

ECB Survey of Monetary Analysts (SMA)

December 2021

Thank you for participating in this survey – your time and input are greatly appreciated.

Please return the completed questionnaire to the ECB's email address ecbsma@ecb.europa.eu by 18:00 CET on Thursday, 2 December 2021.

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 by ECB staff, in accordance with applicable Union law, and used for the purpose of the survey only. The results of the survey will be published in aggregate form on the ECB website. 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 Market Conditions;
- 2. Asset Purchases and Reinvestment;
- 3. 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 you to express the answer in basis points, always omit "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 complements existing benchmark rates. The 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. The EONIA will be discontinued on 3 January 2022.

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.

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 and of GDP growth at the time of the next increase in key interest rates – these 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 y-o-y terms, both for the projections you are invited to provide and for the inflation rate you foresee prevailing at the time of the next increase in key interest rates. 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, both for the projections you are invited to provide and for the unemployment rate you foresee prevailing at the time of the next increase in key interest rates.

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 the 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-

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. For more details see here.



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 Market Conditions

1.1 Please indicate the percentage 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 the 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								

1.2 Please indicate the percentage chance you attach to a change at the dates surrounding the timing of the next rate *change* (*increase or decrease*) that you specified in your response to Question 1.1.³

DFR	Date	Dates are centred on your answer to Q1.1; step size is at the Governing Council frequency								
Increase								Check		
Probability								sum is 100%		

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).

³ Responses must add up to 100%.



DFR	Dates are centred on your answer to Q1.1; step size is at the Governing Council frequency								
Decrease								Check	
Probability								sum is 100%	

MRO	Date	Dates are centred on your answer to Q1.1; step size is at the Governing Council frequency							
Increase								Check	
Probability								sum is 100%	

MRO	Date	Dates are centred on your answer to Q1.1; step size is at the Governing Council frequency							
Decrease								Check	
Probability								sum is 100%	

1.3 Please indicate the percentage 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 1.1.⁴

	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												

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



If applicable, please state the factors behind any change in your answers to Questions 1.1 to 1.3 since the previous survey and explain your answer in more detail.

1.4 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 monetary policy 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 the EONIA.

Governing Council meetings	DFR	MRO	MLF	€STR	3-month EURIBOR
Sep-21	-0.50	0.00	0.25	-0.57	-0.55
Oct-21	-0.50	0.00	0.25		
Dec-21					
Jan-22					
Mar-22					
Apr-22					
Jun-22					
Jul-22					
Sep-22					
Oct-22					
Dec-22					
Jan-23					
Mar-23					
Apr-23					
Jun-23					

⁵ Please omit the "%" sign when entering the data.

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
Jul-23					
Sep-23					
Oct-23					
Quarters					
2023 Q4					
2024 Q1					
2024 Q2					
2024 Q3					
2024 Q4					
2025 Q1					
2025 Q2					
2025 Q3					
2025 Q4					
Years					
2026					
2027					
2028					
2029					
Long run ⁷					

1.5 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.



1.6 Please indicate whether you expect any changes to the two-tier system for reserve remuneration, and – if you do – please provide details in the table.⁹

No	Yes

If you answered "yes", please provide the date(s) when you expect the change(s) to occur and your numerical expectation(s) for the multiplier of the two-tier system.

Multiplier after expected change	Month	Year

1.7 In the October 2021 Monetary Policy Decisions¹⁰, the Governing Council stated that it expects the key ECB interest rates "to remain at their present or lower levels until it sees inflation reaching two per cent well ahead of the end of its projection horizon and durably for the rest of the projection horizon, and it judges that realised progress in underlying inflation is sufficiently advanced to be consistent with inflation stabilising at two per cent over the medium term. This may also imply a transitory period in which inflation is moderately above target".

> Please provide your expectation of the most likely time interval (i.e. the mode) referred to by "well ahead of the end of its projection horizon".

