| ☒ | Trading – Interest Rate Derivatives | ☒ | Back-office - Options |
|---|---|---|---|
| ☒ | Trading – Equity and Index Derivatives | ☒ | Technology |
| ☒ | Back-office – Futures | ☒ | Regulation |

**CIRCULAR**
January 24, 2006

**REQUEST FOR COMMENTS**

# OPTIONAL USE OF VALUE AT RISK (VAR) MODELING TO DETERMINE CAPITAL REQUIREMENTS FOR APPROVED PARTICIPANTS SECURITY POSITIONS

## ADDITION OF NEW ARTICLE 7201A AND AMENDMENTS TO ARTICLE 9002

## AMENDMENTS TO STATEMENT B AND TO THE CERTIFICATE OF PARTNERS AND DIRECTORS OF THE JOINT REGULATORY FINANCIAL QUESTIONNAIRE AND REPORT – POLICY C-3 OF THE BOURSE

### Summary

The Rules and Policies Committee of Bourse de Montréal Inc. (the Bourse) has approved the addition of article 7201A to the Rules ad Policies Manual of the Bourse as well as amendments to article 9002 of the Rules, and to Statement B and the Certificate of Partners and Directors of Policy C-3 of the Bourse. The purpose of these amendments is to permit the optional use of VaR modeling for determining the capital requirements associated with an approved participant's proprietary inventory security positions.

### Process for Changes to the Rules

Bourse de Montréal Inc. is recognized as a self-regulatory organization (SRO) by the Autorité des marchés financiers (the Autorité). In accordance with this recognition, the Bourse carries on activities as an exchange and as a SRO in Québec. In its SRO capacity, the Bourse assumes market regulation and supervision responsibilities of its approved participants. The responsibility for regulating the market and the approved participants of the Bourse comes under the Regulatory Division of the Bourse (the Division). The Division carries on its activities as a distinct business unit separate from the other activities of the Bourse.

Circular no.: 017-2006

**Tour de la Bourse**
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The Division is under the authority of a Special Committee appointed by the Board of Directors of the Bourse. The Special Committee is empowered to recommend to the Board of Directors the approval or amendment of some aspects of the Rules and Policies of the Bourse governing approved participants, among which, the Rules and Policies relating to margin and capital requirements. The Board of Directors has delegated to the Rules and Policies Committee of the Bourse its powers to approve or amend these Rules and Policies with recommendation from the Special Committee. These changes are submitted to the Autorité for approval.

Comments on the proposed addition of article 7201A to the Rules ad Policies Manual of the Bourse, amendments to article 9002 of the Rules, and to Statement B and the Certificate of Partners and Directors of Policy C-3 of the Bourse must be submitted within 30 days following the date of publication of the present notice in the bulletin of the Autorité. Please submit your comments to:

*Ms. Joëlle Saint-Arnault*
*Vice-President, Legal Affairs and Secretary*
*Bourse de Montréal Inc.*
*Tour de la Bourse*
*P.O. Box 61, 800 Victoria Square*
*Montréal, Quebec H4Z 1A9*
*E-mail: legal@m-x.ca*

A copy of these comments shall also be forwarded to the Autorité to:

*Ms. Anne-Marie Beaudoin*
*Director – Secretariat of L'Autorité*
*Autorité des marchés financiers*
*800 Victoria Square, 22nd Floor*
*P.O. Box 246, Tour de la Bourse*
*Montréal (Quebec) H4Z 1G3*
*E-mail: consultation-en-cours@lautorite.qc.ca*

**Appendices**

For your information, you will find in appendices an analysis document of the proposed rule amendments as well as the proposed regulatory text. The implementation date of the proposed amendments will be determined, if applicable, with the other Canadian self-regulatory organizations following approval by the "Autorité des marchés financiers”.

APPENDIX A

# OPTIONAL USE OF VALUE AT RISK (VAR) MODELING TO DETERMINE CAPITAL REQUIREMENTS FOR APPROVED PARTICIPANTS SECURITY POSITIONS

## ADDITION OF NEW ARTICLE 7201A AND AMENDMENTS TO ARTICLE 9002

## AMENDMENTS TO STATEMENT B AND TO THE CERTIFICATE OF PARTNERS AND DIRECTORS OF THE JOINT REGULATORY FINANCIAL QUESTIONNAIRE AND REPORT – POLICY C-3 OF THE BOURSE

## I OVERVIEW

Currently, the regulatory capital requirements for approved participants' positions in and offsets involving securities and related derivative instruments are set out in Rules 7 and 9 of Bourse de Montréal Inc. (the Bourse). These requirements have been developed over a number of decades to conservatively provide for the market risk associated with unhedged security positions[1] as well as to allow capital requirement reductions for a limited number of security offset strategies[2, 3].

### A CURRENT RULES

Rules Seven and Nine of the Bourse sets out the capital requirements that address the market risk associated with approved participant positions in and offsets involving securities (and related derivative instruments). Over the past decade, capital rules have increased significantly due largely to the introduction of numerous new types of securities products and the continuation of a strategy-based[4] rulemaking approach, which requires that specific rules be developed for each new product (as well as accompanying offset rules).

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1 Examples of the conservatism in the current capital requirements for unhedged security positions include the fixed percentage margin requirements for debt securities and the traded price per share margin requirements for equity securities.

2 Rule Seven of the Bourse sets out a number of strategy-based offsets which allow for capital requirement reductions for debt offsets, convertible/exchangeable security offsets and swap contract offsets. These offsets requirements were most recently amended effective January 1, 2004 through the implementation of amendments to articles 7202A, 7213, 7226, 7226A (added article), 7227 and 7228 of the Rules of the Bourse.

3 Rule Nine of the Bourse sets out a number of strategy-based offsets which allow for capital requirement reductions for offsets involving exchange traded derivative instruments. These offset requirements were most recently amended effective January 1, 2005.

4 Strategy-based rules set out capital and margin requirements for a security or derivative position or offset strategy involving two or more security/derivative positions based on the calculated worst-case scenario loss for the position or offset strategy.

