Documentation of the

Bundesbank Online Panel Firms (BOP-F)

Questionnaire 6

Waves 6, 7, 8

Juli, August, September 2021

Deutsche Bundesbank

Research Centre

Notes

a   General coding

For all questions, the following codes apply.

-9999	Dropout: The respondent did not answer the question due to dropout.
-9998	No answer: The respondent clicked "No answer" instead of answering the question.
-9997	Don't know: The respondent clicked "Don't know" instead of answering the question.
-9996	Does not apply: The respondent clicked "Does not apply to my enterprise" instead of answering the question.
-6666	Does not apply: The question or response option was not shown to the respondent due to filters or prior item non-response.
-5555	Recoded by BBk: A coding or data error that was recorded by the Bundesbank

b   Legend for question header

Each question header includes information on the name of the question, whether it was part of the core questionnaire ("Core"), included for a specific project ("Pro"), or part of descriptive statistics ("Descript"), the broad topic and the variable name(s).

Legend	Question name	Question source	Topic	Variable name
Example 1	003	Core	Perceived problems	percprob_[a-j]
Example 2	103	Pro	Supply chains qualitative	suppchains_[a-b]

c   Question filtering and coding

Coding details, filters and conditional redirects are highlighted using `Courier.` If questions are posed to all respondents, this is not explicitly stated. For filtered questions, the filter is listed at the top and refers to the question name, e.g.:

103	**Pro**	**Supply chain problems domestic or foreign**	**suppchain_[a-b]**
`Input filter: 001_d = 6	7	8	9	10`			

d   Variable names

Variable names are indicated in the top right corner. If the question has multiple items, the items are indicated by underscores and a letter. Enumeration letters correspond to variable names. The coding of the variables is numeric and indicates the scale.

A001	**Core**	**Perceptions qualitative**	**percmacroquali_[a-i]**

QUESTION: How did the following metrics develop in your enterprise in April 2021 compared with the previous month, i.e. March 2021?

1 = Decreased significantly
2 = Decreased slightly
3 = Stayed roughly the same
4 = Increased slightly
5 = Increased significantly
-9996 = Does not apply to my enterprise

a	Turnover
b	Employment (measured in hours worked)
c	Access to intermediate inputs
d	Current trade receivables
e	Current trade payables
f	Short-term liquidity
g	Need for credit financing
h	Access to financing sources
i	Inventories (stock of intermediate products and finished goods)

Structure of the questionnaires and the dataset

Variable name	Topic	Questionnaire 6	Origin
percmacro_[a-g]	Perceptions qualitative	X01	Core
expmacro_[a-g]	Expectations qualitative	X02	Core
percprob_[a-h]	Perceived problems	X03	BiQ-Core
keyrateprob_[a-j]	Development key rate probabilistic	X04A	Core
exp_unempl_pre	Unemployment rate – PRE	601	Pro
inflexpoint	Inflation expectations quantitative	X04B	Core
infexprob_[a-j]	Inflation expectations probabilistic – PRE	602	Core HH
salespast	Sales past quarter quantitative	X05A	Core
salesfuture_[a-e]	Sales comparable quarter prediction	X05B	Core
salesprob_[a-e]	Sales comparable quarter probabilistic	X05C	Core
pricepast	Price change past year quantitative	X06A	Core
pricefuture	Price change next year quantitative	X06B	Core
priceunc	Price change uncertainty	X06C	Core
creduse1	Microfinance credit negotiations	X07A	Core
creduse2_[a-f]	Microfinance negotiations result	X07B	Core
financingpast_[a-g]	Financing sources past	X08A	Core
financingfuture_[a-g]	Financing sources future	X08B	Core
remainliqui	Liquidity buffer	603	Pro410
use_payment_[a-k]	Use of payment instruments	604	Pro
char_payment_[a-k]	Payment instruments characteristics	605	Pro
prodcosts_2022	Qualit. expectations production costs 2022	606	Pro
influ_prodcosts_2022_[a-h]	Influence on production costs 2022	607	Pro
	TREATMENT TEXTS		Pro
exp_unempl_post	Unemployment rate – POST	608	Pro
infexprob_post_[a-e]	Inflation expectations probabilistic - POST	610	Pro
neg_interest	Negative interest rate	611	Pro
inv_plan_2020_[a_1-b_2_]	Planned to invest in 2020	614	Pro
chang_inv_plan_[a-d]	Changes in plans to invest	615	Pro
inv_act_2020_[a_1-b_2]	Actual investments in 2020	616	Pro
reasons_change_[a_1-l_2]	Reasons change investment plans	617A	Pro
reasons_nochange_[a-e]	Reasons no change investment plans	617B	Pro
RD_invest_quali	Propensity to invest qualitative	613	Pro
consent	Firm characteristics implicit	D01	Descript
firmemploy_[a-b]	Firm characteristics explicit employment	D02	Descript
firmturnover_[a-b]	Firm characteristics explicit turnover	D03	Descript
firmsector	Firm characteristics explicit economic sector	D04	Descript
firmtype	Firm characteristics explicit ownership	D05	Descript
firmregion	Firm characteristics explicit region	D06	Descript
respondenttype_[a-k]	Characteristics of respondent	D07	Descript
feedback_[a-b]	Feedback questions	F01	Core
feedbackopen	Open feedback question	F02	Core
panel	Panel participation	P01	Core
contact	Contact	P02	Core

000	Core	Opening 1

Welcome to the survey of firms conducted on behalf of the Deutsche Bundesbank.

Important information concerning the survey:

- To navigate through the survey, please only use the "Continue" button at the bottom of the screen. Please do <u>not</u> use the buttons in your browser or the back button on your phone or tablet.
- To ensure that the individual questions are displayed correctly, use an up-to-date browser such as Google Chrome, Mozilla Firefox (version 12 or later), Apple Safari (version 6 or later), Opera (version 20 or later) or Microsoft Edge. Using older browsers, particularly Internet Explorer 8 or earlier, can result in limited functionality in terms of design and ease of use.
- During the survey, there is **no** option to go back to questions previously answered. If you would like an overview of the full questionnaire, please send a request to unternehmensbefragung@bundesbank.de.

If you have any questions, problems or comments about navigating this questionnaire, you can contact the forsa support team from Monday to Friday between 09:00 and 18:00 on the free telephone number 0800 3677202 or by email at bundesbank-unternehmensbefragung@forsa.de. If you have any questions or comments on the content of the survey, please contact the Bundesbank's project team by telephone at +49 (0)69 9566 7623 or by email at unternehmensbefragung@bundesbank.de.

000	Core	Opening 2

Thank you for taking the time to complete this survey. The Deutsche Bundesbank would like to know how the coronavirus crisis has been affecting your enterprise over time and what you are currently expecting for the future.

The survey will take roughly 15 to 20 minutes to complete. Your answers will be treated confidentially. It is a great help to us if you answer the questions as carefully as possible.

000	Core	Opening 3

The Deutsche Bundesbank attaches particular importance to protecting your data. All of the information you provide will be treated confidentially in accordance with legal provisions. Only a few employees at a Bundesbank data trustee will see your survey data after pseudonymisation. Bundesbank employees will receive your data only after they have been further anonymised. Published results are completely anonymous and therefore cannot be traced back to your enterprise. Your answers will help the Deutsche Bundesbank to fulfil its statutory tasks (to learn more about the Bundesbank's tasks, please click here).

Only effectively anonymised data can be passed on to research institutions for research purposes that are related to the Bundesbank's tasks. You will find more information, details of how to contact the project team, and selected results of the survey on the Bundesbank's website: https://www.bundesbank.de/en/bundesbank/research/pilot-survey-on-the-expectations-of-firms.

Your participation in our survey is of course voluntary. By participating in this survey, you give your consent for your data to be stored, processed and shared for the purposes of the Deutsche Bundesbank fulfilling its tasks. You may withdraw your consent at any time. However, withdrawal of your consent shall not affect the lawfulness of any processing that took place on the basis of this declaration of consent before it was withdrawn.

