

## Appendix A: Price Level Version Questionnaire

Dear participant,

thank you for participating in this study! Its goal is to gain further insights into investors' forecasts of the future development of stocks. The questionnaire will take about 15 minutes to be completed.

As an incentive, we will randomly select 10 out of all completed questionnaires. Participants who filled out the selected questionnaires will win 20 Euros. Exclusively for this purpose, you will be asked to provide your e-mail address. However, the complete data analysis will be conducted without this information, i.e. anonymously.

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In Part I of the questionnaire, you will see index level or price charts for the *DAX index* and *3 other DAX stocks* over the last 6 months. In Part II, you will see price charts for *3 unidentified stocks* over the last 6 months.

In both Part I and Part II, you are asked to provide the following 3 values for each presented time series for a **1 month horizon** and a **6 month horizon**:

1. an **upper bound** for the price/index level
2. an **estimate** of the price/index level
3. a **lower bound** for the price/index level

The true, realized value (i.e. the price of the stock in 1 month respectively 6 months) should ...

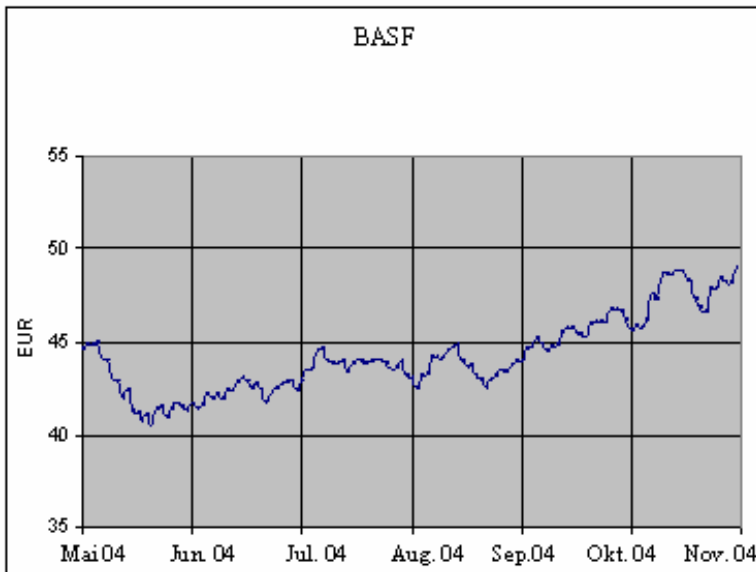
- ... exceed the **upper bound** only with a low probability (5 %).
- ... with the same probability be below respectively above the **estimate**.
- ... fall short of the **lower bound** only with a low probability (5 %).

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In Part III, the questionnaire ends with some questions regarding your general opinion about stock markets and with some questions about yourself.

## Part I: Forecasts of DAX Stocks and the DAX Index

### Forecast 1: BASF



On the left hand side, the price chart of the BASF stock over the last 6 months is shown. For the price in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a price estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the price in **1 month**, please state ...

... an upper bound:

 €

... an estimate:

 €

... a lower bound:

 €

For the price in **6 months**, please state ...

... an upper bound:

 €

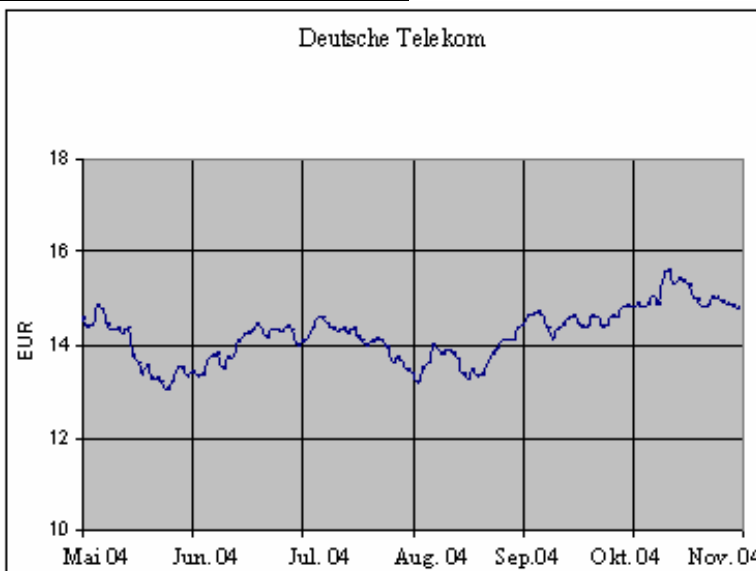
... an estimate:

 €

... a lower bound:

 €

### Forecast 2: Deutsche Telekom



On the left hand side, the price chart of the Deutsche Telekom stock over the last 6 months is shown.

