

REPORT OF THE TECHNICAL COMMITTEE OF IOSCO

on

CAPITAL REQUIREMENTS FOR MULTINATIONAL SECURITIES FIRMS

presented to the

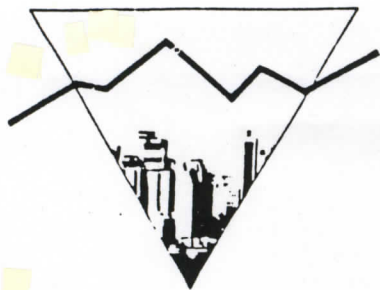
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**XV CONFERENCIA ANUAL DE LA ORGANIZACION  
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**SANTIAGO - CHILE 1990**

**CAPITAL ADEQUACY STANDARDS FOR SECURITIES FIRMS**

**Remarks by Jeffrey Knight,  
Chairman, Working Party N° 3**



INTERNATIONAL ORGANISATION OF SECURITIES COMMISSIONS

ANNUAL CONFERENCE

SANTIAGO, CHILE

NOVEMBER, 1990

Remarks by Jeffrey Knight,  
Chairman, Working Party n° 3  
Capital Adequacy Standards for Securities Firms

Mr. Chairman, Ladies and Gentlemen,

It is a particular pleasure to be presenting this report on Capital Adequacy Standards for Securities Firms to the annual conference of IOSCO here in Santiago de Chile. I can trace my own association with this organisation right back to the first meeting of its predecessor organisation, the Inter American Conference, which I think I am right in saying took place in Caracas in 1974. I had the privilege of participating in a number of the Inter American conferences, in South and North America, but have never previously had the opportunity to come to Chile. It is a great pleasure to do so now, and I would like to add my voice to those which have already congratulated the organisers on the success of this meeting.

Working Party n° 3 is one of those originally set up when the Technical Committee first met, in London in July 1987. The work we are doing is the first of its kind, in that no other organisation, at least to my knowledge, has set out to analyse the rules set by securities regulators for the maintenance of capital, and to suggest international standards on which such rules should be based. I do not think I need stress the importance of capital standards in today's world. The onward march of international securities business, and the presence of the financial multinationals in the markets of so many parts of the world leads to exposures which firms find increasingly hard even to measure, still less control. And the markets are in a state of volatility which at least for the time being looks like staying with us. Under these conditions, firms dealing in both national and international markets need to be reassured that those with whom they will find themselves in counterparty relationships have sufficient capital for the business they are undertaking.

Before going on to introduce the four papers which our Working Party has submitted to this conference, I will mention two other important factors which we have to take into account. The first is the extent to which the traditional barriers between different kinds of financial institution are breaking down - indeed, in many countries, have broken down. Deregulation continues to make the differences between banks, insurance companies, mortgage loan companies and securities houses increasingly difficult to define. Many countries have abandoned the

separations still maintained in the U.S. through the Glass-Steagall Act and the Bank Holding Company Act. These trends do not make life easier for regulators and supervisors. The problems of supervising financial conglomerates is having to be carefully thought about. There is a very particular problem of finding capital standards which can be applied by banking and securities regulators to entities which may fall under the tutelage of either kind of regulator but which compete directly for the same business. I will come back to the subject of banks and securities firms a little later.

The second factor which influences the work we are doing in Working Party n° 3 is the introduction of rules on capital adequacy in the European Community. This measure, referred to as the Capital Adequacy Directive, or CAD, is being introduced as part of the drive towards the completion of the internal market in the E.C. in 1992. Since five of the twelve member countries of the Technical Committee are also members of the E.C. (and Sweden and Switzerland are to some extent linking themselves to the EC legislation), we obviously have to keep a close eye on the shape the CAD is taking. Indeed, one of the earliest objectives we set ourselves was to seek to avoid a serious divergence between the rules being set in the E.C., and those being set elsewhere amongst the developed capital markets of the world.

Last time many of us met was at this same meeting last year in another beautiful city - La Serenissima - in other words, Venice. At that meeting I presented to the Plenary session the first report from Working Party n° 3. It was a relatively brief document, but we had laboured long over it. Our report contained an analysis at the conceptual level of the approach of the securities regulator towards setting capital requirements. It emphasised the need for the regulator to assess as closely as possible the risks to which the securities firm was subject, and to tailor the requirements to those risks. In our report we described the nature of the risks which a firm runs, and suggested that the capital a firm should have available should have a number of components. When I made my address to the Plenary session in Venice I said that if our first report was accepted, it would be our intention to develop our analysis of those capital components at a more detailed level. That we have been doing, and our analyses are the subject of the four papers which have been circulated to you. I want to give you the briefest summary of those papers now, and then to describe the other work on which we have been engaged.

We decided that we should examine in some depth the requirements in the four countries which were the original members of our Working party, namely France, Japan, the U.K. and the U.S. We wanted to examine the scope for harmonisation of the various elements of the requirements. We took as our subjects the equity position risk requirements, debt position risk requirements, the base requirement and the minimum requirement for capital, and finally the definition of capital.

I will take them in turn.

The risk which the equity position risk requirements is designed to cover is the possible adverse change in the price of equity securities in which the firm holds a principal trading position. Such a risk arises as soon as a transaction has been made. The requirements are commonly referred to as "haircuts", because their effect is to discount (or shave an amount from) the latest market value of equity positions held, to cover the possibility of a future adverse price movement. And note my

reference to the latest market value. For it is a central feature of our recommendations that all securities held are "marked to the market" every day. The concern is the potential price volatility of the positions held, since the assets are assumed to be held for trading purposes.

The rules we describe in the paper relate to firms which take positions, and hence have exposures, in the equity market. They do not therefore apply to firms which restrict themselves (or are required to do so) to agency broking.

Our paper is based upon a close analysis of the rules as they apply in the four countries I have mentioned, which make up the original membership of our Working Party. In each of these countries a carefully structured approach has been taken, so that the capital requirements do match the extent of the risks. Thus, in addition to the mark to market principle, which I have mentioned, and the use of the haircut technique, our report shows how the four countries distinguish between the differing degrees of liquidity, which bears upon the prospective volatility, of different classes of equity. We show how the regulators penalise positions which involve an unusual degree of concentration in the securities of a particular issuer; and where a single position constitutes an unduly large element in the firm's trading portfolio.

An important part of our analysis bears upon the way regulators accommodate hedging techniques. Hedging may take three forms. There is for a start the management of the firm's own book. There are quite considerable disparities in the way regulators make allowance for off-setting long and short book positions. Then there is the use of derivative markets to hedge individual positions. Finally, there are the very large arbitrage positions taken by firms, where a basket of stocks is assembled which is designed to replicate the performance of the index, and which is offset by a position in the index future or option. In these manoeuvres the gross positions may be very large, but the risks are low, and so are the potential returns.

Towards the end of our report on equity position risk we put down the broad objectives which guide the regulators in the four countries under review. They are worth reciting here. They are that the requirements

- (1) should reduce the risk of firms failing, owing sums to clients or counterparties
- (2) should generally reflect the risks, so that firms are encouraged to use risk reduction techniques (because they will be treated less severely)
- (3) should not affect market practice perversely
- (4) should not be too costly to comply with nor too complex.

We are some way from a standard which would meet all these objectives, but work is being done in an allied group to see whether agreement can be reached on position weights.

Our second paper is a comparison of position risk requirements for debt securities. This one, it must be said, is more difficult to read, at least for anyone who does not find it rewarding to immerse himself from the beginning in tables of statistics. But the principles are basically the same as those which guide the same four countries (for once again we have restricted our comparison to France, Japan, the U.K. and the U.S.) in their approach to equity position risk. Thus, positions are recognised in principle on a trade date basis (although the U.S. starts from settlement date); positions are marked to market; and the aggregated amount of calculated risk is deducted from the firm's capital.

In three of the four countries surveyed, risk weights are determined according to the type of issuer and to the maturity of the security. In general, the assumption used (which is of course borne out by experience) is that the longer the maturity, the higher the volatility, and hence, the risk weight is set accordingly higher. Risk weights also take account of the relative liquidity of the bonds.

As might be expected, the rules governing position risk for bonds are sophisticated and complex. Account is taken - and here again, one is talking of trading, not agency, firms - of off-sets between, for example, long and short positions in the same sub-category of maturity. All four countries have rules which recognise the ability of the firm to reduce its exposure (to risk) by the use of derivative markets. And in countries where firms undertake interest rate swaps, the rules treat the swaps for the purposes of market risk as notional government bonds.

We take considerable heart from our analysis of the capital rules applying to bonds. We think there is reason to suppose that harmonisation of risk weights, and of the treatment of offsets and hedging, would be possible to achieve. We believe that more detailed work again should be done towards that end.

We found ourselves on rather more difficult ground when it comes to studying the base requirement and the minimum requirement for capital. Our report on this component of capital discloses that there are differing philosophical as well as technical approaches amongst the securities regulators themselves, and that when one starts to compare the regime applied by the banking supervisor with that of the securities regulator, the differences are even greater.

The essential point about base or minimum requirements is that each may be defined as being not directly linked to either market risk or counterparty risk. In this respect, the capital requirement does not follow the precept of our original concept paper, that the capital requirements should be related to the assessment of risk, although some countries require a cushion of capital which reflects the size of a firm (on the basis of its expenditure or its volume of business).