The following paragraph is shown only to newcomers, not to panellists:
During the survey, there will be two further requests for consent to link the survey data to business statistics and for another survey (if you would like to know more about this, please click here). Of course, you can choose not to consent to the above, though we would ask you to take part in the survey and fill in the other information. Your data will help the Deutsche Bundesbank fulfil its statutory tasks.

X01	Core	Perceptions qualitative	percmacro_[a-g]

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

After the term "Access to financing sources", an info box <i> with the following definition is shown: "Access to financing sources describes the possibility of using various forms of external financing to finance your business activities, e.g. bank loans, trade credits, equity, debt securities or other financing instruments. If the possibilities of using these sources have deteriorated, please state "decreased" or "decreased significantly"."

After the term "Access to intermediate inputs", an info box <i> with the following text is shown: "If access to intermediate inputs has deteriorated, please state "decreased" or "decreased significantly"."

QUESTION: Please consider the period from **end-June 2020** to **end-June 2021**. How did the following metrics develop in your enterprise during this period?

Note: *Please select one answer for each row.*

1 = Decreased significantly
2 = Decreased
3 = Stayed roughly the same
4 = Increased
5 = Increased significantly
-9996 = Does not apply to my enterprise

a = Access to intermediate inputs <i>:
b = Current trade receivables:
c = Current trade payables:
d = Short-term liquidity:
e = Need for credit financing:
f = Access to financing sources <i>:
g = Inventories (stock of intermediate products and finished goods):

X02	Core	Expectations qualitative	expmacro_[a-g]

After the term "Access to financing sources", an info box <i> with the following definition is shown: "Access to financing sources describes the possibility of using various forms of external financing to finance your business activities, e.g. bank loans, trade credits, equity, debt securities or other financing instruments. If you expect the possibilities of using these sources to deteriorate, please state "decrease" or "decrease significantly"."

After the term "Access to intermediate inputs", an info box <i> with the following text is shown: "If you expect access to intermediate inputs to deteriorate, please state "decrease" or "decrease significantly"."

QUESTION: How do you think the following metrics will develop in your enterprise from **end-June 2021** to **end-June 2022**?

Note: Please select one answer for each row.

1 = Decrease significantly
2 = Decrease
3 = Stay roughly the same
4 = Increase
5 = Increase significantly
-9996 = Does not apply to my enterprise

a = Access to intermediate inputs <i>:
b = Current trade receivables:
c = Current trade payables:
d = Short-term liquidity:
e = Need for credit financing:
f = Access to financing sources <i>:
g = Inventories (stock of intermediate products and finished goods):

X03	BiQ-Core	Perceived problems	percprob_[a-h]

After the term "Access to financing sources", an info box <i> with the following definition is shown: "Access to financing sources describes the possibility of using various forms of external financing to finance your business activities, e.g. bank loans, trade credits, equity, debt securities or other financing instruments."

QUESTION: How problematic do you expect the following aspects will be for your enterprise over **the next six months** ?

Note: Please select one answer for each row.

1 = No problem at all
2 -> 4 [no label]
5 = An extremely pressing problem
-9996 = Does not apply to my enterprise

a = Lack of customer demand:
b = High competitive pressure:
c = Access to financing sources <i>:
d = Access to intermediate inputs:
e = High production/labour costs:
f = Availability of skilled workers and experienced managers:
g = High level of regulation/government rules (excluding coronavirus-related restrictions/closures):
h = Closures or work restrictions due to the coronavirus pandemic:

X04A	Core	Development key rate probabilistic	keyrateprob_[a-j]

Supported values are between 0 and 100.

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

The programming of the question requires the sum of the ten variables to be 100. The current sum of all entered points is shown to the respondent when answering the question. Respondents are asked to correct their responses if the sum does not equal 100. If the sum is not equal to 100, the following error message will be displayed: "Please note that your answers to all scenarios have to add up to 100." Upon entry, the fields should be pre-populated with zeroes. If a negative value is entered, the following error message will be displayed: "Please enter a positive value (possible input values range from 0 to 100)."

If no values are entered, the following error message will be displayed: "Please enter a value in the fields or select one of the possible responses below."

After "policy rate of the European Central Bank" an info box <i> with the following text is shown: "The ECB's policy rate is currently the interest rate on the deposit facility, also known as the deposit rate. This is the rate applied when commercial banks deposit overnight liquidity with the Eurosystem."

QUESTION: We would now like to ask you some questions about macroeconomic developments. How likely do you think <u>the policy rate</u> of the European Central Bank (ECB) <i> is to fluctuate within the following bands at the **end of June 2022**?

Note: The aim of this question is to determine how likely you think it is that something specific will happen in the future. You can rate the likelihood on a scale from 0 to 100, with 0 meaning that an event is completely unlikely and 100 meaning that you are absolutely certain it will happen. Use values between the two extremes to moderate the strength of your opinion. Please note that your answers to the categories have to add up to 100. Input fields left blank will be filled with a value of 0.

a	Below -2.00%:	[Input field]
b	Between -2.00% and -1.51%:	[Input field]
c	Between -1.50% and -1.01%:	[Input field]
d	Between -1.00% and -0.51%:	[Input field]
e	Between -0.50% and -0.01%:	[Input field]
f	Between 0.00% and 0.50%:	[Input field]
g	Between 0.51% and 1.00%:	[Input field]
h	Between 1.01% and 1.50%:	[Input field]
i	Between 1.51% and 2.00%:	[Input field]
j	Above 2.00%:	[Input field]

601	Pro	Unemployment rate	exp_unempl_pre

QUESTION: What do you expect the <u>unemployment rate</u> in Germany to be in **twelve months' time**?

Note: Please enter a value with a maximum of one decimal place.

[Input field]%

X04B	Core	Inflation expectations quantitative	inflexpoint

QUESTION: What do you expect the <u>rate of inflation</u> <i> to be over **the next twelve months**?

Note: If you expect the price level to increase, please enter a positive percentage value. If you expect the price level to decrease, please enter a negative percentage value. Please enter a value with a maximum of one decimal place.

[Input field]%

	Split sample 1	Randomisation 1

602	Core HH	Inflation expectations probabilistic	infexprob_[a-j]

Randomisation of the order of answer categories:

For group A: – deflation 12% to inflation 12% (a-j)

For group B: – inflation 12% to deflation 12% (j-a)

The programming of the question requires the sum of the ten variables to be 100. The current sum of all entered points is shown to the respondent when answering the question. Respondents are asked to correct their responses if the sum does not equal 100.

After the term "rate of inflation", an info box <i> with the following definition is shown: "Inflation is the percentage increase in the general price level. It is mostly measured using the consumer price index. A decrease in the price level is generally described as "deflation".

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

QUESTION: In your opinion, how likely is it that the <u>rate of inflation</u> <i> will change as follows **over the next twelve months**?

Note: The aim of this question is to determine how likely you think it is that something specific will happen in the future. You can rate the likelihood on a scale from 0 to 100, with 0 meaning that an event is completely unlikely and 100 meaning that you are absolutely certain it will happen. Use values between the two extremes to moderate the strength of your opinion. Please note that your answers to the categories have to add up to 100. Input fields left blank will be filled with a value of 0.

a =   The rate of deflation (opposite of inflation) will be 12% or higher:

b =   The rate of deflation (opposite of inflation) will be between 8% and 12%:

c =   The rate of deflation (opposite of inflation) will be between 4% and 8%:

d =   The rate of deflation (opposite of inflation) will be between 2% and 4%:

e =   The rate of deflation (opposite of inflation) will be between 0% and 2%:

f =   The rate of inflation will be between 0% and 2%:

g =   The rate of inflation will be between 2% and 4%:

h =   The rate of inflation will be between 4% and 8%:

i =   The rate of inflation will be between 8% and 12%:

j =   The rate of inflation will be 12% or higher:

---	---	**END SPLIT SAMPLE 1**

	Split sample 2	**Randomisation 2**

Randomisation dummy: dsalesrandom1

1 = group A – (50% of the sample)

2 = group B – (50% of the sample)

X05A	Core	Sales past quarter quantitative	salespast

Input filter: if dsalesrandom1 = 1

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

After the word "turnover" in the question, an info box `<i>` with the following definition is shown: "Instead of turnover, banks/credit institutions should enter their gross interest and commission income and their net trading income, while insurance companies should enter their gross premiums written."