## B THE ISSUE

In spite of recent efforts to rationalize the existing strategy-based rules, the continued exclusive use of such rules is no longer workable as:

- the strategy-based rules have been found to be overly conservative in that the number of permitted offset strategies within an issuer product group is limited and issuer risk diversification is not considered; and
- the rulemaking and compliance burden associated with the strategy-based rules is increasing due to the increasing number and complexity of securities products.

It is for these reasons that the optional use of a more sophisticated approach to determining the market risk associated with an approved participant proprietary inventory security positions, specifically value at risk (VaR) modeling, is being proposed.

## C OBJECTIVE(S)

The proposal seeks to permit the optional use of VaR modeling for determining the capital requirements associated with an approved participant's proprietary inventory security positions, subject to certain conditions being met by the approved participant. The proposal does not seek to replace the existing strategy-based rules which will continue to be necessary for determining the capital and margin requirements for relatively unsophisticated proprietary inventory and customer account security positions.

The objective of the proposal is also to grant those approved participants who maintain sophisticated and/or significant proprietary inventories the option of using a VaR model approach to determine their capital requirements, the by-product of which will be capital requirements being provided by the approved participant which are more reflective of the overall market risk of the proprietary inventory. Specifically, the use of a VaR model will generally[5] result in reduced capital requirements for offsets strategies that are either not addressed in the current strategy-based rules (or are addressed in an overly conservative fashion) as well as reduced capital requirements in situations where the VaR model recognizes the market risk reduction achieved through portfolio diversification.

## D EFFECT OF PROPOSED RULES

As previously stated, the proposal seeks to permit the optional use of a VaR model for determining the capital requirements associated with an approved participant's proprietary inventory security positions, subject to certain conditions being met by the approved participant. Adoption of the proposal will make consistent the regulatory capital requirements that address the market risk associated with inventory security positions that are held at either a Canadian bank or a Canadian securities dealer.

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[5] Although the use of a VaR model will generally result in lower capital requirements than current requirements of the Bourse, it may not always result in such lower requirements. There may be instances where an approved participant holding an unhedged portfolio of securities, particularly once the new "basic margin rate" methodology is implemented for equity securities, may calculate a lower requirement under the current strategy-based requirements than under the VaR model used.

The conditions that shall be met by those approved participants opting to use a VaR model will be:

- provision of a higher minimum capital requirement on Statement B, Line 4 of the Joint Regulatory Financial Questionnaire and Report of Policy C-3 of the Bourse (the JRFQR) than the current $250,000 requirement that applies to a full service dealer. The proposal sets this requirement at the greater of $10 million and 25% of the capital requirement calculated using the VaR model approach;
- certification that the VaR methodology to be used utilizes standards that are compliant with the Basel Accord recommended capital standards and with any additional standards the Bourse may subsequently establish from time to time.

It is not anticipated that the proposed rule will have any market structure impacts. It is believed that the proposed rule will have positive impacts in terms of enabling improved approved participant competitiveness with non-dealer financial institutions without diminishing the effectiveness of the Bourse's overall capital adequacy requirements. It is also believed that the proposed higher minimum capital that will be required will better reflect the additional resources that will be necessary and the incremental operational risk and "tail event" market risk that will have to be assumed when an approved participant opts to use a VaR model. As a result, competition among approved participants should not be unduly affected under the proposed rule.

## II DETAILED ANALYSIS

### A PRESENT RULES, RELEVANT HISTORY AND PROPOSED POLICY

**Present rules and relevant history**

Rules Seven and Nine set out the capital requirements that address the market risk associated with approved participant positions in and offsets involving securities (and related derivative instruments). Over the past decade capital rules have increased significantly due largely to the introduction of numerous new types of securities products and the continuation of a strategy-based rulemaking approach which requires that specific rules be developed for each new product (as well as accompanying offset rules). Efforts have been made over the past five years to rationalize the existing strategy-based rules through the development of the following rule amendment proposals among others:

- capital and margin requirements for positions in and offsets involving interest rate and total performance swaps – Articles 7226 and 7226A, implemented effective January 1, 2004;
- capital and margin requirements for offsets involving capital shares and convertible and exercisable securities – Articles 7202A, 7213, 7227 and 7228, implemented effective January 1, 2004;
- capital and margin requirements for positions in and offsets involving exchange traded derivatives – Rule Nine, implemented effective January 1, 2005;
- optional use of TIMS or SPAN for determining the capital requirements for positions in and offsets involving exchange traded derivatives – Article 9002, implemented effective January 1, 2005;
- capital requirements for underwriting commitments – Article 7224, implemented effective March 1, 2005;
- capital and margin requirements for offsets involving Canadian debt securities and related futures contracts – Articles 7204A, 9323 et 9423, pending approval by the Autorité des marchés financiers (AMF); and

- capital and margin requirements for listed equity securities – Articles 7203, 7203, 7204, 7213 and 7224, submitted simultaneously for approval with this proposal.

In spite of these efforts to rationalize the existing strategy-based rules, the continued exclusive use of such rules is no longer workable as:

- the strategy-based rules have been found to be overly conservative in that the number of permitted offset strategies within an issuer product group is limited and issuer risk diversification is not considered; and
- the rulemaking and compliance burden associated with the strategy-based rules is increasing due to the increasing number and complexity of securities products.

It is for these reasons that the optional use of a more sophisticated approach to determine the market risk associated with an approved participant's proprietary inventory security positions, specifically value at risk (VaR) modeling, is being proposed.

**Background to development of proposal**

In early 2004, the Investment Dealers Association of Canada (IDA) engaged the consulting firm PricewaterhouseCoopers to perform an initial feasibility study of the optional use of value at risk (VaR) modeling for determining the capital requirements for approved participant's proprietary inventory security positions. The study was undertaken for a number of reasons including:

- the recent initiatives in Europe and the United States to consider the use of the Basel II capital standards (including VaR modeling) by the securities industry requiring that Canadian securities regulators consider the same for capital markets competitiveness reasons;
- the increasing limitations to the use of strategy-based rules for determining the capital requirements for proprietary inventory security positions (as discussed above); and
- the expressed interest by an increasing number of securities brokers/dealers to use VaR modeling for regulatory purposes.