For the price in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a price estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the price in **1 month**, please state ...

... an upper bound:

 €

... an estimate:

 €

... a lower bound:

 €

For the price in **6 months**, please state ...

... an upper bound:

 €

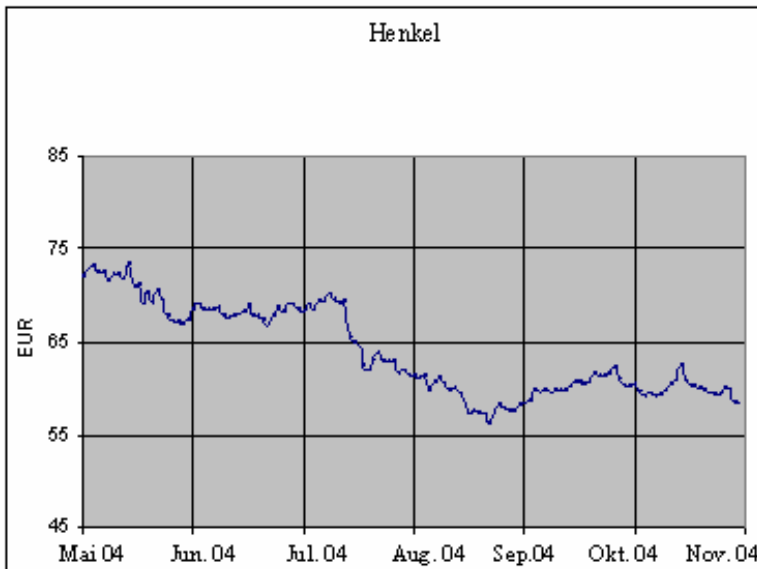
... an estimate:

 €

... a lower bound:

 €

### Forecast 3: Henkel



On the left hand side, the price chart of the Henkel stock over the last 6 months is shown. For the price in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a price estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the price in **1 month**, please state ...

... an upper bound:  €

... an estimate:  €

... a lower bound:  €

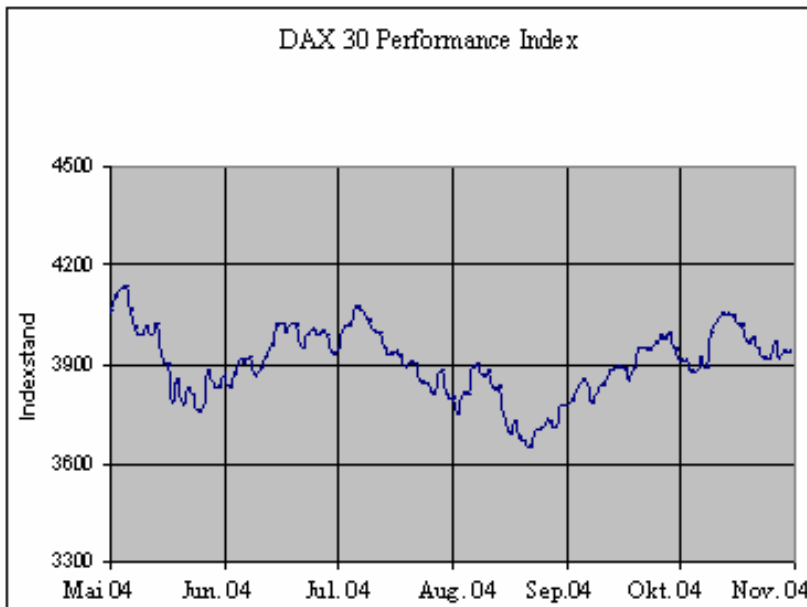
For the price in **6 months**, please state ...

... an upper bound:  €

... an estimate:  €

... a lower bound:  €

### Forecast 4: DAX 30 Performance Index



On the left hand side, the chart of the DAX 30 Performance Index over the last 6 months is shown. For the value in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... an estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the value in **1 month**, please state ...

... an upper bound:

... an estimate:

... a lower bound:

For the value in **6 months**, please state ...

... an upper bound:

... an estimate:

... a lower bound:

## Part II: Forecasts of Unidentified Stocks

### Forecast 5: Stock A



On the left hand side, the price chart of Stock A over the last 6 months is shown.

