Sheep of Wall Street
Proposal

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Abstract

1 What part of phenomenon would you like to model?

1. Investors deciding whether or not to change investments[**?**]

2. Investors deciding whether or not to change their investing strategies.

3. Criteria for assessing the above.

   The challenge designers have intentionally left that a little vague at the start. For the challenge itself (the mandatory write-up and video part of this challenge), it would be good to explore different meanings of "winning" ... median and/or mean of rank over multiple rounds, median and/or mean of earnings over multiple rounds, and any other outcomes you can think of. For the tournament (the optional part of this challenge), the instructors are leaning towards using the median rank over a small number of rounds, but this is still under discussion. If that changes, we will let you know. (Rank is placing in a given round without regard to gross earnings, rank 1 being assigned to the agent with the highest earnings in a given round of 100 steps, rank 2 to the agent with the second highest earning, etc. Ties receive the same ranking in a given round.)

2 What are the principal types of agents involved in this phenomenon?

Agent	Goal
Investor	these are the Agents in the Problem Statement
Pools	can be patches
Predictors	these are function closures, not Turtles

3 What properties do these agents have?

Agent	Property	Remarks
Investor	wealth	accumulated payout, allowing for tau
	favourite-predictor	tell Investor what course to follow
	alternative-predictor	switch if favourite not doing well
	payoffs	list of payouts, most recent first, before tau subtracted
	choices	list of choices made by turtle, most recent first
Pool	Total	cell3
	probability	cell6
Predictor	action	cell3
	history	cell6
	parameters	cell9

4 What actions (or behaviours) can these agents take?

Agent	Goal	
Investor	Switch pools	Has a cost τ
	Switch strategies	See [?] and [?]
Pools		
Predictors		

5 If the agents have goals, what are their goals?

Agent	Goal
Investor	Accumulate wealth
Pools	
Predictors	

6 Agents operate in what kind of environment?

7 How do agents interact with environment?

References