APPENDIX C

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"Best Practices in Risk Management: Private and Public Sectors Internationally"

A Sampling of Risk-Related Regulatory, Rating Agency and Corporate Governance Guidelines and Requirements

There are a number of regulatory, rating agency and corporate governance guidelines and regulations that ERM programs and policies need to consider. The more prominent of these are described below.

- General Industry
  - Cadbury Report, et al (UK) — the London Stock Exchange has adopted a set of principles — the Combined Code — that consolidates previous reports on corporate governance by the Cadbury, Greenbury and Hampel committees. This code, effective for all accounting periods ending on or after December 23, 2000 (and with a lesser requirement for accounting periods ending on or after December 23, 1999), makes directors responsible for establishing a sound system of internal control and reviewing its effectiveness, and reporting their findings to shareholders. This review should cover all controls, including operational and compliance controls and risk management. The Turnbull Committee issued guidelines in September 1999 regarding the reporting requirement for non-financial controls.
  - Dey Report (Canada) — commissioned by the Toronto Stock Exchange and released in December 1994, it requires companies to report on the adequacy of internal control. Following that, the clarifying report produced by the Canadian Institute of Chartered Accountants, "Guidance on Control" (CoCo report, November 1995) specifies that internal control should include the process of risk assessment and risk management. While these reports have not forced Canadian listed companies to initiate an ERM process, they do create public pressure and a strong imperative to do so. In actuality, many companies have responded by initiating ERM processes.
  - Australia/New Zealand Risk Management Standard — a common set of risk management standards issued in 1995 that call for a formalized system of risk management and for reporting to the organization's management on the performance of the risk management system. While not binding, these standards create a benchmark for sound management practices that includes an ERM system.

- Financial Services Industry
  - Basel Committee:
    - The Basel Committee on Banking Regulation and Supervisory Practices was established in 1974 (originally called the Cooke Committee) in response to the erosion of capital in leading global banks. The committee meets under the auspices of the Bank for International Settlements (BIS) but is not part of the BIS. The committee consists of representatives from the central banks/supervisory authorities of the G10 countries + Luxembourg. The committee has no legal authority, but the governments of the representatives on the committee have always legislated to make the recommendations part of their own national law. The standards set by the committee are widely

regarded to be best practice and a large number of other countries that are not formally represented on the committee have implemented the proposals. In the U.S., the Federal Reserve has adopted the Basel Capital Accord ("Basel I" – see below).

- "Basel I" — the 1988 Basel Capital Accord established a framework to calculate a minimum capital requirement for banks. The Accord focused on credit risk and was crude in its recognition of the relative risk of different loans. A number of amendments were made to the Accord (prior to "Basel II" – see below), the most significant of which is the market risk amendment in 1996; this extended the 1988 Accord to cover market risk and allowed for the use of internal models to quantify regulatory capital.
- "Basel II" — in 1999 the Basel Committee issued a draft proposal for a new accord and accepted comment. Based on feedback, the Committee issued a revised proposal in 2001 for review and comment. In this New Basel Capital Accord, proposed for implementation in 2004, among other changes a capital charge for operational risk is included as part of the capital framework. The charge reflects the Committee's "realization that risks other than market and credit" can be substantial. Operational risk is defined as "the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events". The new capital adequacy framework is proposed to apply to insurance subsidiaries of banks and may apply to insurance companies as insurance and banking activities converge.

- OSFI (Canada) — the Office of the Supervisor of Financial Institutions supervisory framework defines "inherent risk" to include credit risk, market risk, insurance risk, operational risk, liquidity risk, legal and regulatory risk and strategic risk. It states that "Where independent reviews of operational management and controls have not been carried out or where independent risk management control functions are lacking, OSFI will, under normal circumstances, make appropriate recommendations or direct that appropriate work be done."
- FSA (UK) — the Financial Services Authority (FSA – the recently created regulator of all UK financial services businesses) is introducing a system of risk based supervision which will create a single set of prudential requirements organized by risk rather than by type of business. Regulated businesses will have to demonstrate that they have identified all material risks and have adequate systems and financial resources to manage and finance such risks, including market risk, credit risk, operational risk and insurance risk. There is also likely to be a requirement for formal documentation of the whole process in a format that is readily accessible to the FSA.

