τ . Regulators, however, would do more than simply review and approve bank proposals for thresholds: they would also set a *loss parameter*, λ , in advance. This parameter would relate the capital and loss thresholds, fixing the loss threshold as a percentage of the capital threshold: $\kappa \times \lambda = \tau$. So the way this capital adequacy regime applied to a particular bank would be a function of the choices of both bank management and its regulators.⁸

Regulators would set λ empirically, based on the length of the income reporting period used, the level of confidence with which regulators wanted to avoid insolvencies, the systemic importance of the bank, the degree to which its businesses took advantage of an explicit or implicit government guarantee and the stage of the business cycle. λ could be set globally for all G-10 banking systems, or regulators could be allowed an element of discretion in determining λ , based on local market conditions and practices – such as the scope for diversification in the local economy or local accounting practices.

Then, any qualifying bank with losses in excess of τ or capital that fell below κ would be subject to regulatory and supervisory actions.

It is important to this proposal to have both the capital and loss thresholds. With a capital threshold but no loss threshold, banks would have an incentive to minimize their capital threshold to give themselves the maximum leeway before regulatory action was triggered. With the loss threshold but no capital threshold, banks would have an incentive to maximize their loss threshold

⁸ This approach would apply to bank holding companies or conglomerates and to their bank subsidiaries, in much the same way that it is intended Basel 2 would be applied.

for the same reason. By tying the two together with the loss parameter, regulators would force banks to make a careful judgment about how well they could manage their risk and, therefore, how much capital they truly needed.

One more value is important to understanding how the NGA would work – a *target level of capital*, α . Faced with having to commit to a capital and a loss threshold, a bank would necessarily aim to keep capital at a level well above the capital threshold, to be sure that even unusual losses would not lead to regulatory action. This target level is important as one of the main drivers of a bank's cost of capital and, as we shall see later, in estimating transition values for the loss parameter.

Capital and loss definitions

The “true” capital of a bank is the difference between assets and liabilities valued at fair or mark-to-market value. After all, for regulatory purposes, what is the salient measure for gauging solvency? That must be the value that the bank has as a going concern – akin to its valuation for merger purposes. This is very much the fair or mark-to-market value, not the historical one.

Basel 2 proposes using the same definition for capital as Basel 1 - namely, equity (measured at book value), reserves and subordinated debt. When these reserves are valued as the difference between book value equity and subordinated debt on the one hand and true capital on the other, the Basel 2 definition of capital is accurate. But that won't happen often. Otherwise, significant adjustments are needed to reported capital to derive a reliable estimate of true capital.

Now, we recognize that many banks have books of assets and liabilities for which there is no real market. For example, a small loan to a local business may not be tradable or securitizable anywhere. Mark-to-“market” is a misnomer here. However, applying the test of how much value would you attach to a loan like this in evaluating a bank during a merger, some commonsense adjustments would be called for if general market conditions had changed since the loan was made. So, if interest rates had risen or there were reasons to think that the credit risk for borrowers of this kind had worsened, it would make sense to mark down the loan by an amount reflecting the difference in the original rate and a rate that might be charged today, while also reflecting the remaining maturity of the loan.

This and similar adjustments are sometimes described disparagingly by practitioners as “mark-to-model”, as though there was something theoretical, arbitrary or impractical about them. But that is not right. Even when the specific adjustments are quite complex, the principles applied are straightforward and the adjustments are certainly no more arcane than many of today's accounting rules for which there is a good deal less real justification.

So, as a practical matter, “true” capital is going to be derived through a series of adjustments to reported asset and liability values, at least until accounting practices for financial institutions materially improve.⁹

During any accounting period, true capital is likely to change in value. It will change as assets and liabilities rise and fall in value, as assets and liabilities are accumulated and sold, and as net

⁹ There is one other problem cited by critics of mark-to-market that warrants comment. Markets sometimes are out of kilter with values evidently a long way from equilibrium. There are ways to deal with this, such as using a moving average of market values. But ultimately the point is that the values in today's marketplace are almost always more relevant than the original values of assets and liabilities that have been held for a while.

income is generated by operations, taxes are paid and decisions are made about retaining earnings. “True” loss is this change in the value of true capital — when it is negative. (Obviously, there is a corresponding concept of “true” gain or income, when capital increases.) It would equal loss as measured in the income statement if there was no dividend, if capital was correctly measured and net asset value changes were fully recognized.

In practice, as for capital, significant adjustments are likely to be needed to convert loss as measured in the income statement into an estimate of true loss and income. For example, national practices on loss recognition vary enormously. Where losses or reserves for non-performing loans are booked quickly and completely, adjustments to income and loss numbers will be smaller than in those jurisdictions where losses are recognized only with considerable delay.

How much practical difference would it make if the NGA was applied without adjusting reported capital and loss? It might very well matter a good deal. Given how long it will take to reform accounting practice, regulators should plan to make adjustments to reported capital and loss to derive true capital and loss in the early years of applying the NGA.

An illustration

Suppose, for example, that regulators deem for a particular bank of systemic importance and deposit base at this stage in the business cycle that it should have a loss parameter of 10% for a one-quarter period. Suppose the bank has capital (we are talking about true capital and loss here and in the subsequent discussion) of \$250 and commits to its regulators to a capital threshold of \$150. It follows that its loss threshold is one tenth of this; that is, \$15 a quarter.

If the bank then loses \$10 in the quarter, its capital falls from \$250 to \$240. No regulatory action results because neither the capital nor the loss threshold is violated. If losses are \$20, capital falls to \$230. The capital threshold still has not been violated, but the loss threshold has, and regulatory action results.

Consider a different scenario. Suppose the bank’s actual capital is still \$250, and suppose it aimed to maximize its freedom from regulatory action by setting its capital threshold artificially low – at say \$30: the bank has given itself a large buffer from the danger of regulatory action as a result of a breach of the capital threshold. However, with the loss parameter set by the regulators at 10% the loss threshold is only \$3 a quarter. The bank finds itself having very little leeway to deal with unexpected losses before regulatory action results. So, for example, if it lost \$10 in a quarter, while it would indeed still have capital well above its capital threshold, it would have grossly violated its loss threshold and regulatory action would follow.