If an invalid number (negative or including a comma or period) is entered, the following error message is shown: "Please enter a positive value, without a comma or period (possible input values are 0 to 999999999)."

QUESTION: We would now like to ask you some more questions about your enterprise. What was the turnover `<i>` of your enterprise in the **second quarter of 2021** (April to June 2021)?

Note: Please enter an amount in full <u>thousands</u> of euro.

Turnover (excluding VAT): [Input field],000 euro

X05B	Core	Sales comparable quarter prediction	salesfuture_[a-e]

Input filter: if dsalesrandom1 = 1

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

Supported values are between -100 and 999.

Firms are expected to provide at least one number.

Firms must <u>not</u> be forced to provide all five values.

Supported values should be monotonically non-decreasing, e.g. a<=b<=c<=d<=e when all five values are non-missing.

When programming the questionnaire, please be mindful of scenarios in which firms provide, for instance, only three values (e.g. 1, 2, 4, NA, NA; or 1, NA, 2, NA, 3) or only two values (e.g. 1, NA, NA, NA, 2; or NA, 1, 2, NA, NA.).

When values are NOT monotonically non-decreasing, then the following message should be shown: "Please make sure that your answers are ordered from the lowest value to the highest."

After the term "turnover", an info box `<i>` with the following definition is shown: "Instead of turnover, banks/credit institutions should enter their gross interest and commission income and their net trading income, while insurance companies should enter their gross premiums written."

QUESTION: By how much do you think your turnover `<i>` will potentially change in the **second quarter of 2022** (April to June 2022) compared to your turnover in the **second quarter of 2021** (April to June 2021)? Please indicate what <u>percentage change in your turnover</u> you would expect in the following scenarios.

Note: If you expect turnover to increase, please enter a positive percentage value. If you expect turnover to decrease, please enter a negative percentage value. Please make sure your answers are ordered from the lowest value to the highest.

a The **lowest** potential percentage change would be: [Input field] %
b A **low** potential percentage change would be: [Input field] %
c A **medium** potential percentage change would be: [Input field] %
d A **high** potential percentage change would be: [Input field] %
e The **highest** potential percentage change would be: [Input field] %

X05C	Core	Sales comparable quarter probabilistic	salesprob_[a-e]

Supported values are between 0 and 100.

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

The programming of the question requires the sum of the five variables to be 100. The current sum of all entered points is shown to the respondent when answering the question. Respondents are asked to correct their responses if the sum does not equal 100.
If the sum is not equal to 100, the following error message will be displayed:
"Please note that your answers to all scenarios have to add up to 100."
If possible, only those fields should be active for which a value has been provided in the previous question.

After the term "turnover", an info box <i> with the following definition is shown:
"Instead of turnover, banks/credit institutions should enter their gross interest and commission income and their net trading income, while insurance companies should enter their gross premiums written."

QUESTION: How likely do you think it is that the individual scenarios for the change in your turnover <i> in the **second quarter of 2022** (April to June 2022) compared to your turnover in the **second quarter of 2021** (April to June 2021) will materialise?

Note: The aim of this question is to determine how likely you think it is that something specific will happen in the future. You can rate the likelihood on a scale from 0 to 100, with 0 meaning that an event is completely unlikely and 100 meaning that you are absolutely certain it will happen. Use values between the two extremes to moderate the strength of your opinion. Please note that your answers to the scenarios have to add up to 100.

a   The likelihood of a change of around **{salesfuture[a]}**% is: [Input field]
b   The likelihood of a change of around **{salesfuture[b]}**% is: [Input field]
c   The likelihood of a change of around **{salesfuture[c]}**% is: [Input field]
d   The likelihood of a change of around **{salesfuture[d]}**% is: [Input field]
e   The likelihood of a change of around **{salesfuture[e]}**% is: [Input field]

---	---	**END SPLIT SAMPLE 2**

X06A	Core	**Price change past year quantitative**	**pricepast**

Supported values are between -100.0 and 999.0

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

QUESTION: Please consider the period from **end-June 2020** to **end-June 2021**. Please enter the average percentage change in the prices charged for your products and services in this period.

Note: If prices increased, please enter a positive percentage value. If prices decreased, please enter a negative percentage value. Please enter a value with a maximum of one decimal place.

[Input field]%

X06B	Core	Price change next year quantitative	pricefuture

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

Supported values are between -100.0 and 999.0.

QUESTION: Now consider the period from **end-June 2021** to **end-June 2022**, which is mostly in the future. What average percentage change in the <u>prices charged</u> for your products and services do you expect in this period?

Note: If you expect prices to increase, please enter a positive percentage value. If you expect prices to decrease, please enter a negative percentage value. Please enter a value with a maximum of one decimal place.

[Input field]%

X06C	Core	Price change uncertainty	priceunc

Input filter: a number provided in pricefuture (Question X06B)

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

If pricefuture > 0

QUESTION: How certain are you that the <u>prices charged</u> for your products and services will increase by around **{pricefuture}**% on average in the period from **end-June 2021** to **end-June 2022**?

1 = Very uncertain
2 = Rather uncertain
3 = Neither certain nor uncertain
4 = Rather certain
5 = Very certain

If pricefuture < 0

QUESTION: How certain are you that the <u>prices charged</u> for your products and services will decrease by around **{pricefuture}**% on average in the period from **end-June 2021** to **end-June 2022**?

1 = Very uncertain
2 = Rather uncertain
3 = Neither certain nor uncertain
4 = Rather certain
5 = Very certain

If pricefuture == 0

QUESTION: How certain are you that the <u>prices charged</u> for your products and services will stay roughly the same on average in the period from **end-June 2021** to **end-June 2022**?

1 = Very uncertain
2 = Rather uncertain
3 = Neither certain nor uncertain
4 = Rather certain
5 = Very certain

X07A	Core	Micro finance credit negotiations	creduse1

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

After the term "government-sponsored loans", an info box <i> with the following definition is shown: "Government-sponsored loans include, for example, public sector support in the form of guarantees, reduced interest rates or funding grants."

QUESTION: In the **second quarter of 2021** (April to June 2021), did your enterprise negotiate with one or more banks with a view to taking out a loan or establishing a credit line?

Note: This does not include any government-sponsored loans <i>.

1 = Yes
2 = No

X07B	Core	Microfinance negotiations result	creduse2_[a-f]

Input filter: creduse1 = 1

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

QUESTION: What was the outcome of these negotiations?

Note: Please select all answers that apply.

0 = Category not selected
1 = Category selected

a   Loan/credit line was approved for the desired amount at the desired conditions (interest, collateral, etc.)
b   Loan/credit line was approved for the desired amount but at less favourable conditions
c   Loan/credit line was approved for a smaller amount, but at the desired conditions
d   Loan/credit line was approved for a smaller amount and at less favourable conditions
e   No decision has yet been made regarding the loan application
f   Loan negotiations were concluded without a deal

X08A	Core	Financing sources past	financingpast_[a-g]

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

After the term "government-sponsored loans", an info box <i> with the following definition is shown: "Government-sponsored loans include, for example, public sector support in the form of guarantees, reduced interest rates or funding grants."

QUESTION: Has your enterprise used the following <u>financing sources</u> over the past **three months**?

Note: Please select one answer for each row. Please consider the last three full calendar months when answering this question.

1 = Yes
2 = No, but used prior to this period
3 = No, never used to date

a   Retained earnings:
b   Bank loans (excluding overdrafts):
c   Overdrafts:
d   Government-sponsored loans <i>:
e   Trade credits (including advances and trade payables):
f   Equity:
g   Other instruments (debt securities, other loans (including to affiliated enterprises), leases/hire purchase and factoring):

X08B	Core	Financing sources future	financingfuture_[a-g]

Input filter: only show items with financingpast_[a-g] = 2 | 3

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

After the term "government-sponsored loans", an info box <i> with the following definition is shown: "Government-sponsored loans include, for example, public sector support in the form of guarantees, reduced interest rates or funding grants."

QUESTION: Is your enterprise planning to use the following <u>financing sources</u> over the next **three months**?