Length referred to by "well ahead of the end of its projection horizon" (in quarters)

Please indicate your answer with an "X". For more details, see

https://www.ecb.europa.eu/press/pr/date/2019/html/ecb.pr190912_2~a0b47cd62a.en.html

¹⁰ See https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.mp211028~85474438a4.en.html



Please provide your expectation of the most likely value of underlying inflation (i.e. the mode) referred to by "realised progress in underlying inflation is sufficiently advanced".

Value of underlying inflation referred to by "realised progress in underlying inflation is sufficiently advanced" (in y-o-y)¹¹

Please indicate whether you expect any change in the forward guidance on policy rates.¹²

No	Yes

If you answered "yes", please provide the date when you would expect this change to occur.

Month	Year

¹¹ Quarterly rate of inflation. Please omit the "%" sign when entering the data.

¹² Please indicate your answer with an "X".



2 Asset Purchases and Reinvestment

2.1 In the October 2021 Monetary Policy Decisions, the Governing Council stated that it expects net asset purchases under the asset purchase programme (APP) "to run for as long as necessary to reinforce the accommodative impact of its policy rates, and to end shortly before it starts raising the key ECB interest rates". Please provide your expectations of the most likely date (i.e. the mode) of the end of APP net purchases.

Date of the end of net purchases under the APP		
Month Year		

2.2 In the October 2021 Monetary Policy Decisions, 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 it starts 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 date (i.e. the mode) of the end of the reinvestment of the principal payments from maturing securities purchased under the APP.

Date of the end of the reinvestment of the principal payments from maturing securities purchased under the APP			
Month Year			



2.3

Please provide your expectations of the most likely (i.e. the mode) Eurosystem stock of bonds under the APP and the pandemic emergency purchase programme (PEPP) (cumulative net purchases) at the end of each of the periods listed below (in book value, EUR billions).

Year	Eurosystem APP stock of bonds	Eurosystem PEPP stock of bonds
	(cumulative net purchases)	(cumulative net purchases)
Recent value (end of 2021Q3)	3226.55	1412.29
Recent value (end of October 2021)	3249.73	1480.15
2021 Q4		
2022 Q1		
2022 Q2		
2022 Q3		
2022 Q4		
2023 Q1		
2023 Q2		
2023 Q3		
2023 Q4		
2024 Q1		
2024 Q2		
2024 Q3		
2024 Q4		
2025 Q1		
2025 Q2		
2025 Q3		
2025 Q4		
2026 Q1		
2026 H1		
2026 H2		
2031		



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

2.4 Please indicate whether you expect any changes to the forward guidance on the APP and reinvestments.¹³

No	Yes

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

			ng of cement	Timiı impleme	U
Changes in forward guidance on the APP and reinvestments (please describe below)	Probability you attach to the announcement ¹⁴	Month (Format: MMM)	Year (Format: YYYY)	Month (Format: MMM)	Year (Format: YYYY)

- 2.5 In the October 2021 Monetary Policy Decisions, the Governing Council stated that "if favourable financing conditions can be maintained with asset purchase flows that do not exhaust the envelope over the net purchase horizon of the PEPP, the envelope need not be used in full. Equally, the envelope can be recalibrated if required to maintain favourable financing conditions to help counter the negative pandemic shock to the path of inflation".
- 2.5.1 What amount of the PEPP envelope of €1,850 billion do you expect to be used by March 2022?

Amount of the PEPP envelope of €1,850 billion to be used by March 2022 (EUR billions)

¹³ Please indicate your answer with an "X".

¹⁴ Please omit the "%" sign when entering the data.



2.5.2 If you expect a further recalibration of the PEPP envelope, please provide your expectations of the most likely announcement date and size (i.e. the modes) of the additional envelope. In case you do not expect an increase in the size of the total envelope, please enter "0" for the size of the additional envelope.

Announcement date of PEPP envelope recalibration		Size of additional PEPP envelope
Month	Year	EUR billions

2.6 In the October 2021 Monetary Policy Decisions, the Governing Council stated that it will conduct net asset purchases under the PEPP "until at least the end of March 2022 and, in any case, until it judges that the coronavirus crisis phase is over". Please provide your expectations of the most likely date (i.e. the mode) of the end of PEPP net asset purchases.

