



Macro-financial scenario for the 2021 EU-wide banking sector stress test

This document presents the baseline and adverse macro-financial scenarios that banks are required to use in the 2021 EU-wide stress-testing exercise coordinated by the European Banking Authority (EBA). In accordance with its mandate, the EBA, in cooperation with the European Systemic Risk Board (ESRB), initiates and coordinates EU-wide stress tests. The aim of such tests is to assess the resilience of financial institutions to adverse financial and economic developments, as well as to contribute to the overall assessment of systemic risk in the EU financial system.

The adverse scenario sets out paths for key economic and financial variables in a hypothetical adverse situation triggered by the materialisation of risks to which the EU banking system is exposed. A stress test is a scenario-based analysis measuring how the banking sector would fare under hypothetical adverse economic developments. Accordingly, the scenario should not be considered a forecast of the most likely negative shocks to the financial system. In particular, it does not attempt to make any predictions about the evolution of the coronavirus (COVID-19) pandemic but leaves room for a variety of possible negative outcomes (e.g. ineffective vaccine distribution or mutation of the virus). However, the medium-term vulnerabilities arising from the COVID-19 pandemic dominate the scenario.

Scenario variables include the evolution of real GDP, inflation, unemployment rates, real estate prices, stock prices, exchange rates and interest rates. The scenario covers the three years from 2021 to 2023 in line with the EBA methodology. The baseline macro-financial scenario for EU countries is based on the December 2020 projections from the national central banks.¹ The adverse macro-financial scenario was designed by the ESRB's Task Force on Stress Testing in close collaboration with the European Central Bank (ECB).²

The scenario was approved by the ESRB General Board on 15 December 2020 and sent to the EBA on 25 January 2021.

¹ For non-EU countries, the baseline macro-financial scenario is based mainly on the projections from the October 2020 International Monetary Fund (IMF) World Economic Outlook and data from the Organisation for Economic Co-operation and Development (OECD).

² The scenario design methodology follows the calibration approach of the EBA 2020 scenario. Further details can be found in Annex 3 to "[Macro-financial scenario for the 2020 EU-wide banking sector stress test](#)", ESRB, January 2020. However, in contrast to the 2020 scenario, the 2021 scenario does not include a "cyclical feature" for GDP shocks, i.e. countries that are more advanced in the financial cycle are not subject to larger GDP shocks.



1 Main risks to the stability of the EU financial sector and calibration of the adverse scenario

The narrative of the adverse scenario for the EU-wide banking stress test draws upon a subset of the main financial stability risks to which the EU banking sector is exposed, as identified by the ESRB General Board. In the fourth quarter of 2020 the ESRB General Board stated that “...Against this background, the General Board continued to consider that the main source of systemic risk in the EU originates from the negative impact of the pandemic on economic activity that may give rise to widespread defaults in the private sector and their feedback effects on the financial system. The General Board noted that broad-based policy support measures have been essential to mitigate the impact of the crisis on households and firms as well as to contain a spillover from the non-financial private sector to the banking system. However, the longer the COVID-19 crisis lasts and the more severe its impact is on countries and economic sectors, the more pronounced the deterioration in asset quality will be. Banks, therefore, need to be proactive by identifying and provisioning for non-performing loans. Recognising losses at an early stage will be key to keeping banks’ balance sheets transparent and avoiding cliff effects, thereby contributing to the recovery by sustaining credit to the non-financial private sector...”.³

The narrative also reflects recent risk assessments by the EBA and the ECB (see Annex 2).

The COVID-19 pandemic has shaped the EU financial and macroeconomic environment since March 2020. The unprecedented shock inflicted by COVID-19 in 2020, both at the EU level and worldwide, initially led to a sudden halt in economic activity and a sharp deterioration in short-term economic prospects. This was partly a reflection of the necessary containment measures taken. To mitigate the impact on the economy, governments implemented a number of support measures such as furlough schemes, statutory loan moratoria, government-guaranteed loans and direct grants. These complemented the monetary policy and prudential actions taken by the ECB and other EU central banks and supervisory authorities. Nevertheless, the unprecedented slowdown in the economy led to a projected decline in real GDP of 6.9% for the EU in 2020 compared with the figure for the previous year (excluding the United Kingdom), as well as an increase of 0.7 percentage points in the unemployment rate. As such, the macroeconomic starting point for the 2021 adverse scenario, particularly for GDP, is significantly worse than the starting points for the most recent of the previous EBA stress-testing exercises.

³ See [Press release of the ESRB General Board meeting of 18 December 2020](#).



When assessing the severity of the scenario, it is important to take the weaker macroeconomic starting point into account.⁴ The 2021 EBA stress test, using the adverse scenario, tests the resilience of the banking sector to a further deterioration in economic fundamentals against the background of an economy already significantly weakened by the impact of the pandemic in 2020. The severity of the 2021 scenario is comparable to that of previous scenarios in terms of cumulative or peak-to-trough GDP impact. In addition, the calibration approach followed in the design of the 2021 scenario is similar to the approach taken with the 2020 adverse scenario. In the event, the EBA Board of Supervisors postponed the EBA 2020 stress test – for which that scenario was intended – to allow banks to prioritise operational continuity.⁵ The design of the 2021 scenario therefore takes into consideration several of the proposals made in a 2019 report of the European Court of Auditors on the EU-wide stress test.⁶

The convention used in the calibration of adverse scenarios for EBA stress tests is one of “no policy change”, which also applies to the 2021 adverse scenario. This means that neither monetary policy nor fiscal policy reactions are assumed under the adverse scenario over and above what is already embedded in the baseline scenario. Consequently, the economic recession assumed in the adverse scenario is more pronounced than would be the case if monetary or fiscal policymakers responded with mitigating actions or if existing COVID-19 support measures expiring during the scenario horizon were prolonged further.

2 A prolonged COVID-19 scenario in a “lower for longer” interest rate environment

In the adverse scenario, ongoing concerns about the possible evolution of the COVID-19 pandemic and its economic ramifications trigger adverse confidence effects worldwide and prolong the economic contraction. These confidence shocks could be triggered by a mutation of the virus, significant setbacks in the distribution or acceptance of vaccines, possible further lockdowns following re-emerging waves of infections or other unexpected negative developments in the containment of the pandemic. The accompanying worsening of economic prospects is reflected

⁴ In contrast to scenarios calibrated for recent EBA stress tests, which featured economic contractions following positive growth, a distinguishing feature of this scenario is that it is envisaged to take place following a substantial economic contraction. If the scenario were to materialise, the economic contraction over a four-year period, including 2020, would be the largest seen in recent EU data. On this basis, the scenario can be considered severe.

⁵ See “**EBA Statement on actions to mitigate the impact of COVID-19 on the EU banking sector**”, EBA, March 2020, and “**Macro-financial scenario for the 2020 EU-wide banking sector stress test**”, ESRB, January 2020.

⁶ See “**EU-wide stress test for banks: unparalleled amount of information on banks provided but greater coordination and focus on risks needed**”, *Special Report*, No 10, European Court of Auditors, 2019.



in a global decline in long-term risk-free rates from an already historically low level. It results in a sustained drop in GDP and an increase in unemployment.

The reassessment of market participants' expectations amid declining corporate earnings leads to an abrupt and sizeable adjustment of financial asset valuations. Market volatility spikes, asset return correlations increase, and borrowing costs surge on expectations of widespread non-financial corporate sector defaults. The shift in risk sentiment among market participants triggers significant capital outflows from emerging market economies, further exacerbating the slowdown in economic activity worldwide. A more protracted contraction in global growth has a sustained negative impact on EU exports, investment and consumption. This, alongside adverse domestic factors, puts further strain on the corporate sector, which endures a sharp contraction in profits, leading to significant downsizing of businesses and corporate insolvencies. The re-emergence of protectionist actions or intensifying geopolitical tensions further reduces economic activity in the EU and abroad.

