

ECB Survey of Monetary Analysts (SMA)

March 2020

Thank you for participating in this survey – your time and input are greatly appreciated. The pilot phase of the survey has been extended until the end of 2020.

Please return the completed questionnaire to the ECB's email address ecb-sma@ecb.europa.eu by 18:00 CET on Friday, 28 February 2020.

Disclaimer: This survey has been formulated by ECB staff; members of the ECB's decision-making bodies are not involved in the formulation of the survey. The survey's purpose is to gather analysts' expectations of the evolution of monetary policy instruments and initiatives that the ECB has already announced, as well as their expectations for the economy and financial markets. The questions never presume or signal an intention to undertake any particular policy action in the future.

Legal statement: Your individual answers to this voluntary survey will be treated confidentially, in accordance with applicable Union law, and used for the purpose of the survey only. If public disclosure of your individual answers were required the ECB would seek to obtain your prior consent.

Completing the questionnaire

The questionnaire is organised in four separate sections:

1. Key ECB Interest Rates, Market Rates and Conditions;
2. Asset Purchase Programme and Reinvestment;
3. Targeted Longer-Term Refinancing Operations;
4. Macroeconomic Outlook.

You are invited to respond to all questions, although if you are unable to respond to a question you may leave it blank.

An additional section is included at the end of the questionnaire should you wish to provide any further information or feedback.

Entering your responses

For your ease of reference, in certain sections of the questionnaire recent values of the data have been included. Details about the recent values and their cut-off dates can be found in the “Reference Data” Annex to this questionnaire.

Data format

If a percentage rate is required as input, always omit the % sign. Similarly, if the question asks to express the answer in basis points, always omit writing bps. If a date is required as input, always provide it in the format MMM YYYY (e.g. Apr 2019).

Unless otherwise stated, the questionnaire asks for future realisations of monetary policy instruments, financial and macroeconomic variables that you consider *most likely* to prevail over specific forecast horizons. In other words, your forecasts should reflect your modal projections over the forecast horizons and, if possible, should be mutually consistent for all surveyed variables.

Market rates

Please note that this survey asks for the level of the euro short-term rate (€STR) instead of the euro overnight index average (EONIA). The €STR reflects the wholesale euro unsecured overnight borrowing costs of euro area banks and will complement existing benchmark rates. EONIA is a measure of the euro interbank overnight lending conditions. As of 2 October 2019, the EONIA methodology has been redefined as the €STR plus a spread of 8.5 basis points.

For the sake of brevity, the questionnaire focuses on the €STR. However, the ECB considers the entire set of available interest rates when assessing prevailing market conditions.

With regard to swap spreads, we are seeking your estimate of the spread between the relevant benchmark sovereign bond and a maturity-matched swap against 6M Euribor (I-Spread), expressed in basis points according to the euro convention (lower numbers denote a more expensive bond).

Macroeconomic variables

For real GDP growth you are asked to provide your expectations of the change in the variable in quarter-on-quarter (q-o-q) terms (not annualised), that are calendar and seasonally adjusted. In addition, you are asked for your expectations of the long-run growth rate of GDP – this should be provided in year-on-year (y-o-y) terms.

For HICP inflation and HICP inflation excluding energy and food, you are asked to provide your expectations of the change in the variable in year-on-year (y-o-y) terms. If your institution constructs projections at a monthly frequency for these variables, then a quarterly frequency may be calculated by taking the average of the y-o-y changes for each of the three months in the quarter.

For the unemployment rate you are asked to provide period averages in seasonally adjusted terms.

Administration and contacts

If you have any questions please contact us at ecb-sma@ecb.europa.eu.

If your contact details or the contact person (i.e. the person that should receive the survey questionnaire) has changed, please inform us of the new details by sending an email to ecb-sma@ecb.europa.eu.

Privacy Statement for the Survey of Monetary Analysts (SMA)

Participation in the Survey of Monetary Analysts (SMA) is voluntary.

All personal data are processed in accordance with EU Data Protection Law.¹ The European Central Bank (ECB) is the controller and the Monetary Policy Strategy Division in the ECB's Directorate General Monetary Policy is the unit responsible for processing your data.