The approach towards minimum capital is thoroughly pragmatic. Any firm, in whatever kind of economic activity, needs starting capital, and only owners' capital can be ultimately counted as capital. Even where the requirements are expressed as a base, i.e. an amount determinable other than by reference to a fixed sum, there is frequently a minimum below which a firm's capital is not permitted to fall (without, that is, the intervention of the authorities). Depending on local conditions, or on the type of business to be undertaken, the minimum level may be set relatively



high, so that the very threshold keeps out financially inadequate firms (as the case, for example, of members of some futures markets); or it may be set at a relatively low level; in order to allow the easy entry of new firms to the market, but in which case the requirements are made to rise as the level of business (however measured) increases.

This last approach is to apply a base requirement for capital. Such a rule takes as its starting point that there are certain business risks which are not susceptible to measurement in the same way that, for example, price volatilities in equities and bonds may be measured and provided against. These risks would include the possibility of a general reduction in the volume of business, which would put strain on a firm's capital position if were not required to maintain a cushion of capital, which would still be held even if all the specific trading and other risks had been removed.

Our paper shows some considerable diversity in the way the base requirement is determined. Some countries relate it to the level of the firm's expenditures over a given period; some to the value of assets under management; others to the number of professionally qualified staff; and yet others to a volume of business requirement. Two leading countries, for example, relate the base requirement to a percentage of clients' open positions, or client-related receivables.

On the basis of the report we have made on this subject, the search for harmonisation of regulation in respect of either minimum or base requirements for capital looks beset with problems. These I have described in terms of the very different approaches among securities regulators. And if alignment with the rules set by banking supervisors is sought, the problems are even greater. There is no practical possibility of applying a base requirement to the entire activities of a bank; and although there is a move in a number of countries to allow banks to "strip out" their securities trading activities from their conventional banking business (in order to apply lower capital weights than the general credit risk weight of 8% set by the Committee on Banking Supervision in Basle), there is resistance to accepting a base requirement as applicable to the trading book alone.

That the base requirement is a potential source of competitive distortion between banks and non-banks is undeniable. We are not at that point, so long as the banks are required to apply the 8% rule, and the securities firms are required to have both risk-based capital and a base capital. But if the risk-weights for banks and non-banks are aligned, the base requirement could constitute a severe competitive disadvantage for non-banks.

These rather pessimistic remarks bring me to our fourth paper, which is on the Definition of Capital. You will find set out here a very lucid exposition of the need for a proper definition of what is to be allowed as capital, and a description of the different forms in which capital may be provided. If it were simply a question of finding common ground amongst securities regulators, one would be entitled to feel confident on the basis of our analysis of reaching substantial harmonisation. But here again, considerations of competitive equality between banks and non-banks arise. There are two specific areas which give rise to contention between the two types of regulator. They are the use of subordinated debt as capital, and the use of guarantees.

The position is that in France, Japan (for the branches of foreign firms), the U.K. and the U.S., securities regulators allow the use of subordinated loans to make up part of the capital of the firm. Generally, the amount of subordinated debt permitted is greater and the term required is shorter than the banking supervisors permit. But there are good reasons for the practice of the securities supervisors. By the use of subordinated loans, securities firms are enabled to meet their fluctuating, risk-based requirements, and if a firm were to encounter difficulties, the funds representing the subordinated loans could be used to meet the firm's obligations to customers and counterparties. Subject to certain conditions, as suggested in our paper, securities regulators believe that subordinated loans can provide as much comfort as is required, both to the lender and to the regulator.

Bank regulators do not allow banks to include guarantees as capital at all. Guarantees are accepted by some regulators, but they do not represent actual funds, and there is always the possibility of the failure of a guarantor. Guarantees therefore present difficult problems of alignment.

Before turning to other matters I must draw your attention to a small but important editorial change to the paper on the definition of capital. This consists in the deletion of the words "net worth" at the end of the first paragraph on page 12 of the paper. The reason for this deletion is to avoid any inference being drawn that the mark to market principle is applicable to the liabilities side of the balance sheet. I hope you will allow me to make that amendment to the text.

I have mentioned several times in the course of these remarks the problems of aligning the capital requirements applicable to non-bank securities with those which are applied to banks. The differences were very briefly touched upon in an annex to our original concept paper, and it was always our intention to develop the subject further. We have in fact been doing so, fairly intensively, even since the meeting in Venice last year. That work has been going along in parallel with the preparation of the four reports which I am presenting to you today.

We began by enlarging the size of our Working Party, to include representatives of Germany, Holland, Sweden and Switzerland, all countries in which banks play a significant role in the securities market. Over the time that we have been working on the subject, pressure from firms has continued to increase to find a basis for convergence between the rules applying to banks and those applying to securities firms. We have prepared a substantial analysis of the techniques and objectives of the two types of regulator. Our report on that subject has not yet been submitted to the Technical Committee, and hence is not really within my scope today, but I thought I should let you know of its existence.

I mentioned pressure from firms. The pressure manifests itself also on the banking regulators, who have always accepted that the 8% credit risk weight applied through the Basle Accord, reached in 1988, was not a refined way of looking at market risk. In fact the committee of Banking Supervisors at Basle has had for some time sub-committees looking at three types of market risk: interest-rate risk (which includes position risk for debt securities); equity position risk; and foreign exchange risk. At a meeting held in Basle in September between banking supervisors and securities regulators, consideration was given to the possibility of a common system for measuring risk, and a minimum set of capital adequacy requirements which could be applied to the securities business of bank and non-bank securities companies. There was enough general consensus

to warrant further work being done on risk measurement of debt and equity positions. We are left, even if agreement on those is found, with the difficult matters I have described, in the application of the base requirement, and the definition of capital. Those problems will need further careful study, before we can expect to reach agreement.



June 1990

COMPARISON OF EQUITY POSITION RISK  
REQUIREMENTS AND SCOPE FOR HARMONIZATION

Report of Working Group No. 3  
of the International  
Organization of Securities  
Commissions



Comparison of Equity Position Risk Requirements and  
Scope for Harmonization

Introduction

1. The Technical Committee of IOSCO published a paper 'Capital Adequacy Standards for Securities Firms' last October which set out a framework for the capital requirements of non-bank securities firms. Working Party 3 has followed this paper by considering in greater depth the scope for harmonization of various elements of the requirements. One of these elements is the equity position risk requirements.
2. This paper compares the equity position risk requirements for non-bank securities houses in France<sup>(1)</sup>, Japan<sup>(2)</sup>, the UK<sup>(3)</sup> and the USA<sup>(4)</sup>. It is recognized that the regulators often need to take into account other factors, such as the structure of the market, when setting levels of capital, and to exercise their judgement accordingly which will lead to the adoption of rather different requirements in different countries.
3. The paper then assesses the scope for harmonization of the requirements in the light of these factors. There is increasing interest in the search for harmonized standards internationally, with the European Community developing common minimum standards for securities firms authorised by

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- (1) The French requirements were introduced from the beginning of January 1989.
  - (2) The Japanese requirements were introduced on an experimental basis from the Summer of 1989 and were fully implemented from 1st April this year.
  - (3) The UK (SIB/TSA) requirements were introduced in April 1988.
  - (4) The current US haircuts were introduced in 1975.

~~a member state and with the Basle Committee on Banking~~  
Supervision looking for appropriate requirements to cover  
the securities positions of banks.

4. The risk which is addressed by the equity position risk requirements is the possible adverse change in the price of positions held by the non-bank securities firm. (This risk clearly arises from trade date). The requirements are commonly called haircuts in a number of countries because the effect is to discount (or shave an amount from) the latest market value of positions held to cover an adverse price movement. Clearly the market valuation of the securities held is the starting point and where positions relate to issues traded outside an organized market a conservative valuation is used. Credit risk is subsumed in the haircuts and in the mark to market requirements. For most publicly traded issues (certainly all those traded on an exchange) the likelihood that the issuer might fail without warning is very small indeed although it can happen. A gradual deterioration in the standing of an issuer over a long period will be captured through the daily mark to market. What is of concern is the potential price volatility of the positions held, since the assets are all assumed to be held for trading purposes.
  
5. The rules described in this paper relate to firms which take exposures in the equity market rather than, for example, those which act solely as agency brokers for which different considerations are important. In most markets worldwide, securities market intermediaries act solely as agency brokers rather than taking positions - the orders are matched on the floor of the exchange. But increasingly even in auction markets securities firms are taking positions, making the risks related to the books more akin to those of firms in competing market maker systems. In competing market maker systems the rules of the exchanges



drive all the orders across the books of the market makers, giving them a large quantity of positions on both sides of the book.

#### Optional treatments for position risk

6. US firms are able to choose between two capital standards (the basic and the alternative\*) under which there are different equity haircuts - the haircut under the basic standard is 30% and under the alternative standard is 15%. Almost all the large firms are on the alternative standard and this equity requirement is therefore the one referred to in this paper. (There are also proposals to reduce the haircut under the basic standard to 15%).
7. The choices open to securities firms operating in the UK are more extensive. As far as equities are concerned, the firms can opt for a simple approach which gives no allowance for hedging or diversification (Equity Method 1) or more complex requirements which give allowances for hedging and also diversification of holdings in a particular market (Equity Method 2) or diversification of portfolios between the US, UK and Japanese markets (Equity Method 3).
8. In Japan and France there is only one treatment for equities.

#### Liquidity

9. There is general agreement in all four countries that illiquidity is a key concern. If a firm is holding a position in a stock which is thinly traded and therefore

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\* Under the basic method, aggregate indebtedness cannot exceed 15 times net capital. Under the alternative the firms must have a cushion of capital equal to 2% of customer and customer related receivables.

which-it-might-have-difficulty-disposing,-it-is-exposed-to the possibility of larger potential price movements than if it could easily and rapidly liquidate its position.