Corporate sector indebtedness, already at a high level, paired with the sharp decline in profits, exerts pressure on corporate sector balance sheets. Increasing concerns about the sustainability of corporate debt leads to a widening in corporate credit spreads and a tightening of credit standards, limiting corporates' access to funding for their investments and operations. The impact on the different sectors is asymmetrical, with the hardest-hit sectors being those that are most severely affected by the containment measures (e.g. travel, air transport, accommodation services, food, and film and media) and those that experience sharp reductions in supply capacity (e.g. sectors engaged in labour-intensive manufacturing, such as textiles and apparel, or those depending strongly on global value chains, such as automotive).

Over the scenario horizon, GDP contracts by 3.6% both in the EU and in the euro area. The prolonged effects of COVID-19 mentioned above and the economic fallout of the pandemic trigger confidence shocks. These in turn lead to a continued decline in GDP following an already unprecedented contraction in 2020 (see Chart 1, left-hand panel).⁷ The paths of GDP across the EU mainly reflect the heterogeneous impact of the pandemic and the subsequent recovery on the different economies as assumed in the baseline scenario.^{8,9} In the rest of the world, real GDP falls cumulatively by 3.7% in the United States and by 5.0% in Latin America. Emerging Asia experiences only a slow recovery from the negative growth of -1.8% in 2020 to an annual average growth rate of 1.3% over the scenario horizon (see Chart 1, right-hand panel).

⁷ Under the adverse scenario, GDP is projected to be 12.9% lower than the baseline level, making this the most severe scenario among any of the past EBA exercises or other published stress-testing exercises.

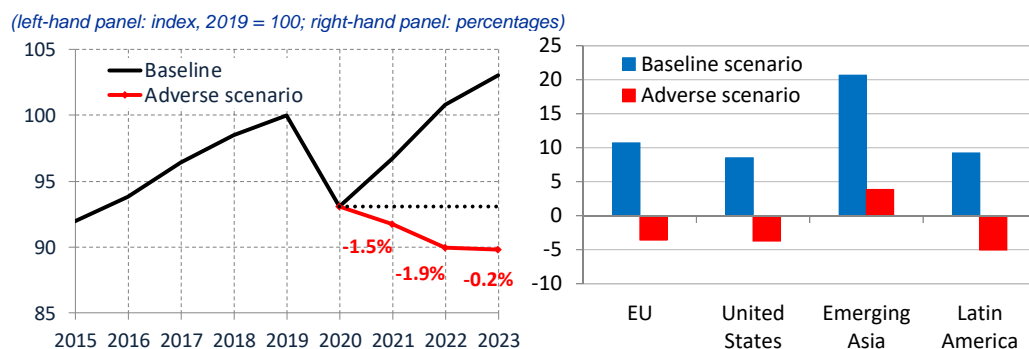
⁸ The narrative reflects the EBA requirement for cumulative GDP growth to be negative over the scenario horizon.

⁹ The baseline depends on factors such as the sectoral composition of the economies and their initial position as regards public and private sector debt.



Chart 1

Path of the level of real GDP in the EU (2019 level = 100) (left-hand panel); three-year cumulative real GDP growth for the EU, United States, emerging Asia and Latin America (right-hand panel)



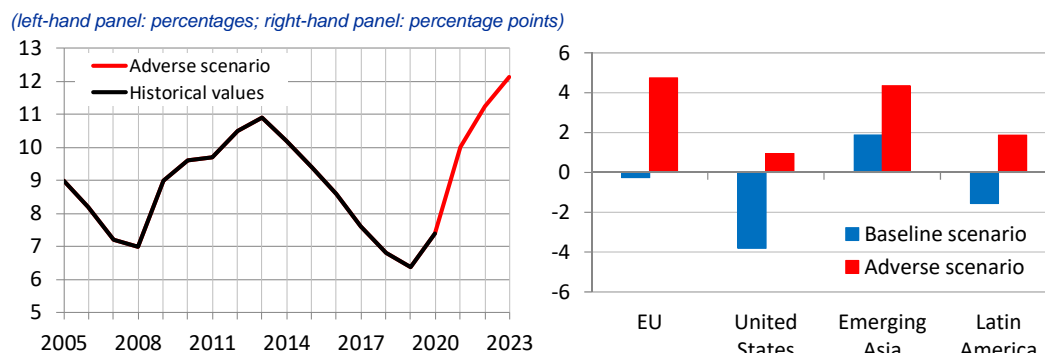
Sources: ECB, October 2020 IMF World Economic Outlook and ECB calculations.

As a consequence of material business downsizing and a large number of corporate defaults, unemployment rises sharply across all EU economies.

The economic slowdown leads to a substantial cumulative rise of 4.7 percentage points in the EU unemployment rate over the scenario horizon (see Chart 2, left-hand panel) and, paired with high macroeconomic uncertainty, has an adverse impact on aggregate demand, consumer confidence and household debt servicing capacity. A protracted and correlated decline in asset prices further erodes household sector financial wealth and weighs on consumption growth. In the United States, the unemployment rate increases by 0.9 percentage points, in Latin America by 1.9 percentage points and in emerging Asia by 4.3 percentage points (see Chart 2, right-hand panel).

Chart 2

Path of the unemployment rate in the EU (left-hand panel); three-year cumulative increase in the unemployment rate in the EU, the United States, emerging Asia and Latin America (right-hand panel)



Sources: ECB, October 2020 IMF World Economic Outlook and ECB calculations.

A slowdown in residential property market activity leads to significant price corrections.

Lower income and higher unemployment make it challenging for homeowners to service their mortgages, especially in an environment where policy support is absent. This results in significantly



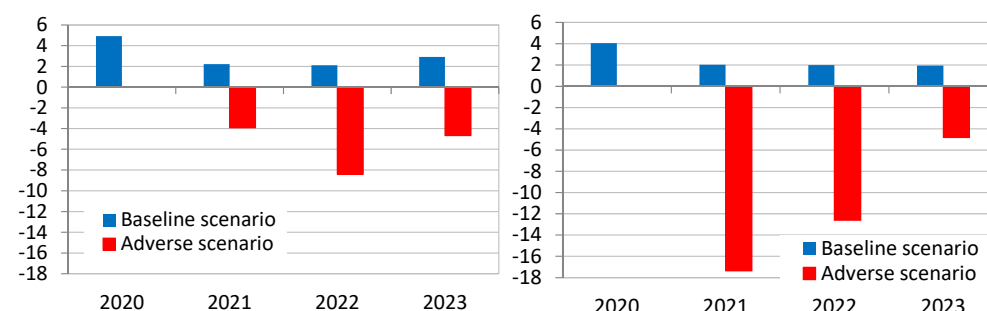
higher mortgage defaults, which exerts downward pressure on residential real estate prices. Tighter financial conditions, depressed economic activity and a negative economic outlook, marked by an inversion of the yield curve, amplify the impact of the initial shock. Over the scenario horizon, residential real estate prices decline by 16.1% at the EU level (see Chart 3, left-hand panel).

Structural changes in commercial real estate demand, exacerbated by COVID-19, trigger a sharp repricing of commercial real estate. The commercial real estate sector faces particularly adverse conditions. An unparalleled decline in demand for property from certain industries as a result of significant changes in spending habits and business organisation, marked by an increase in remote working and a shift to e-commerce, leads to an abrupt and sustained drop in commercial real estate market activity and strong price corrections over the scenario horizon. The commercial real estate market experiences substantial repricing, which leads to a cumulative decline of 31.2% at the EU level (see Chart 3, right-hand panel).

Chart 3

Residential real estate price growth in the EU (left-hand panel); commercial real estate price growth in the EU (right-hand panel)

(percentages)



Sources: ECB and ECB calculations.

