

Capital punishment

or just a headache
for the banks?

Banks and securities dealers are preparing for a significant new phase in the evolution of world-wide capital adequacy conventions. Proposals issued by the Bank for International Settlements



Victor Raeburn



Michael Ullmer

are complex, and will affect banks and their subsidiaries differently. In this article Victor Raeburn and Michael Ullmer introduce the major issues and predict that the proposals, if implemented, will give strong incentives for banks to change the way they do business. This has strong positive implications for the corporate debt market in Australia.

In July 1988 the Basle Committee on Banking Supervision, a committee of banking supervisory authorities established in 1975 by the central bank governors of the Group of Ten countries, determined a common measurement system and a minimum standard for the capital adequacy of international banks in the G10 countries. These arrangements, commonly referred to as the Basle Accord, came into full force at the end of 1992 and have been adopted by numerous other countries, including Australia.

The Basle Accord addressed the minimum level of capital required to support credit risk. As part of the process of developing further the capital standards, the Basle Committee, on 30 April 1993, issued for comment a package of supervisory proposals over 100 pages in length dealing with netting and market risks, together with an interim approach for the measurement of interest-rate risk. The consultative process is due to conclude at the end of this year. The Basle Committee will then issue a formal amendment to the Capital Accord to be implemented over an extended transitional period to December 1996 at the earliest.

The proposals most likely to have a major impact on banks and securities

dealers are those concerning market risks.

The market risks proposals were originally being developed jointly by the Basle Committee and the International Organisation of Securities Commissions (IOSCO) as long ago as 1987, with a view to developing common capital charges for banks and securities firms for positions in traded debts, equities and derivatives. However, IOSCO has been unable to reach agreement within its own group on these matters. Despite this, it is appropriate for non-bank securities firms to consider the implications of these proposals. Those owned by banking institutions overseas will be brought within the ambit of the proposals by virtue of the consolidation provisions. For other securities firms, it is inevitable that their respective supervisors will be looking to these proposals as a possible benchmark for establishing required levels of capital.

For some years, banks and securities companies have had risk-measurement systems and policy-imposed limits to assist in managing market risk. In many cases the banks measure risk in fundamentally the same way as the Basle Committee proposals. Some have their own internal capital-allocation process which ensures capital is

Victor Raeburn SIA (Aff) is managing consultant in Coopers & Lybrand's Banking & Finance Industry Group. Previously he was general manager, treasury, for the State Bank of Victoria and more recently director banking practices of the Australian Bankers' Association. *Michael Ullmer* SIA (Aff) is the chairman of Coopers & Lybrand's Banking & Finance Industry Group.

provided for these risks. In this context, the efforts of the Basle Committee should be seen as a move to reflect best practice of banks, as well as developing an approach to prudential standards that ensures a bank's capitalisation is appropriate for its risk profile.

Issues and implications – debt securities

For debt securities in the trading book, the current capital adequacy standards for credit risk will no longer apply. They will be replaced by the market-risk proposals, including a capital charge for specific risk. The table indicates the proposed capital charges for specific risks compared with the current capital charge for credit risk. Under the proposed approach, these charges will be added to the capital charge for general market risk calculated separately.

This approach recognises a differentiation between credit and other specific risks for various classes of issuer not accommodated in the current capital adequacy system. However, it does not extend this beyond the trading book. This implies an assumption about the impact of the liquidity of these instruments on risk compared with normal bank loans. The proposals give regulators significant latitude in determining what should constitute securities which could fall into the qualifying category. A key factor they may consider in exercising this discretion is the liquidity of the paper concerned.

The "other" category of securities would be treated in the same way as a private-sector borrower with an 8 per cent capital charge. However, in addition to the capital charge for specific risk, the general market risk component would be added, making "other" securities less attractive to banks than loans to these customers.

Comparing the proposal with the current capital standards, all other things being equal:

- *qualifying securities* would always attract a lower capital standard than loans to qualifying issuers;
- *other securities* will, for maturities in excess of three months, always require more capital than loans to the same issuer; and
- depending on the government, the proposals increase the capital required for *government debt securities* for maturities in excess of three months

Table 1: Proposed and current capital charge

	Proposed %	Current %
Commonwealth Government (over 1 year to maturity)	0.00	0.80
Semi Government	0.00	1.60
Qualifying Securities:		
- less than 6 months to maturity	0.25	8.00
- 6 to 24 months to maturity	1.00	8.00
- greater than 24 months to maturity	1.60	8.00
Other	8.00	8.00

A "qualifying" security is defined as paper that is rated as investment grade by rating agencies, or otherwise approved by the relevant supervisory authority.