10. Both the UK and the Japanese requirements capture liquidity of the paper through categorising equities and applying graduated requirements. In the UK the sub-division can be seen most easily in the haircuts in the simplest (Equity Method 1) test but it applies to all the tests - in Equity Method 1 the requirement applies to the sum of the long and short positions. The table at the end of this section sets out the requirements for domestic equities in the UK (Equity Method 1) and Japan.
11. The UK and Japan have additional liquidity requirements which come into play if a firm has a substantial part of an issue and therefore might have difficulty liquidating it quickly. The requirement comes into force if a firm's holdings (after taking into account all commitments to buy or sell the securities in whatever form, including derivatives) exceed 5% of an issue - calculated with reference to the size of an issue remaining in circulation rather than the original issue size. The additional requirement is equivalent to 50% of the requirement on a single equity, if the firm holds between 5% and 25% of the issue, and 100% if the firm holds over 25%.
12. As to equity positions, the SEC rule equates those securities without a "ready market" to illiquid assets, which then receive no value for net capital purposes. Generally, all other equities receive a 15% deduction. This single test presumes that larger securities firms will have and in fact in the US do have a position in a broad range of securities over a wide spectrum of markets.
13. To discourage firms from holding excessive amounts of a particular issue or from holding less liquid securities, the SEC rule has other features. If a firm holds a position which is excessive in relation to the normal volume of that security, that amount in excess of the

normal-volume-is-assessed-a-100%-charge.— A rule-of-thumb as to normal volume is a twenty day training period. The concentration requirements in the USA (and in the other markets as well - see below) also help to discourage firms from holding excessive positions.

14. The French requirements at present do not reflect liquidity but the intention is to establish higher requirements for OTC issues and non-marketable equities. At present there is a single requirement of 20% of the long and short positions, for all equities. (As in the other three countries long and short positions in identical equities can be completely netted).

Requirements for Domestic Equities

	UK	Japan	USA	France	
				Current require- ment	Future require- ment (9)
Most liquid	10.5 <sup>(1)</sup>	10.0 <sup>(4)</sup>			12.5
Liquid	15.0 <sup>(2)</sup> - 18.0 <sup>(3)</sup>	15.0 <sup>(5)</sup>	15.0 <sup>(7)</sup>	20.0	
Other marketable	25.0	25.0 <sup>(6)</sup>			20.0
Unmarketable	100.0	100.0	100.0 <sup>(8)</sup>		100.0

(1) Alphas.

(2) Betas.

(3) Gammas.

(4) 1st section issues on the Tokyo, Osaka and Nagoya exchanges.

(5) 2nd section issues on the TSE, OSE and NSE.

(6) OTC issues.

(7) "Additional charges may result from excessive positions relating to a firm's own capital or relating to a normal trading volume of stock."

(8) Having no ready market.

(9) Figures under consideration.

## Structuring the requirements to reflect the risks

15. Equity markets are tending to become more alike in the risk characteristics of the firms. A number of auction markets (for example the Paris market) are moving more towards dealer markets with the brokers taking positions on their own behalf. In the auction markets in the USA and Japan the firms have traditionally taken positions on their own account reflecting their view of the market. The competing market maker system in London (which at present is a pure dealer market with all orders crossing the books of the firms) may in future be supplemented with a central limit order service enabling small orders to be matched, rather like an auction market.
16. Thus the tendency is for more and more securities firms worldwide to take long and short positions on their own account. Firms are also increasingly active in the derivative markets and are involved in various kinds of arbitrage activity. All four countries make very substantial allowance for the low risk of these arbitrage books.
17. One activity of this kind is index arbitrage where a basket of stocks is created which mirrors some 80-95% of the index and which is offset by a position in the index future. The gross positions are huge and the returns are very small (as a percentage of the holdings). The risks are very small indeed. The firm has locked in a profit (over and above the funding cost for the positions) which is likely to be the minimum it will receive as long as it holds the positions to expiry of the futures contract. Likewise where a firm is holding convertibles hedged with the actual equity the cost of conversion is known and therefore the firm has a locked in profit.
18. The regulators have varying ways of treating such arbitrages to ensure that the requirements are not excessive relative to the risks being run. For example,

the Japanese regulators enable the firms to use models with the requirements based on the observed volatility of the positions - the data on these volatilities must be shown to the regulators. The French requirements are reduced by a set amount depending on whether the hedge is general or specific. Positions with a general hedge (for example general cash positions hedged with the index) carry an 8% capital requirement, rather than 20%. Positions with a specific hedge (for example index arbitrage positions) carry a requirement of 4%.

19. There is a varying treatment of risk related to cash equity positions. In the US markets where broker dealers hold short positions in individual equities there is some allowance in the requirements for the holding of such positions. There is no requirement on short positions (in aggregate) totalling up to 25% of the long positions (in aggregate). However, there is a 15% requirement on the excess of short positions over this percentage. In the US, there has been no desire to reduce this cushion of capital by looking to diversity or any other theory of analyzing volatility or future prices. The US regulators believe that firms that are financial intermediaries dealing with the public should not be allowed to expand their risk positions significantly without a larger capital base. Thus, no offset is given if longs are offset by unrelated short positions. Shorts are haircut separately except for a percentage of the longs. The US believes that there is specific risk associated with short positions such as short squeezes. The firms, however, are encouraged by the rule to enter into risk reducing positions including warrants, convertible bonds, options, or futures.
20. The broker dealers in the US do not have a market making obligation in the auction markets - this function is performed by the specialists. The specialists do not deal with the public and therefore do not come under the SEC's capital rules (and therefore do not have to meet the 15% requirement). They meet a stock exchange minimum capital

requirement of \$1-million. The lower capital requirements which they face help them to comply with their market stabilization obligation.

21. In the UK market, firms which accept obligations, under the rules of the Exchange, to make markets in individual stocks have traditionally run relatively balanced books (ie books with similar amounts of short and long positions). (Books with a similar profile are seen in some other markets as well, for example the Dutch market). The evidence from the London market is that these books are much less risky in periods of sharp market downturn than unbalanced positions and the UK requirements give substantial benefit for such risk reduction, provided the firm holds diversified positions. A firm holding 25 long positions of equal value and 25 short positions of equal value (in the most liquid equities), amounting to £100mn and £90mn respectively, would have a requirement in the UK equivalent to  $1\frac{1}{3}\%$  of the gross value of the positions (25% of the net). To benefit from any allowance for long and short positions the firms must hold a minimum number of positions (ten in the UK market) and the requirement is adjusted to reflect the extent of the diversification of the book. On a fully diversified gross long book the minimum requirement is  $4\frac{1}{2}\%$ . Consideration is being given to an upward revision of this minimum requirement for long positions in the light of the price volatility in the equity markets in the recent past.

22. In the Japanese market (where firms are not able to short sell individual equities) there are no separate allowances for holding short as well as long positions.

#### Concentrated Positions

23. A significant risk occurs when a firm holds positions in equities (or bonds) which are concentrated in terms of the capital of the firm. This is because a substantial (unexpected) adverse move in the price of a single equity holding (for example because of a takeover) which is itself

~~large relative to a firm's capital could leave the firm~~  
vulnerable. A firm is of course also vulnerable, because of the possibility of default, if its exposure to a single issuer is large even though that exposure is spread over bonds and equities.

24. Under UK and Japanese rules a firm has a concentrated exposure to one issuer if the total value of its exposure to that entity exceeds 25% of its adjusted net liquid assets - i.e. in the UK case shareholders funds plus allowable subordinated loans and guarantees after deductions for illiquid assets and provisions and in the case of Japan the calculation is broadly the same but subordinated loans<sup>(1)</sup> and guarantees are excluded. Where a firm has a concentrated exposure there is an additional requirement, amounting to 50% of the haircut on a single equity of that type if the exposure is equivalent to 25% to 50% of the firm's adjusted net liquid assets, and 100% if the exposure is equivalent to over 50% of the adjusted net liquid assets.
25. The French have a limit on concentrations. The requirement is that a firm's exposure to one issuer, the sum of all the net positions in that issuer's paper (after allowable hedges in that paper), should not exceed 40% of the net shareholders funds of the firm.
26. The US requirements cover a concentrated position in an issue. They do not cover concentrated positions to an issuer comprising holdings of different types of paper (ie. a position spread over bonds and equities issued by one firm) because this has never been a problem in the US. The

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(1) Subordinated loans have not traditionally been used as a form of financing in Japan.

~~requirement is that if the firm holds one particular type~~ of paper issued by an entity, which exceeds 10% of its net capital, it must meet an additional position risk requirement of 15% on the excess. Also in the US, if a firm controls enough securities of a publicly traded company so that it has actual or legal control, it may not be able to sell any of the shares on the public markets. This could cause a 100% charge even if the shares in the hands of another person are otherwise liquid.

#### Scope for harmonization of equity position risk requirements

27. There are a number of objectives regarding the structure of the requirements which are agreed by the securities regulators in France, Japan, the UK and US. These objectives are that the requirements:-

- (1) should reduce the likelihood of firms failing owing sums to clients/ counterparties
- (2) should generally reflect the risks and therefore firms reducing risk should be treated in a less severe manner
- (3) should not affect market practice perversely
- (4) should not be too costly to comply with nor too complex.

28. To achieve harmonization it would be necessary for any standard to meet all these objectives.

29. As far as the first objective is concerned there is general agreement that with additive requirements a regulator should not attempt to cover extreme market conditions with each and every element. To do so would lead to such high capital requirements overall that firms would be hampered in their ability to hold positions. This is particularly the case in those countries where the base requirement



provides a substantial extra cushion for all firms. It is in any case unlikely that a large diversified firm would have problems in all aspects of the business at the same time. The other elements of the requirements (counterparty risk and position risk for bonds) therefore also provide a cushion in short-term extreme periods.