Finally, consider the situation where actual capital is \$250 as before, but the bank is cautious about its capital threshold and sets it as \$240. Its loss threshold will now be \$24. And let’s suppose that it loses \$15 in a quarter. This time it has not violated its loss threshold, but it has violated its capital threshold. So once again regulatory action would result.

The point of these illustrations is to show that banks have an incentive to propose a realistic level for their capital threshold: gaming the system won’t work. This goes part of the way toward answering a potentially damning criticism of the NGA, namely that banks might get it wrong. Well, perhaps they might — without the regulatory review that is a part of the NGA, Pillar 2, if you like. But they are unlikely to get it wrong intentionally.

Calculations

A good place to start thinking about the estimation of the loss parameter, the thresholds and the target level of capital is the probability distributions for capital and income. Once again, using an example will help us get a feel for the problem.

Suppose that a bank expects to earn profits (or “true” income) of \$30 during the quarter.¹⁰ The distribution of true income has a “standard deviation” of \$40, and a loss of \$10 or more (ie, an outcome below one “standard deviation” beneath expected value) would have a probability of about 1 in 3; a loss of \$50 or more would have a probability of about 1 in 30; and of \$90 or more, of 1 in 1,000.

Let’s concentrate on the loss threshold first and suppose that, for the bank and its management, the cost of any regulatory action is high, but not so high that they would mind a period of supervisory action once in every 30 quarters.¹¹ Then the loss threshold they should aim for is \$50. If regulators have set a loss parameter at 10%, this would imply a capital threshold of \$500. And, if they also want to be sure that they do not go through the capital threshold more than once in 30 quarters, they need to target the amount of capital they have to be two “standard deviations” above the capital threshold, or \$80 higher, at \$580.¹²

At this point, the bank has in effect done a three way trade-off: it has decided to take risk and invest in risk management to the point where the “standard deviation” for income from all of the banks’ businesses combined and all of its risks combined stands at \$40; it has decided to maintain a target of \$580 of capital; and it has decided that it is willing to pay the price in terms of reputational loss, management pre-emption and so on of regulatory action one quarter out of every 30. The marginal costs to the bank’s management of each of these positions will be as near to equal as management can make them.

Now, if the regulators lower λ , what happens? Suppose they lowered it by a quarter to 7.5%. In the absence of any change in risk taking or risk management, or any change in its tolerance for regulatory action, this same bank management would keep its loss threshold at \$50. However, that would carry with it the implication of a capital threshold of \$667 and, at two standard deviations above it, a level for target capital of \$747. In practice, of course, the bank would probably increase its tolerance for regulatory action a smidgen, reduce its risk taking and invest more in its risk management and reduce its proposed loss threshold somewhat, and thereby save on capital. Nevertheless, transition costs permitting, target capital would go up. So lowering λ raises bank capital.

¹⁰ For the sake of simplicity, we assume the bank doesn’t distribute dividends. Note, too, that banks’ income is never normally distributed – for credit risk, at least, there is plenty of loss potential and not a lot of upside, and tails tend to be fat. But all probability distributions have expected values, and all can be described in terms of percentile or absolute variations – what we call here a “standard deviation” in quotation marks — from that value.

¹¹ There is some evidence in the US that large banks have an aversion to regulatory action that is a good deal higher than this. Since prompt corrective action was introduced – something over 40 quarters ago – there has been only one regulatory action for capital inadequacy against a large bank, of which there are 40 or so. An outcome of one adverse outcome in 1,600 events suggests that the tolerance for regulatory action among large US banks is in fact very low.

¹² This is a healthy bank if, with capital of \$580, it expects profits of \$30 a quarter or \$120 a year – a 20% return on equity.

The other regulatory change that will raise bank capital is an increase in the severity of the regime of regulatory actions triggered by a breach of either the loss or the capital thresholds. If a bank regulator has a scale of prompt corrective actions, such as the US regulatory scheme under the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), and if the actions become more draconian at each point on the scale, or the scale is compressed to move closer to the threshold level, then it will increase the cost to management of a breach and act as an incentive to reduce risk or raise thresholds and, therefore, their target level of capital.

Factors affecting λ

We said earlier that:

“Regulators would set λ empirically, based on the length of the income reporting period used, the level of confidence with which regulators wanted to avoid insolvencies, the systemic importance of the bank, the degree to which its businesses took advantage of an explicit or implicit government guarantee and the stage of the business cycle. λ could be set globally for all G-10 banking systems, or regulators could be allowed an element of discretion in determining λ , based on local market conditions and practices – such as the scope for diversification in the local economy or local accounting practices.”

Let’s look at each one of these factors in turn:

i. The length of the income reporting period used: The income reporting period used should not greatly influence the capital threshold or target which are stock concepts, but should affect the loss threshold, which is a flow concept. Consequently, λ , which links the capital threshold and the loss threshold, will have to be greater, the longer the period – depending on the characteristics of the one-period income distribution and how auto-correlated bank income is (which is quite a lot).

This is not just a technical point. It shows how the NGA accommodates different reporting periods easily – only λ needs to be adjusted – for different institutions or regulators or over time. The approach can, therefore, easily accommodate improvements in reporting practices – that is to say reductions in the length of reporting periods. This is not a trivial point, given how much more volatile capital markets are today than they were – and, therefore, how important it will be going forward to compress reporting periods.

ii. Insolvency aversion: How strong should regulatory aversion to bank insolvency be? That can be treated as a public policy issue to be settled locally by legislatures or regulators, or as an issue for global standardization. Global standardization produces fairness of sorts. Local determination could accommodate the fact that some regulators believe occasional bankruptcies are a good thing while others do not – the culture toward bankruptcy varies. Some highly concentrated banking systems might also have a low tolerance for bankruptcy on the grounds that all banks are systemically significant. Moreover, the ability of different regulators to manage bankruptcy varies too – so it might well make perfect sense for less experienced regulators to lower λ and thereby encourage banks to hold more capital.

Recent work by three UK researchers, Patricia Jackson, William Perraudin and Victoria Saporta has estimated that the regulators (following Basel 1) are implicitly aiming for an annual bank

failure rate of less than 1%.¹³ So, although regulators tend to say they would always like more capital in the system, what regulators do suggests that they set a solvency standard that accepts a real, albeit small, risk of bank failure.