# APPENDIX A

As part of the study, the risk specific capital requirements that apply to financial institutions regulated by the Office of the Superintendent of Financial Institutions (OSFI) (both pursuant to current OSFI rules and proposed Basel II rules) and to approved participants were compared. The following table summarizes this comparison of requirements:

| Risk Type | OSFI Requirements | | Rules of the Bourse |
|---|---|---|---|
| | Current OSFI | Proposed Basel II | |
| **Market risk**<br>[proprietary inventory positions] | VaR modeling allowing risk requirement reduction through recognizing a virtually unlimited number of position risk reduction strategies and portfolio diversification | VaR modeling allowing risk requirement reduction through recognizing a virtually unlimited number of position risk reduction strategies and portfolio diversification | Unhedged positions subject to fixed percentage margin requirements set out in Rule Seven<br>Hedged positions granted reduced margin where offset rule is available |
| **Credit risk**<br>Institutional clients | Relatively simple standardized approach | Proposed credit rating based approach will result in some reductions for investment grade credit risks and significant increases for less than investment grade credit risks | Relatively simple standardized approach with, in a number of instances, lower credit requirements than under current OSFI requirements (e.g., currently "acceptable institution" exposures attract no capital provision) |
| **Credit risk**<br>Retail clients | Relatively simple standardized approach | Proposed credit rating based approach would yield similar results as requirements of the Bourse as would assess value of credit risk collateral | Same as Market risk requirements above |
| **Operational risk** | No current capital requirement | Proposed capital requirement | No current capital requirement. |

As the table suggests, the current requirements of the Bourse with respect to the assessment of market risk in proprietary trading books are more conservative than the current OSFI and proposed Basel II VaR requirements. However, the current requirements with respect to the assessment of operational risk and institutional account credit risk are generally less conservative than the existing Basel and proposed Basel II capital requirements.

Specific to operational risk, the Bourse currently has no particular capital requirements that apply to approved participants. As a result, if the optional use of VaR models is permitted without any other rule changes, the overall capital requirements of the Bourse will be less conservative than those of Basel and proposed Basel II. It is also believed that operational risk will be of greater concern for those dealers who will opt to use VaR models because of the sophisticated systems and control structures that will then need to be maintained on an ongoing basis. For these reasons, the proposal will require from approved

participants that choose to use a VaR model to determine their prescribed capital to provide a higher minimum capital requirement in the determination of their risk adjusted capital.

**Proposal details**

The proposal itself is relatively straightforward. It seeks to provide approved participants with the option of using a VaR model for determining the capital requirements of their proprietary inventory security positions, provided two conditions are met: (1) the provision, on Statement B, Line 4 of the JRFQR, of a higher minimum capital requirement than the current $250,000 requirement that applies to full service dealers and (2) certification that the VaR model to be used utilizes standards and is subject to stress testing and back-testing procedures that are compliant with the Basel II recommended capital standards and any additional standards the Bourse may establish from time to time.

All Canadian approved participants being under the audit jurisdiction of the IDA for regulatory capital matters, they will be required, if they wish to opt for the use of a VaR model, to apply to the IDA to receive permission to use such a model. As part of their application to the IDA, the approved participants will be required to submit a description of their internal risk management control system and how that system satisfies the IDA requirements, together with a description of the method they intend to use to calculate deductions to risk adjusted capital. The IDA will review how the firm manages its market risk and its mathematical models to determine if the approved participant has met the VaR model requirements. When approving the application, the IDA may impose additional conditions or limitations where necessary or appropriate in the public interest or for the protection of investors.

***Higher minimum capital requirement***

The proposal will require approved participants wishing to use a VaR Model to provide a higher minimum capital requirement in the determination of their risk adjusted capital. It is considered that a higher capital requirement is necessary to address the increased operational risk that will result when an approved participant opts to use a VaR model. Specifically, while VaR modeling is a more sophisticated market risk measurement approach, it is also more resource intensive to support and maintain in comparison to the existing strategy-based rules.

Further, while a VaR model works well in capturing the probable loss in most markets, it does not always cover “tail events”, i.e. the rare market moves that cause extreme losses. The limitations of VaR modeling approaches can be addressed by stress tests that can be used to determine a capital cushion over and above the calculated VaR amount to provide for the risk associated with these events. A higher minimum capital requirement is therefore necessary to provide for “tail event” market risk.

As a result, to address the incremental operational risks and “tail event” market risks, it is proposed that the minimum capital requirement provided on Line 4 of Statement B of the JRFQR by approved participants who opt to use a VaR model be the greater of:

i) $10 million (to cover the increased operational risk associated with using a VaR model); and
ii) 25% of the capital requirement calculated by the VaR model.

***Establishment and maintenance of a system of internal risk management controls***

As a prerequisite to using a VaR model, approved participants shall establish, document, and maintain a system of internal risk management controls to assist them in managing the market risk associated with their proprietary trading inventory. The remainder of this section details the factors considered when developing an internal risk management controls system and the elements of such a system.

***a) Environmental factors to be considered***

In establishing its internal risk management controls system, an approved participant must consider all relevant environmental factors when adopting its internal control system guidelines, policies, and procedures including: (i) the ownership, governance and management structures of the firm, (ii) the scope and nature of established risk management guidelines, (iii) the scope and nature of permissible proprietary trading activities, (iv) the sophistication and experience of proprietary trading, risk management, and internal audit personnel, (v) the sophistication and functionality of information and reporting systems, and (vi) the scope and frequency of monitoring, reporting, and auditing activities.

***b) Elements of an internal risk management system***

Taking these environmental factors into consideration, an approved participant's internal risk management control system must include the following elements: (i) a risk control unit that reports directly to senior management and is independent from the proprietary trading units, (ii) separation of duties between personnel responsible for entering into a transaction and those responsible for recording the transaction in the books and records, (iii) periodic reviews (which may be performed by internal audit staff) and annual reviews (which must be conducted by independent certified public accountants) of the approved participant's risk management systems, (iv) definitions of risk, risk monitoring, and risk management, and (v) written guidelines, approved by the senior management of the firm.