30. A concern is that the risk of firms failing is significantly increased if they are able to maintain very large books with a very small capital base relative to risk.
31. To meet the second objective the regulators believe that it is important to look at past price volatility. Although past price volatility cannot provide a perfect guide to future volatility, either of individual stocks where there could be substantial specific risk, or for the market as a whole in extreme periods, it will give supervisors an important guide to the level of requirements needed to capture the risks and therefore greater confidence in the requirements set.
32. The third objective is very important but has different implications in different markets. There is general agreement that lack of liquidity should be reflected in the requirements, although it is accepted that there are different ways of achieving this which are appropriate for different markets. For some markets graduated requirements for marketable equities are thought to be appropriate whereas this is not the case for others - in part because there is a concern about how it could be achieved given the way markets change and also because there is a concern that in some markets tiering is complicated and subjective and could widen spreads and reduce liquidity for lower grade equities.
33. Given the different practices in relation to tiering, harmonization of requirements could only be achieved at a minimum level linked to liquid equities in a particular

market. But regulators should apply higher requirements (than the minimum) to positions in some equities to capture lack of liquidity. This would give scope for those countries with a tiered approach to continue to impose higher requirements for less liquid equities than for liquid equities and for other countries, which want a single requirement for all marketable equities, to have a higher requirement across the board.

34. To meet the third objective it is essential that the requirements for arbitrage books (involving a wide variety of instruments such as index futures, warrants, convertibles and options) should reflect the almost negligible risks which some of these positions entail. Excessive requirements relative to the risks would simply discourage firms from carrying out this kind of activity, because the low returns (relative to the large positions taken) would not give an adequate return on capital employed.
35. The third objective also influences the attitude towards short positions. In some auction markets broker dealers have traditionally taken long positions and only modest short positions. Indeed rules governing market practice in some auction markets are designed to discourage firms from running short positions.
36. In contrast, in other markets (both some auction markets and competing market maker systems), firms run more balanced books. In these markets the concern is that requirements which penalized such books (by rising the more balanced the book) would discourage firms from running their books in this way leading to more risk in the market.
37. To take account of these different concerns it would be necessary for harmonized requirements (which would provide a minimum) to avoid a treatment of risk which would have a perverse effect (by discouraging either arbitrage activity or balanced books) in some markets. The minimum standard

could, however, be built on, with extra requirements, to discourage firms from taking short positions in markets where such behaviour was seen as adding to risk.

38. The fourth objective is a major concern for regulators in many markets. Finely tuned requirements which closely reflect risk are more complex and require the firms to invest in systems to handle them. It enables firms to have lower capital requirements and also the firms can make use of the systems for their own risk management purposes. In any international standard a balance will therefore need to be struck between capturing risk closely and the costs of doing so.



June 1990

COMPARISON OF POSITION RISK  
REQUIREMENTS FOR DEBT SECURITIES

Report of Working Group No. 3  
of the International  
Organization of Securities  
Commissions



This paper compares the position risk requirements for debt securities applied to non-bank securities firms in France, Japan, the US and the UK and discusses the similarities and differences of the rules among four countries.

## I. Position Risk Methodology and Requirements

(Japan )

### (a) Categorization

For domestic (yen-denominated) debt securities, there are three categories depending on the type of issuer.

- Government Bonds
- Qualifying Bonds
- Other Bonds

Qualifying Bonds include government guaranteed and prefectural/municipal bonds, bank debentures, and corporate bonds with a BBB or better rating. Other bonds include privately placed bonds or those with a rating of BB or lower.

### (b) Risk Weights

For each category of securities, risk-weights are determined according to the maturity period. The risk weights of domestic debt securities will be as follows.

Maturity period	Government Bonds ("JGBs")	Qualifying Bonds	Other Bonds
0-3 months	0.20%	0.30%	0.60 %
3-6 months	0.40	0.65	1.30
6-12 months	0.75	1.20	2.40
1-3 years	1.40	2.25	4.50
3-5 years	2.00	3.20	6.40
5-7 years	2.50	4.00	8.00
7-10 years	3.20	5.10	10.20
10-15 years	4.20	6.70	13.40
over 15 years	5.00	8.00	16.00

Companies wishing to reduce compliance costs are able to choose the simplified method with broader maturity band. The risk weights table under the simplified method is as follows.

Maturity period	Government Bonds	Qualifying Bonds	Other Bonds
0-12 months	0.75%	1.20%	2.40 %
1-5 years	2.00	3.20	6.40
5-10 years	3.20	5.10	10.20
over 10 years	4.20	6.70	13.40

As for foreign currency denominated bonds, the determination of the risk weights will be similar to domestic bonds.

## (a) Categorization

There are three categories of securities which may be included in the debt securities calculations:

- Government Bonds
- Qualifying Debt securities
- Other Bonds

Qualifying debt security shall mean high quality bond issued other than by a government in its domestic currency. For each category, the risk weight is determined according to maturity period of the securities.

## (b) Risk Weights

The risk-weight table is as follows.

Maturity	UK	Sterling Denominated Other Fixed Income Securities	Deutschemark Sovereign(#1)	Deutschemark Denominated Other Fixed Income Securities	US Treasuries
	Gilts				
0-3 months	0.25%	0.50%	0.10%	0.25%	0.25%
3-6 months	0.50	1.00	0.25	0.50	0.50
6-12 months	0.75	1.50	0.50	1.00	0.75
1-2 years	1.50	2.75	0.75	2.00	1.50
2-5 years	2.75	4.25	1.75	4.00	2.50
5-10 years	3.25	5.00	2.50	5.00	3.50
10-20 years	3.50	5.75	3.00	5.50	4.50
over 20 years	3.50	6.50	3.00	5.50	4.50

Maturity	US Dollar Denominated Other Fixed Income Securities	Yen Sovereign(#2)	Yen Denominated Other Fixed Income Securities	Irish Gilts	Irish Punt Denominated Other Fixed Income Securities
	0-3 months	0.50%	0.10%	0.25%	0.50%
3-6 months	1.00	0.25	0.50	1.00	1.25
6-12 months	1.50	0.50	1.00	1.50	2.00
1-2 years	2.75	0.75	2.25	2.75	3.50
2-5 years	4.00	1.50	4.00	3.25	5.50
5-10 years	5.00	2.25	5.00	3.75	6.25
10-20 years	7.00	3.00	5.50	4.25	8.75
over 20 years	7.50	3.00	6.00	4.25	9.50

Maturity	European Currency Unit Denominated Fixed Income Securities	Other Currency Denominated Fixed Income Securities	Non-qualifying Debt Securities %
	0-3 months	0.50%	
3-6 months	1.00	1.25	
6-12 months	1.50	2.00	
1-2 years	2.75	3.50	
2-5 years	4.25	5.50	
5-10 years	5.00	6.25	10



NOTES

(+1) Deutschemark denominated fixed income securities issued by the Federal Republic of Germany

(+2) Yen denominated fixed income securities issued by the Japanese Government

(U. S.)

(a) Categorization

There are following category by types of issuer.

- Securities issued or guaranteed by the U.S. Government and its agencies
- Municipal securities
- Securities issued or guaranteed by the Canadian Government
- Nonconvertible debt securities rated in one of the top four categories
- Others

(b) Risk Weights (Hair Cut)

Maturity	Securities Issued/ Guaranteed by the US Gov't or its Agencies & Canadian Gov't(+1)	Municipals Bonds (+2)		Non-Convertible Debt Securities rated in one of the top four categories	Others I (+3)	Others II (+4)
0-1 months	0 %	1.00 %	0 %	2.0 %	30 % (15 %)	40 %
1-3 months			1/8 %			
3-6 months			1/4 %			
6-9 months			3/8 %			
9-12 months			1/2 %			
1-2 years	1.50 %	2.00 %	3/4 %	3.0 %		
			1.00 %			
2-3 years	2.00 %	3.00 %		5.0 %		
3-5 years	3.00 %	4.00 %		6.0 %		
5-7 years	4.00 %	5.00 %		7.0 %		
7-10 years		5.50 %				
10-15 years	4.50 %	6.00 %		7.5 %		
15-20 years	5.00 %	6.50 %		8.0 %		
20-25 years	5.50 %	7.00 %		8.5 %		
over 25 years	6.00 %		9.0 %			

(+5)

NOTES

(+1) Subcategorization is made for the U.S. government bond category. The subcategories are shown by dotted lines.

(+2) There are two sets of percentages for municipal securities.

The right column applies to those that have a maturity of less than 732 days at the time of issuance.

The left column applies to all other municipal securities.

(+3) "Others I" category includes those securities that have three or more market makers.

The figure in the parenthesis shows a percentage used in the alternative method.

(+4) "Others II" category includes those securities that have one or two market makers.

(+5) In the case of primary dealers, these percentages are adjusted as 75% of those figures that apply to each category.

(France)

(a) Categorization

- There is no category either by type of issuers or maturity.

(b) Risk Weight

- 4% in all cases.

The attached Annexes compare the risk weights applied in Japan, the U.K. and the U.S. for various types of issuer of fixed rate bonds.

