Notes from John C. Hull's famed textbook.

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May 12, 2023

1 Chapter 1: Introduction

A **derivative** can be defined as a financial instrument whose value depends on (or derives from) the values of other, more basic, underlying variables. The variables underlying a derivative are often the prices of traded assets. A stock option is a derivative whose price is dependent on the price of the stock. Note that derivatives can be dependant on almost any variable: from the price of hogs to the amount of snow in the Alpes.

1.1 Exchange-Traded Markets

A derivatives exchange is a market where individuals trade standardized contracts that have been defined by the exchange. Traditionally, derivative exchanges used the *open outcry system*; physically meeting up on the floor of the exchange, shouting and using a set of complicated hand signals. This is fortunately being replaced by electronic trading. The replacement has led to a growth in algorithmic trading, also known as blackbox trading, automated trading, high-frequency trading, or robo trading, or beep-boop-machine-make-money-out-of-thin-air trading. The last one is rarely used in the industry.

1.2 Over-the-counter Markets

This is an alternative to the exchange market and has become **much larger** than it in terms of the total volume of trading. Trades are done over the phone and usually between two fininsts or between a fininst and one of its clients (typically a corporate treasurer or a fund manager). Fininsts often act as **market makers** for the more commonly traded instruments; they are prepared to quote a bid price (to buy) and offer price (to sell). There is a credit risk associated with over-the-counter trade, while exchanges have organized themselves to eliminate virtually all credit risk.

1.3 Forward Contracts