***(c) Written risk management guidelines***

Written risk management guidelines must include or address: (i) quantitative guidelines for managing the firm's overall proprietary trading risk exposure, (ii) the type, scope, and frequency of reporting by management on risk exposures, (iii) the procedures for and the timing of periodic review(s) of the risk monitoring and risk management written guidelines, systems and processes by the Board of Directors of the firm, (iv) the processes for the performance of the risk monitoring and management functions by persons independent from or senior to the proprietary trading units whose activities create the risks, (v) the authority and resources of the groups or persons performing the risk monitoring and risk management functions, (vi) the appropriate response by management when internal risk management guidelines have been exceeded, and (vii) the procedures authorizing designated employees to commit the firm to particular types of transactions.

***(d) Review by the Management***

Approved participant's management must periodically review, in accordance with written procedures, its proprietary trading activities for consistency with risk management guidelines including that: (i) risks arising from the firm's proprietary trading activities are consistent with prescribed guidelines, (ii) risk exposure guidelines for each proprietary trading unit are appropriate

for the unit, (iii) the data necessary to conduct the risk monitoring and risk management function as well as the valuation process over the firm's proprietary trading positions is accessible on a timely basis and information systems are available to capture, monitor, analyze, and report relevant data, (iv) procedures are in place to enable management to take action when internal risk management guidelines have been exceeded, (v) procedures are in place to monitor and address the risk that a transaction contract will be unenforceable, (vi) procedures are in place to identify and address any deficiencies in the operating systems and to contain the extent of losses arising from unidentified deficiencies, (vii) procedures are in place to authorize specified employees to commit the firm to particular types of transactions, to specify any quantitative limits on such authority, and to provide for the oversight of their exercise of such authority, (viii) procedures are in place to provide for adequate documentation of the principal terms of transactions and other relevant information regarding such transactions, (ix) personnel resources with appropriate expertise are committed to implementing the risk monitoring and risk management systems and processes; and (x) procedures are in place for the periodic internal and external review of the risk monitoring and management functions.

***VaR modeling methodology standards***

No single approach to VaR modeling best measures the market risk of a portfolio of securities (and any related derivative instruments positions). Various VaR models produce different results for the same securities portfolio and therefore quantitative and qualitative factors need to be assessed to determine the suitability of any VaR model. To ensure consistency of approaches amongst those approved participants who will opt to use a VaR models, it is proposed that the VaR models used must comply, at a minimum, with the recommended qualitative and quantitative standards set out in the publication entitled "Amendment to the Capital Accord to Incorporate Market Risks" that was published by the Basel Committee on Banking Supervision in January 1996 and modified in September 1997. The remainder of this section provides specific guidance on how approved participants opting to use VaR models are expected to calculate the capital requirement for their proprietary inventory positions.

***a) Computation of the capital requirement for their proprietary inventory positions***

Approved participants opting to use a VaR model must determine their current proprietary inventory position exposures and their VaR model capital requirements on a daily basis in order to comply with the current requirement of article 7006 of the Rules of the Bourse to have and maintain at all times a risk adjusted capital greater than zero.

Approved participants must provide capital for their proprietary trading inventory equal to the sum of: (i) for positions for which the use of a VaR model has been approved, the calculated capital requirement according to this model and (ii) for all other positions, the calculated capital requirement pursuant to Rules Seven and Nine of the Bourse. In assessing which positions will be eligible for VaR modeling, the approved participant must either demonstrate that the position is readily marketable or that its VaR model adequately captures the material risks (including issuer specific risk) associated with making a market for the position.

Approved participants must use the same model to determine regulatory market risk as the model used to report risk to the approved participant's senior management and the model must be integrated into the internal risk management system of the firm. The VaR model used must be reviewed by the approved participant both periodically and annually. The periodic review may be conducted by the approved participant's internal audit staff. The annual review must be conducted

by a public accounting firm with risk management expertise. The VaR model used must: (i) use a one-tailed confidence level of at least 99 percent with price changes equivalent to a ten business-day movement in rates and prices for purposes of determining market risk; (ii) use an historical observation period of at least 260 consecutive trading days in length that includes periods of market stress; if any, and (iii) take into account and incorporate all significant, identifiable market risk factors applicable to the firm's positions. Historical data sets must be updated at least monthly and must be reassessed when position and/or portfolio volatilities change significantly.

***(b) Back testing***

Approved participants must also ensure through ongoing back testing that the capital requirements calculated by their VaR model continue to cover normal market risk events (i.e., events other than "tail events"). It is therefore also proposed that the back testing procedures used by the approved participant must comply with those recommended in the publication entitled "Amendment to the Capital Accord to Incorporate Market Risks" that was published by the Basel Committee on Banking Supervision in January 1996 and modified in September 1997.

As a result, on a quarterly basis at a minimum, the approved participant must conduct back testing of the VaR model by comparing its actual daily net trading profit or loss for its VaR eligible positions, using a 99 percent (or higher) one-tailed confidence level, to its calculated VaR modeling capital requirement. The comparison must be performed at a minimum for each of the most recent 260 consecutive trading days. The approved participant must identify the number of days its actual daily net trading loss for its VaR eligible positions exceeds the amount calculated by the VaR model (back testing violation days). Where the violation day percentage (determined by dividing the number of back testing violation days by the number of trading days tested) exceeds 1%, the approved participant must consider modifying its model assumptions, document any assumption changes made or not made and document why assumption changes have been made or not made.

Where the approved participant determines, as a result of its back testing or otherwise, that there is a material error in its calculated VaR modeling capital requirement or detects a material deficiency in its internal risk management control systems, the approved participant must immediately notify the IDA. In response, the IDA will have the discretion to impose additional conditions or limitations on the approved participant's ongoing use of a VaR model. Should an approved participant fail to comply with these additional conditions and/or limitations, the IDA may withdraw its approval of the approved participant's use of a VaR model.

