Imagine your are working as a broker at the stock market. You will have repeatedly the opportunity to choose stocks for which you expect profit. For each decision in which you pick the more profitable stock, you receive 5 Cents additional payment.

The study consists of 105 decision trials in which you will decide between two stocks. Each stock is labeled by a random combination of letters. **It is always the case that one stock leads to a higher profit than the other stock**. In each round, you will see a new pair of stocks. After you chose one of the stocks, you will be asked how certain you are that you picked the more profitable stock.

You will receive suggestions from stock-market experts that could help you in your decision. The experts are motivated to predict and suggest the better of two stocks. In case an expert thinks the stocks are both equally good / bad, he will give positive /negative assessments for both stocks.

Please be aware that even experts cannot predict stock-market performance with 100% accuracy. Nonetheless, please try to find out which stock is more profitable.

The experts differ in their experience and therefore in their quality of prediction concerning profits from stocks. The experts also differ how often they give positive assessments of stock (as compared to negative ones) and how often they make recommendations that differ between both options. Some experts, for example, tend to give more often positive recommendations than other experts. Additionally, experts differ how frequently they give the same recommendation for both options, that is, how often they rate both stocks positive or negative.

During the study, information about the experts will be presented on the screen. This information is based on experts' recommendations from the prior 100 rounds. The following information is displayed:

1) **Prediction accuracy**

The prediction accuracy of an expert is defined as the relative number of correct recommendations based on prior 100 rounds, this means, in how many out of 100 rounds the expert recommended the more profitable stock. On the screen, prediction accuracy is displayed as "**% correct**".

The prediction accuracy of experts is between 65% and 90% in the study.

For example, a prediction accuracy of 90 means that the expert recommended in 90 out of 100 predictions the better option. Please note that an accuracy of 50% is equal to chance level. This means that recommendations from an expert with a prediction accuracy of 50% is uninformative and can be ignored.

1) **Frequency of positive recommendations**

Experts differ in the extent they make positive recommendations. Some experts tend to give more positive recommendations than others. The extent of positive recommendations is based on how often an expert recommended a stock in the last 100 rounds. The number of positive recommendations is displayed as **"% positively recommended"** on the screen.

The percentage of positive recommendations is between 55% and 73% in the study. For example, given the percentage of positive recommendations is 50% for an expert this expert gave a positive recommendation for half of all stocks.

2) **Distinctiveness**

The distinctiveness of an expert is the relative number of 100 prior rounds in which the expert recommended only **one** of both stocks. This means that the expert only recommended one of the stocks (and not both or none). Distinctiveness is displayed as **"% distinct"** on the screen.

For example, consider an expert made 80% distinct predictions in the past. This means that the expert recommended a single stock in 80 rounds. In the remaining 20 rounds the expert recommended both or none of the stocks.

In each round you will receive information from new experts. The experts do not know each other, recommendations from the experts are therefore independent of each other. The names of the experts are anonymous. Instead of names experts have randomly generated letter-strings for identification.

In each round, one recommendation from one expert for one stock is missing. Instead of a recommendation, you will see a question mark only. Question marks are randomly distributed over decision trials.

Information for each decision is displayed in the following format [translation: left column → names experts, middle column → information experts; % correct, % positively recommended; % distinct; right column → recommendations experts; lower display: your choice; please indicate which stock you want to choose].

Namen Experten	Informationen Experten			Empfehlungen Experten	
	% richtig	% positiv empfohlen	% eindeuig	Aktie trj	Aktie tzu
Experte ebr	90	50	80	+	−
Experte rzu	80	50	80	?	+
Experte jui	70	50	80	+	−
Experte uio	65	50	80	−	+

Ihre Entscheidung

Bitte geben Sie an, für welche Aktie Sie sich entscheiden.

Aktie trj Aktie tzu

The expert "ebr" predicts that stock "trj" (+) is more profitable than stock "tzu".

The expert "ebr" recommended in the last 100 of 90 rounds the correct stock---i.e., the more profitable stock (% correct = 90%).

The expert "ebr" recommended 50% of all stocks positively (i.e., the expert recommended 100 out of 200 stocks in the last 100 rounds).

The expert "ebr" recommended in the last 100 rounds 80 times only one of the stock and the other one not. This means he gave in 80% of all rounds a distinct prediction.

Summary

The study consists of three parts with 35 decisions each (105 trials). In each round, you are asked to pick the more profitable stock. You receive new information before each round. To make you familiar with the task, you can exercise three trials before the study starts.