Your personal data are processed based on your consent. The purpose of the processing is to maintain a list of contact persons in the participating organisations to whom any questions related to the survey may be addressed. There will be no further processing of your personal information if you withdraw your consent, although earlier processing will remain lawful.

Personal data will be accessed by the ECB staff members directly involved in SMA.

Your personal data are stored for as long as your organisation participates in the survey and will be deleted after that. Your personal data will also be deleted as soon as the ECB receives notification that you no longer act as the contact person for your organisation, or if a new contact person has been nominated.

You have the right to access, rectify or (with some limitations) request deletion of your personal data or restriction of the processing of your data in line with Regulation (EU) 2018/1725. You can exercise these rights by sending an email to ecb-sma@ecb.europa.eu.

¹ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC.

sma@ecb.europa.eu. If you have any further questions, please contact the ECB's Data Protection Officer (dpo@ecb.europa.eu).

Furthermore, you have the right to contact the [European Data Protection Supervisor](#) at any time regarding the processing of your personal data.

1 Key ECB Interest Rates, Market Rates and Conditions

1.1

1.1.1 Please indicate the percent chance you attach to the next rate *change* being an increase or a decrease, the most likely timing of such a change and the size of change you expect.²

| DFR | | | | |
|-----------|-------------|-------|------|------|
| Direction | Probability | Month | Year | Size |
| Increase | | | | |
| Decrease | | | | |

| MRO | | | | |
|-----------|-------------|-------|------|------|
| Direction | Probability | Month | Year | Size |
| Increase | | | | |
| Decrease | | | | |

| MLF | | | | |
|-----------|-------------|-------|------|------|
| Direction | Probability | Month | Year | Size |
| Increase | | | | |
| Decrease | | | | |

² The probabilities of an increase or decrease must add up to 100%. DFR refers to the rate on the deposit facility, MRO refers to the rate on main refinancing operations and MLF refers to the rate on the marginal lending facility. Please include the sign of the rate change (+ for an increase, – for a decrease).

1.1.2 Please indicate the percent chance you attach to the dates surrounding the timing of the next rate *change* (*increase or decrease*) that you specified in your response to Question 1.1.1.³

| DFR | Dates are centred on your answer to Q1.1.1; step size is at the Governing Council frequency | | | | | | | |
|-------------|---------------------------------------------------------------------------------------------|--|--|--|--|--|--|-------------|
| Increase | | | | | | | | Check |
| Probability | | | | | | | | sum is 100% |

| DFR | Dates are centred on your answer to Q1.1.1; step size is at the Governing Council frequency | | | | | | | |
|-------------|---------------------------------------------------------------------------------------------|--|--|--|--|--|--|-------------|
| Decrease | | | | | | | | Check |
| Probability | | | | | | | | sum is 100% |

| MRO | Dates are centred on your answer to Q1.1.1; step size is at the Governing Council frequency | | | | | | | |
|-------------|---------------------------------------------------------------------------------------------|--|--|--|--|--|--|-------------|
| Increase | | | | | | | | Check |
| Probability | | | | | | | | sum is 100% |

| MRO | Dates are centred on your answer to Q1.1.1; step size is at the Governing Council frequency | | | | | | | |
|-------------|---------------------------------------------------------------------------------------------|--|--|--|--|--|--|-------------|
| Decrease | | | | | | | | Check |
| Probability | | | | | | | | sum is 100% |

³ Responses must add up to 100%. Please omit the % sign when entering the data.

- 1.1.3 Please indicate the percent chance you attach to larger and smaller sizes of the next *change (increase or decrease)* in the DFR and MRO that you specified in your response to Question 1.1.1.⁴

| Size of change for a rate decrease (in bps) | | | | | | | | | | | | |
|---------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------|
| | <-50 | -50 | -45 | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | Check |
| DFR | | | | | | | | | | | | |
| MRO | | | | | | | | | | | | |

| Size of change for a rate increase (in bps) | | | | | | | | | | | | |
|---------------------------------------------|---|----|----|----|----|----|----|----|----|----|-----|-------|
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | >50 | Check |
| DFR | | | | | | | | | | | | |
| MRO | | | | | | | | | | | | |

If applicable, please state the factors behind any change in your answers to Question 1.1 since the previous survey and explain your answer in more detail.