***(c) Additional reporting requirements***

It is likely that additional reporting requirements will be imposed as a condition of permitting an approved participant to use a VaR model. The exact form and extent of these additional requirements has not yet been determined at this point as the IDA has not yet hired the staff with risk management expertise that would develop the additional reporting requirements.

***(d) Recordkeeping requirements***

No specific rules are proposed with respect to the maintenance of books and records relating to the VaR modeling capital requirement. However, it is important to mention that all Canadian approved participants of the Bourse are members of the IDA and are under its audit jurisdiction for what regards regulatory capital requirements. They are therefore all required to comply with IDA By-

law 17.2 which requires that every member must keep at all times a proper system of books and records.

***Certification of VaR modeling methodology***

The proposal will require approved participants to certify that the VaR model they use utilizes standards and is subject to stress testing and back-testing procedures that are compliant with the recommended Basel II capital standards and any additional standards the IDA or the Bourse may establish from time to time. Certification will be required: (i) at the time the approved participant applies to the IDA to receive permission to use a VaR model, and (ii) on an annual basis through responding to a specific VaR modeling question which will be added to the Certificate of Partners and Directors in the JRFQR.

## B ISSUES AND ALTERNATIVES CONSIDERED

With respect to the use of VaR modeling by approved participants, the following three alternatives were considered:

1. allow the optional use by approved participants of the entire bank regulatory capital reporting format (i.e., Basel II in 2006);
2. allow the optional use by approved participants of certain bank regulatory capital reporting format items (i.e., VaR modeling) through an amendment of the capital formula; or
3. do not allow the optional use by approved participants of VaR modeling.

The only alternative seriously considered among the above three was the second one.

The first alternative would only be practical for bank-owned approved participants and, even for those firms, the regulatory reporting efficiencies achieved would have been limited, as they would be required to file information on a non-consolidated basis. Also, other issues such as the lack of applicability of some of the Basel II proposals to securities dealers and dealer versus dealer level playing field concerns made this alternative less attractive.

The third alternative was also considered but rejected since, as previously stated, the continued exclusive use of strategy-based rules within the current capital formula is no longer workable.

## C COMPARISON WITH SIMILAR PROVISIONS

### European Union

The Financial Conglomerates Directive was passed by the European Parliament on December 16, 2002. According to the website of Her Majesty's Treasury in the United Kingdom:

> "The Financial Conglomerates Directive introduces specific legislation for the prudential supervision of financial conglomerates and financial groups involved in cross-sectoral activities to foster the stability of the financial system.
>
> The main objectives of the Directive are (I) to ensure that financial conglomerates are adequately capitalized, preventing the same capital being counted twice over and so used simultaneously as a buffer against risk in different entities, (II) to introduce methods for calculating a conglomerate's overall solvency position, and (III) to provide for the establishment of a single lead regulator for financial conglomerates, rather than multiple lead regulators as at present, thereby reducing regulatory duplication."

As a result, once national laws and administrative arrangements are adopted by each of the European Union member countries, European Union securities dealers that are part of a financial conglomerate will be required to make regulatory filings on a consolidated basis and in turn comply with the Basel II capital standards (expected to commence in 2006).

### United Kingdom

Recognizing the risk-based margining approach as more efficient than a strategy-based approach, The Financial Services Authority (FSA) in the United Kingdom permits the use of VaR models for calculating Position Risk Requirements. The FSA is also taking steps to facilitate the implementation of the Financial Conglomerates Directive (referred to in the European Union section above) in the United Kingdom.

### United States

In August 2004, the SEC implemented new "Alternative Net Capital Requirements" (ANCRs) based on Basel II. The ANCRs make use of the Basel II capital standards available to U.S. securities dealers provided the dealer maintains net capital before deductions of at least USD $1 billion and net capital after deductions of at least USD $500 million and, where the dealer is part of a financial conglomerate, grants to the SEC conglomerate-wide regulatory jurisdiction.

It is interesting to note that this rule limits the optional use of VaR modeling to only the largest of U.S. securities dealers, all of which are part of a financial conglomerate. Further, those large dealers that have chosen to be regulated by the SEC under this approach will not be subjected to the regulatory oversight of a European securities regulator. Taking these points into account, the high minimum capital requirements under the ANCRs are understandable as it is believed that the SEC, at least at this point, seems only willing to grant the optional use of VaR modeling to those dealers who would otherwise be subject to the requirements of the European Union Financial Conglomerates Directive.

## D SYSTEMS IMPACTS OF RULE

It is anticipated that should an approved participant decide to use a VaR model for determining the capital requirements for its proprietary inventory security positions, the operations and systems impacts on that firm could be significant. However, it is not believed that these impacts are of concern from a rule implementation standpoint as the use of VaR modeling will be optional.

### Proposed implementation approach

Two implementation approaches were considered: (1) a proportional phased-in approach, whereby an increasing percentage of the VaR calculation is provided over time in combination with a decreasing percentage of the current regulatory requirements; and (2) an eligible security phased-in approach, whereby the use of VaR modeling would be implemented for different levels of eligible securities at different times. The latter approach is the implementation approach that was proposed in the SEC's ANCRs proposal whereby VaR modeling was to be permitted for the following levels of eligible securities in sequence over an 18-month period:

| Level of Eligible Securities | Securities Eligible for VaR |
|---|---|
| 1 | US government securities and derivative instruments on those securities<br>Investment grade corporate debt and derivative instruments on those securities<br>Highly rated foreign government securities and derivative instruments on those securities<br>Highly rated short-term asset-backed securities and derivative instruments on those securities<br>Highly rated municipal securities and derivative instruments on those securities<br>Derivative Instruments on major foreign currencies |
| 2 | Equities<br>Derivative instruments on equities |
| 3 | Positions for which there is a ready market and for which there is adequate historical data to support a VaR model |

The US Securities and Exchange Commission ultimately rejected the use of an eligible security phased-in approach in response to dealer complaints that this implementation approach would impose unnecessary operational costs and inefficiencies. The present proposal also rejects this approach for the same reasons.

The proportional phased-in approach was successfully used recently by the Canadian Depository for Securities (CDS) in rolling out its new risk model (completed in October 2004). The present proposal recommends using this approach for approved participants who opt to use VaR modeling for determining the capital requirements for their proprietary inventory security positions. A one-year phase-in period from the date of approval to use VaR modeling is suggested.