Note: Please select one answer for each row. Please consider the next three calendar months when answering this question.

1 = Yes
2 = No, however, there are plans to use them at a later point in time
3 = No, no use at all planned

a   Retained earnings:
b   Bank loans (excluding overdrafts):
c   Overdrafts:
d   Government-sponsored loans <i>:
e   Trade credits (including advances and trade payables):
f   Equity:
g   Other instruments (debt securities, other loans (including to affiliated enterprises), leases/hire purchase and factoring):

603	Pro	Liquidity buffer	remainliqui

After the question, an info box <i> with the following definition is shown: "Liquid funds comprise funds – such as cash, bank balances, cheques etc. – that are used in particular to settle day-to-day business payments. If an enterprise no longer has enough liquid funds to cover its running costs, it may experience payment difficulties or even insolvency."

QUESTION: Based on the situation today and the most plausible scenario, for how long a period will your enterprise continue to have sufficient <u>liquidity</u> before having to discontinue or abandon its business activities? <i>

Note: Please select the answer that is most applicable.

1 = Up to one month
2 = Up to two months
3 = Up to six months
4 = Up to twelve months
5 = We generally have sufficient liquidity.
-9996 = Does not apply to my enterprise

		Split sample 3	**Randomisation 3**

Randomisation dummy: drandom3

The following three question sets are shown to only one group of enterprises each:
Question set: Payments   -> 1/3 of the sample
Question set: Production costs -> 1/3 of the sample
Question set: Innovation   -> 2/3 of the sample

The variable **drandom3** has been made available by the Bundesbank. It represents the randomised allocation of the questions to the different groups.

drandom3	**Payments**	**Production costs**	**Innovation**
1	x		
2	x		x
3		x	
4		x	x
5			x
6			x

604	Pro Z	Use of payment instruments	use_payment_[a-k]

Plausibility check:

If the check is not valid, the following error message will be displayed: "The sum of your answers is over 100 per cent. Please ensure that your answers to the categories add up to 100 per cent."

Show error message if …

option 6 is selected at least 3 times

option 6 is selected at least 2 times and option 5 is selected at least 1 time

option 6 is selected at least 2 times and option 4 is selected at least 2 times

option 6 is selected at least 1 time and option 5 is selected at least 3 times

option 5 is selected at least 5 times

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

Info box <i> after the term "outgoing payments": "Funds leaving the enterprise for the purpose of settling its payment obligations vis-à-vis third parties."

Info box <i> after the term "credit transfer in euro (SEPA)": "Euro payment in the Single Euro Payments Area (SEPA) with an execution period of one day, or two days for paper instructions."

Info box <i> after the term "international credit transfer (non-SEPA)": "Non-euro-denominated transfer within the European Economic Area (EEA) with an execution period of at most four days, or five days for paper instructions. There is no execution period for transfers outside the EEA."

Info box <i> after the term "instant payment": "Electronic retail payment in euro, which is credited to the recipient's account within a maximum of ten seconds."

Info box <i> after the term "bill of exchange":
"A bill of exchange is a securitised, unconditional promise on the part of the payer (drawee) to pay an agreed upon sum to the payee (drawer) at a specific time."

Info box <i> after the term "letter of credit":
"A letter of credit is an instruction on the part of the debtor to their credit institution to pay out a specific amount of money to the creditor within an agreed period of time and upon the fulfilment of specific obligations (usually handing over documents named in the letter of credit). Letters of credit are mostly used in foreign trade financing (and more rarely domestically)."

Info box <i> after the term "online payment method": "A specialised method for making payments online, which either uses an existing payment instrument or settles the obligation to pay funds that were already transferred. Examples: PayPal, Amazon Pay, SOFORT Überweisung or Giropay."

QUESTION: Now please think about the payment instruments that were used by your enterprise between **January** and **June 2021**. What share of the total value of all outgoing payments <i> do you estimate was settled using the following payment instruments?

1 = Less than 1%
2 = 1-5%
3 = 6-10%
4 = 11-25%
5 = 26-50%
6 = More than 50%
7 = Not used

a = Credit transfer in euro (SEPA) <i>:
b = International credit transfer (non-SEPA) <i>:
c = Express credit transfer (TARGET2):
d = Instant payment <i>:
e = Direct debit:
f = Cash:
g = Credit card:
h = Bill of exchange <i>:
i = Letter of credit <i>:
j = Cheque:
k = Online payment method, e.g. PayPal <i>:

605	Pro Z	Payment instruments characteristics	char_payment_[a-k]

A maximum of three answers can be selected.

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

Info box <i> after the term "liquidity advantages": "By using this payment instrument, you secure a liquidity advantage, for example via long execution periods or deferred (cumulative) payments."

Info box <i> after the term "security": "High level of protection against misuse. The payment settlement process for the payment instrument is very reliable."

Info box <i> after the term "data confidentiality": "Using this payment instrument guarantees that your data remain highly confidential."

Info box <i> after the term "availability": "The payment instrument is available for long periods on as many weekdays as possible."

Info box <i> after the term "ability to be integrated into my enterprise's IT systems": "Integration into an enterprise's existing systems is possible, meaning no additional software or hardware is necessary for extensive use."

QUESTION: In your opinion, which of the following characteristics are important when choosing a payment instrument for settling your enterprise's outgoing payments? Please choose <u>up to three</u> of the most important characteristics.

0 = Category not selected
1 = Category selected

a = Fast settlement
b = Liquidity advantages <i>
c = Low costs
d = Familiarity
e = Security <i>
f = Data confidentiality <i>
g = Ease of use
h = Wide acceptance/reachability
i = High availability <i>
j = Ability to be integrated into my enterprise's IT systems <i>
k = None of the above characteristics are important to me.

606	Pro	Qualitative explanations production costs 2022	prodcosts_2022_[a-c]

Input filter: drandom3=3 | drandom3=4 **(1/3 of sample)**

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

Info box <i> after the term "production costs": "In this context, the average production costs comprise all costs related to the production of goods or services destined for sale (in other words, the cost of sales). This includes, in particular, material costs and labour costs as well as the cost of debt that can be attributed to production."

QUESTION: How do you expect average production costs <i> in your enterprise to develop by **the end of 2022**, in comparison with **the end of 2019**?

Note: Please enter the estimated percentage change in each case or select "Stay the same". For a decrease, please enter a value between 1 and 100. For an increase, please enter a value between 1 and 999.

a = Decrease by around [Input field]%

b = Stay the same:
0 = Category not selected
1 = Category selected

c = Increase by around [Input field]%

607	Pro	Influence on production costs 2022	influ_prodcosts_2022_[a-h]

Input filter: drandom3=3 | drandom3=4 **(1/3 of sample)**

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

Info box <i> after the term "production costs": "In this context, the average production costs comprise all costs related to the production of goods or services destined for sale (in other words, the cost of sales). This includes, in particular, material costs and labour costs as well as the cost of debt that can be attributed to production."

Info box <i> after the term "use of digital technologies": "Use of digital technologies includes, amongst others, video conferences, remote working, e-commerce solutions, cloud computing and other examples of the digitalisation of business processes."

Info box <i> after the term "intermediate goods": "Costs for intermediate goods include costs for raw materials, intermediate products or purchased services."

QUESTION: To what extent do you expect the following factors to affect your enterprise's average production costs <i> in the medium term, i.e. by **the end of 2022**, in comparison to **the end of 2019**?

Note: Please select one answer for each row.

1 = Decrease significantly
2 = Decrease slightly
3 = Neither increase nor decrease
4 = Increase slightly
5 = Increase significantly
-9996 = Does not apply to my enterprise

a = Supply chain restructuring:
b = Ongoing on-site hygiene measures:
c = Automation of the production process:
d = Use of digital technologies <i>:
e = Changes in number and/or qualification of employees:

f =	Level of indebtedness:	
g =	Average labour costs:	
h =	Costs for intermediate goods <i>:	
---	---	**END SPLIT SAMPLE 3**

	Split sample 4	Randomisation 4
The entire sample is split randomly into ten groups. Randomisation dummy (drandom4) is used for the treatment assignment.		
After "policy rate of the European Central Bank" an info box <i> with the following text is shown: "The ECB's policy rate is currently the interest rate on the deposit facility, also known as the deposit rate. This is the rate applied when commercial banks deposit overnight liquidity with the Eurosystem."		