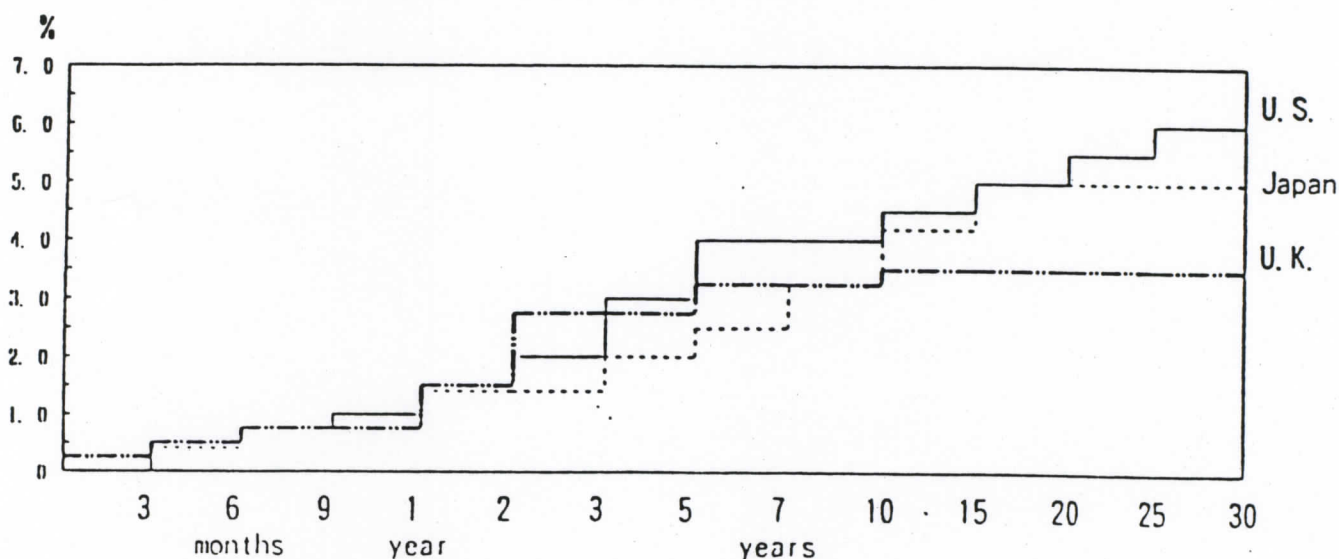
## 2. Basic Philosophy of the Regulations in Japan, U.S., U.K. and France

These four countries adopt the same approach to administration of risks which are associated with a firm's bond portfolio: positions are recognized on a trade date basis; these positions are marked to market; and the aggregate amount of calculated risks are deducted from firms' capital.

With respect to risk weights, French regulations apply a single risk weights of 4% to all bond positions. In the other three countries, risk weights are determined according to the type of issuers and maturity.

In these three countries, the longer the maturity is and, therefore, the higher the price volatility, the greater the risk weight is. The risk weights also differ according to the creditworthiness of the issuer.

Risk weights are determined by the volatility and the liquidity of the bonds. U.K. risk weights for government bonds are calculated with a 95% confidence interval over 1 week, in the U.S., 90% over 1 month (which is the same as the U.K.) and in Japan 95% over one month. In other words, a greater risk weight is applied to those bonds for which the issuer's creditworthiness is lower, takes longer time for liquidation, and whose maturity is longer (that is, their volatility is higher).



In France, a single risk weight of 4% is adopted in order to simplify the regulation, and the weight seems to reflect the market risk.

From the standpoint of simplification of the regulations, the Japanese regulator adopts an alternative and simplified method for those firms whose bond position is comparatively small. This alternative method, which allows less detailed categorization in terms of maturity, is adopted so that the compliance cost of these firms are lowered. This method, however, contains risk weights which are more conservative (greater) than those of the regular method. The U.K. regulators also offer simple high requirements for such firms.

## II Summary of the Offset Rules

### 1. Summary

[Japan ]

The offset will be allowed only to Japanese Government Bonds (JGBs) and qualifying bonds. Complete offset will be allowed only between long and short positions of the same issue. In other cases, the offset will be allowed only to the extent that the risk is actually reduced. Thus, even in the case of holdings of two government bonds with the same maturity a complete offset will not be allowed because, in the short term, the prices can move apart significantly.

The offset coefficient, which reflects the interrelations of the volatility among these bonds, will be used for offsetting. The offset coefficient is 0.6 for JGBs against JGBs, 1.0 for JGBs against qualifying bonds and 1.0 for qualifying bonds against qualifying bonds.

However, long and short positions in bonds may not be offset against each other when the duration of one position is less than one year and that of the other is a year or more. In addition, the offset is not allowed for other bonds. The offset will not be allowed when the alternative method is used.

The offset will be allowed for foreign bonds in the same manner as the domestic bonds as long as the currency is the same.

[U. K. ]

The basic philosophy of the offset is the same as Japan's. The detailed offset coefficients are used for each currency category of qualifying bonds. The offset will be allowed only between the position of the same maturity band and adjacent maturity band.

Basically, a complete offset will be allowed only between long and short positions of the same issue. No offset is permitted between good quality and low quality bonds or between two low quality issues because the low quality issues are subject to considerable specific risk which makes such hedges highly imperfect. The offsets allowed in the U.K. for Sterling fixed income instruments are set out below:

STERLING	Same Maturity Band	Adjacent Maturity Band
Gilts v Gilts	0.55	0.65
Gilts v Other Qualifying	0.95	1.0
other Qualifying v other Qualifying	0.75	0.85

(U.S.)

Instead of specifying the offset coefficient, the U.S. rules allow for offsetting on positions to which risk weights (hair cut percentages) are applied.

(a) Complete Offset

As for bonds issued or guaranteed by the U.S. government, its agencies and the Canadian government, a complete offset is allowed between long and short positions in the same subcategory of maturity.

The long and short positions of the same issue will also be completely offset. In addition the long and short positions of the different categories of maturity will be offset under certain circumstances.

(b) Partial Offset

For U.S. municipal bonds and bonds rated in one of the top four categories, the greater of the long or short positions is regarded as the position at risk --- that means offset coefficient of 1.0 is used for matched positions. In some cases, complete offset can be allowed between the positions of the bonds with rating in one of the top four categories under certain circumstances.

For other bonds, a hair-cut rate of 30% shall be applied first to the market value of the greater of the long or short positions regardless of the category of maturity. Second, in the case the market value of the lesser of the long or short positions 25% of the market value of the greater of the long or short positions- a hair-cut rate of 15% shall be applied to these excessive positions (that means, an offset coefficient of 1.0 is used for a quarter of the matched position and an offset coefficient of 1.5 is used for the rest of the matched position).

When the alternative method is used the hair-cut rate for the first step is 15% and that of the second step is 30%.

(France)

French regulations contain general provisions which allow for partial offsetting.

20% of the matched part of long and short positions of bonds of the same type and the same issuer is regarded as the position at risk --- that means an offset coefficient of 0.2 is used for matched positions.

## 2. Derivative Products

All four countries have rules for the treatment of financial futures or options on debt or interest rate products. The rules basically provide for these instruments to be treated individually or under separate hedging arrangements in which case the underlying actual or notional debt security is included in the offsetting rules referred to below. In one country, only exchange traded derivative instruments are allowed as an offset against the underlying cash instrument. In the case of options, three of the countries have regard in the allowable treatment to the extent to which the option is likely to be exercised. In those countries which investment firms which undertake interest rate swaps the rules treat the swaps for the purposes of market risk as notional government bonds.

### 3. Comparison of the offset rules

All four countries have offset rules between long and short positions.

Japan, the U.K. and France do not allow for complete offset other than between the long and short positions of the same issue. And in the U.S., a complete offset is allowed only in the same subcategory of the bonds issued or guaranteed by the government or its agencies.

The offset coefficients, which reflect interrelation of the volatility between the long and short positions that are being matched, is used for offset. The offset is allowed to the extent the risk is reduced. The reason for not allowing complete offsets is that prices can move apart significantly in the short term.

#### SUMMARY OF % OFFSETS FOR GOVERNMENT BONDS IN THE SAME MATURITY BAND

FRANCE  
20%

JAPAN  
60%

U. K.  
55%

U. S.  
100%



## I ANNEX A

## COMPARISON OF RISK WEIGHTS

## GOVERNMENT BONDS

MATURITY	<u>JAPAN</u>	<u>U. K.</u>	<u>U. S.</u>
0-3 months	0.2%	0.25%	0 %
3-6 months	0.4	0.50	0.50
6-12 months	0.75	0.75	0.75-1.00
1-2 years	1.40	1.50	1.50
2-3 years	2.00	1.50	2.00
3-5 years	2.50	2.75	3.00
5-7 years	3.20	3.25	4.00
7-10 years	4.20	3.25	4.00
10-15 years	5.00	3.50	4.50
15-20 years	5.00	3.50	5.00
20-25 years	5.00	3.50	5.50
25-30 years	5.00	3.50	6.00





## ANNEX B

## COMPARISON OF RISK WEIGHTS

## GOOD QUALITY CORPORATE

MATURITY	<u>JAPAN</u>	<u>U. K.</u>	<u>U. S.</u>
0-3 months	0.30 %	0.50%	2.0 %
3-6 months	0.65	1.00	2.0
6-12 months	1.20	1.50	2.0
1-2 years	2.25	2.25	3.0
2-3 years	2.25	4.25	5.0
3-5 years	3.20	4.25	6.0
5-7 years	4.00	5.00	7.0
7-10 years	5.10	5.00	7.0
10-15 years	6.20	5.75	7.5
15-20 years	8.00	5.75	8.0
20-25 years	8.00	6.50	8.5
over 25 years	8.00	6.50	9.0



## ANNEX C

## COMPARISON OF RISK WEIGHTS

## POOR QUALITY CORPORATE

MATURITY	<u>JAPAN</u>	<u>U. K.</u>	<u>U. S.</u>
0-3 months	0.6%	5.0%	30 %
3-6 months	1.3	5.0	30
6-12 months	2.40	5.0	30
1-3 years	4.50	10.0	30
3-5 years	6.40	10.0	30
5-7 years	8.0	15.0	30
7-10 years	10.20	15.0	30
10-15 years	13.40	15.0	30
over 15 years	16.00	15.0	30



**THE BASE REQUIREMENT AND THE MINIMUM REQUIREMENT  
FOR CAPITAL**

**REPORT OF WORKING PARTY N° 3 OF THE INTERNATIONAL ORGANIZATION  
OF SECURITIES COMMISSIONS**



It is also often the case for members of the futures markets (SFE : net tangible assets exceeding \$20 000 for introducing brokers or associate members, \$50 000 for full associate members, and \$250 000 for floor members), and the levels are often very high, reaching FF 750 million on the MATIF for General Clearing Members.