## E. Position of Bourse de Montréal regarding the VaR proposal

This proposal to provide approved participants the option to use VaR modeling for determining capital requirements on their securities proprietary inventory positions has been initiated and developed by the IDA and its Board of Directors approved it on October 26, 2005. The Bourse had the opportunity to participate into the discussions on this subject matter since the project started and wishes to amend its Rules and Policies in the same manner for the main reason that the Bourse considers that the

implementation of this proposal will have a significant and positive impact on the capital requirements applicable to derivative instruments listed on the Bourse.

As already mentioned, the use of VaR modeling will results in capital requirements that better reflect the market risk of securities and securities portfolios. Derivative instruments are increasingly used as hedging tools in portfolios and the use of VaR modeling will surely contribute to further increase in such uses.

### F BEST INTERESTS OF THE CAPITAL MARKETS

The Bourse has determined that this proposed regulatory amendment is not detrimental to the best interests of the capital markets.

### G PUBLIC INTEREST OBJECTIVE

The purpose of this proposal is to facilitate fair and open competition in securities transactions generally. The proposal does not permit unfair discrimination among customers, issuers, brokers, dealers, approved participants or others. It does not impose any burden on competition that is not necessary or appropriate in furtherance of the above purposes.

The proposal has been determined to be in the public interest due to the likely material impact that usage of VaR modeling will have on the capital provided by an approved participant for the market risk associated with its proprietary inventory security positions.

## III COMMENTARY

### A APPROVAL PROCESS

The first step of the approval process for the regulatory amendments proposed in the present document consists in having the proposed amendments approved by the Special Committee – Regulatory Division of the Bourse. The proposed amendments are then submitted to the approval of the Rules and Policies Committee of the Bourse. Once the approval of the Rules and Policies Committee obtained, the project is simultaneously published by the Bourse for a 30-day comment period and submitted to the Autorité des marchés financiers du Québec for approval and to the Ontario Securities Commission for information.

## IV SOURCES

- Rules Seven and Nine of Bourse de Montréal
- Joint Regulatory Financial Questionnaire and Report – Policy C-3 of Bourse de Montréal
- IDA Equity Margin Project Discussion Paper, Draft #14, dated May 11, 2005
- Office of the Superintendent of Financial Institutions of Canada Capital Adequacy Model (based on Basel I)
- "Amendment to the Capital Accord to Incorporate Market Risks" - Basel Committee on Banking Supervision, published in January 1996 and modified in September 1997
- Consultative Document, "The New Capital Accord" - Basel Committee on Banking Supervision, published in April 2003
- FSA Interim Prudential Sourcebook: Investment Businesses – Chapter 10, Rule 10-80 – Position Risk Requirement
- SEC Alternative Net Capital Requirements (ANCR), Securities Exchange Act of 1934, Rule 15c3-1e (Appendix E to 17 CFR 240.15c3-1), August 20, 2004,
- Directive 2002/87/EC of the European Parliament and of the Council of 16 December 2002 on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate and amending Council Directives 73/239/EEC, 79/267/EEC, 92/49/EEC, 92/96/EEC, 93/6/EEC and 93/22/EEC, and Directives 98/78/EC and 2000/12/EC of the European Parliament and of the Council

**7201A Optional Use of Value at Risk Modeling**
(00.00.06)

With respect to approved participant security and related derivative instrument positions, the capital requirement provided may be calculated using an approved value at risk modeling approach, provided the approved participant:

i) reports as its minimum capital requirement on Line 4 of Statement B of its Joint Regulatory Financial Questionnaire and Report (Policy C-3 of the Bourse) the greater of:

A) $10 million; and

B) 25% of the capital requirement calculated using the approved value at risk modeling approach;

and

ii) certifies it is using an approved value at risk modeling approach whose standards are subject to regular stress testing and back-testing to ensure ongoing model standard appropriateness.

For the purposes of the present article “an approved value at risk modeling approach” is one which utilizes standards that are compliant with the recommended qualitative and quantitative standards set out in the publication entitled “Amendment to the Capital Accord to Incorporate Market Risks” published by the Basel Committee on Banking Supervision in January 1996 and modified in September 1997 and compliant with any additional standards the Bourse may subsequently establish from time to time.

## APPENDIX B

**9002 Risk Margining Systems**
(01.01.05, 00.00.06)

a) With respect to an approved participant account constituted exclusively of positions in derivative instruments listed -on the Bourse, the capital required may be the one calculated, as the case may be, by the Standard Portfolio Analysis (SPAN) methodology or by the Theoretical Intermarket Margin System (TIMS) methodology, using the margin interval calculated and the assumptions used by the Canadian Derivatives Clearing Corporation. All changes to the assumptions used by the Canadian Derivatives Clearing Corporation must be approved by the Bourse prior to implementation to ensure that the continued use of SPAN and TIMS methodologies for regulatory purposes is appropriate.

The selected methodology (either SPAN or TIMS) must be used consistently and cannot be changed without the prior consent of the Bourse. If the approved participant selects the SPAN methodology or the TIMS methodology, the capital requirements calculated under those methodologies will supersede the provisions stipulated in the Rules.

For the purpose of the present article, “margin interval” means the product of the three following elements:

i) the maximum standard deviation of percentage fluctuations in daily settlement values over the most recent 20, 90 and 260 business days; multiplied by

ii) 3 (for a 99% confidence interval); and multiplied by

iii) the square root of 2 (for two days coverage).

b) With respect to a client account, it is prohibited to use SPAN methodology or TIMS methodology to determine margin requirements.

c) With respect to approved participant security and related derivative instrument positions, the capital requirement provided may be calculated using an approved value at risk modeling approach, provided the approved participant:

i) reports as its minimum capital requirement on Line 4 of Statement B of its Joint Regulatory Financial Questionnaire and Report (Policy C-3 of the Bourse) the greater of:

A) $10 million; and

B) 25% of the capital requirement calculated using the approved value at risk modeling approach;

and

ii) certifies it is using an approved value at risk modeling approach whose standards are subject to regular stress testing and back-testing to ensure ongoing model standard appropriateness.