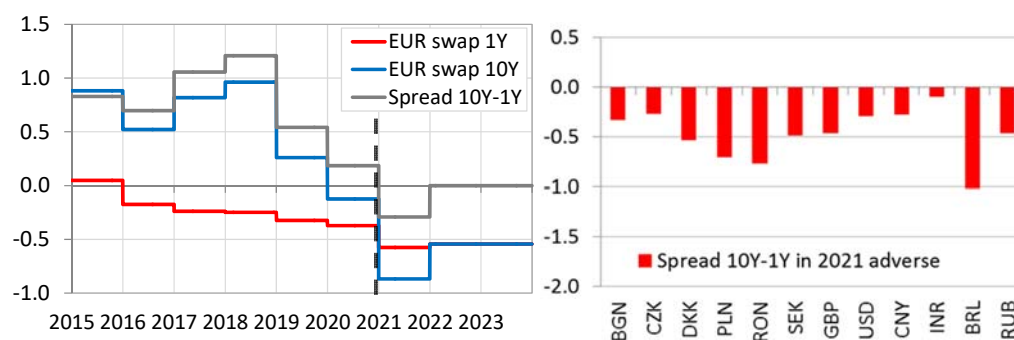
The worsening of economic prospects is reflected in a global decline in long-term risk-free interest rates from an already historically low level, with nominal short and long-term risk-free rates remaining below zero in the EU over the entire scenario horizon. In the euro area, the yield curve inverts in 2021, with one-year euro swap rates remaining at -0.6%, while ten-year euro swap rates drop to -0.9% (see Chart 4, left-hand panel). In 2022 and 2023, the euro area yield curve flattens, with both short and long-term rates converging at -0.5%. Similarly, in the rest of the world the negative outlook for the real economy in an environment of low interest rates leads to either an inversion or a flattening of yield curves (see Chart 4, right-hand panel).



Chart 4

One-year and ten-year euro swap rates (left-hand panel); spread between ten-year and one-year swap rates of other currencies in 2021 (right-hand panel)

(left-hand panel: percentages and percentage points; right-hand panel percentage points)



Sources: ECB and ECB calculations.

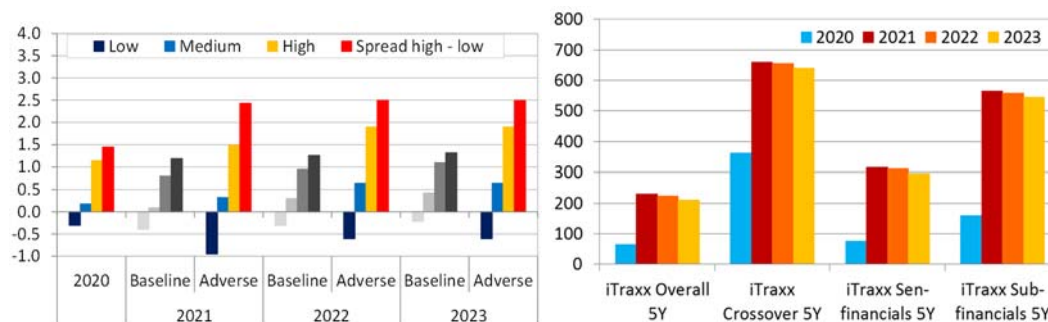
The slowdown in the EU economy and global economy weakens countries' fiscal positions.

Despite the low level of risk-free interest rates, a resurfacing of concerns about the sustainability of public debt amid weakening domestic demand leads to significant increases in credit risk premia on sovereign bonds, especially in high-spread economies. In EU countries with high debt sustainability concerns, sovereign long-term interest rates increase by 75 basis points on average in 2023 compared with the starting point (see Chart 5, left-hand panel). By contrast, in countries where debt sustainability concerns are low, government rates decline by 30 basis points on average in 2023 compared with the starting point. As a result, the dispersion of long-term interest rates increases to some extent in the scenario.

Chart 5

Ten-year government bond yields for “low”, “medium” and “high” sovereign risk EU countries, spread between “high” and “low” sovereign risk countries (left-hand panel); iTraxx indices (right-hand panel)

(left-hand panel: percentages and percentage points; right-hand panel: basis points)



Sources: ECB and ECB calculations.

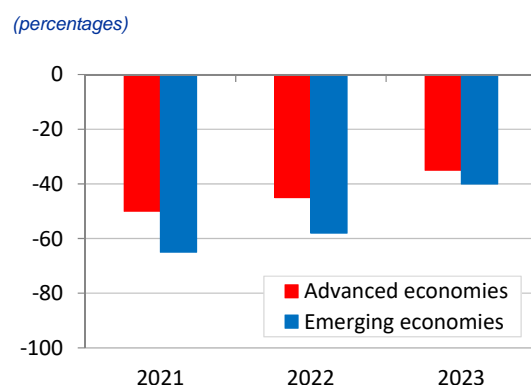
Note: EU countries were divided into three buckets according to the level of their sovereign risk; see the Annex to the **Macro-financial scenario for the EU-wide 2020 banking sector stress test** for a description of how the classification was performed.



In a similar vein, corporate profitability is severely undermined by the downturn, which leads to debt sustainability concerns and to widespread insolvencies of non-financial corporations. As a consequence, corporate credit spreads increase by between 166 and 404 basis points in 2021 compared with 2020 across the credit risk spectrum (see Chart 5, right-hand panel). This increase in non-financial corporate financing costs is reflected in a rise in the user cost of capital, which in turn has a negative impact on investment. Corporate credit spreads of financial institutions also increase, although, given the nature of the COVID-19 shock, to a lesser extent than those of non-financial corporations.

Despite the low level of interest rates, the severity of the contraction in both global and EU economic activity under the adverse scenario leads to a significant repricing of equity. In 2021, stock prices fall abruptly by 50% in advanced economies and by 65% in emerging economies (see Chart 6). While they recover to some extent during 2022 and 2023, the recovery remains limited over the scenario horizon, so that in 2023 stock prices are still 35% below their level at the starting point.

Chart 6
Path of equity prices in advanced and emerging economies under the adverse scenario



Sources: ECB and ECB calculations.

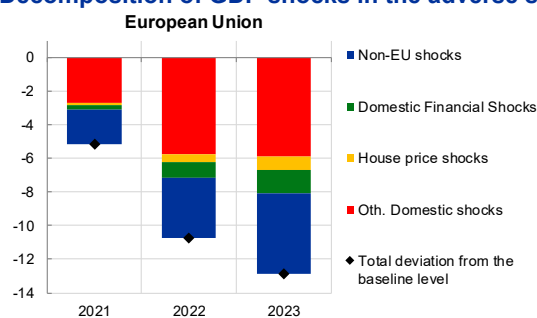
3 Scenario analysis

Domestic shocks are the main drivers of the GDP decline under the adverse scenario relative to the baseline. Given the recovery projected over the 2021-23 horizon for the baseline (post-COVID-19, after an unprecedented decline in 2020), the adverse scenario entails a large decrease in GDP of 12.9% from the baseline level. This decrease under the adverse scenario is mainly driven by domestic shocks (about two-thirds of the total impact) triggering a strong decline (from the baseline level) in business investment, and, to a lesser extent, private consumption, in line with the narrative. Non-EU shocks still account for a sizeable share of the drop in GDP, albeit a smaller one than in previous EBA exercises, contributing 4.8 percentage points to the total



decrease in GDP from the baseline. This reflects a heightening of global trade disruptions and a drop in foreign demand of about 13% from the baseline level in 2023 (see Chart 7).

Chart 7
Decomposition of GDP shocks in the adverse scenario



Sources: ECB and ECB calculations.

Gauging the severity of the scenario – GDP. While the scenario entails a large deviation from the baseline level, the severity of this scenario (measured in terms of deviation from the starting point) has been reduced with respect to the previous EBA exercise, with median cumulative growth standing at -3.5% (i.e. +1.3 percentage points compared with the EBA 2020 figure (see Chart 9)), and taking into account the severity metric (see Chart 9).^{10,11} In addition, while a further decline in real GDP following the unprecedented decline in 2020 reflects a severe scenario, Chart 8 shows that, despite being a tail scenario, the scenario designed is still plausible given the underlying narrative. Indeed, given a level of uncertainty similar to that observed during the peak of the pandemic and which falls gradually over the simulation horizon, the 95% posterior credible densities of the range of a standard Vector Auto Regression (VAR) model for the euro area include this scenario at the euro area aggregate level.¹²

¹⁰ As stated in Section 2, given its severity measured in terms of deviation from the baseline levels, the current scenario is the most severe among the EBA exercises carried out to date. However, the specificities of the stress test exercises, reflected in a number of EBA requirements, make the deviation from the starting point the most appropriate measure of the level of severity. The severity metrics introduced since the EBA 2020 exercise are computed accordingly.