For the price in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a price estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the price in **1 month**, please state ...

... an upper bound:

 €

... an estimate:

 €

... a lower bound:

 €

For the price in **6 months**, please state ...

... an upper bound:

 €

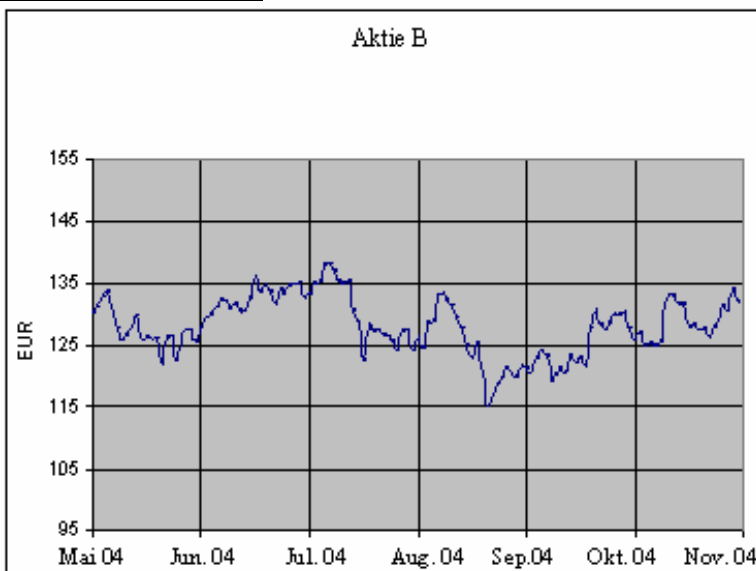
... an estimate:

 €

... a lower bound:

 €

### Forecast 6: Stock B



On the left hand side, the price chart of Stock B over the last 6 months is shown.

For the price in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a price estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the price in **1 month**, please state ...

... an upper bound:

 €

... an estimate:

 €

... a lower bound:

 €

For the price in **6 months**, please state ...

... an upper bound:

 €

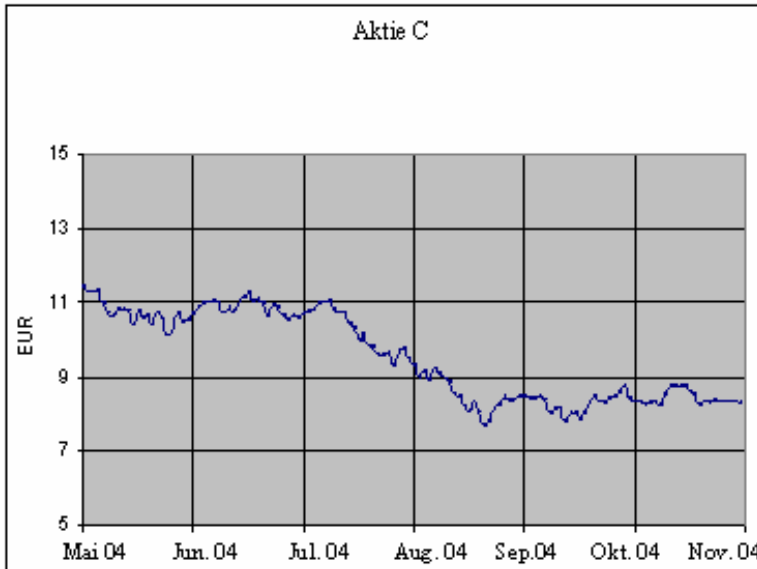
... an estimate:

 €

... a lower bound:

 €

### Forecast 7: Stock C



On the left hand side, the price chart of Stock C over the last 6 months is shown. For the price in 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a price estimate.

... a lower bound. The true value should fall short of the lower bound only with a 5% probability.

For the price in **1 month**, please state ...

... an upper bound:

 €

... an estimate:

 €

... a lower bound:

 €

For the price in **6 months**, please state ...

... an upper bound:

 €

... an estimate:

 €

... a lower bound:

 €

### **Part III: Stock Markets and Demographic Data**

Please answer the following questions regarding stock markets in general and about yourself.

Age: \_\_\_\_\_

Gender:       female       male

Field of study: \_\_\_\_\_

Semester: \_\_\_\_\_

How do you rate your statistics knowledge in school grades?