## APPENDIX B

For the purposes of the present paragraph "an approved value at risk modeling approach" is one which utilizes standards that are compliant with the recommended qualitative and quantitative standards set out in the publication entitled "Amendment to the Capital Accord to Incorporate Market Risks" published by the Basel Committee on Banking Supervision in January 1996 and modified in September 1997 and compliant with any additional standards the Bourse may subsequently establish from time to time.

# APPENDIX B

## STATEMENT B
## NOTES AND INSTRUCTIONS

EACH MEMBER MUST~~SHALL~~ HAVE AND MAINTAIN AT ALL TIMES RISK ADJUSTED CAPITAL IN AN AMOUNT NOT LESS THAN ZERO.

~~**Line 4** - "minimum capital" is $250,000 ($75,000 for Type 1 introducing brokers).~~

**Line 4 - Minimum capital -** Minimum capital" is:

- For Type 1 introducing brokers, $75,000
- For firms that use value at risk modeling to determine the capital requirements on their proprietary inventory positions, the greater of:

  (A) $10 million; and

  (B) 25% of the capital requirement calculated using the approved value at risk modeling approach;
- For all other firms, $250,000.

**Line 9 -** This line should include margin requirement for syndicate accounts where the firm is the lead underwriter and joint trading accounts. If the firm has "drawn down" a portion of the new issue positions from the syndicate account to its inventory accounts, those portions should be disclosed as firm's inventory and be included in Schedules 2 and possibly 2B. If the firm is not the lead underwriter but a Banking Group member, margin requirement should be reported on Schedule 2.

If the other syndicate member is a Regulated Entity, a related company of the Member firm, or an Acceptable Institution, then no margin need be provided by the firm. In the case of an Acceptable Counterparty the amount of margin to be provided, **commencing on regular settlement date** (i.e. the contracted settlement date as specified for that issue), shall be the equity deficiency of (a) the net market value of all settlement date security positions in the entity's accounts and (b) the net money balance on a settlement date basis in the same accounts. For all other parties the amount of margin to be provided by the firm, **commencing on regular settlement date**, shall be the margin deficiency, if any, that exists in the account.

**Line 13 -** No firm may give, directly or indirectly, by means of a loan, guarantee, the provision of security or of a covenant or otherwise, any financial assistance to an individual and/or corporation unless the amount of the loan, guarantee, provision of security or of the covenant or any other assistance is limited to a fixed or determinable amount and the amount is provided for in computing Risk Adjusted Capital. The margin required shall be the amount of the loan, guarantee, etc. less the loan value of any accessible collateral, calculated in accordance with the rules and regulations of the Joint Regulatory Bodies. A guarantee of payment is not acceptable collateral to reduce margin required.

Details of the margin calculations for contingencies such as guarantees or returned cheques should be provided as an attachment to this Statement.

**Line 18 -** 100% of the market value of securities plus applicable margin must be provided (less any margin already provided on those securities) in the case where client or inventory securities are held at locations which do not qualify as Acceptable Securities Locations (see General Notes and Definitions).

Securities
1. held by an entity with which the Member has not entered into a written custodial agreement as required by the bylaws, rules and regulations of the Joint Regulatory Authorities, or

2. in respect of which a positive audit confirmation has not been received in respect of a foreign location approved by a Joint Regulatory Authority and not specified in the definition of acceptable securities location,

shall be considered as being held at non-acceptable securities locations and capital provided for as above.

Client Waiver
Where the laws and circumstances prevailing in a foreign jurisdiction may restrict the transfer of securities from the jurisdiction and the Member is unable to arrange for the holding of client securities in the jurisdiction at an acceptable securities location, the Member may hold such securities at a location in that jurisdiction if (a) the Member has entered into a written custodial agreement with the location as required hereunder and (b) the client has consented to the arrangement, acknowledged the risks and waived any claims it may have against the Member, in a form approved by the Joint Regulatory Authority. Such a consent and waiver must be obtained on a transaction by transaction basis.

**Line 20 -** Items are considered unresolved unless:

(i) a written acknowledgement from the counterparty of a valid claim has been received

(ii) a journal entry to resolve the difference has been processed as of the Due Date of the questionnaire.

This does not include journal entries writing off the difference to profit or loss in the period subsequent to the date of the questionnaire.

Provision should be made for the market value and margin requirements at the questionnaire date on out of balance short securities and other adverse unresolved differences (e.g. with banks, trust companies, brokers, clearing corporations), still unresolved as at a date one month subsequent to the questionnaire date or other applicable Due Date of the questionnaire.

**STATEMENT B**
**NOTES AND INSTRUCTIONS (Cont'd)**

The margin rate to be used is the one that is appropriate for inventory positions. For instance, if the calculation is for securities eligible for reduced margin, the margin rate is 25%, rather than 30%.

A separate schedule, in a form approved by the Joint Regulatory Authority, must be prepared detailing all unresolved differences as at the report date.

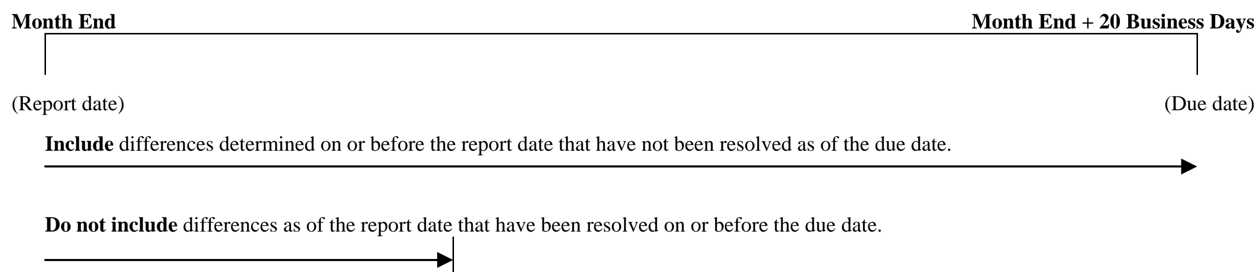
The following guidelines should be followed when calculating the required to margin amount on unresolved items:

| Type of Unresolved Difference | Amount Required to Margin |
|---|---|
| Money balance — credit (potential gains)<br>— debit (potential losses) | None<br>Money balance |
| Unresolved Long with Money on the Member's Book | [(Money Balance on the trade minus market value of the security)* plus the applicable inventory margin] |
| Unresolved Long without Money on the Member's Books | None |
| Unresolved Short with Money on the Member's Books | [(Market value of the security minus money balance on the trade)* plus the applicable inventory margin] |
| Unresolved Long/Short on the Other Broker's Books | None |
| Short Security Break (e.g. Mutual Funds, Stock Dividends) or Unresolved Short without Money on the Member's Books | [Market value of the security plus the applicable inventory margin] |