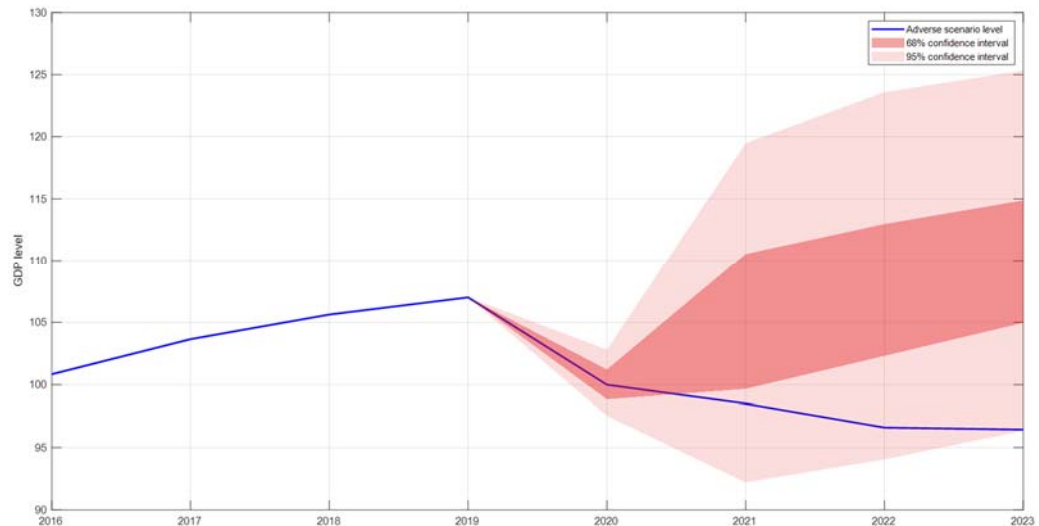
¹¹ The severity metric for real GDP represents the ratio between the maximum decline in real GDP under the adverse scenario and the maximum decline in real GDP over three consecutive years observed in the historical data. For further details, see Annex 3 to “**Macro-financial scenario for the 2020 EU-wide banking sector stress test**”, ESRB, January 2020.

¹² The euro area aggregate is used instead of the EU27 aggregate as only data for the euro area aggregate are available in full.



Chart 8

The adverse path and a model-based predictive distribution



Source: ECB calculations.

Notes: Forecasts of GDP conditional on short and long-term interest rate futures as of 18 November 2020 to take into account the projected recovery in the baseline over the 2021-23 horizon. The model is based on a six-variable VAR model for the euro area (the variables being GDP, Harmonised Index of Consumer Prices (HICP), short-term rates, term spread, unemployment rate and foreign demand) following Lenza, M. and Primiceri, G.E., "How to Estimate a VAR after March 2020", Working Paper Series, No 2461, ECB, Frankfurt am Main, 26 August 2020.

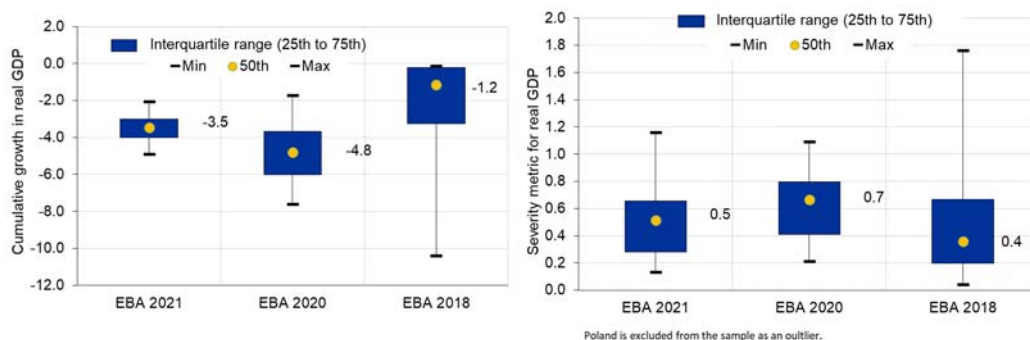
Given the unprecedented decrease in expected GDP for 2020, the maximum further decline in the GDP level among EU countries of about 4.9% is relatively mild compared with previous EBA exercises. In terms of cumulative GDP growth impact, the cross-country dispersion has been significantly reduced compared with previous EBA exercises (see Chart 9). For instance, the cumulative GDP growth rates over the simulation horizon for all countries range between -4.9% and -2.1% (versus [-10.4%, -0.2%] and [-7.6%, -1.7%] in the 2018 and 2020 EBA stress test scenarios respectively). Using the severity metric introduced in the previous EBA stress-testing exercise,¹³ Chart 9 confirms the decrease in the level of severity compared with the last exercise, while the level of dispersion is broadly similar.

¹³ See footnote 11.



Chart 9

Cumulative growth in real GDP (left-hand panel) and the severity metric (right-hand panel) for the 2018, 2020 and 2021 EBA exercises.¹⁴



Sources: ECB and ECB calculations.

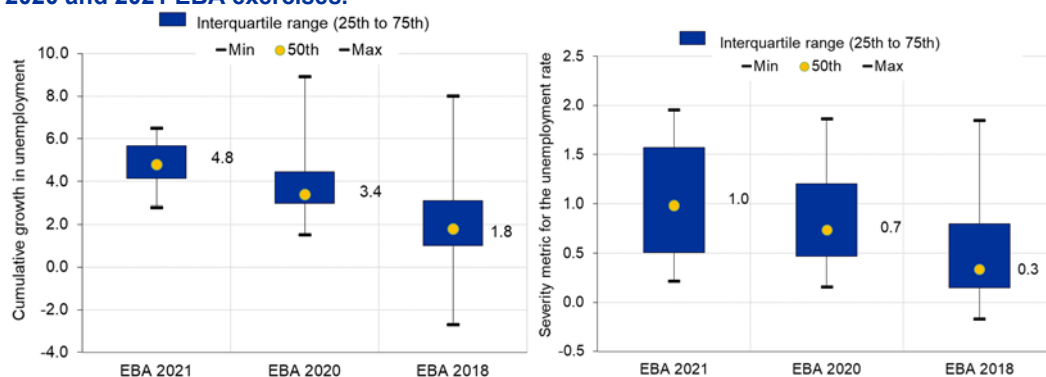
The 2021 adverse scenario includes a milder decline in GDP but a stronger increase in the unemployment rate than the 2020 scenario. In line with the underlying narrative, in particular the downsizing of businesses and increased insolvency risk of non-financial corporations, the scenario assumes a relatively strong increase in the unemployment rate over the simulation horizon. The fact that the unemployment rate reacts relatively strongly also reflects a materialisation of upside risks to unemployment (not included in the baseline) due to current vulnerabilities in the labour market, which has been supported mainly by the effective policies that have been implemented, notably the job retention schemes. The assumption of no policy reaction prevents a prolongation of these measures, which would otherwise mitigate some of the simulated increases in unemployment. The rise in the unemployment rate is estimated to range between 2.6 percentage points and 6.5 percentage points, with a median of 4.8 percentage points. This is because, while the severity of the scenario with respect to the unemployment rate has significantly increased compared with previous exercises, the cross-country dispersion has been kept broadly similar if some outliers of the EBA 2020 scenario are excluded. A similar picture can be seen when assessing severity using the metric developed in 2020 (see Chart 10).

¹⁴ Note that the UK numbers are included in the boxplots for 2020 and 2018, while they are excluded in the 2021 sample.



Chart 10

Cumulative growth in unemployment (left-hand panel) and the severity metric for the 2018, 2020 and 2021 EBA exercises.