Date of the end of net purchases under the PEPP		
Month Year		

2.7 In the October 2021 Monetary Policy Decisions, the Governing Council stated that it "will continue to reinvest the principal payments from maturing securities purchased under the PEPP until at least the end of 2023". Please provide your expectations of the most likely date (i.e. the mode) of the end of PEPP reinvestments of principal payments.

Date of the end of PEPP reinvestments of principal payments			
Month Year			



2.8 Please indicate whether you expect any changes to the forward guidance on the PEPP and reinvestments.¹⁵

No	Yes

If you answered "yes", please indicate the nature of the expected change and time of announcement.

Change to forward guidance on PEPP and reinvestment	Month	Year

¹⁵ Please indicate your answer with an "X".



3 Refinancing Operations

3.1 What do you expect to be the take-up under the third series of targeted longer-term refinancing operations (TLTRO III) for each operation and in total (in EUR billions)?

	Amount
2019 Q3	3.40
2019 Q4	97.72
2020 Q1	114.98
2020 Q2	1,308.43
2020 Q3	176.46
2020 Q4	50.41
2021 Q1	330.50
2021 Q2	109.83
2021 Q3	97.57
2021 Q4	
Total take-up (including all operations)	

3.2 Please provide your estimate of the total repayments (in EUR billions) of the operations under TLTRO III for the dates listed below.¹⁶

	Amount
2021 Q3	79.24
2021 Q4	
2022 Q1	
2022 Q2	
2022 Q3	
2022 Q4	
2023 Q1	
2023 Q2	
2023 Q3	
2023 Q4	
2024 Q1	

¹⁶ For the settlement date of the first voluntary early repayment per operation see the Indicative calendar for the third series of targeted longer-term refinancing operations (TLTROs-III).



	Amount
2024 Q2	
2024 Q3	
2024 Q4	
Total repaid amount (including all operations)	

3.3 What do you expect to be the take-up under the pandemic emergency longer-term refinancing operations (PELTRO) for each operation, and in total (in EUR billions)?

	Amount
May-20	0.85
Jun-20	15.61
Aug-20	5.68
Sep-20	0.79
Oct-20	1.01
Nov-20	0.75
Dec-20	1.88
2021 Q1	0.42
2021 Q2	0.52
2021 Q3	1.34
2021 Q4	
Total take-up (including all operations)	

3.4 If applicable, please state the factors behind any change to your expectations about TLTROs and PELTROs since the previous survey and explain your answer in more detail.



4 Macroeconomic Outlook

4.1 For the euro area, please provide your estimates of the most likely outcome¹⁷ (i.e. the mode) for real GDP growth,¹⁸ the unemployment rate¹⁹ and inflation.²⁰

Please make sure that the figures reported below for projected HICP and HICP inflation excluding energy and food are consistent with your estimate of the date on which the ECB will raise its policy interest rates for the first time, given your understanding of the ECB's forward guidance.

Projection					
	Real GDP Unemployment HICP inflation growth rate		HICP inflation	HICP excluding energy and food	
Quarter	(q-o-q) ¹⁹	(qtly avg) ²⁰	(y-o-y) ²¹	(y-o-y) ²¹	
2021 Q3	2.24	7.52	2.87	1.40	
2021 Q4					
2022 Q1					
2022 Q2					
2022 Q3					
2022 Q4					
2023 Q1					
2023 Q2					
2023 Q3					
2023 Q4					
2024 Q1					
2024 Q2					
2024 Q3					
2024 Q4					
2025 Q1					
2025 Q2					
2025 Q3					
2025 Q4					
2026 Q1					

¹⁷ Please omit the "%" sign when entering the data.

¹⁸ q-o-q calendar and seasonally adjusted but not annualised.

¹⁹ Seasonally adjusted.

²⁰ If a projection is available for this variable at a monthly frequency, 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.



