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The article below has been prepared by the members of the PCO Investment Advisory Committee in order to inform plan administrators and other interested parties about the use of derivatives by pension plans. The views expressed in this article are those of the members of the PCO Investment Advisory Committee. They do not necessarily reflect those of the Pension Commission of Ontario or the Superintendent of Pensions. Readers who have a particular interest in any of the matters addressed in the article should obtain independent professional advice.

A number of high-profile losses involving derivatives have recently moved this subject from the business section of newspapers to the evening news headlines. Since Canadian pension funds are legally empowered to trade in derivatives and some of them are quite active participants in this market, the PCO Investment Advisory Committee felt it was appropriate to address this issue. At this time, the Committee would like to offer perspective and advice to administrators confronted with the decision of whether or not to use derivatives in the management of the assets under their care.

Simply stated, a derivative is a contract between two parties where payments between the parties are dependent upon price movements in some underlying asset, index or financial rate. Although the final strategy may be quite complex or exotic, the Group of 30 (a Washington-based organization of senior bankers and other market participants) concluded that "derivatives by their nature do not introduce risks of a fundamentally different kind or of a greater scale than those already present in financial markets."

Derivatives have been around for quite some time and account for over half of all the trading in global financial markets. Whether or not they realize it, most people use derivatives to manage their own financial affairs. For instance, the purchase of fire insurance on a home is equivalent to the purchase of a put option. Few if any of us believe that this service should be eliminated because of perceived abuses. Similarly, farmers, oil refiners and chocolate makers commonly buy and sell futures to decrease their business risks.

As with traditional stock and bond investments, derivatives do not guarantee a profit on every transaction. We should not therefore conclude that derivatives should be avoided simply because some market participants have experienced heavy losses. As is the case for traditional investments, success should be assessed against the strategy's objective and over a time horizon of sufficient length to provide proper perspective. When losses are experienced, it would also make sense to relate them to the scale of underlying operations.

It should be recognized that derivatives are often used as a mechanism to hedge other risks in which case their impact cannot be judged in isolation. For instance, a cereal grower can buy puts on grain in order to protect a profit irrespective of future price movements. Should prices rise, he will lose money on the puts just as a car owner loses his insurance premium when he "fails" to have an accident.

For the most part, "headline" derivatives losses have been the result of excessive leverage in speculative trading programs. While derivatives do lend themselves to the use of leverage, the two are not necessarily linked. Typically, pension funds that use derivatives avoid the use of leverage. Yet, leverage in more traditional investment programs does exist, for example, the use of mortgages in real estate funds.

The most widely used strategies using derivatives in pension funds are neither hedging nor speculation. Rather they are extensions of the investment function. Derivatives can be combined with other instruments to create new and more diversified portfolios but that have risk and return profiles similar to more traditional investments.

While misperceptions do exist regarding derivatives, we should recognize that they do, like all investment vehicles, have features that can make them hazardous if used imprudently or if used by the uninitiated. The Investment Advisory Committee strongly recommends that plan administrators, being required to be prudent, address at least the following seven issues to their satisfaction before authorizing the use of derivatives.

1) **strategy**: the objective of the derivative strategy should be clear to all parties;

2) **instruments**: the specific derivatives to be used for the strategy should be identified clearly;

3) **sources and magnitude of risks**: sources of risk should be identified and implications of adverse events should be understood. This would include, for example, the impact of adverse changes in the price of the assets underlying the employed derivatives and the possible failure of counterparties to perform as contracted;

4) **leverage**: the use of leverage should be strictly controlled (by establishing the amount of cash backing the derivatives position, for example);

5) **pricing**: the market value and notional value of the positions in derivatives should be priced according to a methodology accepted by all parties;

6) **monitoring**: the fund manager should monitor the marked-to-market positions and values at appropriate intervals, which may be daily; and

7) **expertise:** the people entrusted to manage and implement the derivatives program should have the appropriate derivatives expertise and be subject to strict internal risk reporting and control.

Finally, the Investment Advisory Committee recommends that the policy guidelines and restrictions governing the derivatives strategy be documented.