This solvency standard is completely implicit and, at the same time, completely rigid in Basel 2. By contrast, the NGA makes it quite explicit and can realistically accommodate differences between jurisdictions and over time. This would seem to be a plus for the NGA.

iii. The systemic importance of the bank: Whatever the regulators' general aversion to insolvency, they should have a stronger-than-average aversion for systemically significant institutions. That is, banks that are closer to the system's core, with a large share of critical markets or activities, should have a higher capital threshold relative to the risks they take. This is true in the national, regional or global context, and it is true for banks whose failure would be particularly disruptive to the real economy, directly or indirectly.

In almost any other approach to setting standards for bank capital — and certainly in Basel 2 — there are so many parameters governing different elements of capital requirements that it would be thoroughly impractical to have gradations of parameter values to reflect differences in regulators' concern about the risk of failure for different institutions. In the NGA, by contrast, it is quite practical. So, for example, if λ would be 15% for a bank, absent any particular systemic significance, λ could sensibly be, say, 10%, for a similar bank that was that systemically more significant. How large the exact decrease in λ should be would depend on how much greater the regulatory insolvency aversion was for the second bank over the first.

Would this place systemically-significant institutions at a competitive disadvantage? Systemic significance generally goes either with concentration in a particular market or with size. For large institutions, their ability to diversify should offset the competitive disadvantage of a lowering of λ on account of systemic significance; while for banks that dominate particular marketplaces, competitive disadvantage is not such an issue.

iv. The government guarantee: To many academics and policymakers, the main justification for any capital adequacy regime is the need to “offset” the moral hazard created by deposit insurance or any other form of government guarantee. This point of view applied to the NGA would argue for a lower λ for banks, the more they benefit from such guarantees.

Like the point about systemic significance, this point is potentially very important if the capital regime is extended to non-banks. All other things being equal, non-banks that do not get a government guarantee do not require as much capital as banks that have deposit insurance. It will be a bureaucratic nightmare to adjust every aspect of Basel 2 to non-banks — a task that the Group de Contact is embarking on for the EU.¹⁴ By contrast, the NGA would be a great deal easier to adjust appropriately for institutions with reduced or no benefit from a government guarantee.

¹³ “Regulatory and ‘economic’ solvency standards for internationally active banks” by Patricia Jackson, William Perraudin and Victoria Saporta, Bank of England Working Paper, 2001. Contrast this with the behavioral indication of a much more stringent standard among the managements of large US banks in recent years referred to in an earlier footnote.

¹⁴ See *The Journal*, published by PriceWaterhouseCoopers July 2002, p42.

v. *The stage of the business cycle*: One of the most telling complaints about the current Basel 2 approach is that its narrow specificity would force banks to cut back on lending more sharply than they do today during a recession, thereby exacerbating the business cycle.¹⁵

Once again, the NGA distinguishes itself by being easily modified to make the capital regime anti-cyclical by raising λ in recessions and lowering it when the economy is performing strongly.

It might be sensible for this element of variability to be determined by the monetary authorities and regulatory authorities working together. There is a strong tendency among regulators to want to see banks bolster capital in recessions, which is really not desirable from a macro-economic viewpoint. Instead, they should do more than they have in the past to encourage banks to build reserves during expansions – by lowering λ when the business cycle is on the upswing.

vi. *Local issues*: Local market conditions and practices – such as the scope for diversification in the local economy or local accounting practices – should probably impact policy toward setting λ . For example, to the extent that local accounting standards diverge from fair market accounting practices and to the extent that it is difficult to compensate for their effects when calculating “true” capital and loss, it might make sense for regulators to apply a lower value of λ than they otherwise would, effectively encouraging banks to hold more capital for “accounting” risk.

Combining these factors

The various considerations discussed above define the direction of change of λ with regard to the main factors influencing it. One way to estimate λ might be to start with a global all-other-things-being-equal estimate – call it λ_0 . Each consideration could then determine a factor – β_r for the length of the reporting period; β_{ii} for the insolvency aversion of the regulators; through to β_{vi} for local issue adjustments. So for example, β_{ii} would be equal to 1 for banks of no special systemic significance and, say, 0.8 for systemically significant banks. Then λ would be built up as the product of β_r , β_{ii} through β_{vi} and λ_0 .

FDICIA¹⁶

How much would bank managements regret regulatory action as a result of violating a capital or loss threshold? This is a key determinant of where they will set their capital and loss thresholds, and it will depend on how explicit supervisors and regulators are about their intentions, how severe these intentions are and how public they are about what they actually do to violating banks.

Following the savings and loan crisis, which had been exacerbated by regulatory forbearance, US lawmakers chose to be very explicit and public about the guidance they give to regulators in these circumstances. As a result, the prompt corrective action and least cost resolution provisions of FDICIA are a useful point of reference to other financial systems as they refine their approach to capital.

¹⁵ See for example the note, “Basel and pro-cyclicality” by Charles Goodhart, in “[Bumps on the Road to Basel: An anthology of views on Basel 2](#)” published by the CSFI and SUERF, January 2002.

¹⁶ The description of FDICIA in this section is based largely on “Reforming Bank Capital Regulation”, by the US Shadow Financial Regulatory Committee (pp 39 and 40), published by the American Enterprise Institute.

This Act of Congress defined five capital zones, the kinds of action regulators could take and how much regulatory discretion there was with banks in each zone:¹⁷

- *well capitalized banks* have 1.25 times the capital threshold and are subject to minimum supervision;
- *adequately capitalized banks* have somewhere between 1 and 1.25 times the capital threshold and are subject to more intense regulatory supervision and more frequent monitoring, but no specific sanctions;
- *undercapitalized banks* have capital of between 0.375 and 1 times the capital threshold and regulators are required to order those banks to develop an acceptable capital restoration plan, to limit their asset growth and to obtain approval for any expansion of offices or lines of business;
- *significantly undercapitalized banks* have capital of between 0.25 and 0.375 times their capital threshold and regulators generally have to require recapitalization through sale of stock or merger, restrictions on transactions with affiliates, and restrictions on deposit interest rates; and
- *critically undercapitalized banks* have capital of less than 0.25 times their capital threshold and regulators are obliged to put these up for speedy sale, or close them.

This scheme has worked well in the US for over a decade. While it is true that different cultural and other local factors influencing bank management behavior need to be taken into account in developing an appropriate regulatory action regime, FDICIA is a good starting point. A regulatory action regime is an integral part of a capital adequacy regime. An international standard for capital that does not incorporate a regulatory action regime cannot deliver even on the basic goal of Basel 1 for each national banking system of ensuring that internationally-active banks based in foreign jurisdictions are properly capitalized.