- Insurance Industry
  - A.M. Best — in its *Enterprise Risk Model: A Holistic Approach to Measuring Capital Adequacy*, A.M. Best describes its VaR-based method for determining the adequacy of capital for rating purposes. The report states: "The Enterprise Risk Model is a modular system designed to capture all risks, including noninsurance and non-U.S. related risks. VaR methodologies are somewhat controversial in insurance circles, but they are the standard for other financial-services organizations. More importantly, A.M. Best believes that VaR-based methodologies provide a more accurate assessment of risk and required capital, since they use observable market metrics. Beyond its application in the rating process, the model can also be a useful tool for financial managers, since the VaR framework provides a natural springboard to other applications, including risk-adjusted return on capital (RAROC) and dynamic financial analysis (DFA). The Enterprise Risk Model quantifies the risk to the future surplus – net worth – of an organization arising from a change in underlying risk variables, such as credit risk, insurance risk, interest rate risk, market risk and foreign exchange risk. The model also quantifies the benefits of diversification as it takes a macro view of the correlations among risks within an organization...Like other VaR-based models, it is calibrated to measure the risks over a defined holding period – one year -- for a given level of statistical confidence – 99%."
  - Moody's — in its *One Step in the Right Direction: The New C-3a Risk-Based Capital Component*, June 2000, Moody's Investors Service states that it will use the new method devised by the NAIC and the American Academy of Actuaries for measuring a life insurance company's C-3a (interest-rate) risk, as it incorporates a cash-flow testing requirement for annuity and single premium life products and is more consistent with industry advances in dynamic cash-flow testing: "…the revised calculation is a more accurate barometer of the amount of capital required to support an insurer's interest-sensitive business, as it explicitly incorporates asset-liability mismatches in determining the appropriate amount of required regulatory capital for a company. Consequently, the new calculation should help discourage companies from taking unwarranted asset-liability risk."
  - S&P — in its *Revised Risk-Based Capital Adequacy Model for Financial Products Companies* Standard & Poor's states: "Standard & Poor's Insurance Capital Markets Group has developed a new, risk-based capital adequacy model to analyze the credit, financial market, and operational risks of companies that are offering products or are using sophisticated risk management techniques that are not considered under the existing Rating Group's capital models. The model will also determine these companies' capital adequacy. The primary application of the model will be to analyze specialized financial product companies (FPCs) that are subsidiaries of insurance companies or that are credit enhanced by insurance companies.... The model may also be applied to portions of insurance companies that control or mitigate their risks to a greater extent than is implied by the capital charges applied in the standard life/health capital adequacy model, which bases charges for interest-rate risk and credit risk on industry averages and liability types rather than company-specific exposure."

- NAIC — The National Association of Insurance Commissioners:
  - Risk Based Capital (RBC) — Following a detailed examination of the growing diversity of business practices of insurance companies conducted in 1990, the NAIC concluded that minimum capital requirements placed on companies needed to be increased to protect consumers. The NAIC adopted life/health risk-based capital requirements in December 1992 and adopted Property/Casualty risk-based capital requirements in December 1993. Although risks involved in these two segments of the industry are very different, the NAIC was able to develop a consistent two-step approach to setting risk-based capital requirements for individual companies:
    - Step 1 involves the calculation of a company's capital requirement and total adjusted capital, based on formulas developed by NAIC for each industry.
    - Step 2 calls for comparison of a company's total adjusted capital against the risk-based capital requirement to determine if regulatory action is called for, under provisions of the Risk-Based Capital for Insurers Model Act. The model law sets the points at which a commissioner is authorized and expected to take regulatory action.
  - Interest rate risk — the NAIC's Life Risk-Based Capital Working Group, in conjunction with the American Academy of Actuaries Life Risk-Based Capital Task Force, has finalized the development of an improved method for measuring a company's interest-rate risk. The method, which is effective for the year-end 2000 statements, "incorporates a cash-flow testing requirement for annuity and single premium life products and makes the RBC C-3a calculation more consistent with recent industry advances in dynamic cash-flow testing…The task force has recognized the need to accurately incorporate these additional risks into the RBC formula. They have stated that equity indexed annuities (EIAs) and variable products with secondary guarantees will be incorporated in a future C-3a update. This would be consistent with the task force's goal of upgrading C-3a from a measure of interest-rate risk to a more complete measure of asset/liability risk."
- APRA (Australia) — a feature of ongoing reforms to the regulation of general insurers is a layer of four standards covering the subjects of capital adequacy, liability valuation, reinsurance arrangements and operational risk. The Australian Prudential Regulation Authority (APRA) is implementing an approach based on development of, and compliance with, a range of risk management strategies. These strategies will need to deal with the myriad interlocking risks involved in managing a general insurance company. Each company will need to have its strategy agreed upon by APRA and will then be responsible for managing compliance. APRA has made it clear that an internal enterprise risk model with appropriate specifications will go a long way toward meeting compliance objectives.