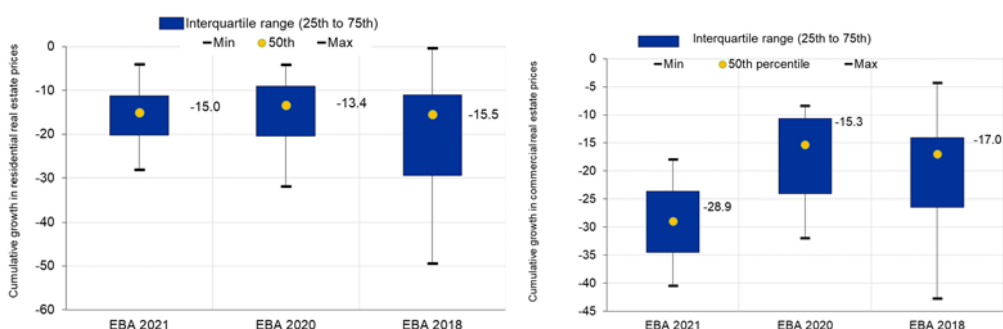


Sources: ECB and ECB calculations.

Commercial real estate is more severely affected than residential real estate. In the light of a substantial increase in remote working, as well as expected downsizing and defaults of non-financial corporates in the scenario, the COVID-19 pandemic has a considerably stronger impact on commercial real estate markets than on residential real estate markets. Commercial real estate prices drop by a median of 28.9%, which is significantly more pronounced than in previous exercises (Chart 11). The cross-country heterogeneity of this variable has been reduced with respect to previous exercises. The median fall in residential real estate prices is 15.0%, which is broadly comparable to previous EBA exercises. The cross-country heterogeneity of this variable has also been reduced.

Chart 11

Cumulative growth in residential (left-hand panel) and commercial (right-hand panel) property prices



Sources: ECB and ECB calculations.



1 Annex: Detailed tables¹⁵

1.1 Real GDP

		Historical growth (%)	Baseline growth (%)				Adverse growth (%)			Cumulative growth from the starting point(%)	Minimum growth from the starting point growth (%)	Level deviation 2023 (%)
		2020	2021	2022	2023	2021	2022	2023				
Belgium	BE	-6.7	3.5	3.1	2.3	-1.5	-1.6	-0.1	-3.2	-3.2	-11.3	
Bulgaria	BG	-5.5	4.0	3.8	3.3	-3.0	-0.7	0.0	-3.7	-3.7	-13.6	
Czech Republic	CZ	-7.2	1.7	4.2	2.7	-3.3	-0.2	0.0	-3.5	-3.5	-11.3	
Denmark	DK	-3.6	3.6	2.3	2.0	-1.5	-2.9	0.2	-4.1	-4.3	-11.4	
Germany	DE	-5.5	3.0	4.5	1.8	-2.7	-0.5	-0.7	-3.9	-3.9	-12.2	
Estonia	EE	-2.5	2.9	4.2	2.6	-1.4	-2.3	0.6	-3.1	-3.7	-11.9	
Ireland	IE	0.5	3.1	3.9	3.8	-0.8	-2.8	0.6	-3.0	-3.6	-12.8	
Greece	GR	-10.0	4.2	4.8	3.7	-1.8	-2.5	0.7	-3.6	-4.3	-14.8	
Spain	ES	-11.1	6.8	4.2	1.7	-0.9	-2.8	0.5	-3.2	-3.7	-14.5	
France	FR	-9.3	4.8	5.0	2.3	-0.9	-2.7	0.2	-3.4	-3.6	-14.2	
Croatia	HR	-8.0	5.2	4.3	2.5	-1.5	-2.6	-0.9	-4.9	-4.9	-15.5	
Italy	IT	-9.0	3.5	3.8	2.3	-0.7	-2.7	-0.5	-3.9	-3.9	-12.6	
Cyprus	CY	-6.2	4.1	3.4	2.7	-0.8	-0.9	-0.4	-2.1	-2.1	-11.5	
Latvia	LV	-4.7	2.8	5.3	3.7	-1.1	-1.6	-0.2	-3.0	-3.0	-13.5	
Lithuania	LT	-2.0	1.9	4.0	2.7	-1.3	-2.4	-0.9	-4.5	-4.5	-12.2	
Luxembourg	LU	-5.2	4.7	5.0	3.8	-1.0	-1.5	0.3	-2.1	-2.4	-14.2	
Hungary	HU	-5.1	6.8	4.5	3.6	-1.5	-2.3	0.6	-3.2	-3.8	-16.3	
Malta	MT	-7.5	5.9	4.4	4.2	-1.8	-2.1	0.2	-3.7	-3.9	-16.5	
Netherlands	NL	-4.3	2.9	2.9	1.9	-1.3	-2.3	-0.6	-4.3	-4.3	-11.3	
Austria	AT	-7.6	3.0	4.0	2.2	-1.3	-1.7	0.1	-2.9	-2.9	-11.3	
Poland	PL	-3.5	3.1	5.7	4.2	-0.7	-1.8	0.4	-2.1	-2.5	-13.8	
Portugal	PT	-8.1	3.9	4.5	2.4	-1.7	-3.4	0.6	-4.5	-5.0	-14.1	
Romania	RO	-5.3	3.4	3.9	3.4	-1.2	-0.4	-0.6	-2.2	-2.2	-12.0	
Slovenia	SI	-7.6	3.1	4.5	3.1	-1.3	-2.4	-0.1	-3.7	-3.7	-13.4	
Slovakia	SK	-5.7	5.6	4.8	3.7	-1.1	-2.8	-0.5	-4.4	-4.4	-16.8	
Finland	FI	-3.8	2.2	2.5	1.5	-1.2	-1.4	-0.2	-2.8	-2.8	-8.6	
Sweden	SE	-3.6	3.7	3.7	2.2	-2.0	-2.8	0.3	-4.4	-4.7	-13.0	
Euro area	EA	-7.3	3.9	4.2	2.1	-1.5	-1.9	-0.2	-3.6	-3.6	-12.9	
European Union	EU	-6.9	3.9	4.2	2.3	-1.5	-1.9	-0.2	-3.6	-3.6	-12.9	
United Kingdom	UK	-9.8	5.9	3.2	1.9	-3.6	-0.4	-0.1	-4.1	-4.1	-13.9	
Norway	NO	-2.8	3.6	3.0	2.3	-4.3	0.3	0.8	-3.3	-4.3	-11.3	
United States	US	-4.3	3.1	2.9	2.3	-3.4	-0.5	0.2	-3.7	-3.9	-11.3	
Japan	JP	-5.3	2.3	1.7	1.2	-4.0	-3.9	0.2	-7.6	-7.7	-12.2	
Canada	CA	-7.1	5.2	3.4	2.4	-4.9	2.1	1.0	-1.9	-4.9	-12.0	
Switzerland	CH	-5.3	3.6	2.1	1.4	-3.2	-1.6	-0.1	-4.9	-4.9	-11.3	
Australia & New Zealand	AU	-4.4	3.1	2.8	2.6	-3.9	-0.9	0.8	-4.0	-4.8	-11.7	
Turkey	TR	-5.0	5.0	4.0	3.5	-5.7	0.0	2.3	-3.6	-5.8	-14.7	
Russia	RU	-4.1	2.8	2.3	2.1	-3.5	-3.1	-2.2	-8.6	-8.6	-14.9	
Emerging Asia	AS	-1.8	7.6	6.0	5.9	-0.5	0.7	3.6	3.9	-0.5	-13.9	
China	CN	1.9	8.2	5.8	5.7	0.1	2.2	2.5	4.8	0.1	-13.5	
India	IN	-10.3	8.8	8.0	7.6	0.1	3.5	3.7	7.4	0.1	-15.1	
Hong Kong	HK	-7.5	3.7	3.4	2.8	-3.0	0.1	0.5	-2.4	-3.0	-11.4	
Latin America	LA	-8.1	3.6	2.7	2.7	-4.7	-0.3	0.0	-5.0	-5.0	-13.1	
Brazil	BR	-5.8	2.8	2.3	2.2	-5.2	0.2	0.5	-4.6	-5.2	-11.2	
Mexico	MX	-9.0	3.5	2.3	2.2	-3.8	-0.6	-0.1	-4.6	-4.6	-11.7	
Chile	CL	-6.0	4.5	3.2	2.9	-3.2	-1.7	0.3	-4.6	-4.8	-14.0	
Colombia	CO	-8.2	4.0	3.6	3.8	-3.6	-1.3	1.2	-3.7	-4.8	-14.0	
Peru	PE	-13.9	7.3	5.0	4.9	-2.0	-1.5	-0.2	-3.5	-3.5	-18.3	
Rest of the world	WR	-4.4	7.1	6.1	6.1	0.1	1.1	3.1	4.4	0.1	-13.4	

Notes: December 2020 projections by the national central banks are used as baseline forecasts for EU countries. For non-EU countries the baseline projections are based on projections from the October 2020 IMF World Economic Outlook.