5. The result is the same in countries that apply the haircuts technique. In the United States, the SEC regulation stipulates that the net capital, defined as the net worth less the haircuts, must not be lower than \$25 000 (indebtedness method) or \$100 000 (other method). The SEC has proposed to raise its net capital requirements to \$ 250 000. Similarly, in Canada, the liquid capital less the haircuts and "net free capital required" must at least equal \$75 000 for SRO members and \$25 000 for others.

6. The authorities are motivated by the need to ensure that companies fulfil their obligations to their clients by providing financial, technical (notably computer) and human resources.

It is not advisable to allow a firm to start up a financial activity if initial investments do not guarantee its capacity to serve its clientele satisfactorily.

7. Finally, the authorities desire warning thresholds in order to be able to take action before a firm goes bankrupt, by organizing a takeover by another company, appointing a provisional administrator, issuing injunctions aimed at protecting the firm's clientele, or transferring its positions or accounts to another intermediary.

The risk-based requirements will usually be higher than the minimum requirements. However this might not be the case and therefore there is a need for a floor.

For this reason, minimum capital is not simply a condition necessary to a company's start-up ; the capital must then be maintained permanently.

### **OBJECTIVES OF THE BASE REQUIREMENTS**

8. Base requirements are proportionate to an indicator of the firm's activity.

#### **- Expenditure volume**

The UK and the Japanese approach are to tie the requirement to a proportion of a firm's expenditure (excluding those items of expenditure which it could quickly reduce or eliminate if necessary eg, staff bonuses, interest payable on borrowing).

The expenditure is calculated on the basis of the most recent audited accounts. When a firm is starting up, the calculation is based on the expenditure figure that appears in the firm's business plan, a figure which can be modified by the authorities.

As we have seen, this regulation is accompanied by a fixed minimum, but in the UK the expenditure rule is more demanding. For most major British firms the base requirement represents around 20 % of the total capital requirements, including risk-based requirements.

#### **- The amount of assets handled**

For French portfolio managers, taking into account the assets handled to set a base requirement for capital does not measure a market or counterparty risk, since these intermediaries are in no way acting on their own behalf and do not receive clients' funds or securities. It represents a business volume.

### - The number of professional negotiators

The Ontario Securities Commission in Canada has completed the haircuts method by also deducting "net free capital required" from liquid capital. Net free capital required includes a sum for each professional negotiator (specialist, market-maker, trader).

### - Business requirements

Volume of business requirements can raise difficulties : the UK authorities abandoned consideration of such a test because it would provide too high a requirement for firms such as inter-dealer brokers with huge turnover but very low risk.

However, french regulators require that brokerage firms maintain net equity at least equal to a certain percentage of their customers' open positions.

The SEC's alternative method requires a securities firm to have net capital equal to 2 % of customer related receivables. The basic method requires a broker-dealer to have net capital equal to 6 2/3 % of customer related liabilities as well as certain other liabilities. Generally, a firm is free to choose either method. As a securities firm's business expands its receivables and liabilities expand. The SEC's approach requires additional capital to carry the expanded business. The 2 % test has proven to be a flexible "volume sensitive" barometer of the expansion and contraction of the firm's business, particularly for the larger U.S. retail houses. As their business increase, their customer receivables increase. These approaches provide for a capital cushion and limitations on leverage of the customer related business.

9. Firms in the securities business face various unmeasurable risks different from the specific risk of price volatility associated with taking positions and settlement risks which are clearly measurable. A sudden fall in a firm's income relative to its expenditure may lead a firm into difficulties, particularly where trading profits form the major part of revenue and the firm cannot reduce its overheads sufficiently quickly to offset this decline. A firm could also encounter unexpected, one-off risks which it may or may not be able to avoid.

Some countries set up base requirements because they consider that the firm must be able to continue to serve its clients promptly despite losses or a drop in earning. It must be able to continue to pay its staff, in the interest of the client, who must be given time to find another intermediary.

10. Even for measurable risks, there may well be imperfections or hitches in the conception or application of the rules. Both sophistication and simplicity have their price. Consequently, all regulations have a degree of approximation. Significant base requirements can therefore be adopted to compensate for these imperfections.

### Towards an international harmonization ?

First question : should the requirements applied to banks and non-banking companies be identical ?

11. There are three obstacles facing this type of alignment.

- The larger of a bank's balance sheet is not assessed at market prices. Consequently, losses on the various markets are not immediatly visible. A significant minimum requirement is therefore necessary to take into account real losses that do not yet appear on the books.



In certain countries, however, the authorities are beginning to allow banks to isolate their trading portfolio for evaluation at market prices. In many countries this evolution in banking regulations is only just beginning however, and the line drawn between trading and non-trading portfolios is likely to be rendered subjective by bringing into play the company's "intention". From this point of view, regulators of non-banking companies will always have a reason for not setting their minimum capital at a level as high as that for banks.

- In certain countries, such as West Germany and Switzerland, banks can operate in all areas, from credit to market-making. In other countries, such as France, Italy or Spain, the banks are theoretically excluded from the transferable securities negotiations monopoly, but are a dominant force on the market.

The draft Directive on investment services will, in the same way, enable a credit institution to provide every type of financial service throughout the EC, without having to obtain further approval as an investment company.

The multiplicity of potential risks to which the banks are subject justifies higher levels of minimum capital.

- Finally, the definition of capital differs, not only between banking and non-banking regulators but also within the latter group. It would be illogical to align capital requirement levels without harmonizing these definitions. It is not possible to rectify the discrepancies between definitions by different compulsory levels. Certain aspects render the banking definition less restrictive : some non-banking company regulators do not take illiquid assets into account in the capital. Other aspects, however, such as the inclusion of subordinate loans or external guarantees in the capital of non-banking companies, render the banking definition more restrictive.

12. One possible fear is that non-alignment of banks and non-banking companies' minimum requirements could create competition distortions : conditions of profitability for own funds would not be the same. This risk does not exist in countries such as Japan or the United States, where there is a distinct separation between the activities that banks and securities firms are allowed to carry out.

There is no risk either in countries such as West Germany, where banks are the only type of financial intermediary.

The risk is a real one, however, in countries with mixed systems (banking and non-banking).

Furthermore, authorities must make sure that firms do not get around the national regulation by setting up an activity abroad and carrying out an activity in their country of origin through a mutual acknowledgement agreement between the authorities, or, within the EC, through the free provision of services.

From this viewpoint, it could be useful to distinguish between minimum capital levels in order to dissuade companies from setting up "false banks", which could trade in government bonds for example, without any credit ratio requirements.

More generally, regulators have to take into account the increasing competition between banks and securities firms on international markets.

13. Making the choice between uniting all the activities of one group within a universal entity and allowing each separate entity to specialize is part of a financial company's daily routine and management method, which depends notably on its clients' needs.

The financial requirements regulation must therefore remain neutral and not incite companies to turn their activities into subsidiaries without another good reason or to encourage banks to re-absorb the activities of specialized securities subsidiaries.

However, this preoccupation cannot lead to the alignment of the minimum requirements of banks and non-banking companies. A significant base requirement for non-banking companies would suffice.

The neutrality of the regulation should therefore be sought more in risk-based ratios.

**Second question : should minimum requirements be set at very low levels ?**

**14. It is necessary to activate competition between companies to ensure optimal market efficiency. Large companies capable of injecting considerable initial capital should not be protected from small firms which can play an innovating role on the market.**

This argument applies above all to certain specific activities in which a small firm can specialize and contribute productivity gains.

In this case it would not be justified to set minimum capital levels too high.

**15. Companies involved in an international of diversified activity need greater material, financial and human resources for technical reasons.**

Authorities' necessarily take more time to react in cross-border operations. Even when the exchange of information on financial requirements regulation is well organized, a company's country of origin will not be as promptly alerted if the company's situation deteriorates on a foreign market.

Authorities in the country of origin consequently need the company's base or minimum requirement to be set at a higher level than that necessary for simple operations on the domestic market.

**16. It is neither possible nor desirable to harmonize market members' minimum requirements for capital on derivative markets.**

Every market has different organisation and operating methods. On the futures markets, for example, the base requirement should be higher if clearing is carried out on a net basis than on a gross basis.

Market security can also be guaranteed by firms' making an immediate repayment to the clearing house of deposits received from their clients.

A market can decide to admit only those members with a very high level of activity elsewhere. An intervention on this market cannot, in this case, threaten the company's creditworthiness, since it is merely of secondary importance.

Each derivative market must be able to fix its operating - and notably financial - regulations under the control of the authorities responsible for ensuring that market security is not sacrificed for competition reasons. These regulations have to cover special risks which members of derivative markets face.