If you expect no changes to the key ECB interest rates over your forecast horizon and have therefore not filled out the above tables, please state this.

⁴ Responses must add up to 100%. Please omit the % sign when entering the data.

1.2

Please indicate the level (in percentage per annum) of the following interest rates⁵ that you consider most likely (i.e. the mode) to prevail over the reserve maintenance period⁶ after the Governing Council meetings listed below. Also, indicate the level that you consider most likely (i.e. the mode) to prevail at the end of each of the quarters and years listed below, and in the long run.

Please note that this survey asks for levels of the €STR instead of EONIA.

| Governing Council meetings | DFR | MRO | MLF | €STR | 3-month EURIBOR |
|----------------------------|-------|------|------|-------|-----------------|
| Dec-19 | -0.50 | 0.00 | 0.25 | -0.54 | -0.39 |
| Jan-20 | -0.50 | 0.00 | 0.25 | | |
| Mar-20 | | | | | |
| Apr-20 | | | | | |
| Jun-20 | | | | | |
| Jul-20 | | | | | |
| Sep-20 | | | | | |
| Oct-20 | | | | | |
| Dec-20 | | | | | |
| Jan-21 | | | | | |
| Mar-21 | | | | | |
| Apr-21 | | | | | |
| Jun-21 | | | | | |
| Jul-21 | | | | | |
| Sep-21 | | | | | |
| Oct-21 | | | | | |
| Dec-21 | | | | | |
| Jan-22 | | | | | |
| Quarters | | | | | |
| 2022 Q1 | | | | | |
| 2022 Q2 | | | | | |
| 2022 Q3 | | | | | |
| 2022 Q4 | | | | | |

⁵ Please omit the % sign when entering the data.

⁶ The reserve maintenance period usually starts on the Wednesday of the week following each Governing Council meeting, which is also the date from which any changes to the key ECB interest rates that the Governing Council has decided at that meeting are applied to the respective Eurosystem monetary policy operations.

| Governing Council meetings | DFR | MRO | MLF | €STR | 3-month EURIBOR |
|----------------------------|-----|-----|-----|------|-----------------|
| Years | | | | | |
| 2023 | | | | | |
| 2024 | | | | | |
| 2025 | | | | | |
| | | | | | |
| Long run ⁷ | | | | | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

1.3

What is your estimate of the level that the Governing Council would consider as a lower bound for each of the key interest rates?⁸

| DFR | MRO | MLF |
|-----|-----|-----|
| | | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

⁷ The long run should be interpreted as the horizon over which the effects of all shocks will vanish. For the purposes of this survey this can be interpreted, for the sake of simplicity, as around ten years.

⁸ Please omit the % sign when entering the data.

- 1.4 Please provide your expectations of the most likely level (i.e. the mode) of excess liquidity (in EUR billion) in the euro area banking system that will prevail at the end of the periods indicated in the table.⁹

| Reference period | Excess liquidity |
|---------------------------------|------------------|
| Recent value (18 February 2020) | 1728.7 |
| 2020 H1 | |
| 2020 H2 | |
| 2021 H1 | |
| 2021 H2 | |
| 2022 H1 | |
| 2022 H2 | |
| 2023 H1 | |
| 2023 H2 | |
| 2024 H1 | |
| 2024 H2 | |
| 2025 H1 | |
| 2025 H2 | |

1.5

- 1.5.1 Please provide your estimate of the most likely level (i.e. the mode) of excess liquidity that remains subject to remuneration at the deposit facility rate (DFR) (i.e. after the application of the two-tier system) at which the €STR would begin increasing above the DFR (towards the MRO).

Please note that this survey asks for the level at which the €STR would begin increasing instead of EONIA.

| | Level of excess liquidity |
|-------------|---------------------------|
| EUR billion | |

⁹ Excess liquidity is defined as the holdings of central bank reserves in excess of minimum reserve requirements plus the holdings of equivalent central bank deposits.