Regulatory review

Before we leave this chapter, we should explore the idea of a regulatory review of a bank's proposed thresholds under the NGA.

Some readers might say that a review like this is tantamount to having regulators set the capital threshold after all. They might argue that all of the precision in Pillar 1 of Basel 2 would be needed anyway and, if the review was rigorous, the end result of the NGA would be exactly the same as Basel 2.

This would be missing the point. Regulators should make a judgment on whether a bank's proposal is *reasonable* – based on several factors such as a comparison with its competitors, the rigor with which underlying risk measurements have been made, how much change is proposed from the preceding period, what methodological improvements have been introduced and so on.

A regulator does not have to develop the “right” one-size-fits-all approach – as the Basel Committee has tried to do – to make a sound judgment on whether thresholds proposed by its banks are reasonable. Indeed, it only has to be comfortable that the capital and loss thresholds

¹⁷ The capital thresholds FDICIA uses are the old methodologies of risk-weighted capital (as in Basel 1) and leverage ratios – that is, the level of capital to assets. The basic concepts apply as well to the capital and loss thresholds of the NGA.

proposed are not way out of kilter – something that as a general matter should not be too difficult to judge – because small errors should be revealed soon enough in performance, and corrected through regulatory action.

4. Evaluation

Benefits

This proposal has several advantages over the current Basel 2 approach.

i. Good governance is encouraged: Chief among the NGA's advantages is that it gives bankers sufficient leeway to do their job, because it focuses on the end that is of public policy importance – bank solvency – rather than the means – the risk management calculations that banks need to make to decide on their capital.

To prescribe too much is no trivial error. The current debate about accounting standards exemplifies this. FASB, the US Financial Accounting Standards Board, has been criticized for being far too rules-oriented – unlike the International Accounting Standards Board (IASB) which has been far more principles-oriented. By trying to prescribe exact rules for every situation, FASB has created enormous complexity and, at the same time, contributed to a mind-set among US accountants and corporate managements that it is all right to search for loopholes and put the most positive spin on published accounts, provided they observe FASB injunctions to the letter. In contrast, the IASB has tried to define broad principles that are generally applicable so that those who prepare accounts cannot game the system and have to earn their keep by interpreting these principles and applying them to the particular circumstances of particular corporations.

If Basel 2 is implemented as it seems likely to be, it is deeply ironic that, in order to appear as pure as Caesar's wife, many bank managements are likely to choose to follow Basel 2 prescriptions to the letter – and then trumpet the fact that they do. Like good children, they will face their critics and say “we do what we are told”, when what they really should be doing in the future is applying standards that are appropriate for their own businesses – possibly more sophisticated than the regulators' rulebook, possibly less, but something of their own choosing. The specific rules for measuring risk and setting capital in Pillar 1 of Basel 2 are an unprecedented offer by bank regulators to take on most of the difficult decisions regarding risk and capital. For many bank managements and their boards, the smart thing to do will be to take that offer up. This divides responsibility for how a bank is managed and undermines good governance.

But there are many other advantages of the NGA.

ii Herd behavior is not encouraged: Under the NGA, regulators would not impose a common approach to risk measurement and management that might well encourage banks around the world to react in a similar way to any adverse market shock. There is real concern that Basel 2 would have this precise effect. The NGA is less likely to make this happen because it permits diversity in risk management.

iii. Pro-cyclicality is countered: As noted in describing the proposal earlier, the NGA can be flexed in such a way as to encourage banks to accumulate more capital in expansions and draw

down their capital in recessions. This would offset the natural tendency for bank behavior to exacerbate the business cycle – a tendency that Basel 2 in its current form would likely worsen.

iv. All financial institutions are easily accommodated: Basel 2 is addressed to banks, but is likely to be extended to non-banks in Europe. Industry observers expect that all European brokerages and investment management firms will be subject to Basel 2, regardless of their size.¹⁸ Many small firms will be greatly disadvantaged by the operational risk charges – which are unjustified because there are almost no externalities associated with a single small firm failure. (Larger firms may, of course, be systemically important, although it is important to remember that they do not benefit from deposit insurance.)

Whereas at the moment some industry representatives are lobbying for a regime for non-banks that is completely separate from Basel 2, their concerns could be met entirely by adjusting the factors related to insolvency aversion, systemic importance and the government guarantee appropriately. Moreover, a business with the same risks could be treated exactly the same under the NGA, regardless of whether it was a bank or not – so there would be no incentive for regulatory arbitrage or distortion of competition between banks and non-banks.

v. Best practice improvements are encouraged: The costly difference between economic and regulatory capital would disappear for sufficiently sophisticated banks under the NGA. Any qualifying bank would have an incentive to invest to improve its capital and risk management indefinitely. By contrast, Basel 2 in its current form would disincentivize investment that might raise risk management standards above the mandated approaches. Banks would have to maintain systems to satisfy Basel anyway. And, furthermore, they would not be allowed to lower their regulatory capital under Basel 2, regardless of how much better they managed their risk, if that did not impact the Basel 2 methodology.

vi. Complexity is avoided: Pillar 1 of Basel 2 has become extraordinarily complex as it tries to provide for every combination of instruments, risks, businesses and levels of sophistication. Some of this complexity might fit well in guidelines to supervisors for use when implementing Pillar 2. After all, banks have become very complex institutions, and supervisors can benefit from sharing their thoughts on risk management practices internationally. But how guidelines of this sort should apply to particular circumstances should be a matter for discussion between a bank and its supervisor.

In any event, this complexity will be very difficult to update and evolve. Compare that with the NGA, which would be relatively easily maintained. It encourages best practice and accommodates changes in practice without any changes in its methodology – because it focuses on results not means. Refining λ over time should be comparatively straightforward. As a consequence, the NGA is likely to prove a good deal more durable than Basel 2.

vii. Fairness increases: It might be argued that the NGA could actually result in greater competitive inequalities. What if some regulators interpreted it liberally and others illiberally? Our answer is that such differences would be pretty obvious since they would lead to differences in national average values of λ that could not be explained by legitimate differences in local market conditions. Outlier countries with high λ s would face moral pressures (via supervisory cooperative forums) and market pressures (via ratings agencies) to reduce their laxity.