In the last few years, the European Central Bank (ECB) has introduced a number of non-standard monetary policy measures. These included securities purchase programmes and negative interest rates on commercial bank deposits at the ECB.

[if drandom4 = 1]
[no text]

[if drandom4 = 2]
We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%.

[if drandom4 = 3]
We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. **The ECB explained** that the negative interest rates help to stimulate the economy and raise the inflation rate.

[if drandom4 = 4]
We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. **A member of the ECB's Executive Board explained** that the negative interest rates help to stimulate the economy and raise the inflation rate.

[if drandom4 = 5]
We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. **Isabel Schnabel, the German member of the ECB's Executive Board, explained** that the negative interest rates help to stimulate the economy and raise the inflation rate.

[if drandom4 = 6]
We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. **A high-ranking representative of the Bundesbank explained** that the negative interest rates help to stimulate the economy and raise the inflation rate.

We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. The median effective interest rate, which banks charge enterprises on new loans of over 1 million euro with an interest rate lock-in of one to five years, has been steadily decreasing and stood at less than 1.5% at the beginning of 2021. In comparison, when the ECB first calculated negative interest rates in mid-2014, it was still at 2.5%.

We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. In December 2020, 64% of banks in Germany charged negative interest rates on their customers' transferable deposits.

We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. **The ECB explained** that negative interest rates help to stimulate the economy and allow enterprises, families and households to take out loans at low interest rates in order to make investments or major purchases such as buying property.

We will now show you a communication from the European Central Bank (ECB) from this year.

The ECB recently announced that it intends to continue its negative interest rate policy and that its policy rate <i> would remain at -0.5%. **The ECB explained** that negative interest rates help to stimulate the economy, secure jobs and allow enterprises to maintain their operations and production.

---	---	**END SPLIT SAMPLE 4**

608	**Pro**	**Unemployment rate post treatment**	**exp_unempl_post**
Supported values are between 0.0 and 100.0 (up to one decimal place).			
"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".			
QUESTION: What do you expect the <u>unemployment rate</u> in Germany to be in **twelve months' time**? *Note: Please enter a value with a maximum of one decimal place.* [Input field]%			

610A/B	Core	Inflation expectations probabilistic - POST	infexprob_post_[a-e]

Supported values are between -100.0 and 999.0

610A:

QUESTION: What value do you think the <u>inflation rate</u>/<u>deflation rate</u> will most likely take on average **over the next twelve months**? What maximum and minimum value will they take?

Note: If it is assumed that there will be deflation, please enter a negative value. Values may have one decimal place.

a - Most likely inflation rate/deflation rate: [Input field]%
b - Minimum: [Input field]%
c - Maximum: [Input field]%

610B:

QUESTION: In your opinion, how likely is it that the inflation rate/deflation rate will take these values **over the next twelve months**?

Note: The aim of this question is to determine how likely you think it is that something specific will happen in the future. You can rate the likelihood on a scale from 0 to 100, with 0 meaning that an event is completely unlikely and 100 meaning that you are absolutely certain it will happen. Use values between the two extremes to moderate the strength of your opinion. Please note that your answers to the categories have to add up to 100.

d - [Input field]%
e - [Input field]%
f - [Input field]%

611	Proposal	Negative interest rate	neg_interest

QUESTION: Has a bank ever charged or is a bank currently charging negative interest on your enterprise's deposits, or have you taken steps to avoid negative interest rates?

1 = Yes
2 = No

614	**Proposal: TFP**	**Planned to invest in 2020**	**inv_plan_2020_a1, inv_plan_2020_a2, inv_plan_2020_b1, inv_plan_2020_b2**

Input filter: drandom3=2 | drandom3=4 | drandom3=5 | drandom3=6 **(2/3 of sample)**

R&D (research and development) is the systematic creative work undertaken to expand existing knowledge and the use of knowledge gained to develop new applications, such as new or significantly improved products/services or processes (including software development).

Digitalisation is the application or increased use of digital technologies in enterprises/organisations. Digital innovations include both product/business process innovations that incorporate information and communication technologies, and innovations that rely to a significant degree on information and communication technologies in their development or use.
Other innovation expenditure excluding R&D is comprised of current expenditure (staff and other operating expenses including outsourced services) and expenditure for investment in fixed assets and intangible assets. They include, amongst others, the purchase of machinery, equipment, software and external knowledge (e.g. patents and licences) and expenditure for construction, design, product design, conception, training, market research, market launch and other preparatory work if it serves the development, production or marketing of innovations.

In the following section, we would like to ask you some questions on the topic of innovations. Innovations are new or improved products or business processes (or a combination thereof) that differ substantially from prior products or business processes and that the enterprise in question has introduced to the market or utilised itself. Innovations are often divided into **research and development** (R&D) <i> and **other innovations** <i>.

QUESTION: Think back to the **end of 2019**, i.e. to the time before the COVID-19 pandemic. How much did you plan to spend on R&D activities <i> and other innovation activities (excluding R&D) <i> **in 2020**, and how much of this expenditure was planned for digitalisation measures <i>?

Note: If you had no expenditure planned for one of the areas, please enter "0".

1 = Planned expenditure for 2020
2 = Of which planned expenditure for digitalisation measures:

a = R&D activities:
b = Other innovation activities (excluding R&D):

To help visualise the above

Planned expenditure for R&D activities in 2020 amounted to: _____,000 euro,
of which planned expenditure for digitalisation measures amounted to: _____,000 euro.

Planned expenditure for other innovation activities in 2020 amounted to: _____,000 euro,
of which planned expenditure for digitalisation measures amounted to: _____,000 euro.

615	Proposal: TFP	Changes in plans to invest	chang_inv_plan_[a-d]

Input filter: drandom3=2 | drandom3=4 | drandom3=5 | drandom3=6   **(2/3 of sample)**

R&D (research and development) is the systematic creative work undertaken to expand existing knowledge and the use of knowledge gained to develop new applications, such as new or significantly improved products/services or processes (including software development).

Digitalisation is the application or increased use of digital technologies in enterprises/organisations. Digital innovations include both product/business process innovations that incorporate information and communication technologies, and innovations that rely to a significant degree on information and communication technologies in their development or use.

Other innovation expenditure excluding R&D is comprised of current expenditure (staff and other operating expenses including outsourced services) and expenditure for investment in fixed assets and intangible assets. They include, amongst others, the purchase of machinery, equipment, software and external knowledge (e.g. patents and licences) and expenditure for construction, design, product design, conception, training, market research, market launch and other preparatory work if it serves the development, production or marketing of innovations.

QUESTION: Did your <u>actual</u> expenditure on <u>R&D activities</u> <i>, <u>other innovation activities</u> <i> or <u>digitalisation measures</u> <i> **in 2020** deviate significantly from your plans at **the end of 2019**?

Note: Please select all answers that apply.

0 = Category not selected
1 = Category selected

a =   Yes, R&D expenditure deviated from planned expenditure as at the end of 2019.
b =   Yes, other innovation expenditure (excluding R&D) deviated from planned expenditure as at the end of 2019.
c =   Yes, expenditure on digitalisation measures deviated from planned expenditure as at the end of 2019.
d =   No, expenditure did not deviate from planned expenditure as at the end of 2019.

616	Proposal: TFP	Actual investments in 2020	Inv_act_2020_[a_1-b_2]

R&D (research and development) is the systematic creative work undertaken to expand existing knowledge and the use of knowledge gained to develop new applications, such as new or significantly improved products/services or processes (including software development).

Digitalisation is the application or increased use of digital technologies in enterprises/organisations. Digital innovations include both product/business process innovations that incorporate information and communication technologies, and innovations that rely to a significant degree on information and communication technologies in their development or use.