(for the Commonwealth Government) or two years (for semi-government issuers), due to the capital required for general market risk.

The difficulty in making these observations is that the potential to reduce capital charges through offsets cannot be established in advance; nevertheless, this analysis does enable the consistency of the proposals and their potential effect to be assessed. It seems

Presumably an empirical assessment of relative risks could be undertaken to provide some support for the levels of capital proposed.

Significantly, the proposal embodies the view that a non-tradeable loan to a non-qualifying corporate issuer is riskier than a tradeable one. The proposals would give banks significant incentive to convert loans, acceptance facilities and other direct credit products for qualifying issuers into marketable securities to be held in their trading book.

Further, if the proposed capital adequacy standard for market risk were implemented in its current form, there would be a major incentive for banks to securitise assets by converting on-balance-sheet banking assets into qualifying securities and carrying them in the trading book. The related capital requirements on those assets could be reduced by more than 75 per cent. These provisions will give the corporate debt and securitisation markets in Australia a major boost in the next few years as banks position themselves to use their capital resources more effectively.

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reasonable that investment-grade securities should be treated more favourably than other non-government securities, and that government securities should be the most favourably treated.

However, there is no apparent justification for the quantum of capital charges chosen or the relative charges between government risk and qualifying risks, using the current capital requirements for credit risk as a basis.

Junk bonds — debt or equity?

The proposals take the view that high-yield debt securities which "often have equity-like characteristics" should have a specific risk charge of greater than 8 per cent and/or that no offset should be allowed between these securities and other debt securities. This is not consistent with the approach adopted for specific and general market risk elsewhere in the proposals.

Application of the methodology would suggest that if it is a debt secu-

rity, it will have a specific risk and an interest-rate risk (general market risk component). If these instruments are seen to carry more specific risk than others then, in order to be treated as debt, this charge should be greater than 8 per cent. To disallow offsets for general market risk on these instruments because of specific risk considerations is not consistent with the methodology for debt securities. Whether these instruments are debt securities or equities for the purpose of the capital standards will have to be decided. Further, if the capital charge to support the specific risk associated with such a security is above 8 per cent, this calls into question the consistency of such an approach with the current capital standards for credit risk and the proposals for equities.

The proposals for debt securities appear to ignore the ability to spread specific risks through the holding of a diversified portfolio. For all debt securities, in particular junk bonds, this is a valid consideration when assessing the risks a bank portfolio is exposed to, and therefore in determining the capital charges required.

Dissecting the balance sheet

The fundamental problem with the proposed approach to the supervision of market risks is that it assumes a bank has two discrete operations (namely *trading* and *non-trading*), separately funded and operating in different markets. This is seldom the case. The interest-rate risks in the trading book are no different from the interest-rate risk associated with loans and deposits. This is clearly recognised in the paper on measuring interest-rate risks. That paper indicates that interest-rate risk measurement standards need to be established, but that it is unlikely that a capital requirement would accompany that risk.

The inconsistent approach to the same risk in the various books of a bank will inevitably lead to banks structuring the way transactions are recorded to minimise capital requirements. This could have a significant impact on various markets, particularly long-term government debt and futures markets, as banks seek to minimise the capital demands of their activities.

The proposals view the trading book as a self-contained operation, clearly definable and separately

funded, and exposed to a set of risks separate from the rest of the bank's balance sheet. A bank's trading operation is rarely self-contained. For example, there may be strong links between the trading desk and the corporate bankers, so as to manage corporate client relationships more effectively across a complex range of products and services, from cash-management facilities to currency derivatives. In this way, the products and services offered to customers can be structured in the most price-competitive manner, irrespective of where in the bank they are booked.

Supervisors will have to agree on how to deal with this issue. For example, the Bank of England has discussed with banking groups the question of whether the trading book can be segregated from other activities. The



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broad conclusion was that banks either run trading books separately (in which case the capital question is relatively straightforward), or run trading books in association with other "banking" instruments.

In the latter case the Bank of England may propose that the trading book should be expanded to encompass various "non-securities", although the combined book would not include traditional banking instruments such as loans and deposits. In any event, this is a particularly complex area which clearly will require considerable effort to resolve.

A bank's treasury is often a *window* to the market for managing balance-sheet risks. In this context, the "bank"

undertakes internal swaps and other derivative deals with its treasury trading operation, which then manages that risk within the trading risk limits applying to its portfolio, providing the internal hedge sought by the "bank" but not necessarily entering into an equal and opposite swap with the market place. In so doing, the bank can maximise opportunities in the market and manage residual risk efficiently. This approach is potentially very capital-intensive under the market risk proposals, which may lead banks to attempt to lay-off balance-sheet risks direct to the marketplace rather than through the trading operation.