- 1.5.2 Please indicate the percent chance that you attach to higher and lower levels of excess liquidity (at which the €STR would begin increasing above the DFR) you specified in your response to Question 1.5.1.

| The excess liquidity levels are centred on your answer to Q1.5.1; step size is +/- 50bn | | | | | | | | |
|-----------------------------------------------------------------------------------------|--|--|--|--|--|--|--|-------------|
| EUR billion | | | | | | | | Check |
| Probability | | | | | | | | sum is 100% |

- 1.6 In the Introductory Statement to the January 2020 press conference, the Governing Council stated that it expects the key ECB interest rates “to remain at their present or lower levels until we have seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2% within our projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics”. Please indicate whether you expect any change in the forward guidance on policy rates.¹⁰

| No | Yes |
|----|-----|
| | |

If you have indicated yes, please provide details in the table below.

| Changes in forward guidance on policy rates (please describe below) | Probability you attach to the announcement ¹¹ | Timing of announcement | | Timing of implementation | |
|------------------------------------------------------------------------|----------------------------------------------------------|------------------------|------------------------|--------------------------|------------------------|
| | | Month (Format: MMM) | Year (Format: YYYY) | Month (Format: MMM) | Year (Format: YYYY) |
| | | | | | |
| | | | | | |

Please explain your answer in more detail.

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¹⁰ Please indicate your assessment with an “X”.

¹¹ Please omit the % sign when entering the data.

2 Asset Purchase Programme and Reinvestment

2.1

- 2.1.1 In the Introductory Statement to the January 2020 press conference, the Governing Council stated that it intends “to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when we start raising the key ECB interest rates, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.” Please provide your expectations of the most likely length (i.e. the mode) of the “extended period”.

| Length of “extended period of time past the date when we start raising the key ECB interest rates” (in quarters) |
|------------------------------------------------------------------------------------------------------------------|
| |

- 2.1.2 Please indicate the percent chance you attach to shorter and longer horizons for the length of the “extended period” you specified in your response to Question 2.1.1.¹²

| Numbers of quarters are centred on your answer to Q2.1.1; step size is +/- 1 quarter | | | | | | | | |
|--------------------------------------------------------------------------------------|--|--|--|--|--|--|--|-------------|
| Quarters | | | | | | | | Check |
| Probability | | | | | | | | sum is 100% |

- 2.1.3 Please provide your expectations of the most likely amount (i.e. the mode) of reinvestments of principal payments (in EUR billion) in each quarter until the end of the “extended period” you specified in your response to Question 2.1.1. To compute the horizon, please provide also the date when you expect the ECB to start raising the key ECB interest rates.

| Date of first increase of rates | |
|---------------------------------|------|
| Month | Year |
| | |

¹² Responses must add up to 100%. Please omit the % sign when entering the data.

| Reference period | 2020 Q1 | ... |
|--------------------------------------|---------|-----|
| Quarterly amount (in EUR billion) | | ... |

If applicable, please state the factors behind any change in your answers to Question 2.1 since the previous survey and explain your answer in more detail.

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- 2.1.4 Please indicate the percent chance you attach to the dates surrounding the timing at which the ECB will start raising the key ECB interest rates that you specified in your response to the first part of Question 2.1.3.

| | Dates are centred on your answer to the first part of Q2.1.3; step size is at Governing Council frequency | | | | | | | | | | |
|-------------|-----------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|-------------|
| Date | | | | | | | | | | | Check |
| Probability | | | | | | | | | | | sum is 100% |

- 2.2 Please indicate your expectations of the length (in quarters) of the “extended period” during which the Governing Council intends to continue reinvesting, in full, the principal payments, under the following two hypothetical scenarios.

| | Please indicate your expectations of the length of the “extended period of time past the date” (number of quarters) |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| You postpone by one quarter the date on which you expect the Governing Council to start raising the key ECB interest rates | |
| You bring forward by one quarter the date on which you expect the Governing Council to start raising the key ECB interest rates | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

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2.3 Please provide your expectations of the most likely (i.e. the mode) Eurosystem stock of bonds under the APP (cumulative net purchases) at the end of each of the periods listed below (in book value, EUR billion).