Other innovation expenditure excluding R&D is comprised of current expenditure (staff and other operating expenses including outsourced services) and expenditure for investment in fixed assets and intangible assets. They include, amongst others, the purchase of machinery, equipment, software and external knowledge (e.g. patents and licences) and expenditure for construction, design, product design, conception, training, market research, market launch and other preparatory work if it serves the development, production or marketing of innovations.

```
If chang_inv_plan_a==1 & chang_inv_plan_b==1 & chang_inv_plan_c==1
```
616A:

QUESTION: How much did your enterprise <u>actually</u> spend on <u>R&D activities</u> <i>, <u>other innovation activities (excluding R&D)</u> <i> and <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 = Actual expenditure for 2020:
2 = Of which expenditure for digitalisation measures:

a = R&D activities:
b = Other innovation activities (excluding R&D):

```
To help visualise the above question
```

Actual expenditure for <u>R&D activities</u> in 2020 amounted to: _____,000 euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

Actual expenditure for <u>other innovation activities</u> in 2020 amounted to: _____,000 euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

```
If chang_inv_plan_a==1 & chang_inv_plan_b==0 & chang_inv_plan_c==0
```
616B

QUESTION: How much did your enterprise <u>actually</u> spend on <u>R&D activities</u> <i> **in 2020**?

Note: If you had no expenditure, please enter "0".

1 = Actual expenditure for 2020:

a = R&D activities:

```
To help visualise the above question
```
Actual expenditure for <u>R&D activities</u> in 2020 amounted to: _____,000 euro.

```
If chang_inv_plan_a==0 & chang_inv_plan_b==1 & chang_inv_plan_c==0
```
616C:

QUESTION: How much did your enterprise <u>actually</u> spend on <u>other innovation activities (excluding R&D)</u> <i> **in 2020**?

Note: If you had no expenditure, please enter "0".

1 = Actual expenditure for 2020:

a = Other innovation activities (excluding R&D):

```
To help visualise the above question
```
Actual expenditure for <u>other innovation activities</u> in 2020 amounted to: _____,000 euro.

```
If chang_inv_plan_a==0 & chang_inv_plan_b==0 & chang_inv_plan_c==1 &
inv_plan_2020_a1>=0 & inv_plan_2020_b1>=0
```
616D

QUESTION: You stated that your actual expenditure for R&D and other innovation activities in 2020 matched your planned expenditure. How much was your <u>actual</u> expenditure for <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 = Actual expenditure for 2020:
2 = Of which expenditure for digitalisation measures:

a =   R&D activities:
b =   Other innovation activities (excluding R&D):

NOTE:
The figures previously provided by the enterprise from inv_plan_2020_a1 are shown in the matrix in cell "1 = Actual expenditure in 2020 in thousands of euro: / R&D activities <i>:". The figures previously provided by the enterprise from inv_plan_2020_b1 are shown in the matrix in cell "1 = Actual expenditure in 2020 in thousands of euro: / Other innovation activities (excluding R&D) <i>:".

`To help visualise the above question`

Actual expenditure for R&D activities in 2020 amounted to: **{Input field inv_plan_2020_a1},000** euro,
of which expenditure for digitalisation measures amounted to: _____,000 euro.

Actual expenditure for other innovation activities in 2020 amounted to: **{Input field inv_plan_2020_b1},000** euro,
of which expenditure for digitalisation measures amounted to: _____,000 euro.

`If chang_inv_plan_a==0 & chang_inv_plan_b==1 & chang_inv_plan_c==1 & inv_plan_2020_a1>=0`
616E
QUESTION: And how much did your enterprise <u>actually</u> spend on <u>other innovation activities (excluding R&D)</u> <i> and <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 =   Actual expenditure for 2020:
2 =   Of which expenditure for digitalisation measures:

a =   R&D activities:
b =   Other innovation activities (excluding R&D):

NOTE:
The figures previously provided by the enterprise from inv_plan_2020_a1 are shown in the matrix in cell "1 = Actual expenditure in 2020 in thousands of euro: / R&D activities <i>:".

`To help visualise the above question`
Actual expenditure for R&D activities in 2020 amounted to: **{Input field inv_plan_2020_a1},000** euro,
of which expenditure for digitalisation measures amounted to: _____,000 euro.

Actual expenditure for other innovation activities in 2020 amounted to: _____**,000** euro,
of which expenditure for digitalisation measures amounted to: _____,000 euro.

`If chang_inv_plan_a==0 & chang_inv_plan_b==1 & chang_inv_plan_c==1 & inv_plan_2020_a1= don't know or no answer`
616F
QUESTION: And how much did your enterprise <u>actually</u> spend on <u>other innovation activities (excluding R&D)</u> <i> and <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 = Actual expenditure for 2020:
2 = Of which expenditure for digitalisation measures:

a = Other innovation activities (excluding R&D):

`To help visualise the above question`

Actual expenditure for other innovation activities in 2020 amounted to: _____,000 euro,
of which expenditure for digitalisation measures amounted to: _____,000 euro.

```
If chang_inv_plan_a==1 & chang_inv_plan_b==0 & chang_inv_plan_c==1 &
inv_plan_2020_b1>=0
```
616G

QUESTION: And how much did your enterprise <u>actually</u> spend on <u>R&D activities</u> <i> and <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 = Actual expenditure for 2020:
2 = Of which expenditure for digitalisation measures:

a = R&D activities:
b = Other innovation activities (excluding R&D):

NOTE:
The figures previously provided by the enterprise from inv_plan_2020_b1 are shown in the matrix in cell "1 = Actual expenditure in 2020 in thousands of euro: / Other innovation activities (excluding R&D) <i>:".

```
To help visualise the above question:
```

Actual expenditure for <u>R&D activities</u> in 2020 amounted to: _____,000 euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

Actual expenditure for <u>other innovation activities</u> in 2020 amounted to: **{Input field inv_plan_2020_b1},000** euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

```
If chang_inv_plan_a==1 & chang_inv_plan_b==0 & chang_inv_plan_c==1 &
inv_plan_2020_b1= don't know or no answer
```
616H

QUESTION: And how much did your enterprise <u>actually</u> spend on <u>R&D activities</u> <i> and <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 = Actual expenditure for 2020:
2 = Of which expenditure for digitalisation measures:

a = R&D activities:

```
To help visualise the above question:
```
Actual expenditure for <u>R&D activities</u> in 2020 amounted to: _____,000 euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

```
If chang_inv_plan_a==1 & chang_inv_plan_b==1 & chang_inv_plan_c==0
```
616I:

QUESTION: And how much did your enterprise <u>actually</u> spend on <u>R&D activities</u> <i> and <u>other innovation activities (excluding R&D)</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 Actual expenditure for 2020:

a = R&D activities:
b = Other innovation activities (excluding R&D):

```
To help visualise the above question
```
Actual expenditure for <u>R&D activities</u> in 2020 amounted to: _____,000 euro.

Actual expenditure for <u>other innovation activities</u> in 2020 amounted to: _____,000 euro.

```
If chang_inv_plan_a==0 & chang_inv_plan_b==0 & chang_inv_plan_c==1 &
inv_plan_2020_a1>=0 & inv_plan_2020_b1=don't know or no answer
```
616J

QUESTION: You stated that your actual expenditure for R&D and other innovation activities in 2020 matched your planned expenditure. How much was your <u>actual</u> expenditure for <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

1 =
2 =   Of which expenditure for digitalisation measures:

a =   R&D activities:
b =

NOTE:
The figures previously provided by the enterprise from inv_plan_2020_a1 are shown in the matrix in cell "1 = Actual expenditure in 2020 in thousands of euro: / R&D activities. <i>:".

```
To help visualise the above question
```

Actual expenditure for <u>R&D activities</u> in 2020 amounted to: **{Input field inv_plan_2020_a1},000** euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

```
If chang_inv_plan_a==0 & chang_inv_plan_b==0 & chang_inv_plan_c==1 &
inv_plan_2020_a1=don't know or no answer & inv_plan_2020_b1>=0
```
616K

QUESTION: You stated that your actual expenditure for R&D and other innovation activities in 2020 matched your planned expenditure. How much was your <u>actual</u> expenditure for <u>digitalisation measures</u> <i> **in 2020**?

Note: If you had no expenditure in one of the areas, please enter "0".

