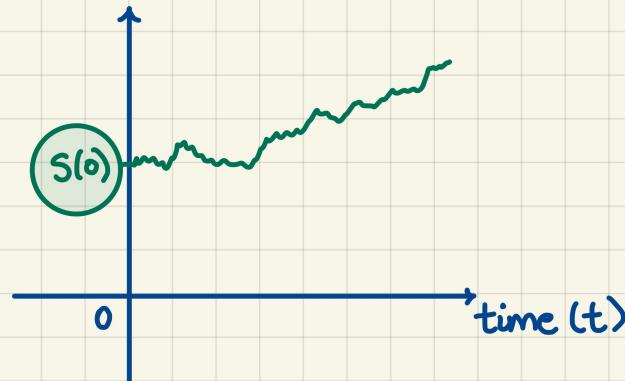


M3392: January 24<sup>th</sup>, 2022.

## Stock Prices.

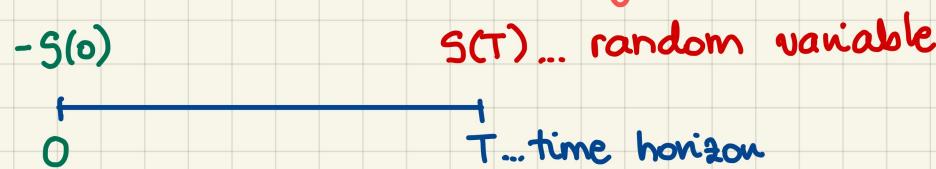
$S(t), t \geq 0$  ... time  $\cdot T$  stock price