| Year | Eurosystem APP stock of bonds (cumulative net purchases) |
|-----------------------------|----------------------------------------------------------|
| Recent value (January 2020) | 2709 |
| 2020 Q1 | |
| 2020 Q2 | |
| 2020 Q3 | |
| 2020 Q4 | |
| 2021 Q1 | |
| 2021 Q2 | |
| 2021 Q3 | |
| 2021 Q4 | |
| 2022 Q1 | |
| 2022 Q2 | |
| 2022Q3 | |
| 2022Q4 | |
| 2023 Q1 | |
| 2023 Q2 | |
| 2023 Q3 | |
| 2023 Q4 | |
| 2024 Q1 | |
| | |
| 2024 H1 | |
| 2024 H2 | |
| 2025 H1 | |
| 2025 H2 | |
| | |
| 2030 | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

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2.4

- 2.4.1 In the Introductory Statement to the January 2020 press conference, the Governing Council stated that “[w]e will continue to make net purchases under our asset purchase programme (APP) at a monthly pace of €20 billion. We expect them to run for as long as necessary to reinforce the accommodative impact of our policy rates, and to end shortly before we start raising the key ECB interest rates”. Please provide your expectations of the most likely date (i.e. the mode) of the end of net purchases.

| Date of the end of net purchases | |
|----------------------------------|------|
| Month | Year |
| | |

- 2.4.2 Conditional on your modal expectations of when you expect the ECB to start raising the key ECB interest rates, please indicate the percent chance you attach to earlier or later dates either side of the date of the end of net purchases that you specified in your response to Question 2.4.1 (as well as the chance you attach to the specified date itself).¹³

| | Dates are centred on your answer to Q2.4.1; step size is at the monthly frequency | | | | | | | | | | |
|-------------|-----------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|-------------|
| Date | | | | | | | | | | | Check |
| Probability | | | | | | | | | | | sum is 100% |

- 2.4.3 Please provide your expectations of the most likely composition (i.e. the mode) of net purchases (in EUR billion) in each quarter until the end of the period you specified in your response to

¹³ Responses must add up to 100%. Please omit the % sign when entering the data.

Question 2.4.1. Please provide your expectations broken down by purchase programme.

| Reference period | 2020 Q1 | ... |
|-------------------------------------------------------------------------------|---------|-----|
| Asset-backed securities purchase programme (ABSPP) (in EUR billion) | | |
| Third covered bond purchase programme (CBPP3) (in EUR billion) | | |
| Corporate sector purchase programme (CSPP) (in EUR billion) | | |
| Public sector purchase programme (PSPP) (in EUR billion) | | |

If applicable, please state the factors behind any change in your answers to Question 2.4 since the previous survey and explain your answer in more detail.

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2.5 Please indicate whether you expect any changes to the forward guidance on the APP and reinvestments.

| No | Yes |
|----|-----|
| | |

If you have indicated yes, please provide details in the table below.

| Changes in forward guidance on the APP and reinvestments (please describe below) | Probability you attach to the announcement ¹⁴ | Timing of announcement | | Timing of implementation | |
|-------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------|------------------------|--------------------------|------------------------|
| | | Month (Format: MMM) | Year (Format: YYYY) | Month (Format: MMM) | Year (Format: YYYY) |
| | | | | | |
| | | | | | |

¹⁴ Please omit the % sign when entering the data.

3 Targeted Longer-Term Refinancing Operations

3.1 Please provide your estimate of the total repayments (in EUR billion) of the targeted longer-term refinancing operations under TLTRO II for the dates listed below.

| | Repayment Total amount repaid (per quarter) |
|---------|------------------------------------------------|
| 2020 Q1 | |
| 2020 Q2 | |
| 2020 Q3 | |
| 2020 Q4 | |
| 2021 Q1 | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

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3.2 What do you expect to be the take-up under TLTRO III of each operation, and in total (in EUR billion)?

| | Amount |
|------------------------------------------|--------|
| 2019 Q3 | 3.40 |
| 2019 Q4 | 97.72 |
| 2020 Q1 | |
| 2020 Q2 | |
| 2020 Q3 | |
| 2020 Q4 | |
| 2021 Q1 | |
| Total take-up (including all operations) | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