2 =   Of which expenditure for digitalisation measures:

a =
b =   Other innovation activities (excluding R&D):

NOTE:
The figures previously provided by the enterprise from inv_plan_2020_b1 are shown in the matrix in cell "1 = Actual expenditure in 2020 in thousands of euro: / Other innovation activities (excluding R&D) <i>:".

```
To help visualise the above question
```
Actual expenditure for <u>other innovation activities</u> in 2020 amounted to: **{Input field inv_plan_2020_b1},000** euro,
of which expenditure for <u>digitalisation measures</u> amounted to: _____,000 euro.

617A	Proposal: TFP	Reasons change investment plans	reasons_change_[a_1-l_2]

Input filter: ((chang_inv_plan_a==1 | chang_inv_plan_b==1) & (drandom3=2 | drandom3=4 | drandom3=5| drandom3=6) **(2/3 of sample)**

R&D (research and development) is the systematic creative work undertaken to expand existing knowledge and the use of knowledge gained to develop new applications, such as new or significantly improved products/services or processes (including software development).

Other innovation expenditure excluding R&D is comprised of current expenditure (staff and other operating expenses including outsourced services) and expenditure for investment in fixed assets and intangible assets. They include, amongst others, the purchase of machinery, equipment, software and external knowledge (e.g. patents and licences) and expenditure for construction, design, product design, conception, training, market research, market launch and other preparatory work if it serves the development, production or marketing of innovations.

If chang_inv_plan_a==1 & chang_inv_plan_b==1

QUESTION: Which of the following changes linked to the coronavirus pandemic led to an adjustment of your plans regarding expenditure for R&D activities <i> and other innovation activities (excluding R&D) <i> **in 2020**?

Note: Please select all answers that apply.

0 = Category not selected
1 = Category selected

1 =   R&D activities
2 =   Other innovation activities (excluding R&D)

a =   Lower customer demand for existing products and services
b =   Higher customer demand for existing products and services
c =   Closures or work restrictions due to the coronavirus pandemic (hygiene rules, lockdown etc.)
d =   Worse access to financing sources
e =   Better access to financing sources
f =   Worse access to intermediate inputs
g =   Better access to intermediate inputs
h =   Worse availability of suitable specialist staff
i =   Better availability of suitable specialist staff
j =   More uncertain economic outlook
k =   Other reasons linked to the coronavirus pandemic
l =   No reasons linked tothe coronavirus pandemic

If chang_inv_plan_a==1 & chang_inv_plan_b==0

QUESTION: Which of the following changes linked to the coronavirus pandemic led to an adjustment of your plans regarding expenditure for R&D activities <i> **in 2020**?

Note: Please select all answers that apply.

0 = Category not selected
1 = Category selected

1 =   R&D activities

a =   Lower customer demand for existing products and services
b =   Higher customer demand for existing products and services
c =   Closures or work restrictions due to the coronavirus pandemic (hygiene rules, lockdown etc.)
d =   Worse access to financing sources
e =   Better access to financing sources
f =   Worse access to intermediate inputs

g = Better Access to intermediate inputs
h = Worse availability of suitable specialist staff
i = Better availability of suitable specialist staff
j = More uncertain economic outlook
k = Other reasons linked to the coronavirus pandemic
l = No reasons linked to the coronavirus pandemic

If chang_inv_plan_a==0 & chang_inv_plan_b==1

QUESTION: Which of the following changes linked to the coronavirus pandemic led to an adjustment of your plans in relation to expenditure for other innovation activities (excluding R&D) <i> **in 2020?**

Note: Please select all answers that apply.

0 = Category not selected
1 = Category selected

2= Other innovation activities (excluding R&D)

a = Lower customer demand for existing products and services
b = Higher customer demand for existing products and services
c = Closures or work restrictions due to the coronavirus pandemic (hygiene rules, lockdown etc.)
d = Worse access to financing sources
e = Better access to financing sources
f = Worse access to intermediate inputs
g = Better access to intermediate inputs
h = Worse availability of suitable specialist staff
i = Better availability of suitable specialist staff
j = More uncertain economic outlook
k = Other reasons linked to the coronavirus pandemic
l = No reasons linked to the coronavirus pandemic

617B	Proposal: TFP	Reasons no change investment plans	reasons_nochange_[a-e]

Info box on R&D, innovation activities and digitalisation

If chang_inv_plan_a==0 & chang_inv_plan_b==1 & (inv_plan_2020_a1>0 | inv_plan_2020_a1<0)

QUESTION: You stated that your enterprise did not adjust its plans regarding expenditure for <u>R&D activities</u> <i> **in 2020**. Which of the following reasons were the most important?

If chang_inv_plan_a==0 & chang_inv_plan_b==0 & (inv_plan_2020_a1>0 | inv_plan_2020_a1<0) & (inv_plan_2020_b1>0 | inv_plan_2020_b1<0)

QUESTION: You stated that your enterprise did not adjust its plans regarding expenditure for <u>R&D activities</u><i> or <u>other innovation activities (excluding R&D)</u> <i> **in 2020**. Which of the following reasons were the most important?

If chang_inv_plan_a==0 & chang_inv_plan_b==0 & (inv_plan_2020_a1>0 | inv_plan_2020_a1<0) & inv_plan_2020_b1==0

QUESTION: You stated that your enterprise did not adjust its plans regarding expenditure for <u>R&D activities</u> <i> **in 2020**. Which of the following reasons were the most important?

If chang_inv_plan_a==0 & chang_inv_plan_b==0 & inv_plan_2020_a1==0 & (inv_plan_2020_b1>0 | inv_plan_2020_b1<0)

QUESTION: You stated that your enterprise did not adjust its plans regarding expenditure for <u>other innovation activities (excluding R&D)</u> <i> **in 2020**. Which of the following reasons were the most important?

If chang_inv_plan_a==1 & chang_inv_plan_b==0 & (inv_plan_2020_b1>0 | inv_plan_2020_b1<0)

QUESTION: You stated that your enterprise did not adjust its plans regarding expenditure for <u>other innovation activities (excluding R&D)</u> <i> **in 2020**. Which of the following reasons were the most important?

Note: Please select all answers that apply.

0 = Category not selected
1 = Category selected

a = We would have reduced investment in innovation, but were not able to make adjustments.
b = We would have increased investment in innovation, but were not able to make adjustments.
c = Overall, the situation for my enterprise did not change significantly in 2020.
d = We had sufficient financial resources.
e = Other reasons

613	Proposal	Propensity to invest qualitative	RD_invest_quali

Input filter: drandom3=2 | drandom3=4 | drandom3=5 | drandom3=6 **(2/3 of sample)**

R&D (research and development) is the systematic creative work undertaken to expand existing knowledge and the use of knowledge gained to develop new applications, such as new or significantly improved products/services or processes (including software development).

Other innovation expenditure excluding R&D is comprised of current expenditure (staff and other operating expenses including outsourced services) and expenditure for investment in fixed assets and intangible assets. They include, amongst others, the purchase of machinery, equipment, software and external knowledge (e.g. patents and licences) and expenditure for construction, design, product design, conception, training, market research, market launch and other preparatory work if it serves the development, production or marketing of innovations.

QUESTION: The previous questions referred only to research and development (R&D) <i> in 2020. How are things generally, is your enterprise investing in research and development (R&D)?

Note: Please select one answer.

0 = Category not selected
1 = Category selected

1 – Yes, continuously with a dedicated R&D budget
2 – Yes, continuously without a dedicated R&D budget
3 – Yes, from time to time
4 – No

D01	Descript	Firm characteristics implicit	firmid

Input filter newcomer = 1

QUESTION: The information collected needs to be categorised in order to complete it. When evaluating the survey data, the Bundesbank would therefore like to merge this information with data it has on record to fulfil its tasks and which are kept in a separate database of enterprises at its premises in Frankfurt am Main, Germany. If you do not consent to this, the Bundesbank will rely on you to categorise this information yourself by means of additional questions. As you can see there, these data relate to the size, balance sheet, legal form, economic sector and other structural details of your enterprise. Your consent is required to merge these data with the survey data.