¹⁸ See for example: “Collateral Damage to European Non-Banks: the need to unscramble Basel” by Angela Knight in “Bumps in the road to Basel: An anthology of views on Basel 2,” *opcit*

Otherwise, as we've noted already, the NGA should increase competitive equality because it does not draw a sharp line between banks and non-banks and, therefore, does not create competitiveness issues between them in the way Basel 2 may well do.

viii. Operational risk incorporated appropriately: Operational risk under Basel 2 is subject to a capital requirement, separate from those for credit and market risk, which is based on the expected level of operational losses.

There are several things wrong with this. Risks that are predictable in the ordinary course of operations should not be taken into account in setting capital standards: they should be expensed against operations-based income, just as provisions are made for specific loan losses as credit is extended. On the other hand, less predictable operational risks are very hard to define and measure in ways that are standardized across institutions – the risk of loss from acts of terrorism, for example, depends first of all on what a bank considers terrorism to be, and then on a host of other subjective and specific factors. And operational risks are often strongly and inversely correlated with other kinds of risk. Consider, for example, the use of derivatives for credit risk mitigation, or outsourcing of operations to specialist institutions. So it is not a good idea to add capital for expected and unexpected operational losses to capital for market and credit risks, which is what Basel 2 would force banks to do.

By contrast, the NGA would present management with exactly the same choices for operational risk as it would for other kinds of risk – choices about the trade-offs between the amount of risk they want to take, the costs of the approach they want to use to manage it, the amount of capital they want to set aside and the risk of regulatory action that they are willing to tolerate. Moreover, the relationship between operational risk and other kinds of risk becomes a matter for bank managements to work out internally – and, perhaps, to share with supervisors in the course of Pillar 2 discussions.

Risks and possible objections

Against these many advantages, there are some possible disadvantages – not least of which are two of the ones originally cited against the Pre-Commitment Approach of Kupiec and O'Brien. Of the four reasons it was hard to sell their approach – an overly technical presentation, a financial penalty for banks that failed to keep to their commitment, what if a bank got it seriously wrong and, finally, that the idea was too radical and too late – we have addressed the first and second already. That leaves the third and fourth problems as potentially real ones.

i Getting it seriously wrong: Banks have no incentive to “get it wrong” intentionally under the NGA, because of the link between the loss and capital threshold; gaming doesn't work in normal times. But, there would still be an incentive to propose a very low capital threshold at the beginning of a period in which management had decided that it wanted to go for broke and gamble the future of the institution. A low capital threshold would give it the freedom to do this, for a single period at least and, if it was lucky, it would have more resources at the end of the period and no violation of the loss threshold either.

To this, the answer is that the NGA is not slavishly mechanical. Supervisors review the threshold proposals of banks before accepting them. They should know what peer institutions are doing, what the bank in question did itself in previous periods and how good the bank's risk management capabilities are. Any major change in threshold by a bank should have been previewed with the supervisors for some time before being proposed, or any supervisor worth his salt would reject it out of hand.

The same process should be effective against a bank making an egregious and innocent error. So, just as it is proposed that the Basel 2 standard should run in parallel with Basel 1 for a year, the NGA should run in parallel with Basel 1 for a period – and, toward the end of that period, the bank and its supervisor should be in a position to judge whether a divergence from the Basel 1 capital threshold would be warranted and why. Over time, we should expect capital levels at different institutions to diverge more and more from the historical norm and from one another. And it would be the job of regulators and supervisors to understand why these divergences emerged and to encourage outliers for which the delta was difficult to explain to reconsider their thresholds.

ii Is the NGA too radical or too late? Although the NGA is new – indeed, may be completely new to those who missed Kupiec and O’Brien’s paper – we would hope that it wins over supervisors and regulators as well as the banking industry by being straightforward and simple.

From the viewpoint of some bank risk managers, of course, especially early adopters of Basel 2, it may have the disadvantage that, if they have invested in understanding Basel 2 and if they have stressed future regulatory compliance as a major reason for investments in risk management, their task of advocacy for risk management improvements may now be more difficult since the NGA leaves them and their managements more freedom to choose whether, when and how to invest in risk management.

But this, of course, gets once again to the main concern we have with Basel 2. Bank managements ought to be making these decisions. It is up to them to choose a strategy for risk that complements their strategy for business development through which they will create the most value for their shareholders. It is right that regulators, with their legitimate concerns about moral hazard and systemic risks, should review the implications of these choices for capital and ensure that capital in the system is adequate as a result. But it is not right for supervisors and regulators to specify how risks should be managed in detail. That is a very large part of the role of individual managements – and, it is to be hoped, different managements would choose to do it in different ways. Regulators should welcome the diversity that would likely result from the NGA.

5. Implementation

While the details of any possible implementation of the NGA would have to await a fuller discussion, we can sketch the broad outlines now – and putting them down here should serve to answer any critics who say that the NGA is impractical.

Ideally, NGA implementation would be predicated on reform of accounting for banks so that their reported capital and income more fairly represented their true market value and performance. It would be desirable to see progress on the timeliness of accounting and reporting. But these reforms are not necessary precursors of implementing the NGA. The alternative is to agree how to adjust existing financial statements to generate reliable estimates of true capital and loss.

In a similar vein, it would also be desirable to see some greater clarity and uniformity of approach to the treatment of institutions that violate capital standards – the regulatory regime. We have put forward the prompt corrective action provisions of FDICIA as a possible model. It would add teeth to the international capital regime if other countries that have not already done so were to adopt similarly transparent, strict and predictable approaches.

Estimation issues

How would the authorities go about estimating the loss parameter? It is not as hard as it might seem, given the requirement of continuity in capital levels in the system during the transition. The value of λ that corresponds to today's regulatory and industry practice is a simple function of κ , today's level of regulatory capital and α , today's actual level of capital. A bank's behavior today indicates that the loss threshold, τ , it has for any given reporting period is the difference between its actual capital and its required capital, adjusted by a factor χ related to the number of periods over which it believes it might have to sustain losses and rebuild capital:

$$\tau = (\alpha - \kappa) / \chi$$

But we also know that $\kappa \times \lambda = \tau$, by definition. So it follows that:

$$\lambda = (\alpha / \kappa - 1) / \chi \quad (1)$$

α and κ are easily observable for individual institutions and for populations. Banks and their regulators should agree on a value for χ – maybe something between four and 12 quarters. So regulators can use (1) not only to estimate a current-practice value of λ for individual institutions, but also a current-practice value of λ_0 for the population of banks they regulate as a whole.¹⁹

Regulators should of course then start a dialogue with the major internationally-active banks to try to understand, in terms of the β factors we defined in Chapter 3, what the sources of variation in the current-practice λ really are. To the extent they can be explained, the regulators might choose to implement the NGA initially with different values of λ for different institutions; to the extent that they could not, they might choose to impose current-practice λ_0 on all of them.

