

Financial Mathematics

MATH 5870/6870¹
Fall 2021

Le Chen

lzc0090@auburn.edu

Last updated on
October 27, 2021

Auburn University
Auburn AL

¹Based on Robert L. McDonald's *Derivatives Markets*, 3rd Ed, Pearson, 2013.

Chapter 14. Exotic Options: I

Chapter 14. Exotic Options: I

§ 14.1 Introduction

§ 14.2 Asian options

§ 14.3 Barrier options

§ 14.4 Compound options

§ 14.5 Gap options

§ 14.6 Exchange options

§ 14.7 Problems

Chapter 14. Exotic Options: I

§ 14.1 Introduction

§ 14.2 Asian options

§ 14.3 Barrier options

§ 14.4 Compound options

§ 14.5 Gap options

§ 14.6 Exchange options

§ 14.7 Problems

An **exotic option**, or **nonstandard option**, is simply an option with some contractual difference from standard options.

Exotic options solve particular business problems that an ordinary option do not.

They are often constructed by tweaking ordinary options in minor ways.

Questions

- ▶ How does the exotic payoff compare to that of a standard option?
- ▶ Can the exotic option be approximated by a portfolio of other options?
- ▶ Is the exotic option cheap or expensive relative to standard options?
- ▶ What is the rationale for the use of the exotic option?
- ▶ How easily can the exotic option be hedged?

Questions

- ▶ How does the exotic payoff compare to that of a standard option?
- ▶ Can the exotic option be approximated by a portfolio of other options?
- ▶ Is the exotic option cheap or expensive relative to standard options?
- ▶ What is the rationale for the use of the exotic option?
- ▶ How easily can the exotic option be hedged?

Questions

- ▶ How does the exotic payoff compare to that of a standard option?
- ▶ Can the exotic option be approximated by a portfolio of other options?
- ▶ Is the exotic option cheap or expensive relative to standard options?
- ▶ What is the rationale for the use of the exotic option?
- ▶ How easily can the exotic option be hedged?

Questions

- ▶ How does the exotic payoff compare to that of a standard option?
- ▶ Can the exotic option be approximated by a portfolio of other options?
- ▶ Is the exotic option cheap or expensive relative to standard options?
- ▶ What is the rationale for the use of the exotic option?
- ▶ How easily can the exotic option be hedged?

Questions

- ▶ How does the exotic payoff compare to that of a standard option?
- ▶ Can the exotic option be approximated by a portfolio of other options?
- ▶ Is the exotic option cheap or expensive relative to standard options?
- ▶ What is the rationale for the use of the exotic option?
- ▶ How easily can the exotic option be hedged?