In case you have questions, please ask the experimenter now or read the instruction once more.

Payment

You will receive a fixed payment of 8 Euros. In the course of the experiment you can earn a bonus. The bonus depends on your decisions. You will receive 5 additional Cents in each trial in case you pick the more profitable stock. How often you picked the more profitable stock will be displayed at the end of the study. Your bonus and your fixed amount will be paid at the end of the study. You can thus earn a bonus of 5.25 € in case you make good decisions.

Exercise questions

Before you start with the study, please answer the following five exercise questions.

1. Each expert recommends stocks with a specific prediction accuracy. What does a prediction of 70% for 100 rounds in the past mean?

1. How many stocks maximum can an expert recommend positively in 100 rounds?

2. How high can the distinctiveness be maximally in 100 rounds?

In the first part of the study the percentage of positive recommendations of experts in the last 100 rounds is [Equal DR and BR = 67%, DR high = 55%, BR high = 73%]. The distinctiveness is [Equal DR and BR = 67%, DR high = 73%, BR high = 55%].

4. In case the positive recommendations are [Equal DR and BR = 67%, DR high = 55%, BR high = 73%], how many out of 200 stocks in the last 100 rounds did the expert recommend?

4. An expert only recommended one of the stocks in [Equal DR and BR = 67%, DR high = 90%, BR high = 55%] of 100 rounds. How high is his distinctiveness for making predictions?

When you are done with answering the questions, please attract the attention of the experimenter.

In the next round of the study your task to choose the more profitable stock continues.

You will still receive recommendations from experts. Two pieces of information have changed in this round

The percentage of positive recommendations of experts in the last 100 round has changed to [Equal DR and BR = 67%, DR high = 55%, BR high = 73%]. The distinctiveness has changed to [Equal DR and BR = 67%, DR high = 90%, BR high = 55%].

Before you start with the next round, we ask you to answer two exercise questions.

1. In case the positive recommendations are [Equal DR and BR = 67%, DR high = 55%, BR high = 73%], how many out of 200 stocks in the last 100 rounds did the expert recommend?

1. An expert only recommended one of the stocks in [Equal DR and BR = 67, DR high = 90, BR high = 55] of 100 rounds. How high is his distinctiveness for making predictions?

When you are done or in case you have questions, please attract the attention of the experimenter.

screen 1

Please read the following instructions carefully. In case you do not understand something, please raise your hand. Your question will then be answered at your workstation.

Imagine your are working as a broker at the stock market. You will have repeatedly the opportunity to choose stocks for which you expect profit.

The study is divided into three rounds with 100 decision each in which you decide between two stocks. It is always the case that one stock has a higher profit than the other stock. In each round, you will see a new pair of stocks.

You will receive suggestions from [Exp. 2: four, Exp. 3: six] stock-market experts that will help you in your decision. The experts are motivated to predict and suggest the better of two stocks. In case an expert thinks the stocks are equally profitable or risky, he will suggest or decline both stocks.

Please be aware that even experts cannot predict stock performance with 100% accuracy. Nonetheless, please try to find out which stock is more profitable.

screen 2

The experts differ in their experience and therefore in their quality of prediction concerning profits from stocks.

During the study the prediction accuracy of the experts will be presented on the screen. The prediction accuracy is based on experience. The prediction accuracy of an expert is defined as the relative number of correct recommendations based on the prior 100 rounds that the expert did BEFORE this study. On the screen, prediction accuracy is displayed as "% correct in trials before the study". [Exp. 2: The prediction accuracy is 90% for expert A, 80% for expert B, 70% for expert C, 65% for expert D. Exp 3: The prediction accuracy is 90% for expert A, 80% for expert B, 75% for expert C, 70% for expert D, 65% for expert E, and 60 % for expert F.]

For example, a prediction accuracy of 90 means that the expert recommended in 90 out of 100 predictions the better option. Please note that an accuracy of 50% is equal to chance level. This means that recommendations from an expert with a prediction accuracy of 50% is uninformative and can be ignored. The experts do not know each other, recommendations of the experts are therefore independent of each other.

In each round, one recommendation from one expert for one stock is NOT displayed. Instead of a recommendation, you will see a question mark only. Question marks are randomly distributed over decision trials.

Information on each decision is displayed in the following format (please press the button "continue").