As we noted before in discussing fairness, λ_0 may well vary a good deal among jurisdictions initially. So one could imagine that there would be a lively debate about the extent to which there should be convergence. The question would be how much of local differences in λ_0 reflect reasonable differences in local preferences and practices and conditions, and how much calls for remedial action among less well performing national and regional systems.

Implementation for internationally active banks – and in due course for other banks and non-banks – can follow thereafter. And as the development of regulatory views about insolvency aversion, systemic importance and other factors evolve, as banks' own business strategies evolve and as their risk management capabilities improve, we should then expect to see λ evolve too, with significant divergence appearing among different institutions over time.²⁰

¹⁹ To understand why we used the illustrative value of 10%, consider how a bank might have actual equity at 12% of assets compared with a capital requirement of 8% under the current rules. This suggests that α/κ would be about 1.5, and $(\alpha/\kappa - 1)$ would be about 0.5. So, if χ was about 5, corresponding to perhaps a six to eight quarter period for an average period of capital depletion and recovery, λ would be 0.5/5 or about 10%.

²⁰ Regulators might change λ in any period. Like the capital threshold decisions of the supervised banks, however, gradual and anticipated change should generally be the rule.

Basel 2 first?

Should Basel 2 as it is currently shaping up be implemented first, and then the NGA be considered as a subsequent refinement? The arguments for this would be: it is too late to change course now; early adopters are committed; and a great deal of effort has gone into the current approach. In short, the momentum is irresistible. So leave NGA to one side for now and consider it as a possible refinement for Basel 2 later on.

The momentum argument, though, is not a good one. Large investments should never be completed if the costs of the remaining effort are large in proportion to the benefits. Sunk costs up to now are neither here nor there.

Moreover it is ingenuous to argue that something should be put in the hopper to be considered during subsequent rounds of refinement. It is a fairly safe prediction that there will be no significant reform of Basel 2 for many years. The industry will be thoroughly tired of the topic; regulators and the industry will have a lot to do to master Basel 2's complexity; and all those whose careers are invested in the process will argue for "giving it time".

So we should consider the NGA as an alternative to Basel 2 – or simply forget it?

6. Conclusion

In conclusion, Basel 2 is off track – or, rather, as the level of effort has mushroomed, it is evident that it has gone too far along old tracks that lead nowhere satisfactory in the longer term. But where else could the effort to set capital standards that are sensitive to risk go?

That is the question we have tried to answer in this paper. We are proposing a re-drawing of the line between regulators and those they regulate, making the responsibility for setting capital targets a shared one and shifting the responsibility for risk management – subject of course to appropriate supervisory oversight – squarely back on to the shoulders of bank management where it belongs.

The NGA is a durable solution. As risk management practices improve, we should expect to see the loss parameter edge upward over time – unless systemic interdependence or moral hazard increases more quickly. Banks are free to manage their businesses and their risks as they think fit, provided they build up and maintain a track record of controlling aggregate risk for their institutions as a whole – achieving and maintaining their capital and loss thresholds. And provided that this record is founded on a sound approach to risk management – a supervisory issue.

Work needs to be done, of course, to make the NGA a reality. Implementation will present its own challenges – political, economic and technical. But, with luck, this paper has served to make the case for some further work on estimation of the NGA parameters, on assessing its benefits and on planning its implementation, so that there can be serious consideration of the NGA by the international banking and bank regulatory communities in the months ahead as a viable alternative to Basel 2.



Charles Taylor

Charles Taylor is an independent consultant in Washington DC working on issues of strategy and public policy in the financial services industry.

Until early 2002, Charles Taylor was Managing Director Strategy Development at the Depository Trust & Clearing Corporation in New York, where he was a member of the senior management team. Before that, he was head of the global risk management practice at Andersen Consulting, where he led marketing, knowledge-sharing, and product development as well as working with US and international clients. As Executive Director of the Group of Thirty in the first half of the 1990s, he authored several public policy studies, spoke widely and advised government and industry.

Mr. Taylor began his career at the World Bank as a country economist after graduating from Oxford University with an M Phil. in economics. He also has degrees in mathematics from Cambridge, England and business from Wharton, Pennsylvania.

Mr. Taylor is on the Advisory Boards of the Centre for the Study of Financial Innovation, London and Central Banking, also in London and is a member of Women in Housing and Finance, the National Economists Club and the Global Association of Risk Professionals in Washington DC.