¹⁵ In all tables, the number reported for each year corresponds to the annual average. "Hong Kong" refers in each instance to Hong Kong SAR.



1.2 Unemployment rate

		Historical value (%)	Baseline rate (%)			Adverse rate (%)			Cumulative growth from the starting point (p.p.)	Maximum growth from the starting point growth (p.p.)	Level deviation 2023 (p.p.)
		2020	2021	2022	2023	2021	2022	2023			
Belgium	BE	5.6	7.4	7.0	6.6	7.9	8.7	10.0	4.4	4.4	3.4
Bulgaria	BG	6.1	5.8	5.6	5.4	7.5	8.6	9.2	3.1	3.1	3.9
Czech Republic	CZ	2.6	4.5	4.4	4.0	5.6	6.7	7.7	5.0	5.0	3.6
Denmark	DK	4.9	4.3	3.9	3.6	6.3	9.9	11.4	6.5	6.5	7.7
Germany	DE	4.2	4.7	3.8	3.5	6.0	7.0	8.4	4.2	4.2	4.9
Estonia	EE	7.3	9.9	8.0	6.9	11.5	12.4	13.7	6.4	6.4	6.8
Ireland	IE	6.2	9.0	7.9	6.8	9.3	9.8	10.5	4.3	4.3	3.7
Greece	GR	16.7	16.6	15.6	13.9	18.9	22.1	22.2	5.6	5.6	8.3
Spain	ES	15.8	18.3	15.6	14.3	20.2	21.6	21.9	6.1	6.1	7.6
France	FR	8.5	10.7	9.5	8.9	11.7	12.3	12.7	4.1	4.1	3.7
Croatia	HR	7.5	7.0	6.6	6.2	8.9	11.7	14.0	6.5	6.5	7.9
Italy	IT	9.2	10.4	10.0	9.5	11.3	13.1	14.6	5.4	5.4	5.1
Cyprus	CY	7.6	7.6	6.8	6.3	8.1	10.0	12.8	5.2	5.2	6.5
Latvia	LV	8.2	8.5	7.5	7.2	9.7	11.0	12.9	4.8	4.8	5.8
Lithuania	LT	8.7	9.3	7.5	6.3	9.8	10.2	11.6	3.0	3.0	5.3
Luxembourg	LU	6.5	7.0	6.7	6.3	7.4	9.2	11.3	4.8	4.8	5.0
Hungary	HU	4.4	4.8	4.1	3.8	5.8	7.4	7.2	2.8	3.0	3.4
Malta	MT	4.1	3.9	3.9	3.9	5.6	7.4	7.1	3.0	3.3	3.2
Netherlands	NL	4.0	6.5	6.0	4.6	7.0	9.5	10.0	6.0	6.0	5.4
Austria	AT	5.3	5.6	5.1	4.8	7.4	8.3	9.0	3.6	3.6	4.2
Poland	PL	3.7	5.4	4.4	3.7	6.9	9.1	10.1	6.4	6.4	6.4
Portugal	PT	7.2	8.8	8.1	7.4	10.0	10.9	11.3	4.2	4.2	3.9
Romania	RO	5.4	6.6	6.4	6.4	8.1	8.9	9.8	4.4	4.4	3.4
Slovenia	SI	5.4	5.6	4.8	4.3	7.0	9.0	10.7	5.3	5.3	6.4
Slovakia	SK	6.8	7.9	7.3	6.5	8.6	10.6	12.5	5.7	5.7	6.0
Finland	FI	7.8	8.3	7.7	7.4	10.1	10.6	11.3	3.4	3.4	3.9
Sweden	SE	8.6	9.2	8.4	7.6	13.3	14.0	14.3	5.6	5.6	6.7
Euro area	EA	8.0	9.3	8.2	7.5	10.4	11.5	12.4	4.5	4.5	4.9
European Union	EU	7.4	8.7	7.7	7.1	10.0	11.2	12.1	4.7	4.7	5.0
United Kingdom	UK	5.4	7.4	6.1	5.2	8.0	8.6	8.9	3.5	3.5	3.7
Norway	NO	4.5	4.3	4.0	3.9	5.4	6.3	6.6	2.1	2.1	2.7
United States	US	8.9	7.3	5.7	5.1	9.5	9.7	9.8	0.9	0.9	4.8
Japan	JP	3.3	2.8	2.4	2.3	3.4	4.6	4.5	1.2	1.3	2.2
Canada	CA	9.7	7.9	6.9	6.6	10.0	10.2	10.6	0.9	0.9	4.0
Switzerland	CH	3.2	3.6	3.4	3.2	4.1	5.1	5.6	2.3	2.3	2.4
Australia & New Zealand	AU	6.8	7.6	6.5	5.9	8.7	9.1	9.2	2.4	2.4	3.3
Turkey	TR	14.6	12.4	10.7	9.0	16.1	16.3	16.6	2.0	2.0	7.7
Russia	RU	5.6	5.2	4.7	4.7	5.5	5.9	6.7	1.1	1.1	2.0
Emerging Asia	AS	3.2	3.1	3.1	5.0	4.3	5.1	7.6	4.3	4.3	2.6
China	CN	3.8	3.6	3.6	3.5	4.6	4.9	5.4	1.6	1.6	1.9
India	IN	17.3	15.8	14.6	13.5	17.4	17.3	17.3	0.0	0.1	3.8
Hong Kong	HK	5.2	4.4	4.0	3.9	6.2	8.1	9.1	3.9	3.9	5.2
Latin America	LA	10.8	10.8	9.8	9.2	11.4	12.5	12.6	1.9	1.9	3.4
Brazil	BR	13.4	14.1	13.3	12.5	16.5	16.2	15.8	2.5	3.1	3.4
Mexico	MX	5.2	5.8	4.7	4.4	7.8	7.4	7.7	2.5	2.5	3.3
Chile	CL	11.4	10.2	9.1	8.2	12.4	12.6	12.4	0.9	1.2	4.2
Colombia	CO	17.3	15.8	14.6	13.5	17.4	18.6	18.8	1.5	1.5	5.4
Peru	PE	12.5	8.8	6.8	6.5	10.4	11.1	11.8	-0.7	-0.7	5.3
Rest of the world	WR	5.3	5.3	5.3	5.3	7.7	9.0	9.7	4.4	4.4	4.4

Notes: December 2020 projections by the national central banks are used as baseline forecasts for EU countries. For non-EU countries the baseline projections are based on projections from the October 2020 IMF World Economic Outlook. “p.p.” stands for “percentage points”.