1     2     3     4     5     6

Please specify your general interest in stock and financial markets. I'm...

very interested     interested     not very interested     not interested at all

How do you rate your knowledge about stock and financial markets in school grades?

1     2     3     4     5     6

Suppose the DAX index would have dropped by 10% over half a year. What development would you expect for the following 6 months?

- The DAX index continues to fall.
- The DAX index stays at about the same level.
- The DAX index rises again.

Suppose the DAX index would have risen by 10% over half a year. What development would you expect for the following 6 months?

- The DAX index falls again.
- The DAX index stays at about the same level.
- The DAX index continues to rise.

Please tick all companies/financial products which you *know*.

- BASF
- Deutsche Telekom
- Henkel
- DAX mutual funds/DAX index funds

Please tick all companies/financial products which you *have in your own brokerage account/portfolio*.

- I do not have any brokerage account/portfolio.
- BASF
- Deutsche Telekom
- Henkel
- DAX mutual funds/DAX index funds
- I do not have any of those stocks in my brokerage account/portfolio.

Your e-mail address: (necessary to participate in the drawing of cash prizes)

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**Thank you very much for your participation!**

## Appendix B: Return Version Questionnaire

Dear participant,

thank you for participating in this study! Its goal is to gain further insights into investors' forecasts of the future development of stocks. The questionnaire will take about 15 minutes to be completed.

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In both Part I and Part II, you are asked to provide the following 3 values for each presented time series for a **1 month horizon** and a **6 month horizon**:

1. an **upper bound** for the return
2. an **estimate** of the return
3. a **lower bound** for the return

The true, realized return (i.e. the return of the stock over a 1 month respectively a 6 months horizon) should ...

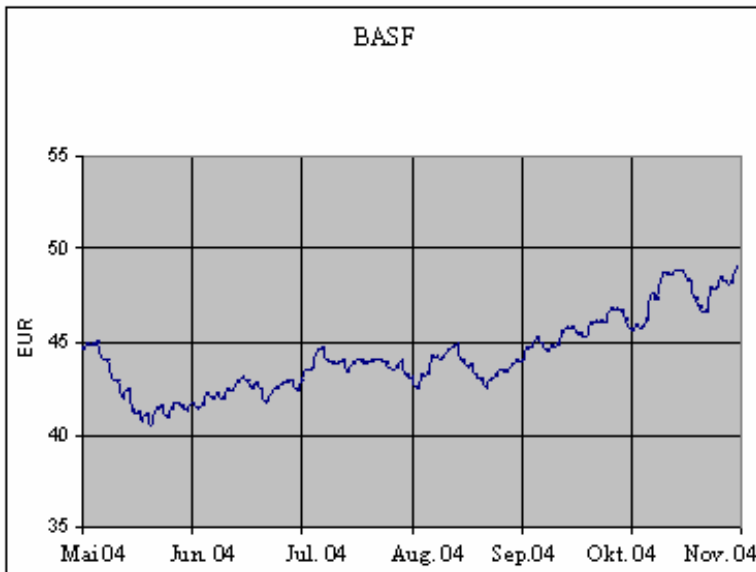
- ... exceed the **upper bound** only with a low probability (5 %).
- ... with the same probability be below respectively above the **estimate**.
- ... fall short of the **lower bound** only with a low probability (5 %).

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In Part III, the questionnaire ends with some questions regarding your general opinion about stock markets and with some questions about yourself.

## Part I: Return Forecasts for DAX Stocks and the DAX Index

### Forecast 1: BASF



On the left hand side, the price chart of the BASF stock over the last 6 months is shown. For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

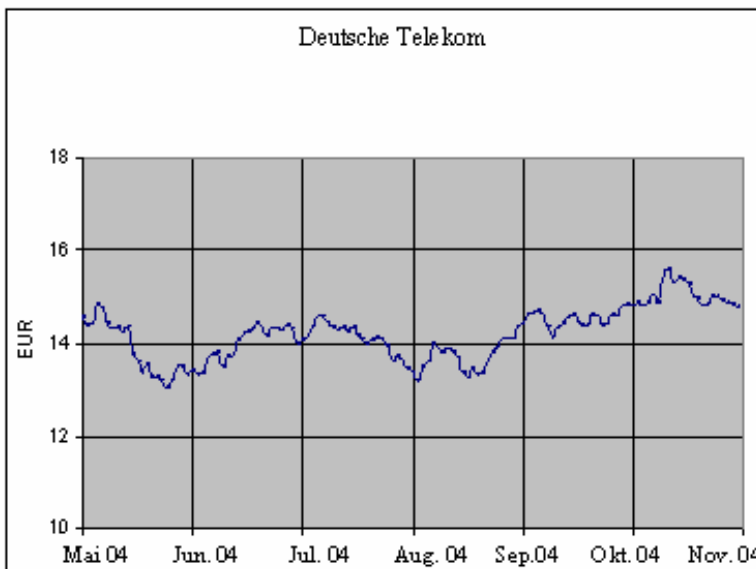
For the return over **6 months**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

### Forecast 2: Deutsche Telekom



On the left hand side, the price chart of the Deutsche Telekom stock over the last 6 months is shown.