Crhtaylor1@aol.com

CSFI PUBLICATIONS

1. **“Financing the Russian safety net”**: A proposal for Western funding of social security in Russia, coupled with guarantee fund for Western investors. By Peter Ackerman/Edward Balls. September 1993 £40/\$65
2. **“Derivatives for the retail client”**: A proposal to permit retail investors access to the risk management aspects of financial derivatives, currently available only at the wholesale level. By Andrew Dobson. Nov 1993 (Only photostat available) £10/\$15
3. **“Rating environmental risk”**: A proposal for a new rating scheme that would assess a company’s environmental exposure against its financial ability to manage that exposure. By David Lascelles . December 1993 £25/\$40
4. **“Electronic share dealing for the private investor”**: An examination of new ways to broaden retail share ownership, inter alia, by utilising ATM networks, PCs, etc. By Paul Laird. January 1994 £25/\$40
5. **“The IBM dollar”**: A proposal for the wider use of “target” currencies, i.e. forms of public or private money that can be used only for specific purposes By Edward de Bono. March 1994 £15/\$25
6. **“UK financial supervision”**: A radical proposal for reform of UK financial regulation, (prepared pseudonymously by a senior commercial banker). May 1994 £25/\$40
7. **“Banking banana skins”**: The first in a periodic series of papers looking at where the next financial crisis is likely to spring from. June 1994 £25/\$40
8. **“A new approach to capital adequacy for banks”**: A proposal for a market-based alternative, using the concept of ‘value-at-risk’, to the present mechanistic Basle approach to setting bank capital requirements. By Charles Taylor. July 1994 £25/\$40
9. **“New forms of Euro-Arab cooperation”**: A proposal for a new public/private development finance corporation to promote employment-generating projects in the Arab world. By Jacques Roger-Machart. October 1994 £25/\$40
10. **“Banking banana skins II”**: Four leading UK bankers and a senior corporate treasurer discuss lessons for the future from the last banking crisis. November 1994 £25/\$40
11. **“IBM/CSFI essay prize”**: The two winning essays for the 1994 IBM/CSFI Prize. November 1994 £10/\$15
12. **“Liquidity ratings for bonds”**: A proposed methodology for measuring the liquidity of issues by scoring the most widely accepted components, and aggregating them into a liquidity rating. By Ian Mackintosh. January 1995 £25/\$40
13. **“Banks as providers of information security services”**: Banks have a privileged position as transmitters of secure data: they should make a business of it. By Nick Collin. February 1995 £25/\$40
14. **“An environmental risk rating for Scottish Nuclear”**: An experimental rating of a nuclear utility. By David Lascelles. March 1995 £25/\$40
15. **“EMU Stage III: The issues for banks”**: Banks may be underestimating the impact of Maastricht’s small print. By Malcolm Levitt. May 1995 £25/\$40
16. **“Bringing market-driven regulation to European banking”**: A proposal for eliminating systemic banking risk by using cross-guarantees. By Bert Ely (Only photostat available). July 1995 £10/\$15
17. **“The City under threat”**: A leading French journalist worries about complacency in the City of London. By Patrick de Jacquelot. July 1995 £20/\$35
18. **“The UK building societies: Do they have a future?”**: A collection of essays on the future of UK building societies and mutuality. (Only photostat available). September 1995 £10/\$15
19. **“Options and currency intervention”**: A radical proposal on the use of currency option strategies for central banks. By Charles Taylor. October 1995 £20/\$35
20. **“Twin peaks”**: A regulatory structure for the new century” A proposal to reform UK financial regulation by splitting systemic concerns from those involving consumer protection. By Michael Taylor. December 1995 £25/\$40
21. **“Banking banana skins III”**: The findings of a survey of senior UK figures into where the perceived risks in the financial system lie. March 1996 £25/\$40
22. **“Welfare: A radical rethink - The Personal Welfare Plan”**: A proposal (by a banker) for the private funding of health, education, unemployment etc. through a lifetime fund. By Andrew Dobson. May 1996 £25/\$40

23. **“Peak Practice”**: How to reform the UK’s regulatory structure. Implementing “Twin Peaks”. By Michael Taylor. October 1996 £25/\$40
24. **“Central bank intervention: a new approach”**: A radical approach to central bank intervention – without foreign exchange reserves. By Neil Record. November 1996 £25/\$40
25. **“The Crash of 2003: An EMU fairy tale.”**: An all too plausible scenario of what might happen if EMU precedes economic convergence. By David Lascelles. December 1996 £25/\$40
26. **“Banking Banana Skins: 1997”**: A further survey showing how bankers might slip up over the next two or three years. April 1997 £25/\$40
27. **“Foreign currency exotic option”**: A trading simulator for innovation dealers in foreign currency (with disc). Winner of the 1997 ISMA/CSFI Prize for financial innovation. By Stavros Pavlou September 1997 £25/\$40
28. **“Call in the red braces brigade... The case for electricity derivatives”**: Why the UK needs an electricity derivatives market, and how it can be achieved. By Ronan Palmer and Anthony White. November 1997 £25/\$40
29. **“The fall of Mulhouse Brand”**: The City of London’s oldest merchant bank collapses, triggering a global crisis. Can the regulators stave off the disaster? A financial thriller based on a simulation conducted by the CSFI, with Euromoney and PA Consulting Group, to test the international system of banking regulation. By David Shirreff. December 1997 £25/\$40
30. **“Credit where credit is due: Bringing microfinance into the mainstream”**: Can lending small amounts of money to poor peasants ever be a mainstream business for institutional investors? By Peter Montagnon. February 1998 £25/\$40
31. **“Emerald City Bank... Banking in 2010”**: The future of banking by eminent bankers, economists and technologists. March 1998. (Only photostat available). £25/\$40
32. **“Banking Banana Skins: 1998”**: The fifth survey of possible shocks to the system. July 1998 £25/\$40
33. **“Mutuality for the 21st Century”**: The former Building Societies Commissioner argues the case for mutuality, and proposes a new legislative framework to enable it to flourish. By Rosalind Gilmore. July 1998 £25/\$40
34. **“The role of macroeconomic policy in stock return predictability”**: The 1998 ISMA/CSFI prizewinning dissertation analyses how government policies affect stock values in markets in Japan and the Far East. By Nandita Manrakhan. August 1998 £25/\$40
35. **“Cybercrime: tracing the evidence”**: A working group paper on how to combat Internet-related crime. By Rosamund McDougall. September 1998 £6/\$10
36. **“The Internet in ten years time: a CSFI survey”**: A survey of opinions about where the Internet is going, what the main obstacles are and who the winners/losers are likely to be. November 1998 £25/\$40
37. **“Le Prix de l’Euro... Competition between London, Paris and Frankfurt”**: This report sizes up Europe’s leading financial centres at the launch of monetary union. February 1999 £25/\$40
38. **“Psychology and the City: Applications to trading, dealing and investment analysis”**: A social psychologist looks at irrationality in the financial services sector. By Denis Hilton. April 1999 £25/\$40
39. **“Quant & Mammon: Meeting the City’s requirements for post-graduate research and skills in financial engineering”**. A study for the EPSRC on the supply of and demand for quantitative finance specialists in the UK, and on potential areas of City/academic collaboration. By David Lascelles. April 1999 £25/\$40
40. **“A market comparable approach to the pricing of credit default swaps”**. Winner of the 1999 ISMA/CSFI prize for financial innovation. By Tim Townend. November 1999 £25/\$40
41. **“Europe’s new banks: The non-bank phenomenon”**. A report for euro-FIET on the threat posed by new technology to European banks’ traditional franchise. By David Lascelles. November 1999 £25/\$40
42. **“In and Out: Maximising the benefits/minimising the costs of (temporary or permanent) non-membership of EMU”**. A look at how the UK can make the best of its ambivalent euro-status. November 1999 £25/\$40

