S|X|F™

Synthetic exposure of the portfolio

Situation

Suppose a portfolio manager thinks that the price level of the Canadian stock market will go up. Buying SXF contracts will allow a manager to increase the market exposure of his Canadian portfolio without having to buy additional Canadian stocks.

On December 5, a manager wants to increase the market exposure of his portfolio by 50% since he anticipates that the stock market will go up in the next three months.

Objective

To increase until March the market exposure of a Canadian portfolio without having to buy additional Canadian stocks, using a leverage position.

Strategy

MARKET SNAPSHOT ON DECEMBER 5:

Value of the portfolio:	$1,530,000
SXF, March contract:	439.30
Beta of the portfolio:	1.3

Increasing market exposure by 50% amounts to buy the equivalent of $1,530,000 x 0.50 = $765,000 in Canadian stocks. The futures equivalent is calculated as follows:

$$N = \frac{\text{Value of the equity position x ß}}{\text{Future price of the March contract x \$200}}$$

$$N = \frac{\$765{,}000 \times 1.3}{439.20 \times \$200} = 11.31, \text{ or } 11 \text{ contracts}$$

So, the manager buys 11 SXF March contracts instead of $765,000 in Canadian stocks. Remember that buying 11 SXF contracts will not require any fees from the manager unlike buying the shares themselves. The initial and variation margin deposits constitute the only investments until the futures position is closed.

TMX Montréal Exchange

Results

Assume that the market S&P/TSX moves from 438.24 to 508.04.

MARKET SNAPSHOT ON MARCH 5:

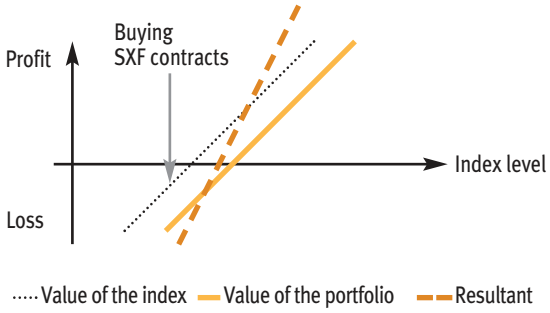
Value of the portfolio:	$1,836,000 a 20% increase
SXF, March contract:	509.16
Beta of the portfolio:	1.3

PROFIT / LOSS

Gain on the portfolio:
$1,836,000 - $1,530,000 = $306,000

Gain on the futures contracts:
11 x (509.16 – 439.30) x $200 = $153,692

Net gain = $459,692



The profit/loss payout outcomes for the portfolio position and the long futures position are presented in the above diagram: the futures position increases the market exposure of the equity position.

Commentary:

In case of purchasing additional shares, a 20% gain on $765,000 represents $153,000, which is similar to the gain on the futures position. If, contrary to the expectations of the manager, the value of the portfolio would have dropped, the loss on the futures position would have accentuated the loss on the equity position of the portfolio. This strategy is highly speculative, which means that the manager is taking an additional risk by entering into a speculative futures position.

Transaction fees are not taken in consideration in this example.

TMX Montréal Exchange