The proposed approach to market risk also ignores the manner in which the trading book is funded. Implicit in the approach is that the trading book is funded either through the overnight market or at a fixed rate which never resets. This is not generally the way trading books are managed and has the potential in many instances to overstate risks significantly. There should be explicit consideration of how the trading book is funded, as there is in the approach contained in the Basle Committee paper on measuring interest-rate risk for the whole bank.

Of the two main sources of anomalies present in these proposals, the vast majority occur as a result of splitting the trading book from the rest of the bank's balance sheet. The remainder occur due to the way relative risks between various securities (mainly debt and equity) are handled.

Meeting the capital requirements

A third tier of capital in the form of subordinated debt will be allowed for the sole purpose of meeting the requirements for market risk. The distinguishing features between this and the existing two tiers of bank capital would be:

■ the minimum original maturity is considerably shorter (two years compared with five years);

■ the debt will be valued at par, rather than amortised over the last five years to maturity; and

■ a *lock-in* feature would prohibit the payment of interest on principal, even at maturity, if certain thresholds were breached.

This third tier of capital appears to be an attempt to maintain a semblance of competitive neutrality between

THE CAPITAL ADEQUACY CALENDAR

- 1988** Basle Committee determines minimum standards for capital adequacy of international banks in the G10 countries.
- 1992** Official introduction of Basle Accord on level of capital to support credit risk. Accord adopted by many countries including Australia.
- 1993** Basle Committee issues in April a discussion paper containing proposed measures on netting and market risks, together with an interim approach for the measurement of interest rate risk.
- Consultative process to continue until end of 1993.
- 1996** Earliest completion date for the implementation of formal amendments to the Accord.

banks and securities companies, who can use similar short-term capital instruments to meet their capital requirements.

Under the arrangements, the shorter-term capital with a *lock-in* provision is deemed appropriate to underpin trading risks, compared with the longer-term capital requirements deemed necessary for other aspects of a bank's balance sheet.

This view of the risks associated with the trading book being fundamentally different from the risks inherent in "banking activities" seems to be based as much on how profit and loss are measured as on the fundamental risks associated with banking.

The view implied by the proposals is that because the result of trading activities is measured on a mark-to-market basis, there is a special requirement for capital. The more significant issue for banks, especially in respect of interest rate risk, is that the economic value of the bank will change with changes in interest rates irrespective of how the assets and liabilities of the bank are accounted for. While this is recognised in the paper on measuring interest-rate risk, it would seem that the risks inherent in a bank's balance sheet are harder to measure consistently, and as they are normally accounted for on a book-value (as distinct from market-value) basis, and will only be realised over a period of time, they apparently do not require a capital charge.

This approach to a major risk associated with banking is out of step with the way many banks manage interest-

rate risk, and inconsistent with the prudential standards proposed by the US Federal Reserve for banks in that country. Under the US proposals, interest rate risks associated with *all* bank assets and liabilities are considered when assessing capital requirements for interest rate risk.

Accounting policy and capital standards

Profit-and-loss measurement methods, whether based on mark-to-market or historical cost, seem to play



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a role in the way the Basle Committee has approached a number of issues. The global trend toward mark-to-market accounting for financial instruments, even those not part of the trading book, will raise a number of issues for regulators in terms of applying capital-adequacy standards.

It is interesting that the market-risk paper asserts that "bank assets are often illiquid and not easily marked to

market, and therefore are typically reported at book value. This treatment is consistent with the inherent going-concern nature of banking, in which recognising short-term fluctuations in the value of assets held for the long term is generally inappropriate".

This contrasts with *Exposure Draft 59 - Accounting for Financial Instruments (ED59)* recently released in Australia, which proposes the lower of cost or market value or mark-to-market approach to accounting for all financial assets. The view that the value of assets in the "banking business" is less prone to short-term movements in interest rates than the trading book is not accepted in ED59. This would pose a dilemma for the supervisors; namely, is it appropriate to require adjustment of bank financial statements prepared in accordance with ED59 to a more traditional approach for the purpose of computing regulatory capital for market risk?

Ultimately, the issue is that movements in interest rates, equity prices and foreign-exchange rates expose banks to changes in their net economic value. Together with credit risk, these are the greatest risks a bank must manage, irrespective of the accounting methodology applied. Accordingly, it would be more logical for the capital standards applicable to these risks to encompass the whole banking operation, not just the trading book. In fairness to the Basle Committee, development of internationally acceptable standards has to be undertaken on an incremental basis. Inevitably, the proposals will generate some anomalies in the short-term. It is hoped over time that these will be addressed.