* also referred to as the Mark to Market Adjustment.

Where mutual fund positions are not reconciled on a monthly basis, margin shall be provided equal to a percentage of the market value of such mutual funds held on behalf of clients. Where no transactions in the mutual fund, other than redemptions and transfers, have occurred for at least six months and no loan value has been associated with the mutual fund, the percentage shall be 10%. In all other cases, the percentage shall be 100%.

**Unresolved Differences in Accounts:** Report all differences determined on or before the report date that have not been resolved as of the due date.




For each account listed, set out the number of unresolved differences and the money value of both the debit and credit differences. The Debit/Short value column includes money differences and market value of security differences, which represent a potential loss. The Credit/Long value column includes money differences and market value of security differences, which represent a potential gain. In determining the potential gain or loss, the money balance and the security position market value of the same transaction should be netted. Debit/short and credit/long balances of different transactions cannot be netted.

All reconciliation must be properly documented and made available for review by the Vice-President, Financial Compliance and Member's Auditor.

**Unresolved differences in Security Counts:** Report all security count differences determined on or before the report date that have not been resolved as of due date. The amount required to margin is the market value of short security differences plus the applicable inventory margin.

**Line 21 -** This item should include all margin requirements not mentioned above as outlined in the bylaws, rules and regulations of the Joint Regulatory Bodies and the Canadian Investor Protection Fund.

# APPENDIX B

## JOINT REGULATORY FINANCIAL QUESTIONNAIRE AND REPORT
## CERTIFICATE OF PARTNERS OR DIRECTORS

______________________________________________
(Firm Name)

I/We have examined the attached statements and schedules and certify that, to the best of my/our knowledge, they present fairly the financial position and capital of the firm at ____________________ and the results of operations for the period then ended, and are in agreement with the books of the firm.

I/We certify that the following information is true and correct to the best of my/our knowledge for the period from the last audit to the date of the attached statements which have been prepared in accordance with the current requirements of the applicable Joint Regulatory Body and Canadian Investor Protection Fund.

**ANSWERS**

1. Do the attached statements fully disclose all assets and liabilities including the following:
   - (a) All future purchase and sales commitments? ........ __________
   - (b) Outstanding puts, calls or other options? ........ __________
   - (c) Participation in any underwriting or other agreement subject to future demands? ........ __________
   - (d) Writs issued against the firm or partners or corporation or any other litigation pending? ........ __________
   - (e) Income tax arrears of partners or corporation? ........ __________
   - (f) Other contingent liabilities, guarantees, accommodation endorsements or commitments affecting the financial position of the firm? ........ __________

~~2. Are all Exchange seats which are operated by the firm owned outright and clear of encumbrance by the firm?........~~ __________

2~~3~~. Does the firm promptly segregate clients' securities in accordance with the rules and regulations prescribed by the appropriate Joint Regulatory Body? ........ __________

3~~4~~. Does the firm determine on a regular basis its free credit segregation amount and act promptly to segregate assets as appropriate in accordance with the rules and regulations prescribed by the appropriate Joint Regulatory Body? ........ __________

4~~5~~. Does the firm carry insurance of the type and in the amount required by the rules and regulations of the appropriate Joint Regulatory Body? ........ __________

5~~6~~. Have all "concentrations of securities", as described in the rules, regulations and policies of the appropriate Joint Regulatory Body, been identified on Schedule 9? ........ __________

6~~7~~. Has the "most stringent rule" requirement *[as described in the general instructions]* been adhered to in the preparation of these statements and schedules? ........ __________

7~~8~~. Does the firm monitor on a regular basis its adherence to early warning requirements in accordance with the rules and regulations prescribed by the appropriate Joint Regulatory Body? ........ __________

8~~9~~. Does the firm have adequate internal controls in accordance with the rules and regulations prescribed by the appropriate Joint Regulatory Body?........ __________

9~~10~~. Does the firm maintain adequate books and records in accordance with the rules and regulations prescribed by the appropriate Joint Regulatory Body? ........ __________

10~~1~~1.Does the firm follow the minimum required firm policies and procedures relating to security counts as prescribed by the appropriate Joint Regulatory Body? ........ __________

11. Where the firm uses value at risk modeling to determine its capital requirements on its proprietary inventory security positions, does the firm use an approved value at risk modeling approach whose standards are subject to regular stress testing and back-testing to ensure ongoing model standard appropriateness in accordance with the rules and regulations prescribed by the appropriate Joint Regulatory Body? ........ __________

__________

______________________________
*[date]*

| **Name and Title - Please type** | **Signature** |
| --- | --- |
| ______________________ | ______________________ |
| ______________________ | ______________________ |
| ______________________ | ______________________ |
| ______________________ | ______________________ |

## APPENDIX B

### CERTIFICATE OF PARTNERS OR DIRECTORS
### NOTES AND INSTRUCTIONS

1. Details must be given for any "no" answers.

2. To be signed by:
   (a) chief executive officer/partner
   (b) chief financial officer
   ~~(c) member seatholder [if applicable]~~
   (cd) chief accountant
   (de) at least two directors/partners if not included in (a) andto (be) above.

3. Copies with original signatures must be provided to the Joint Regulatory Body with prime audit jurisdiction.