The data records will be merged at a data trustee – the Deutsche Bundesbank's Research Data and Service Centre (RDSC). The security of your data is ensured when this information is subsequently processed at the RDSC. Your consent is of course voluntary. You may withdraw it at any time. However, withdrawal of your consent shall not affect the lawfulness of any processing that took place on the basis of this declaration of consent before it was withdrawn.

1 = Yes, consent granted.
2 = No, consent not granted.
3 = I am not authorised to grant consent.

D02	Descript	Firm characteristics explicit employment	firmemploy

Input filter newcomer = 1

Supported values are >= 0.

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

If invalid number (negative or including comma or a dot) is entered, the following error message is shown: "Please enter a valid value, without a comma or period (possible input values are 0 to 9999999)."

QUESTION: How many **employees** did your enterprise have on 31 December 2020?

[Input field]

D03	Descript	Firm characteristics explicit turnover	firmturnover

Input filter newcomer = 1

Supported values are >= 0 [thousand].

"Don't know" and "No answer" shown as soft prompts if no response selected and the participant clicked on "Continue".

After the term "turnover", an info box <i> with the following definition is shown: "Instead of turnover, banks/credit institutions should enter their gross interest and commission income and their net trading income, while insurance companies should enter their gross premiums written."

If invalid number (negative or including comma or a dot) is entered, the following error message is shown: "Please enter a valid value without a comma or period (possible input values are 1 to 999999999)."

QUESTION: What was the **turnover** <i> of your enterprise in 2020?

Note: Please enter an amount in full <u>thousands</u> of euro.

Turnover (excluding VAT) in 2020: [Input field],000 euro

D04	Descript	Firm characteristics explicit economic sector	firmsector

Input filter newcomer = 1

After the term "economic sector", an info box <i> with the following explanation is shown: "All economic sectors according to the IAB Establishment Panel classification are listed here."

After the term "agriculture, hunting and forestry, fishing", an info box <i> with the following explanation is shown: "Crop and animal production, hunting and related services; forestry and logging; fishing and aquaculture."

After the term "mining and quarrying, electricity and water supply", an info box <i> with the following explanation is shown: "Mining of coal and lignite; petroleum and natural gas extraction; mining of metal ores; other mining and quarrying; mining support service activities; electricity, gas, steam and air conditioning supply; water supply."

After the term "manufacture of non-durable goods", an info box <i> with the following explanation is shown: "Manufacture of: textiles; apparel; leather, leather goods and shoes; wood and of products of wood and cork, except furniture; paper and paper products; printing; reproduction of recorded media."

After the term "manufacture of industrial goods", an info box <i> with the following explanation is shown: "Coke and refined petroleum products, manufacture of: chemical products; pharmaceutical products; rubber and plastic products; other non-metallic mineral products; metal production and processing."

After the term "Manufacture of capital and durable consumer goods", an info box <i> with the following explanation is shown: "Machinery and equipment; manufacture of motor vehicles and motor vehicle parts, other transport equipment, other manufacturing, repair and installation of machinery and equipment; fabricated metal products; computers and electronic and optical products; electrical equipment; furniture."

After the term "information and communication", an info box <i> with the following explanation is shown: "Publishing activities; film, video and television programme production; cinemas; sound recording and music publishing activities; programming and broadcasting activities; telecommunication; computer programming, consultancy and related activities; information service activities."

After the term "Financial and insurance services", an info box <i> with the following explanation is shown: "Provision of financial services; insurance, reinsurance and pension funding (excluding compulsory social security); activities auxiliary to financial and insurance services."

After the term "Business support, scientific and other professional services", an info box <i> with the following explanation is shown: "Real estate activities; legal and accounting activities; activities of head offices, management consultancy; architectural and engineering activities; technical testing and analysis; research and development; advertising and market research; other professional, scientific and technical activities; veterinary activities; rental and leasing activities; employment activities; travel agency, tour operator reservation service and related activities; security and investigation activities;

"Don't know" and "No answer" shown as soft prompts if no response selected and the
participant clicked on "Continue".

QUESTION: To which economic sector <i> does your enterprise best belong?

Note: Please select one answer.

1 = Agriculture, hunting and forestry, fishing <i>
2 = Mining and quarrying, electricity and water supply <i>
3 = Sewerage and waste management
4= Food products, beverages and tobacco
5 = Manufacture of non-durable consumer products <i>
6 = Industrial goods <i>
7 = Manufacture of capital and durable consumer goods <i>
8 = Construction
9 = Wholesale, sale and repair of motor vehicles
10= Retail (except of motor vehicles and motorcycles)
11 = Transportation and warehousing
12 = Information and communication <i>
13 = Accommodation and food service activities
14 = Financial and insurance activities
15 = Business support, scientific and other professional services <i>
16 = Education
17 = Health and social services
18 = Other service activities <i>
19 = Activities of membership, religious and other organisations (excluding social work activities and sport)
20 = Public administration, defence, social security

D05	Descript	Firm characteristics explicit ownership	firmtype

Input filter newcomer = 1

QUESTION: How would you describe your enterprise?

Note: Please select all answers that apply.

[a] Independent profit-driven enterprise that makes its own financial decisions
[b] Branch of another enterprise
[c] Subsidiary of another enterprise
[d] Non-profit institution
[e] Family business

D06	Descript	Firm characteristics explicit region	firmregion

Input filter newcomer = 1

QUESTION: In which federal state is your enterprise's head office in Germany based?

1 = Baden-Württemberg
2 = Bavaria
3 = Berlin
4 = Brandenburg
5 = Bremen
6 = Hamburg
7 = Hesse
8 = Mecklenburg-West Pomerania
9 = Lower Saxony
10 = North Rhine-Westphalia
11 = Rhineland-Palatinate
12 = Saarland
13 = Saxony
14 = Saxony-Anhalt
15 = Schleswig-Holstein
16 = Thuringia

D07	Descript	Characteristics of respondent	Respondenttype_[a-k]

Input filter newcomer = 1

QUESTION: We would now like to learn more about your role in your enterprise. In which area of your enterprise do you work?

Note: Please select all answers that apply.

[a] Management board
[b] Finance/control/accounting
[c] Sales/marketing/communication
[d] Another area (please specify): [Input field] **respondenttype_e**

QUESTION: Which job title best describes your role?

Note: Please select all answers that apply.

[f] Owner/executive director/member of the management board/holder of a general commercial power of attorney (Prokura)
[g] Head of division
[h] Team leader
[i] Clerical officer
[j] Other (please specify): [Input field] **respondenttype_k**

F01	Core	Feedback questions	feedback_[a-b]

QUESTION: How difficult did you find the survey overall?

1 = Very difficult
2 = Somewhat difficult
3 = Partly difficult/partly easy
4 = Somewhat easy
5 = Very easy

QUESTION: How did you find the length of the survey?

1 = Far too long
2 = Somewhat too long
3 = Just right
4 = Somewhat too short
5 = Far too short

F02	Core	Open feedback question	feedbackopen

QUESTION: If you have any suggestions or criticism about the survey, please let us know here.

1 = [Input field]
2   No, nothing/no answer

P01	Core	Panel participation	panel

QUESTION: In order to find out how you continue to manage the crisis and how your enterprise develops over the next few years, we would, going forward, like to invite you to complete a survey at intervals of three months. We will need to keep your contact details on file so that we can get in touch with you about the new survey. To do this, we require your consent under the Data Protection Act.

Your contact details will be kept separately from the questionnaire and solely for the purpose of this further survey. They will never be traced back to the answers you have provided. Your information will remain anonymous as described above and your data will never be passed on to third parties. Once the last survey is complete, your contact details will be permanently deleted. The data protection statement on the processing of personal contact details, as well as contact details for the data protection officer and information about the rights of data subjects can be found in the general data protection notice at www.bundesbank.de/unternehmensstudie.

We would be very grateful if you decided to continue participating in our research project. Of course, this is also voluntary and you can withdraw your consent at any time.

I agree that my address may be kept on file for further surveys (please select):

1 = Yes
2 = No

P02	Core	Contact		contact

QUESTION: To make it easier for us to contact you about a new survey, please give us an email address that we can use to contact your enterprise. This email address will not be used for any other purpose and will be treated with the same level of confidentiality as your other contact details.

Note: Please type your email address in the text field.

[Input field]