Projection				
	Real GDP growth	Unemployment rate	HICP inflation	HICP excluding energy and food
2026 Q2				
2026 Q3				
2026 Q4				
2027 Q1				
2027 Q2				
2027 Q3				
2027 Q4				
2028 Q1				
2028 Q2				
2028 Q3				
2028 Q4				
	(у-о-у)	(rate)	(у-о-у)	(у-о-у)
Long run ²¹				

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

4.2 Please indicate your estimate of the most likely value²² (i.e. the mode) for the following indicators during the quarter of the next increase in key interest rates.

Real GDP growth (y-o-y) ²³	Unemployment rate (qtly avg) ²⁴	HICP inflation (y-o-y) ²⁵	HICP excluding energy and food (y-o-y) ²⁶

²¹ The long run should be interpreted as the horizon over which the effects of all shocks will vanish. For the purposes of this survey and, for the sake of simplicity, this can be interpreted as around ten years.

²² Please omit the "%" sign when entering the data.

²³ Year-on-year growth that you foresee for the quarter of the next increase in key interest rates.

²⁴ Seasonally adjusted quarterly average of the unemployment rate that you foresee for the quarter of the next increase in key interest rates.

²⁵ Quarterly rate of inflation (headline and core, respectively) that you foresee for the quarter of the next increase in key interest rates. 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.



4.3 Please indicate the percentage 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%	

4.4 How do you assess the balance of risks surrounding your projections for euro area growth and inflation?²⁶ 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	
2021						
2022						
2023						
2024						

²⁶ Please indicate your assessment with an "X".



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



5

Please provide any additional information or feedback.



6

Reference Data Annex²⁷

All data in percent, unless otherwise stated.

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

Market interest rates	
€STR	-0.57
3-month EURIBOR	-0.57

Macroeconomic data ²⁸	
Annual HICP inflation (October 2021)	4.10
Annual HICP inflation (quarterly average rate, 2021 Q3)	2.87
Annual HICP inflation excluding energy and food (October 2021)	2.00
Annual HICP inflation excluding energy and food (quarterly average rate, 2021 Q3)	1.40
Real GDP growth (q-o-q; calendar and seasonally adjusted), flash estimate for 2021 Q3 (according to ESA2010)	2.24
Real GDP growth (annual average rate; y-o-y) for 2020	-6.51
Unemployment rate (monthly rate; seasonally adjusted) for September 2021	7.40
Unemployment rate (quarterly average rate; seasonally adjusted) for 2021 Q3	7.52

²⁷ Cut-off date for the data provided in this annex: 23 November 2021 (unless otherwise stated). Sources: Bloomberg, ECB, Eurostat, and Thomson Reuters.

²⁸ Cut-off date for HICP inflation and HICP inflation excluding energy and food: 17 November 2021.



APP redemption amounts

Expected monthly redemption amounts for the APP over a rolling 12-month horizon (in EUR billions)²⁹

Month	APP
Oct-21	24.7
Nov-21	19.8
Dec-21	10.9
Jan-22	33.0
Feb-22	9.7
Mar-22	20.7
Apr-22	42.9
May-22	23.1
Jun-22	16.8
Jul-22	25.7
Aug-22	8.1
Sep-22	44.2
Oct-22	36.6

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 here.

TLTRO III	Maturity date	Amount (in EUR billions)
1	28/09/2022	2.10
2	21/12/2022	85.18
3	29/03/2023	96.66
4	28/06/2023	1,261.52
5	27/09/2023	173.20
6	20/12/2023	50.41

TLTRO III outstanding amounts and maturity dates

²⁹ Actual redemptions for October 2021, 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.



TLTRO III	Maturity date	Amount (in EUR billions)
7	27/03/2024	330.08
8	26/06/2024	109.57
9	25/09/2024	97.57
TOTAL		2,206.29

PELTRO

All PELTRO operations provide longer-term funding to counterparties with decreasing tenors, starting with a tenor of 16 months in the first operation and ending with a tenor of 8 months in the last operation. For further information, see here.

PELTRO outstanding amounts and settlement dates

PELTRO	Settlement date	Amount (EUR billions)
8	25/03/2021	0.42
9	24/06/2021	0.52
10	30/09/2021	1.34
TOTAL ³⁰		2.28

³⁰ Total may not add up due to rounding. For further information on open market operations, see here.



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