**SECOND CITY OPTIONS: A Case Study on Index Options[[1]](#footnote-2)**

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Second City Options (SCO) is a small firm that specializes in option trading. Employing 35 people, SCO is located on LaSalle Street in the Chicago financial district. It is a member firm of the Chicago Board Options Exchange (CBOE), where it trades options on stocks and stock indices. It is also a member firm of the Chicago Mercantile Exchange Group (CME Group), where it trades options on futures and the underlying futures contracts.

SCO trades for itself and a number of corporate and individual clients. In addition, it provides general advice to other clients who trade for themselves. SCO was founded in 1975, two years after the CBOE opened. It was very successful for its first 25 years, but its profits have declined steadily since 2000. SCO's founder and principal owner, Joseph Jensen, is 67 years old and has been a life-long student of the stock market. Jensen has traded since he was a teenager. By the age of 30 he was a millionaire and an acknowledged expert on analyzing market trends.

Throughout his career Jensen has relied primarily on technical analysis, the evaluation of trends in past market data such as prices and volumes. He has consistently devised option strategies to take advantage of his stock market forecasts. Over the last several years, however, his techniques have grown less profitable. Jensen attributes his declining success to the growing competitiveness of the options market, which has made it increasingly difficult for SCO to implement its trading strategies at attractive prices.

Worried that his firm's techniques were becoming outmoded, Jensen has conferred recently with his chief trading executive, Bill Harrison, to analyze the situation and discuss possible solutions. Harrison believes that better implementation of option pricing techniques would improve SCO's trading profits. In particular, there would be two potential benefits for SCO: it could improve its historical strategy of trading based on stock market forecasts, and it could explore other trading opportunities related to option mispricing. Consequently, SCO has significantly upgraded and modernized its computer system. Furthermore, it has hired Carla Shilling, a derivatives specialist who recently graduated from a major Midwestern business school. Her mandate is to improve the firm's trading profits by utilizing her expertise in option valuation.

**The Market Outlook**

Before making any recommendation regarding strategies, Shilling must finalize her opinion of how the economy and stock market will perform over the next few months. The date is July 2, 2007. Over the last six months the S&P 500 has ranged from 1374.12 to 1539.18, closing at 1503.35 at the end of June. Investors seem worried about an impending credit crunch, even though problems at two Bear Stearns hedge funds that own collateralized debt obligations (CDOs) based on subprime mortgage debt appear to be contained. The economy has slowed with consumer pessimism high, reflecting a weak housing market combined with credit worries. For the last two months personal income has declined after adjusting for inflation. The Federal Reserve has focused on rising inflation. The Federal Open Market Committee, the Fed's policy-setting arm, left interest rates unchanged in its June 27–28 meeting, keeping the Fed funds target level at 5.25% for the ninth time in the past twelve months. Despite inflation fears, the Federal Reserve did not raise interest rates due to concern that rate hikes would ripple out to home mortgages and hurt borrowers already struggling to make mortgage payments. Economists differ widely in their optimism or pessimism regarding the overall economy. There is no consensus, for example, on whether the stock market will increase or decrease during the next few months. Economists do agree in one key respect, however — they believe there is a large and increasing degree of uncertainty regarding future economic and market behavior.

SCO's Trading Committee meets weekly to determine the firm's outlook regarding the overall economy and the stock market. Shilling attended the most recent meeting, and she left that meeting holding the same opinion as the vast majority of her colleagues. There was a strong general belief that market volatility was relatively high, yet it might climb even higher than expected in the near future.

1. This case is an updated and revised version of Second City Options Case, by Don M. Chance (1997). Although it can easily be used with virtually any derivatives text, it has been written to accompany the 8th and higher editions of An Introduction to Derivatives and Risk Management, by Don M. Chance and Robert Brooks. The computer software files Stratlyz9e.xls, Hisv9e.xls, BSMbin9e.xls, and BSMImpVol9e.xls (8e = 8th edition, 9e = 9th edition, etc.) mentioned in this case are available at the www.cengage.com website for this text. Instructors and students who adopt this text can use them freely. [↑](#footnote-ref-2)