For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

For the return over **6 months**, please state ...

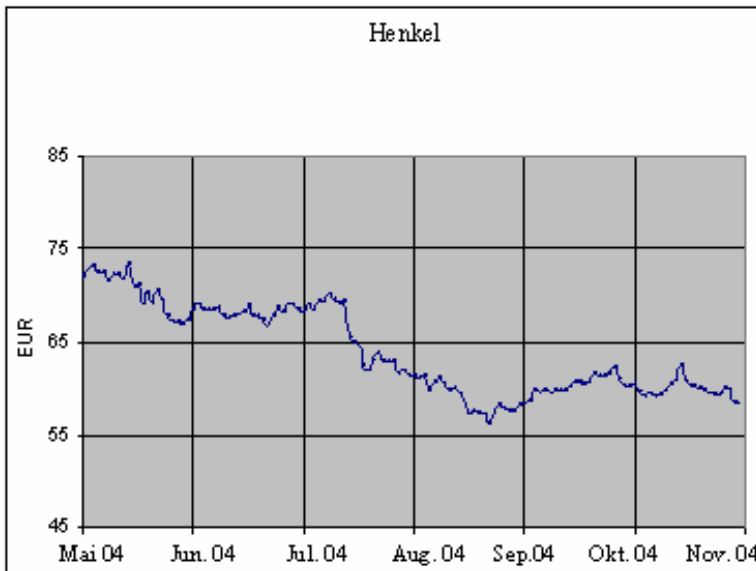
... an upper bound:  %

... an estimate:  %

... a lower bound:  %



**Forecast 3: Henkel**



On the left hand side, the price chart of the Henkel stock over the last 6 months is shown. For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

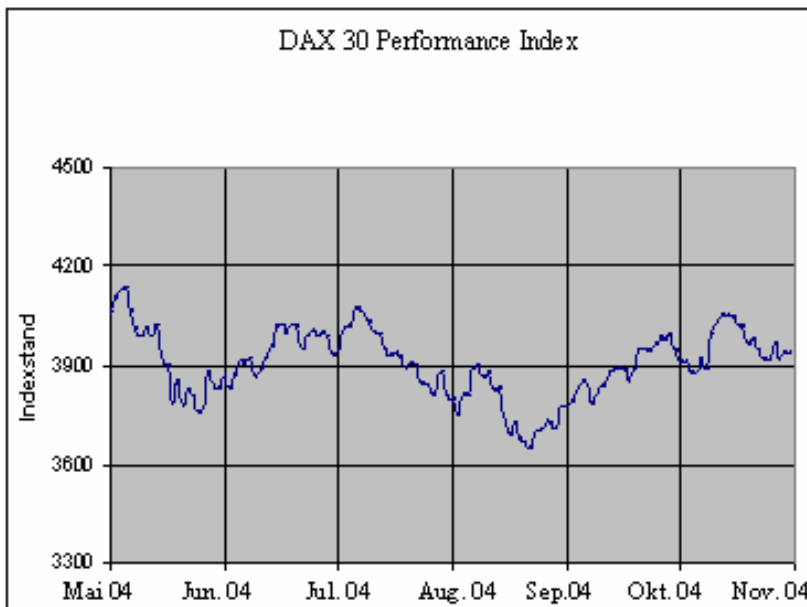
For the return over **6 months**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

**Forecast 4: DAX 30 Performance Index**



On the left hand side, the chart of the DAX 30 Performance Index over the last 6 months is shown.

For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

For the return over **6 months**, please state ...

... an upper bound:  %

... an estimate:  %

... a lower bound:  %

## Part II: Return Forecasts for Unidentified stocks

### Forecast 5: Stock A



On the left hand side, the price chart of Stock A over the last 6 months is shown.

For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:

 %

... an estimate:

 %

... a lower bound:

 %

For the return over **6 months**, please state ...