Aufgabe 1 von 300

Namen Experten	Informationen Experten		Empfehlungen Experten		Info
	% richtig in den Durchgängen vor der Studie		Aktie "cjp"	Aktie "imz"	Was steckt hinter der verdeckten Empfehlung?
Experte A	90		−	+	
Experte B	80		+	+	Experte C spricht für Aktie "imz" (? ist also +).
Experte C	70		+	?	
Experte D	65		+	−	Wie gut war Ihre Entscheidung?

Ihre Entscheidung

Bitte geben Sie an, für welche Aktie Sie sich entscheiden.

Aktie "cjp"   Aktie "imz"

Sie haben die gewinnbringendere Aktie gewählt.

Expert A thinks that stock "imz" (+) is more profitable than stock "cjp" (-). Expert A recommended the correct stock---i.e., the more profitable stock---in 90 out of 100 trials before the study. (% correct in the trials before the study = 90%).

The recommendation of expert C for stock "imz" is concealed (?). After you picked one of the stocks (stock "imz" in the example), you will receive feedback on the concealed recommendation (either "+" or "-" in an information box on the right. For a quick overview, a concealed "+" will be highlighted green whereas a concealed "-" will be highlighted red. Additionally, you will receive feedback whether you picked the more profitable stock. A decision for a more profitable stock will be highlighted green whereas a decision for a less profitable stock will be highlighted red.

Aufgabe 5 von 300

Namen Experten	Informationen Experten		Empfehlungen Experten		Info
	% richtig in den Durchgängen vor der Studie		Aktie "bjs"	Aktie "gmp"	Was steckt hinter der verdeckten Empfehlung?
Experte A	90		+	-	
Experte B	80		-	+	Experte C spricht für Aktie "gmp" (? ist also +).
Experte C	75		+	?	
Experte D	70		+	+	Wie gut war Ihre Entscheidung?
Experte E	65		+	+	Sie haben die gewinnbringendere Aktie gewählt.
Experte F	60		+	-	

Ihre Entscheidung

Bitte geben Sie an, für welche Aktie Sie sich entscheiden.

Aktie "bjs"   Aktie "gmp"

Weiter

Expert A thinks that stock "bjs" (+) is more profitable than stock "gmp" (-) . Expert A recommended the correct stock---i.e., the more profitable stock---in 90 out of 100 trials before the study. (% correct in the trials before the study = 90%).

The recommendation of expert C for stock "gmp" is concealed (?). After you picked one of the stocks (stock "bjs" in the example), you will receive feedback on the concealed recommendation (either "+" or "-" in an information box on the right. For a quick overview, a concealed "+" will be highlighted green whereas a concealed "-" will be highlighted red. Additionally, you will receive feedback whether you picked the more profitable stock. A decision for a more profitable stock will be highlighted green whereas a decision for a less profitable stock will be highlighted red.

screen 4

Summary and payment

The study consists of three rounds with 100 trials each (300 trials in total). In each round, you are asked to pick the more profitable stock. In the first round, you will receive feedback on the missing recommendation and whether you picked the more profitable stock.

In the second round, we ask you to guess what the missing recommendation is (i.e., ?) before you receive information on the missing recommendation. In case you guess the missing recommendation correctly in 75 out of 100 rounds, you will receive a bonus of 1 Euro at the end of the study.

In the final round, you will not receive feedback on the missing recommendation. You will also receive no feedback whether you chose the more profitable stock. For each more profitable stock you choose, you will receive a bonus of 5 Cents. This means that you can earn an additional 5 Euros in the final round with 100 trials. We will inform you how often you picked the more profitable stock at the end of the study.

Your payment is therefore a fixed amount of [Exp. 2: 17, Exp 3: 7] Euros that will be paid at the end of the study. You can earn an additional bonus of 6 Euros in case you make good decisions.
In case you have questions, please attract the attention of the experimenter or read the instruction once more.

screen 5 (after the first learning phase)

Reminder

In the following round of 100 trials, we ask you to guess what the missing recommendation is (i.e., ?) before you receive information on the missing recommendation. In case you guess the missing recommendation correctly in 75 out of 100 rounds, you will receive a bonus of 1 Euro at the end of the study.

screen 6 (after the second learning phase)

Reminder

In the following final round, you will not receive feedback on the missing recommendation. You will also receive no feedback whether you chose the more profitable stock. For each more profitable stock you choose, you will receive a bonus of 5 Cents. This means that you can earn an additional 5 Euros in the final round with 100 trials. We will inform you how often you picked the more profitable stock at the end of the study

We also ask you to indicate how certain you were that you picked the more profitable stock after each decision.