

M339D: January 20th, 2023.

Market Makers.

Bid price ... the price that the market maker is willing to **pay** for an asset

Ask price ... the price that the market maker wants to **receive** for an asset

Bid Prices < Ask Price

=> Bid-Ask Spread

Brokers. Charge a commission per transaction

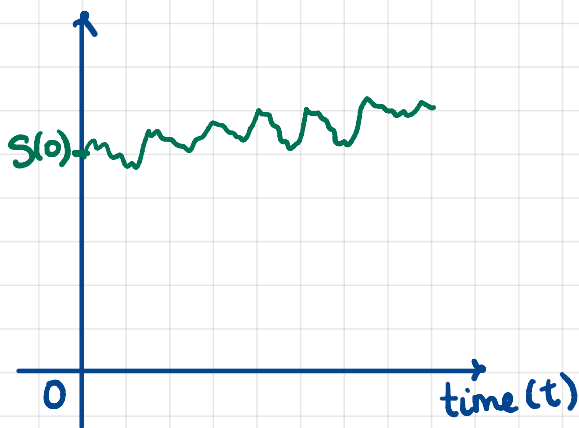
fixed amount proportional to the cashflow

Assume no bid-ask spread or transaction costs.

Stock Prices.

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

a stochastic process



Outright Purchase of One Share of Stock.

Assume no dividends.

$-S(0)$

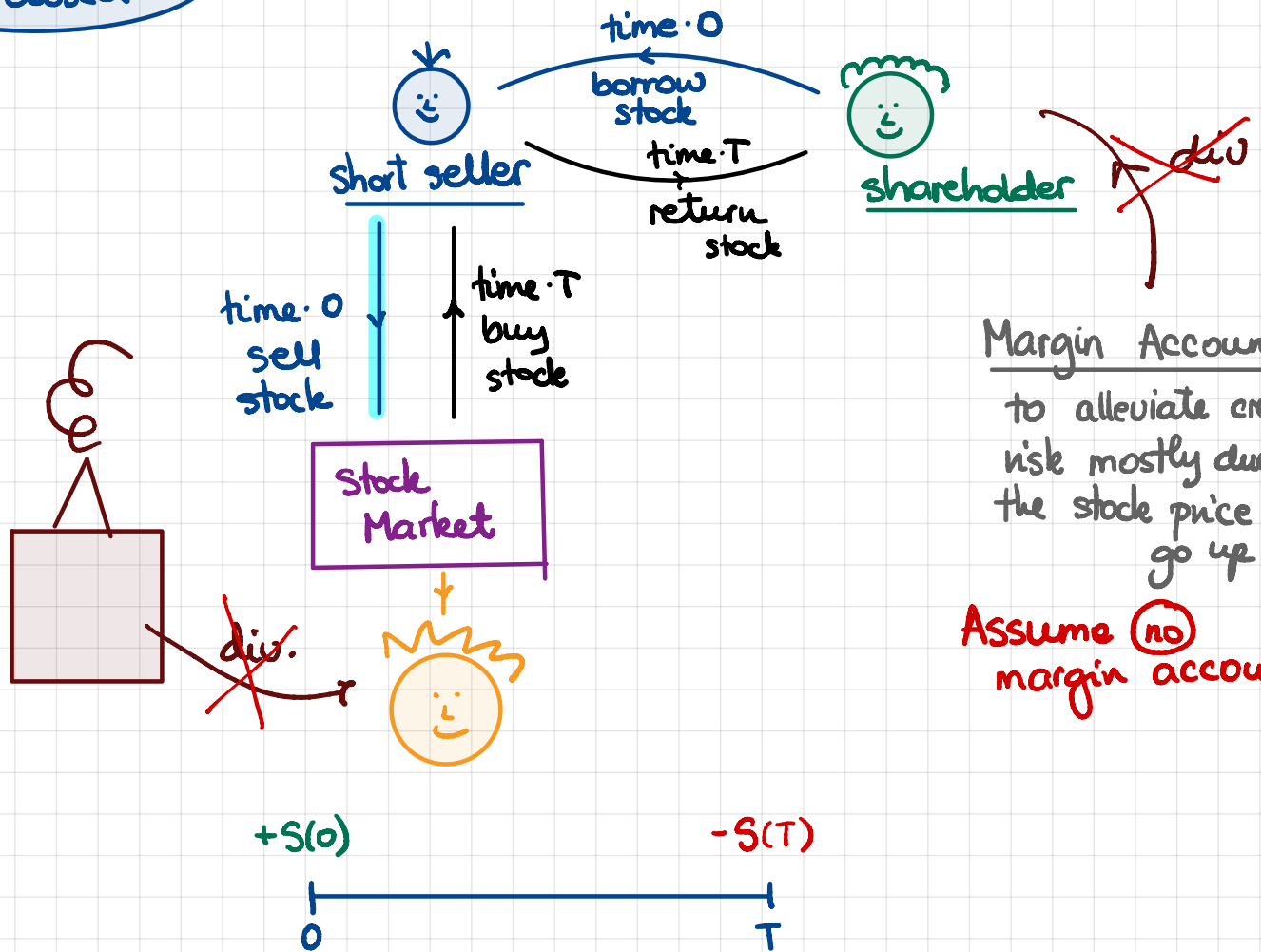
$S(T)$... random variable

0

T ... time horizon

Short Sales.

T... short sale
is closed



Margin Account

to alleviate credit risk mostly due to the stock price to go up.

Assume **(no)** margin account.