1.3 HICP and other consumption price indices

		Historical growth (%)	Baseline growth (%)			Adverse growth (%)			Cumulative growth from the starting point(%)	Minimum growth from the starting point growth (%)	Level deviation 2023 (%)
		2020	2021	2022	2023	2021	2022	2023			
Belgium	BE	0.4	1.7	1.9	1.9	1.4	1.4	1.2	4.1	1.4	-1.4
Bulgaria	BG	1.2	1.7	1.6	1.5	1.4	1.0	1.1	3.6	1.4	-1.1
Czech Republic	CZ	3.2	2.3	2.0	1.9	2.1	1.3	0.8	4.3	2.1	-2.0
Denmark	DK	0.3	0.9	1.2	1.4	0.7	0.7	0.6	2.0	0.7	-1.5
Germany	DE	0.4	1.8	1.3	1.6	1.7	0.9	0.6	3.3	1.7	-1.4
Estonia	EE	-0.6	1.3	2.0	2.0	1.1	1.5	1.3	3.9	1.1	-1.4
Ireland	IE	-0.6	-0.7	0.3	0.9	-0.8	-0.1	0.3	-0.6	-0.9	-1.1
Greece	GR	-1.3	-0.1	0.6	0.9	-0.3	0.1	-0.1	-0.3	-0.3	-1.6
Spain	ES	-0.3	0.6	1.2	1.3	0.4	0.7	0.5	1.6	0.4	-1.4
France	FR	0.5	0.5	0.8	1.0	0.2	0.4	0.2	0.8	0.2	-1.4
Croatia	HR	0.2	1.1	1.5	1.5	1.0	0.8	0.2	2.0	1.0	-2.1
Italy	IT	-0.2	0.5	0.9	1.2	0.3	0.4	0.7	1.4	0.3	-1.2
Cyprus	CY	-1.2	0.5	0.9	1.4	0.1	0.4	0.3	0.8	0.1	-1.9
Latvia	LV	0.1	1.1	1.6	1.7	0.6	0.9	0.8	2.3	0.6	-2.0
Lithuania	LT	1.1	1.1	1.8	1.8	0.8	1.3	0.7	2.9	0.8	-1.9
Luxembourg	LU	0.0	1.9	1.7	1.7	1.7	1.5	1.6	4.8	1.7	-0.5
Hungary	HU	3.6	3.6	3.0	2.5	3.1	2.2	1.5	7.0	3.1	-2.2
Malta	MT	0.8	0.9	1.4	1.6	0.8	0.7	0.5	2.0	0.8	-1.9
Netherlands	NL	1.2	1.5	1.5	1.6	1.3	1.3	0.7	3.3	1.3	-1.4
Austria	AT	1.3	1.4	1.7	1.7	1.1	1.2	0.9	3.2	1.1	-1.6
Poland	PL	3.4	2.6	2.7	3.4	2.1	2.2	2.7	7.1	2.1	-1.7
Portugal	PT	-0.2	0.3	0.9	1.1	0.0	0.3	0.6	0.9	0.0	-1.4
Romania	RO	2.7	2.3	2.4	2.4	1.6	1.8	1.5	5.0	1.6	-2.0
Slovenia	SI	-0.2	0.9	1.3	1.6	0.5	0.8	0.8	2.1	0.5	-1.7
Slovakia	SK	2.0	0.6	1.8	1.9	0.4	1.2	1.1	2.7	0.4	-1.6
Finland	FI	0.4	0.9	1.2	1.5	0.6	0.4	0.2	1.2	0.6	-2.3
Sweden	SE	0.5	1.2	1.3	1.7	0.7	0.6	1.0	2.3	0.7	-1.8
Euro area	EA	0.2	1.0	1.1	1.4	0.8	0.7	0.5	2.1	0.8	-1.4
European Union	EU	0.5	1.1	1.3	1.5	0.9	0.8	0.7	2.4	0.9	-1.5
United Kingdom	UK	0.3	1.5	1.8	2.0	1.0	0.8	1.5	3.3	1.0	-1.9
Norway	NO	2.0	1.8	1.8	2.0	0.8	0.0	0.8	1.6	0.7	-3.9
United States	US	2.1	2.2	2.1	2.1	1.7	1.7	1.6	5.0	1.7	-1.4
Japan	JP	-0.6	0.7	1.1	0.6	-1.3	-3.4	-3.4	-7.9	-7.9	-10.0
Canada	CA	0.3	1.4	1.7	1.9	0.4	-0.5	-0.2	-0.2	-0.2	-5.1
Switzerland	CH	0.9	0.9	0.9	0.9	-0.7	-0.8	0.0	-1.5	-1.5	-4.2
Australia & New Zealand	AU	0.7	0.9	1.7	1.8	-1.8	-2.2	-0.9	-4.9	-4.9	-9.0
Turkey	TR	12.0	12.0	11.0	11.0	9.4	8.5	8.1	28.3	9.4	-7.0
Russia	RU	3.8	3.3	3.7	4.0	1.7	1.3	3.2	6.3	1.7	-4.6
Emerging Asia	AS	1.8	2.7	2.8	2.9	2.2	1.6	2.0	5.9	2.2	-2.6
China	CN	2.1	2.1	2.1	2.5	1.4	0.3	2.2	4.0	1.4	-2.6
India	IN	3.4	4.0	3.7	3.9	2.3	2.0	3.9	8.4	2.3	-3.3
Hong Kong	HK	0.3	2.4	2.5	2.4	0.4	0.8	2.1	3.3	0.4	-3.9
Latin America	LA	5.6	6.8	5.9	5.0	5.4	3.1	2.8	11.6	5.4	-6.0
Brazil	BR	3.7	3.7	3.7	3.3	1.5	-0.7	-1.3	-0.5	-0.5	-10.3
Mexico	MX	3.7	2.9	3.0	3.0	1.0	-0.8	-0.6	-0.4	-0.4	-8.7
Chile	CL	2.6	2.6	2.6	3.0	1.9	0.3	-2.4	-0.3	-0.3	-8.0
Colombia	CO	1.4	2.4	2.6	2.7	1.2	0.1	0.4	1.7	1.2	-5.8
Peru	PE	1.8	2.0	2.0	2.0	0.8	-0.5	-0.4	-0.1	-0.1	-5.8
Rest of the world	WR	2.8	3.0	3.4	3.5	2.8	3.1	3.1	9.2	2.8	-0.8

Notes: December 2020 projections by the national central banks are used as baseline forecasts for EU countries. For non-EU countries the baseline projections are based on projections from the October 2020 IMF World Economic Outlook.



