

# Mathematical Finance 1

## Exercise sheet 4

Please prepare the exercises of Sheet 3 which have not been treated in the exercise class last time.

1. Consider the financial market model of the lecture and a contingent claim whose payoff at time  $T$  is of the form

$$f = a + (H \cdot S)_T$$

for some  $a \in \mathbb{R}$  and some predictable strategy  $H$ . Suppose that (an unbounded number of) this claim can be sold at price  $b > a$ . What is the strategy to get arbitrarily rich, i.e., to earn any  $R > 0$ ?