43. **"Reinventing the Commonwealth Development Corporation under Public-Private Partnership"**. £25/\$40
By Sir Michael McWilliam, KCMG. March 2000
44. **"Internet Banking: A fragile flower"** Pricking the consensus by asking whether retail banking £25/\$40
really is the Internet's "killer app". By Andrew Hilton. April 2000
45. **"Banking Banana Skins 2000"** The CSFI's latest survey of what UK bankers feel are the biggest £25/\$40
challenges facing them. June 2000
46. **"iX: Better or just Bigger?"** A sceptical look at the proposed merger between the Deutsche Boerse £25/\$40
and the London Stock Exchange By Andrew Hilton and David Lascelles. August 2000
47. **"Bridging the equity gap: a new proposal for virtual local equity markets"** A proposal for local stock £25/\$40
exchanges, combining Internet technology and community investment. By Tim Mcroft and Keith Haarhoff.
48. **"Waking up to the FSA"** How the City views its new regulator. By David Lascelles. May 2001 £25/\$40
49. **"The Short-Term Price Effects of Popular Share Recommendations"** Winner of the £25/\$40
2001 ISMA/CSFI Essay Prize. By Bill McCabe. September 2001
50. **"Bumps on the road to Basel: An anthology of views on Basel 2"** This colleaction of sixteen (very brief) £25/\$40
essays offers a range of views on Basel 2. Edited by Andrew Hilton. January 2002
51. **"Banana Skins 2002: A CSFI survey of risks facing banks"** What bankers are worrying about at the £25/\$40
beginning of 2002. Sponsored by PricewaterhouseCoopers. By David Lascelles. February 2002
52. **"Single stock futures: the ultimate derivative"** A look at a new product being introduced almost £25/\$40
simultaneously on each side of the Atlantic. By David Lascelles. February 2002.
53. **"Harvesting Technology: Financing technology-based SMEs in the UK"** DTI Foresight sponsored £25/\$40
report, which examines what has been done (and what will be done) on the financing tech-based SMEs.
By Craig Pickering. April 2002
54. **"Waiting for Ariadne: A suggestion for reforming financial services regulation"** £25/\$40/€40
A new proposal for fund management. By Kevin James. July 2002
55. **"Clearing and settlement: Monopoly or market?"** An argument for breaking the monopoly £25/\$40/€40
mindset for ACHs. By Tim Jones. October 2002. ISBN 0-9543145-1-4.
56. **"The future of financial advice in a post-polarisation marketplace"** A discussion of the structure of £25/\$40/€40
financial advice post-CP121 and post-Sandler, with support from Accenture.
By Stuart Fowler. November 2002. ISBN 0-9543145-2-2 £25/\$40/€40
57. **"Capitalism without owners will fail: A policymaker's guide to reform"** A comprehensive look £25/\$40/€40
at the transatlantic corporate governance, with detailed recommendations.
By Robert Monks and Allen Sykes. November 2002. ISBN 0-953145-3-0.
58. **"Who speaks for the city? Trade associations in the spotlight"** A survey of trade association £25/\$40/€40
effectiveness. By David Lascelles and Mark Boleat. November 2002. ISBN 0-9583145-4-9.

REGULATORY PAPERS

1. **"Accepting failure"**: A brief paper from the CSFI's regulatory working group on the £6/\$10
need for the new FSA explicitly to accept the likelihood that banks will fail.
By David Lascelles. February 1998
2. **"Financial education and the role of the regulator: the limits of caveat emptor"**: A £6/\$10
brief note of warning to the FSA on what can and cannot realistically be expected
of financial education. By Victoria Nye. May 1998
3. **"Independence and accountability: tweaking the Financial Services Authority"**: A proposal £6/\$10
for fine-tuning FSA governance. By Robert Laslett and Michael Taylor. June 1998
4. **"Embracing smoke: The Internet and financial services regulation"** £6/\$10
A new regulatory framework is necessary for the Internet, most important 'lose the paper'.
By Joanna Benjamin and Deborah Sabalot. June 1999

OTHER REPORTS

Internet and Financial Services: a CSFI report. In-depth analysis of the industry's key sectors. Please £45/\$75
order through City & Financial Publishing. Tel: 01483-720707 Fax: 01483 740603.

Over the last year the Centre has received general purpose support from the following institutions:

Abbey National
Accenture
Barclays Group
Citigroup
EFG Private Bank Limited
International Securities Market Association
JP Morgan Chase
Merrill Lynch
Newsdesk Communications
PricewaterhouseCoopers
UBS Warburg

Alliance & Leicester
AMS
Aon
AVIVA
Bank of England
BT Global
City & Financial
Corporation of London
CRESTCo
Deloitte Consulting
Deutsche Bank
DTI/OST
Ernst & Young
Euronext.liffe
Financial Services Authority
Fitch Ratings
GISE AG
Halifax plc
HM Treasury
HSBC Holdings plc
INVESTEC
ISMA Centre, University of Reading
Law Debenture Corporation plc
Link Network Interchange
Lloyd's of London
Logica Consulting
London Stock Exchange
Merlin Financial Communications
MilleniumAssociates AG
Misys International Banking Systems
mi2g
Moody's Risk Management
Morgan Stanley International
National Savings & Investments
PA Consulting
Premchand Roychand & Sons
Prudential plc
Reuters
Royal Bank of Scotland
Securities Institute
Standard & Poor's Ratings Group
Swiss Re New Markets
virt-X

Bankgesellschaft Berlin
Banking Code Standards Board
Brigade Electronics
Canadian High Commission
Chown Dewhurst LLP
City Consultants
Finance & Leasing Association
Futures & Options Association
GCI Financial
Housing Finance Corporation
IFSL
Lombard Street Research
Record Currency Management
Schroders
SERM Rating Agency
TRW Investment Management
Z/Yen

In addition, the Centre has received special purpose support from, among others, Linklaters, the Building Societies Association, World Bank and *The Banker*.

UK £25
US \$40
€45
CSFI ©
2 0 0 2

CSFI Registered Charity Number 1017353
Registered Office: Sussex House, 8-10 Homesdale Road, Bromley, Kent, BR2 9LZ
Registered in England and Wales limited by guarantee. Number 2788116