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4 Macroeconomic Outlook

4.1 For the euro area, please provide your estimates of the most likely outcome¹⁵ (i.e. the mode) for real GDP growth¹⁶, the unemployment rate¹⁷ and inflation¹⁸.

| Projection | | | | |
|------------------------|-----------------------|--------------------------|-----------------------|------------------------|
| | Real GDP growth | Unemployment rate | HICP inflation | HICP ex. energy & food |
| Quarter | (q-o-q) ¹⁸ | (qtly avg) ¹⁹ | (y-o-y) ²⁰ | (y-o-y) ²⁰ |
| 2019 Q4 | 0.06 | 7.48 | 1.00 | 1.23 |
| 2020 Q1 | | | | |
| 2020 Q2 | | | | |
| 2020 Q3 | | | | |
| 2020 Q4 | | | | |
| 2021 Q1 | | | | |
| 2021 Q2 | | | | |
| 2021 Q3 | | | | |
| 2021 Q4 | | | | |
| 2022 Q1 | | | | |
| 2022 Q2 | | | | |
| 2022 Q3 | | | | |
| 2022 Q4 | | | | |
| 2023 Q1 | | | | |
| 2023 Q2 | | | | |
| 2023 Q3 | | | | |
| 2023 Q4 | | | | |
| | (y-o-y) | (rate) | (y-o-y) | (y-o-y) |
| Long run ¹⁹ | | | | |

¹⁵ Please omit the % sign when entering the data.

¹⁶ q-o-q calendar and seasonally adjusted but not annualised.

¹⁷ Seasonally adjusted.

¹⁸ If a projection is available for this variable at a monthly frequency, then the quarterly rate may be obtained by calculating the average of the y-o-y change for each of the three months in the quarter.

¹⁹ The long run should be interpreted as the horizon over which the effects of all shocks will vanish. For the purposes of this survey this can be interpreted, for the sake of simplicity, as around ten years.

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

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4.1.1

Please indicate the percent chance that you attach to the following levels of long-run HICP inflation.

| Long-run HICP inflation | Probability |
|-------------------------|-------------|
| <0% | |
| 0.0 – 0.2% | |
| 0.3 – 0.5% | |
| 0.6 – 0.8% | |
| 0.9 – 1.1% | |
| 1.2 – 1.4% | |
| 1.5 – 1.7% | |
| 1.8 – 2.0% | |
| 2.1 – 2.3% | |
| 2.4 – 2.6% | |
| 2.7 – 2.9% | |
| 3.0 – 3.2% | |
| 3.3 – 3.5% | |
| 3.6 – 3.8% | |
| ≥ 3.9% | |
| Check sum is 100% | |

- 4.2 How do you assess the balance of risks surrounding your projections for euro area growth and inflation?²⁰ In the second table below, please specify any particular risks that you consider important, even beyond this horizon.

| | Risks surrounding the euro area growth outlook | | | Risks surrounding the euro area inflation outlook | | |
|------|------------------------------------------------|----------|--------|---------------------------------------------------|----------|--------|
| | downside | balanced | upside | downside | balanced | upside |
| 2020 | | | | | | |
| 2021 | | | | | | |
| 2022 | | | | | | |

| Risks surrounding the euro area growth outlook in detail | Risks surrounding the euro area inflation outlook in detail |
|----------------------------------------------------------|-------------------------------------------------------------|
| | |

If applicable, please state the factors behind any change since the previous survey and explain your answer in more detail.

- 4.3 If the interest rate assumptions underlying your projections above are different from those indicated earlier in response to the questions in Section 1, please specify the different assumptions used.

²⁰ Please indicate your assessment with an "X".

- 4.4 Assuming that euro area HICP inflation would be expected to be in line with the ECB's inflation aim at the end of the projection horizon in the Eurosystem/ECB staff macroeconomic projection exercise, please indicate the policy action (if any) you would expect the ECB to take under two hypothetical scenarios: (i) a shock occurs that shifts the expected annual inflation rate by the end of the projection horizon up by 50 basis points and leads to a strengthening of the economic outlook; and (ii) a shock occurs that shifts the expected annual inflation rate by the end of the projection horizon down by 50 basis points and leads to a worsening of the economic outlook. Please provide quantitative and qualitative details (e.g. size and timing of changes in the level of policy rates and/or size and timing of non-standard measures).

| | Policy instruments | Quantitative and qualitative details |
|-------------------------------|--------------------|--------------------------------------|
| (i) Upward shift by 50 bps | | |
| (ii) Downward shift by 50 bps | | |

- 5 Please provide any additional information or feedback in this Section.