... an upper bound:

 %

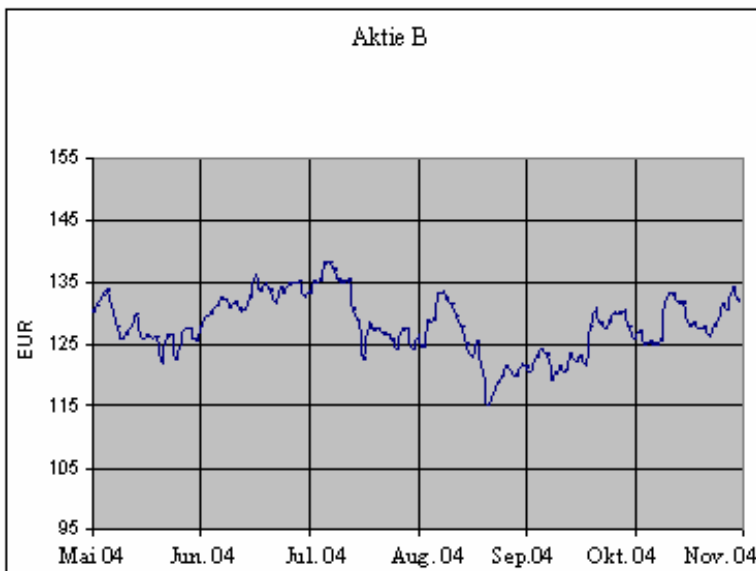
... an estimate:

 %

... a lower bound:

 %

### Forecast 6: Stock B



On the left hand side, the price chart of Stock B over the last 6 months is shown.

For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:

 %

... an estimate:

 %

... a lower bound:

 %

For the return over **6 months**, please state ...

... an upper bound:

 %

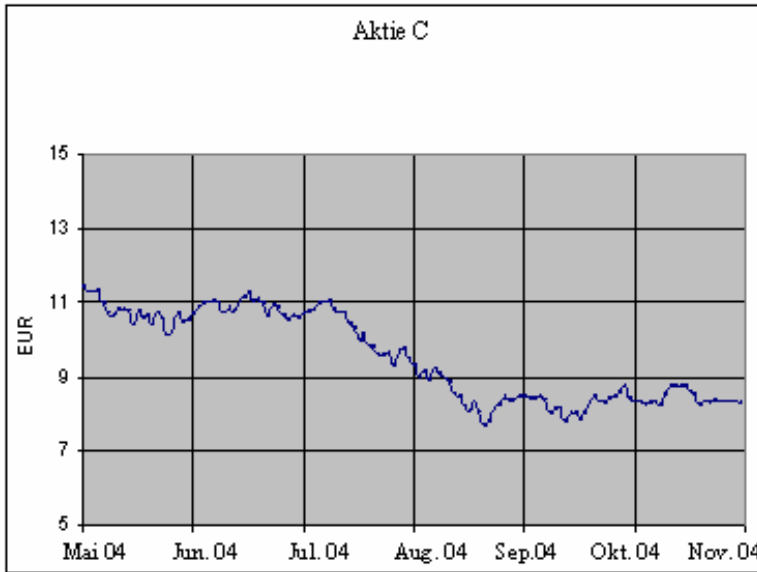
... an estimate:

 %

... a lower bound:

 %

### Forecast 7: Stock C



On the left hand side, the price chart of Stock C over the last 6 months is shown.

For the return over 1 respectively 6 months, please state ...

... an upper bound that will be exceeded only with a 5% probability.

... a return estimate.

... a lower bound. The true, realized return should fall short of the lower bound only with a 5% probability.

For the return over **1 month**, please state ...

... an upper bound:

 %

... an estimate:

 %

... a lower bound:

 %

For the return over **6 months**, please state ...

... an upper bound:

 %

... an estimate:

 %

... a lower bound:

 %

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Please answer the following questions regarding stock markets in general and about yourself.

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- The DAX index rises again.

Suppose the DAX index would have risen by 10% over half a year. What development would you expect for the following 6 months?

- The DAX index falls again.
- The DAX index stays at about the same level.
- The DAX index continues to rise.

Please tick all companies/financial products which you *know*.

- BASF
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Please tick all companies/financial products which you *have in your own brokerage account/portfolio*.

- I do not have any brokerage account/portfolio.
- BASF
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Your e-mail address: (necessary to participate in the drawing of cash prizes)

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