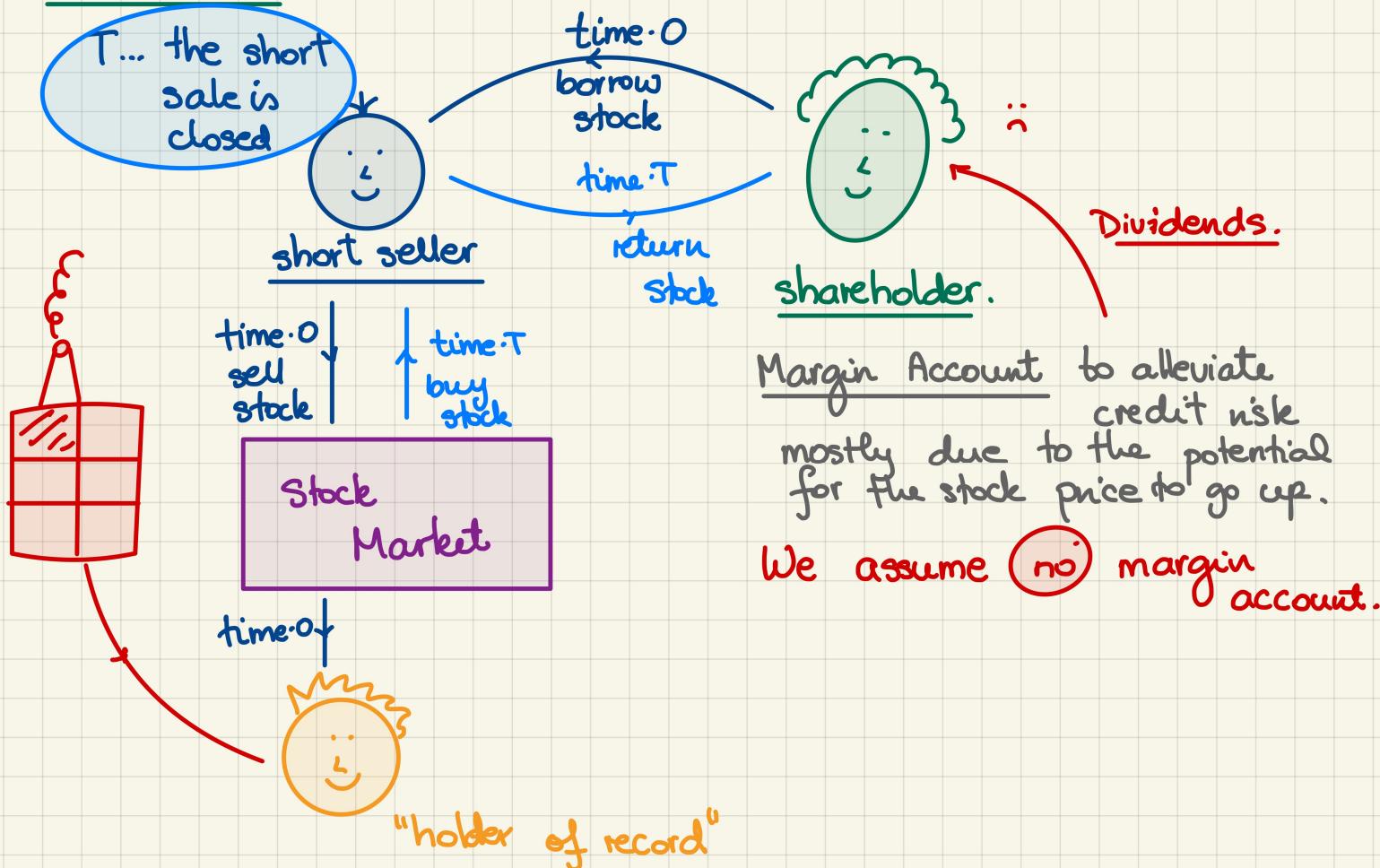
a stochastic process

## Outright Purchase of one share of stock.

Assume no dividends for today.



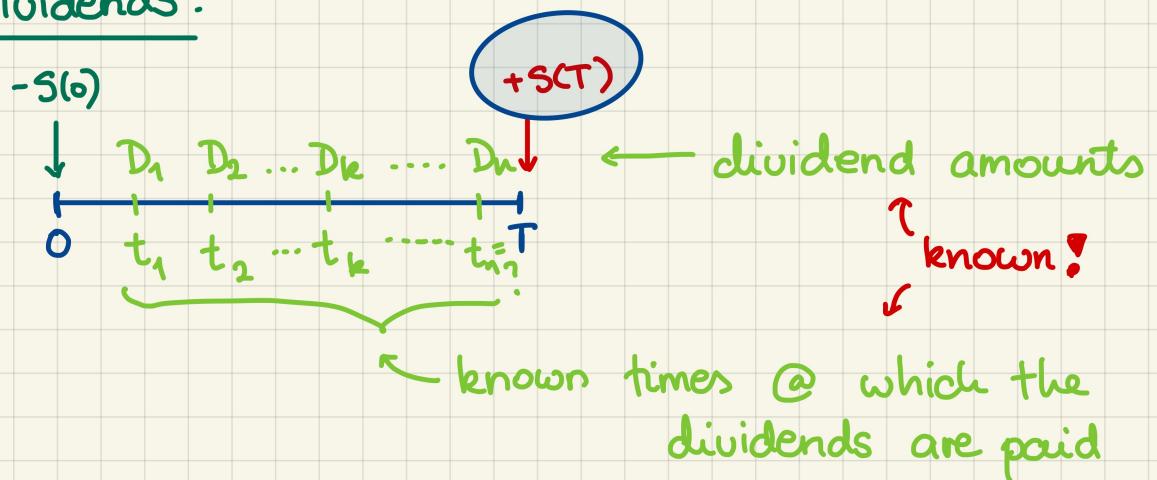
## Short Sales.



Assume temporarily no dividends.



Discrete Dividends.



Of interest:  $NPV(\text{all the dividends in } [0, T])$

$$= \sum_{k=1}^n PV_{0,t_k}(D_k)$$

If r... continuously compounded, risk-free interest rate,

then

$$NPV(\text{Div}) = \sum_{k=1}^n D_k e^{-rt_k}$$