### 3rd question : How can the base and minimum requirements be distinguished ?

17. Excluding market members, four categories of firms can be identified.

- Firms acting solely on their own behalf (e.g. locals firms on a futures market).

In this category, minimum capital does not need to be set a very high level, as the security of clients' funds is not at stake.

Furthermore, the financial requirements regulations covering the market risk guarantee that capital is proportionate to risks.

The regulations can include in the base requirements a sum of capital for each of the firm's traders or for each value handled by the firm in the case of specialists or market-makers.

- Firms acting on behalf of a third party, but not receiving clients' funds or securities

The minimum capital of these firms must be set at a higher level, since a minimum of material, financial and human resources is indispensable to enable them to meet clients' needs promptly.

Furthermore, it is advisable that these firms also have a base requirement proportionate to their activity. As they do not intervene on their own behalf on the markets, there is no rule covering the market, counterparty or liquidity risk to require that capital be increased in line with the size of the company.

A base requirement calculated according to expenditure or the volume of assets handled can be envisaged here.

In this particular case, the volume of assets handled seems to be better adapted, since it is directly linked to the company's activity. As the objective of the base requirement is to compel firms to satisfy their resources obligation, the volume of expenditure does not seem to be the best parameter as it is the direct result of these resources.

- Firms which receive clients' funds, but which are subject to a segregation requirement or benefit from a full performance guarantee (e.g. brokers in several countries).

These firms can be held responsible to their clients in the case of counterparty default on the market, or to the market in the case of default by a client.

The minimum capital must therefore be set at a higher level than the previous category.

However, the firm's creditworthiness or liquidity must normally be guaranteed by regulations covering market and counterparty risks.

One of the main risks for these companies lies in a slump in market activity. It is therefore useful to provide a cushion of capital based on (1) a proportion of a firm's previous year's expenditures or (2) a firm's volume of business measured by criteria such as customer open positions, customer receivables or most liabilities.

For some regulators the purpose of the base requirement is also to provide an additional buffer to help the firm through extreme periods (a very sharp fall in the equity market, for example) which might not be covered by the specific position risk requirements. For the base requirement to fulfil the role of additional buffer in the requirements it must be additive.

According to other regulators, this requirement proportional to the volume of expenditure should not intervene in addition to risk-based regulations, which should normally take priority, as they permit a guarantee of security at minimal cost to own funds.

**- Firms receiving clients' funds, without a segregation obligation or full performance guarantee**

All that has been said for the previous category is valid here.

In addition, there is no mechanism for this category guaranteeing a full return of clients' funds and securities if the firm goes bankrupt.

These firms' risk is therefore similar to that of banks. They carry out banking operations (i.e. they receive clients' funds, but are not forbidden to use them for their own purpose). The conditions governing the profitability of their own funds must therefore be likened to those applied to banks and their minimum capital must be higher.

1. At its meeting held in London on 29th December 1989, the IOSCO Working Party n° 3 agreed to prepare a paper on :

"The base requirement for capital, otherwise called the leverage requirement, which would also include material on absolute minimum requirements for securities firms".

### Definition

2. The purpose of this paper will therefore to examine any capital standard that is not directly linked to one of the two following risks :

- The market risk (i.e. the risk of a drop in an asset's value or of an increase in the value of liabilities on the market) ; the illiquidity risk (i.e. the risk of an asset not being transferable), can be considered as an aspect of the market risk ;

- The counterparty risk (i.e. the risk of default by a third party).

The risk linked to the concentration of assets or liabilities is not considered as a specific risk here, but as a factor that heightens one of the two preceding risks. It is therefore not included in this paper.

3. It ensues from the above definition that requirements for minimum capital must be included in this paper. There is in fact some link between the minimum capital requirements and the base requirements, as, in certain regulations, business must have a capital that is at least equal to a fixed minimum level or a level representing the business or liabilities volume, whichever is the higher.

This is the case, for example, in the U.K. (see TSA ruling), in Australia (regulations applicable to securities dealers), in France (for portfolio management firms) and in the United States (second method accepted by the SEC).

However the objectives of the minimum requirements and the objectives of the base requirements are different.

Thus, the Japanese authorities intend to maintain their minimum capital requirement, despite the introduction of regulations that include requirements based on expenditure volume.

### OBJECTIVES OF THE MINIMUM CAPITAL REQUIREMENTS

4. In many countries, the concept of minimum capital remains essential, at least for certain business categories. The concept is used directly when approval is subject to forming a minimum capital. This is the case in countries with universal banks, such as West Germany (minimum capital for a partial license : DM 3 millions), or in countries with a mixed system, such as Italy and France (minimum of Lira 50 billion for the capital of merchant bank subsidiaries of Italian commercial banks ; minimum capital of FF 25 million for French brokerage firms).

In Hong Kong, the net capital for corporate dealers is at least equal to \$5 million, and for individual brokers, \$1 million.



DEFINITION OF CAPITAL

Report of Working Group No. 3  
of the International  
Organization of Securities  
Commissions

October 22, 1990





## I. Preface

The Technical Committee of the International Organization of Securities Commissions ("IOSCO"), comprised of representatives of securities regulators of twelve countries, <sup>1/</sup> held its first meeting in July, 1987. At this meeting, six working groups were established to study various aspects of the international securities markets. Under the Chairmanship of Mr. Jeffrey R. Knight, formerly of the International Stock Exchange, Working Group Number 3, with representatives from France, Japan, the United Kingdom, and the United States, was set up to study the issues related to capital adequacy for securities firms from a world-wide perspective.

That group produced a report entitled "Capital Adequacy Standards for Securities Firms." Among other things, the report concluded that there is a need for a common world-wide conceptual framework regarding the capital requirements for non-bank securities firms. At its annual meeting in September, 1989, IOSCO endorsed the conclusions of the report and asked the Technical Committee to continue its work in this area, to consider how a more detailed common framework could be developed, and to consider ways in which international financial supervisory arrangements could be improved.

With the concurrence of the Technical Committee, the Working Group was expanded to include representatives from West Germany, the Netherlands, Sweden, and Switzerland. In addition,

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<sup>1/</sup> The twelve countries are Australia, Canada, France, West Germany, Hong Kong, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.

representatives from the Basle Committee on Banking Supervision have participated in the Working Group's meetings. The Working Group completed papers on the make up of capital, the base requirements, and position risk for equities and debt with respect to non-bank securities firms.

This paper examines: (1) the need for an adequately designed capital base; (2) the definition of capital for non-bank securities firms in France, Japan, the U.K., and the U.S.; (3) the definition of capital for banks; (4) the reasons for differences in the definitions of capital for banks and non-bank securities firms; and (5) the way in which capital can be defined for non-bank securities firms in order to facilitate a more harmonized approach.

## II. The Need For An Adequately Designed Capital Base

The equity market crash in October, 1987, underlined the fact that one of the most important tasks facing regulators and securities participants is ensuring the financial integrity and responsibility of the world-wide securities market place. In the past decade, risks assumed by firms engaged in the securities markets have increased dramatically. Today, firms risk a substantial amount of their capital in complex trading strategies involving securities, futures (both financial and commodity), commodities, currencies, and interest rate swap vehicles. The failure of a large player in the securities markets could seriously impact other major firms, clearing systems, and lenders as well as the overall functioning of the financial systems. To

provide adequate protection against such an occurrence, a capital rule must provide for an adequately designed capital base. An adequately designed capital base protects counterparties, customers, and creditors by reducing the possibility that financial problems at a firm will cause it to default on its obligations. It enables a firm to absorb losses while continuing to operate in a financially sound manner. An adequately designed capital base fosters confidence in the securities firm and the industry.

### III. Definition of Capital for Non-Bank Securities Firm

Generally, the definition of capital for non-bank securities firms includes their net worth (i.e., assets minus liabilities) plus subordinated liabilities. In some regulatory regimes, guarantees are permitted as a substitute for capital. In all regulatory systems, though, the degree to which subordinated loans or guarantees can be used is limited relative to net worth.

#### A. Net Worth

In France, Japan, the U.K., and the U.S., net worth generally includes share capital, such as common or preferred stock, and retained earnings (i.e., net earnings of the firm that have been retained in the business). In computing net worth, securities positions are marked-to-the-market to reflect current value. This adds, after allowance for tax, any gain to and deducts any loss from net worth even though no transaction recognizing the gain or loss has taken place. However, in Japan only 90% of the unrealized gains on securities is included in net

worth.

B. Subordinated Loans

In addition to net worth, securities regulators in France, the U.K., and the U.S. permit the inclusion of subordinated loans as part of the capital of a securities firm. This is because subordinated loans possess unique characteristics. These unique characteristics include: (1) subordinated loans provide for the infusion into the securities firm of liquid assets in the form of cash or, under certain conditions, securities <sup>2/</sup>; (2) they are subordinated to the claims of all present and future creditors, including customers; (3) they must be approved for inclusion as regulatory capital by the securities firm's regulator; (4) they may not be repaid if the repayment would reduce regulatory net capital below required amounts; (5) and their initial term must be a specific period of time.

To be counted as capital in the U.S., subordinated loans must have an initial term of at least one year. A securities firm may also have a revolving subordinated loan agreement (committed line of credit). Only that portion of the committed line of credit drawn down by the securities firm for a period of at least one year can be included as capital. The committed line of credit provides for prepayment of that portion drawn down

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<sup>2/</sup> In the U.S., securities can be infused into the securities firm through the use of a secured demand note. A secured demand note is a receivable from a subordinated lender collateralized by securities which may be used in the business of the borrowing securities firm as if equity capital. The collateral, if equity securities, must exceed by thirty percent the receivable amount.

within a year upon approval by the firm's regulator. Approval for prepayment will be provided only if after giving effect to such prepayment and all other scheduled prepayments to occur over the succeeding six months a firm can satisfy certain rigid tests relating to its net capital. In addition, a securities firm can count as capital subordinated loans that have a stated term of no more than 45 days that are used to participate in underwriting activities. This can be done only three times a year. Generally, small and medium sized U.S. securities firms use the 45 day subordinated loan agreement provision.