All data in percent, unless otherwise stated.

| ECB policy rates | |
|--------------------------------------|-------|
| Deposit facility rate | -0.50 |
| Marginal refinancing operations rate | 0.00 |
| Marginal lending facility rate | 0.25 |

| Market interest rates | |
|-----------------------|-------|
| €STR | -0.54 |
| 3-month Euribor | -0.40 |

| Macroeconomic data | |
|---------------------------------------------------------------------------------------------------------------------------|------|
| Annual HICP inflation (January 2020) | 1.40 |
| Annual HICP inflation (quarterly average, 2019 Q4) | 1.00 |
| Annual HICP inflation excluding energy and food (January 2020) | 1.10 |
| Annual HICP inflation excluding energy and food (quarterly average, 2019 Q4) | 1.23 |
| Real GDP growth (q-o-q; calendar and seasonally adjusted, preliminary flash estimates) for 2019 Q4 (according to ESA2010) | 0.06 |
| Real GDP growth (annual average rate; y-o-y) for 2019 | 1.17 |
| Unemployment rate (monthly rate; seasonally adjusted) for December 2019 | 7.45 |
| Unemployment rate (quarterly average rate; seasonally adjusted) for 2019 Q4 | 7.48 |

| Excess liquidity | Amount (in EUR billion) |
|-------------------------------------|-------------------------|
| Excess liquidity (18 February 2020) | 1728.7 |

²¹ Cut-off date for the data provided in this annex: 18 February 2020 (unless otherwise stated).
Sources: Bloomberg, ECB, Eurostat, and Thomson Reuters.

APP redemption amounts

Expected monthly redemption amounts for the APP over a rolling 12-month horizon (in EUR billions)²²

| | APP |
|--------|-------|
| Jan-20 | 31.96 |
| Feb-20 | 6.80 |
| Mar-20 | 18.78 |
| Apr-20 | 34.14 |
| May-20 | 15.42 |
| Jun-20 | 17.98 |
| Jul-20 | 34.13 |
| Aug-20 | 2.48 |
| Sep-20 | 23.85 |
| Oct-20 | 31.77 |
| Nov-20 | 30.71 |
| Dec-20 | 10.36 |
| Jan-21 | 23.55 |

TLTRO III

All TLTRO III operations have a maturity of three years from their settlement date; counterparties are able to repay the amounts borrowed under TLTRO III at a quarterly frequency starting two years from the settlement of each operation. For further information, see:

<https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html>.

TLTRO III outstanding amounts and maturity dates

| TLTRO III | Maturity date | Amount (in EUR billion) |
|--------------|---------------|-------------------------|
| 1 | 28/09/2022 | 3.40 |
| 2 | 21/12/2022 | 97.72 |
| TOTAL | | 101.12 |

²² Actual redemption for January 2020, based on month end data. Remaining values are ECB estimates. Figures may not add up due to rounding. Figures are preliminary and may be subject to revision. Note: Realised redemptions may differ from estimated redemptions. For more details see here: <https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html>

TLTRO II

All TLTRO II operations have a maturity of four years from their settlement date; counterparties are able to repay the amounts borrowed under TLTRO II at a quarterly frequency starting two years from the settlement of each operation. Counterparties are not subject to mandatory early repayments; for further information, see:

<https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html>.

TLTRO II outstanding amounts and maturity dates

| TLTRO II | Maturity date | Amount (in EUR billion) |
|----------------------------|---------------|-------------------------|
| 1 | 24/06/2020 | 222.69 |
| 2 | 30/09/2020 | 31.82 |
| 3 | 16/12/2020 | 48.19 |
| 4 | 24/03/2021 | 208.07 |
| TOTAL ²³ | | 510.77 |

²³ Total may not add up due to rounding.
<https://www.ecb.europa.eu/mopo/implement/omo/html/index.en.html>

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