STUDY SESSION

4

Derivatives and Currency Management

The purpose of this study session is to illustrate ways in which derivatives might be used in typical investment situations. Few asset managers or individual investors will ever use all of the strategies described here. However, an informed investment professional should still be aware of these important strategies and understand the associated risk–return trade-offs.

The first reading examines widely used options strategies, including covered calls, protective puts and select spread and combination option strategies. Derivatives strategy selection is discussed and demonstrated in a series of applications.

The second reading shows how swaps, forwards, and futures can be used to change the risk exposure of an existing position. There are many ways in which investment managers and investors can use swaps, forwards, futures, and volatility derivatives. The typical applications of these derivatives involve modifying investment positions for hedging purposes or for taking directional bets, creating or replicating desired payoffs, implementing asset allocation and portfolio rebalancing decisions, and even inferring current market expectations.

When the strategic asset allocation includes exposure to global markets, non-domestic currencies create additional sources of portfolio volatility and potential returns. The final reading in this study session explores how currency exposures can be managed to reflect a client's investment objectives and constraints.

READING ASSIGNMENTS

Reading 8	Option Strategies by Adam Schwartz, PhD, CFA, and Barbara Valbuzzi, CFA
Reading 9	Swaps, Forwards, and Futures Strategies by Barbara Valbuzzi, CFA
Reading 10	Currency Management: An Introduction by William A. Barker, PhD, CFA

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LEARNING OUTCOMES

READING 8. OPTIONS STRATEGIES

The candidate should be able to:

a demonstrate how an asset's returns may be replicated by using options;

b discuss the investment objective(s), structure, payoff, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of a covered call position;

c discuss the investment objective(s), structure, payoff, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of a protective put position;

d compare the delta of covered call and protective put positions with the position of being long an asset and short a forward on the underlying asset;

e compare the effect of buying a call on a short underlying position with the effect of selling a put on a short underlying position;

f discuss the investment objective(s), structure, payoffs, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of the following option strategies: bull spread, bear spread, straddle, and collar;

g describe uses of calendar spreads;

h discuss volatility skew and smile;

i identify and evaluate appropriate option strategies consistent with given investment objectives;

j demonstrate the use of options to achieve targeted equity risk exposures.

READING 9. SWAPS, FORWARDS, AND FUTURES STRATEGIES

The candidate should be able to:

a demonstrate how interest rate swaps, forwards, and futures can be used to modify a portfolio's risk and return;

b demonstrate how currency swaps, forwards, and futures can be used to modify a portfolio's risk and return;

c demonstrate how equity swaps, forwards, and futures can be used to modify a portfolio's risk and return;

d demonstrate the use of volatility derivatives and variance swaps;

e demonstrate the use of derivatives to achieve targeted equity and interest rate risk exposures;

f demonstrate the use of derivatives in asset allocation, rebalancing, and inferring market expectations.

READING 10. CURRENCY MANAGEMENT: AN INTRODUCTION

The candidate should be able to:

a analyze the effects of currency movements on portfolio risk and return;

b discuss strategic choices in currency management;

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- **c** formulate an appropriate currency management program given financial market conditions and portfolio objectives and constraints;
- **d** compare active currency trading strategies based on economic fundamentals, technical analysis, carry-trade, and volatility trading;
- **e** describe how changes in factors underlying active trading strategies affect tactical trading decisions;
- **f** describe how forward contracts and FX (foreign exchange) swaps are used to adjust hedge ratios;
- **g** describe trading strategies used to reduce hedging costs and modify the risk–return characteristics of a foreign-currency portfolio;
- **h** describe the use of cross-hedges, macro-hedges, and minimum-variance-hedge ratios in portfolios exposed to multiple foreign currencies;
- **i** discuss challenges for managing emerging market currency exposures.

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