On a related matter, market commentators will no longer be able to point to a bank's capital-adequacy ratio as an indication of capital strength. Instead, the absolute value of capital above the requirements for credit and market risk will be more relevant and the extent to which this is seen as adequate will be an interesting issue for the market to resolve.

Equities and debt

The most striking feature of the proposed approach to equities is in the comparison of these proposals with those for debt securities — in particular, the assumption that for a diversified portfolio of equities, 100 per cent

netting of long and short positions is allowable without any disallowance factor for general market risks, whereas for interest-rate risks at least a 10 per cent disallowance factor is required.

Second, specific risk is assumed to be 4 per cent for a liquid and diversified equity portfolio, whereas the same risk for debt securities other than qualifying ones is 8 per cent. In addition, the ability to diversify specific risk for debt securities does not reduce the capital charge under the debt security proposals.

These anomalies are best illustrated by example. An equity position of a bank which comprises \$100 million of long and \$100 million of short positions, both liquid and diversified, carries a capital charge of \$8 million. A similar position comprising *other* debt securities in the same time band will carry a charge of \$16 million.

This approach seems to significantly favour equities, compared with a portfolio of debt securities. The significance of this is illustrated by the general assumption that all debt securities are *qualifying securities*. Provided this assumption holds true, supervisors are unlikely to face difficulty in determining which are *qualifying securities* under the proposal. In the UK, most firms perceive that the requirements for equities under the European Capital Adequacy Directive will result in much higher capital charges than those for debt.

The approach to equities is based on portfolio notions of liquidity and diversification, and ignores relative price risks between debt and equity securities.

It should be noted that two standard deviations of the monthly movement in yields on 10-year Commonwealth bonds is approximately equal to a 5 per cent movement in the value of the investment. For an investment in the All Ordinaries Index, the same two standard deviations amounts to an 8 per cent change in value, equivalent to a 60 per cent more risky profile.

It would be helpful if before implementation, a thorough empirical analysis of the relative risks between debt securities and equities is undertaken to ensure a consistent approach to the relative risks is adopted. This is particularly important given that one of the primary objectives of the market risk framework is to ensure that:

"The capital charges for each class of instrument i.e. debt, equities and foreign exchange would be roughly grouped under economic terms so as not to create artificial incentive favouring one class of instrument over the others." (Market Risk Paper page 1)

Other important issues

The back office

The measurement procedures will, for many, require a significant change in the manner in which risks are recorded and measured, and require a more integrated approach to handling risks at bank and group levels to ensure the benefits of the offset provisions will be available to them. This is likely to require considerable cost and effort.

In addition, banks will have to review the systems for measuring inter-



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est-rate risk across the entire balance sheet to ensure they can cope with the proposed changes for market risk. While the current proposals relate only to market risks, the Interest Rate Risk Paper presented in the package raises a number of issues in respect of interest-rate risk management across the entire balance sheet. The paper seeks responses to proposals to standardise the way in which interest-rate risk is measured and reported by banks to banking supervisors.

The Basle Committee itself clearly views this as a major issue for banks, given that it envisages "... *that an extended transitional period to implementation (ie, to end 1996 at the earliest),*

would be needed to enable market participants to develop the necessary reporting and control systems" (Market Risk Paper page 3).

Netting

The netting proposals open the way for the Reserve Bank to respond to submissions made by the industry in October 1991 to allow netting of treasury transactions under certain circumstances.

The netting arrangements, if approved, are likely to reduce the capital requirements for credit risk for many banks with significant activity in derivatives markets.

Competitive neutrality?

It is likely that the proposals, if implemented, will require a higher level of capital for banks to undertake treasury and security trading activities, which would lead to an increase in banks' operating costs in these markets. This will provide an opportunity for non-bank related entities to undertake these activities at a potentially lower cost than banks. The consolidation provisions require that the entire banking group comply with these capital adequacy provisions.

This will undoubtedly create difficulties for regulators of security firms, who earlier in the year at an international level were unable to reach agreement within the International Organisation of Securities Commissions (IOSCO), much less the Basle Committee, and are not associating themselves with the specific proposals put forward for market risk.

Issues for the supervisors

One of the more significant aspects of the proposals is the degree of involvement national supervisors would have in the implementation and interpretation of the proposals.

There are at least 20 issues on which national supervisors will have to form an opinion or provide a ruling for banks.

One obvious implication of the proposals is that individual banks will be seeking consultations and rulings from national supervisors far more frequently than in the past. In addition, banks will be required in many instances to demonstrate to the supervisors the accuracy of their computer systems and the technical aspects of the modelling undertaken. ■