

# Stock Markets

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## 1 Introduction

Before we get into strategies such as the wheel, we need to have a basic model for what stocks are and how they work.

## 2 Symbols

$$\mathbb{R} = (-\infty, \infty)$$

$$\mathbb{R}_0^+ = [0, \infty)$$

## 3 Stock Market

Suppose that we are looking at the stock value for company E.

A stock is a function  $S_E : T \rightarrow \mathbb{R}_0^+$  where  $T \subset \mathbb{R}_0^+$  and  $0 < \text{card}(T) < \text{card}(\mathbb{N})$  and where  $1 \in \mathbb{R}_0^+$  is 1 second from 0. Further,  $\tau_0 \in T$  such that  $\tau_0 \leq t$  for all  $t \in T$

The time  $\tau_0$  is the point in time when the company E went public and the value  $S_E(\tau_0)$  is the initial value of the companies stock.

## 4 Step 1

Sell cash covered put.