The U.S. capital rules prohibit subordinated loans from any person from exceeding 70% of the securities firm's total of net worth and subordinated loans for more than ninety days. A subordinated loan that is contributed by an owner of the securities firm with an initial term of at least three years and a remaining term of at least one year may be treated as net worth, not a subordinated loan, for purposes of this restriction.

The U.K. distinguishes between long and short-term subordinated loans. Long-term subordinated loans must have a term of over two years but may be repaid upon three months written notice of early repayment with the consent of the regulator. Short-term subordinated loans must have a term of at least two years but may be repaid upon two days written notice of early repayment with the consent of the regulator. The U.K. short-term subordinated loan approach is similar to that used by the U.S. for revolving subordinated loan agreements. However, in

the U.K., the committed undrawn line of credit can be included as capital subject to certain restrictions. This is not permitted in the U.S. In the U.K., short-term subordinated loans may only be used to cover position risk requirements ("haircuts") <sup>3/</sup> and counterparty risk requirements <sup>4/</sup> subject to the constraint that short-term subordinated loans plus committed undrawn lines of credit must not exceed the total position risk requirements. In the U.K., all subordinated loans and facilities to draw down subordinated loans may not in aggregate exceed 400% of net worth less intangible assets.

In France, subordinated loans are also included as capital for the brokerage firm. In France, subordinated loans must be approved for inclusion as regulatory capital by the market authority and all subordinated loans may not in aggregate exceed 300% of net worth.

Firms incorporated in Japan are not permitted to include subordinated loans as capital. However, a branch of a foreign firm operating in Japan is permitted to include subordinated loans as capital in the calculation of branch capital.

#### C. Guarantees

In the U. K., securities firms are permitted to include guarantees that have certain characteristics. The funds called

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<sup>3/</sup> Position risk requirements require a securities firm to have capital for potential losses that can be incurred as a result of market fluctuations.

<sup>4/</sup> Counterparty risk requirements require a securities firm to have capital to reflect the risk of non-performance by clients and counterparties.

for under the guarantee must be available to the firm or the regulator on short notice; the firm cannot repay the funds without the consent of their regulator; and the firm cannot repay the funds if repayment would cause the firm to breach its capital requirements. The guarantor must be a bank or, with the prior approval of the regulator, an affiliate of the securities firm or another financial institution. Guarantees in the U.K. may be used to meet up to thirty percent of the firm's base requirement.

France also permits the use of guarantees from banks for members of the stock exchange and the MATIF. The use of guarantees have developed in France because of high entrance requirements, particularly on the MATIF. The funds called for under the guarantee must be available to the market authority on short notice. The securities firm can substitute guarantees for capital only after the market authority has approved the guarantee. In France, guarantees may not exceed three times net worth.

Neither Japan nor the U.S. permits the use of guarantees as capital.

D. Securities Firms' Need for Capital Other Than Net Worth

The allowance of subordinated loans as capital for securities firms must be understood in the context of the structure of the securities business and the approach taken by securities regulators for securities capital requirements. 5/

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5/ After the proposals announced by Japan last year and now in effect, capital requirements for non-bank securities firms  
(continued...)

Because securities regulators have capital requirements that are closely tied to the risks associated with a securities firm's business, they allow a firm to include subordinated loans in the calculation of capital. This enables a firm to meet its fluctuating capital requirements that result from changes in the nature and size of its trading book. For example, a securities firm may need to substantially increase the size of its trading book to handle a large institutional trade or to participate in a large underwriting. Also, it may have unexpected increases in its capital requirement resulting from counterparty transactions, customers borrowing from the securities firm for securities purchases, or bookkeeping errors.

Finally, in France, the U.K., and the U.S., securities firms generally operate within a broader holding company structure and generally are subsidiaries of the parent holding company or banking company. Subordinated loans from the parent or other entities in the holding company structure provide the overall group with flexibility to respond to the changing capital requirements of the regulated securities entities. This allows

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5/ (...continued)

will be based on a net liquid assets test in all the larger markets. The objective of this test is that a firm should be able to wind down quickly its activities and repay all of its liabilities, including the claims of other securities houses and customers. In a net liquid assets test, all illiquid or intangible assets are deducted from capital, and most unsecured receivables are also deducted from capital. After these deductions, a firm must have sufficient capital to cover position, contraparty, and settlement risk and to meet a base requirement to cover unmeasurable risk.



an efficient utilization of the group's assets. 6/

#### IV. Definition of Capital for Banks

Like securities firms, banks need an adequately designed capital base to absorb losses, to protect counterparties and depositors, and to facilitate confidence in the bank and the banking system. However, unlike securities firms, the capital needs of banks generally do not change as quickly as securities firms.

The Basle Committee on Banking Supervision, formed under the auspices of the Bank for International Settlements located in Basle, Switzerland, issued a paper ("Basle Accord") containing proposals for risk-based capital standards for international banks. These standards will be phased in by 1992. One of the principal focuses of the Basle Accord is on a uniform definition of capital.

In general, under the Basle Accord, a bank will be required to maintain at a minimum total capital equal to 8% of its risk-weighted assets. 7/ Under the Basle approach, capital is defined as assets minus liabilities but includes certain subordinated debt and reserves. In general, capital includes shareholders'

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6/ Domestic Japanese securities firms are the parents of their groups and control all of the assets of the group.

7/ Risk weighting is the process of assigning prescribed weights to classes of assets and potential assets (e.g., draw downs on letters of credit). Generally, the weights are based on preconceived notions of credit risk as to each class. The weights vary from 0 percent for government securities to 100 percent for obligations of corporate debtors.

equity (common stock and preferred stock), retained earnings, certain subordinated liabilities, and certain kinds of reserves. For purposes of the Basle Accord, capital is divided into two classes. Tier I, or Core Capital, includes common stock holders' equity, perpetual preferred stock, and retained earnings. In computing Tier I capital, the bank must deduct any carrying value for goodwill. Tier II, g/ or Supplementary Capital, includes redeemable preferred stock, liabilities initially subordinated to creditors for a period of over five years, forty-five percent of revaluation reserves arising from unrealized securities gains, and certain reserves against assets. Subordinated debt with an initial term of less than five years and guarantees are not included as qualifying capital. Under the Basle Accord, Tier II capital may not contain an amount of subordinated loans which exceeds 50% of Tier I capital.

With respect to securities activities of banks, many countries distinguish between investment account assets and trading account assets. Generally, in these countries, investment account assets are accounted for on a cost basis and trading account assets are valued at either market value or the lower of cost or market value. Where different valuation rules are used, defining which securities fall into which category becomes important.

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g/ Tier II capital may not exceed 100% of Tier I capital.

## VI. Working Group Conclusions and Recommendations

Securities regulators, like banking regulators, place emphasis on a core of owners' equity. In France, Japan (for the branches of foreign firms), the U.K., and the U.S., securities regulators allow the use of subordinated loans to make up part of the capital of the firm. Generally, the amount of subordinated loans allowed is greater, and the term required is shorter than banking supervisors permit. This enables securities firms to meet their fluctuating risk-based requirements, and if a firm were to encounter difficulties, the funds provided by the subordinated loans could be used to meet the firm's obligations to customers and counterparties. The use of revolving subordinated loan agreements in the U.S. and short-term subordinated loans in the U.K. permits a securities firm to enter into long-term arrangements for capital borrowings under which it can regularly adjust the amount of subordinated borrowing it has outstanding. This allows securities firms to meet changing capital needs and recognizes that securities firms should not be required to incur the cost of maintaining unnecessary capital.

The use of subordinated loans as capital permits holding companies more flexibility in the use of their resources. If a subordinated loan to the securities firm is from the holding company or its subsidiaries, there should be adequate controls to prevent abuse.

However, the Working Group recognizes that subordinated loans may not be renewed and are more likely to be withdrawn than

net worth if the securities firm loses money or experiences other difficulty. Accordingly, if securities regulators permit securities firms to use subordinated loans as capital, they should do so only under certain conditions such as: (1) subordinated loans should be approved for inclusion as capital by the regulator; (2) they should be subordinated to the claims of creditors, including customers and market organizations; and (3) repayment by the non-bank securities firm to the lender should not be permitted if it would result in the firm's capital falling below a threshold set above its required level of capital. Furthermore, the degree to which subordinated loans can be used by large securities firms should be limited relative to owner's equity.

With respect to guarantees, bank regulators do not allow banks to include guarantees as capital. However, some securities regulators (e.g., France and the U.K.) permit guarantees to be included as capital subject to restrictions. The Working Group recognizes that guarantees have value, but the use of guarantees raises worries. The capital provided by a guarantee neither provides for an actual infusion of cash nor other liquid assets into the securities firm. It also depends on a third party providing liquidity. For any number of reasons (e.g., financial difficulty experienced by the guarantor), the guarantor may be unable to provide the funds when they are actually needed by the firm.

Because this matter requires further study, the Working Group at this time reaches no conclusions with respect to guarantees or other financings that do not provide for the actual infusion of liquid assets into the securities firm. The Working Group is continuing to review these matters and will report to the Technical Committee at a later date.