1.4 Residential real estate prices

		Historical growth (%)	Baseline growth (%)			Adverse growth (%)			Cumulative growth from the starting point(%)	Minimum growth from the starting point growth (%)	Level deviation 2023 (%)
		2020	2021	2022	2023	2021	2022	2023			
Belgium	BE	4.6	3.5	3.1	2.8	-6.1	-13.9	-10.1	-27.4	-27.4	-33.8
Bulgaria	BG	2.7	0.5	1.8	2.9	-2.5	-3.5	-0.8	-6.6	-6.6	-11.3
Czech Republic	CZ	7.1	4.1	4.2	6.6	-5.2	-12.5	-6.6	-22.6	-22.6	-33.1
Denmark	DK	1.6	1.5	3.1	4.0	-6.3	-10.8	-6.5	-21.9	-21.9	-28.2
Germany	DE	6.6	5.4	4.3	4.0	-2.9	-10.1	-6.6	-18.5	-18.5	-28.7
Estonia	EE	3.6	0.4	9.1	6.6	-5.6	-2.7	-1.7	-9.8	-9.8	-22.7
Ireland	IE	0.0	-5.2	-0.3	-0.3	-7.1	-4.0	-2.7	-13.2	-13.2	-7.9
Greece	GR	3.0	-1.5	5.1	4.3	-5.8	-3.1	-1.3	-9.9	-9.9	-16.5
Spain	ES	1.1	-0.5	2.9	3.0	-6.3	-7.4	-4.3	-17.0	-17.0	-21.2
France	FR	4.8	0.5	-0.9	2.3	-4.2	-8.6	-3.4	-15.4	-15.4	-16.9
Croatia	HR	7.6	4.1	4.9	5.6	-2.7	-7.1	-3.2	-12.6	-12.6	-24.2
Italy	IT	2.9	-0.3	0.7	1.6	-2.6	-3.1	-1.0	-6.5	-6.5	-8.4
Cyprus	CY	1.6	-0.4	0.3	1.2	-1.7	-2.0	-0.4	-4.0	-4.0	-5.1
Latvia	LV	0.8	-1.4	4.2	5.0	-6.5	-5.2	-1.8	-12.9	-12.9	-19.3
Lithuania	LT	5.7	1.2	3.8	4.4	-2.8	-3.4	-0.7	-6.7	-6.7	-15.0
Luxembourg	LU	11.7	7.0	5.9	6.2	-4.7	-15.4	-10.9	-28.2	-28.2	-40.3
Hungary	HU	8.0	5.0	4.3	3.0	-2.1	-8.0	-5.6	-15.0	-15.0	-24.6
Malta	MT	3.6	2.0	2.9	3.4	-3.6	-6.5	-3.3	-12.9	-12.9	-19.8
Netherlands	NL	7.1	2.0	1.1	2.5	-4.4	-9.8	-5.5	-18.5	-18.5	-22.9
Austria	AT	7.4	7.6	3.6	2.5	-2.2	-13.2	-10.0	-23.6	-23.6	-33.2
Poland	PL	8.2	2.9	0.3	2.5	-2.4	-8.5	-4.0	-14.3	-14.3	-18.9
Portugal	PT	6.1	-1.2	2.7	2.7	-8.9	-11.4	-7.7	-25.4	-25.4	-28.4
Romania	RO	4.1	0.8	1.6	1.4	-1.6	-2.5	-1.3	-5.2	-5.2	-8.8
Slovenia	SI	5.5	4.6	2.3	2.1	-1.6	-8.1	-5.1	-14.2	-14.2	-21.4
Slovakia	SK	11.3	9.6	8.3	6.9	-0.3	-9.3	-6.3	-15.2	-15.2	-33.2
Finland	FI	0.2	0.9	1.9	1.5	-5.0	-8.3	-5.6	-17.8	-17.8	-21.2
Sweden	SE	7.2	4.8	2.1	3.7	-5.3	-15.2	-9.7	-27.6	-27.6	-34.8
Euro area	EA	4.7	2.1	2.1	2.8	-3.9	-8.2	-4.5	-15.7	-15.7	-21.4
European Union	EU	4.9	2.2	2.1	2.9	-3.9	-8.4	-4.7	-16.1	-16.1	-21.9
United Kingdom	UK	2.9	2.9	2.9	2.9	-12.9	-8.9	-3.3	-23.3	-23.3	-29.6
Norway	NO	3.7	2.9	3.0	3.1	-14.0	-11.0	-5.0	-27.3	-27.3	-33.5
United States	US	5.6	5.6	5.6	5.6	-12.9	-8.9	-3.3	-23.3	-23.3	-34.8
Japan	JP	2.0	2.0	2.0	2.0	-12.9	-8.9	-3.3	-23.3	-23.3	-27.8
Canada	CA	1.5	1.5	1.5	1.5	-12.9	-8.9	-3.3	-23.3	-23.3	-26.6
Switzerland	CH	1.6	1.6	1.6	1.6	-12.9	-8.9	-3.3	-23.3	-23.3	-26.9
Australia & New Zealand	AU	1.4	1.4	1.4	1.4	-12.9	-8.9	-3.3	-23.3	-23.3	-26.3
Turkey	TR	7.5	7.5	7.5	7.5	-12.9	-8.9	-3.3	-23.3	-23.3	-38.2
Russia	RU	2.0	2.0	2.0	2.0	-12.9	-8.9	-3.3	-23.3	-23.3	-27.7
Emerging Asia	AS	5.9	5.9	5.9	5.9	-12.9	-8.9	-3.3	-23.3	-23.3	-35.4
China	CN	6.1	6.1	6.1	6.1	-12.9	-8.9	-3.3	-23.3	-23.3	-35.7
India	IN	5.8	5.8	5.8	5.8	-12.9	-8.9	-3.3	-23.3	-23.3	-35.2
Hong Kong	HK	6.1	6.1	6.1	6.1	-12.9	-8.9	-3.3	-23.3	-23.3	-35.8
Latin America	LA	6.5	6.5	6.5	6.5	-12.9	-8.9	-3.3	-23.3	-23.3	-36.4
Brazil	BR	0.3	0.3	0.3	0.3	-12.9	-8.9	-3.3	-23.3	-23.3	-23.9
Mexico	MX	8.4	8.4	8.4	8.4	-12.9	-8.9	-3.3	-23.3	-23.3	-39.8
Chile	CL	6.4	6.4	6.4	6.4	-12.9	-8.9	-3.3	-23.3	-23.3	-36.3
Colombia	CO	6.4	6.4	6.4	6.4	-12.9	-8.9	-3.3	-23.3	-23.3	-36.4
Peru	PE	6.5	6.5	6.5	6.5	-12.9	-8.9	-3.3	-23.3	-23.3	-25.4
Rest of the world	WR	6.1	6.1	6.1	6.1	-12.9	-8.9	-3.3	-23.3	-23.3	-35.8

Notes: December 2020 projections from the national central banks are used as baseline forecasts for EU countries. The baseline for Norway was provided by Norges Bank. For other non-EU countries the baseline projections are based OECD data.



1.5 Commercial real estate prices

		Baseline growth (%)			Adverse growth (%)			Cumulative growth from the starting point(%)	Minimum growth from the starting point growth (%)	Level deviation 2023 (%)
		2021	2022	2023	2021	2022	2023			
Belgium	BE	1.9	1.9	1.8	-20.0	-15.0	-5.9	-36.0	-36.0	-39.5
Bulgaria	BG	1.6	1.6	1.5	-11.8	-8.0	-2.9	-21.2	-21.2	-24.8
Czech Republic	CZ	5.1	4.9	4.7	-22.3	-17.2	-6.9	-40.1	-40.1	-48.0
Denmark	DK	2.1	2.1	2.1	-20.3	-15.3	-6.0	-36.6	-36.6	-40.4
Germany	DE	4.2	4.0	3.9	-17.3	-12.6	-4.8	-31.2	-31.2	-38.9
Estonia	EE	5.1	4.8	4.6	-13.1	-9.1	-3.3	-23.6	-23.6	-33.8
Ireland	IE	4.2	4.1	3.9	-18.1	-13.2	-5.1	-32.5	-32.5	-40.1
Greece	GR	0.3	0.3	0.3	-13.4	-9.3	-3.4	-24.2	-24.2	-24.8
Spain	ES	2.4	2.4	2.3	-14.9	-10.5	-3.9	-26.8	-26.8	-31.7
France	FR	1.3	1.3	1.3	-18.3	-13.4	-5.2	-32.9	-32.9	-35.4
Croatia	HR	0.6	0.6	0.6	-16.2	-11.6	-4.4	-29.2	-29.2	-30.4
Italy	IT	0.6	0.6	0.6	-17.1	-12.4	-4.7	-30.8	-30.8	-32.1
Cyprus	CY	0.3	0.3	0.3	-10.2	-6.8	-2.4	-18.4	-18.4	-19.2
Latvia	LV	2.4	2.4	2.3	-14.0	-9.8	-3.6	-25.2	-25.2	-30.3
Lithuania	LT	3.0	2.9	2.8	-11.2	-7.6	-2.7	-20.2	-20.2	-26.7
Luxembourg	LU	6.2	5.8	5.5	-18.4	-13.5	-5.2	-33.0	-33.0	-43.5
Hungary	HU	3.8	3.7	3.5	-16.1	-11.5	-4.3	-28.9	-28.9	-36.2
Malta	MT	2.6	2.5	2.5	-11.6	-7.8	-2.8	-20.8	-20.8	-26.6
Netherlands	NL	1.8	1.7	1.7	-20.2	-15.2	-6.0	-36.4	-36.4	-39.6
Austria	AT	2.0	2.0	2.0	-13.1	-9.0	-3.3	-23.5	-23.5	-28.0
Poland	PL	1.4	1.4	1.3	-15.8	-11.3	-4.2	-28.4	-28.4	-31.3
Portugal	PT	1.4	1.3	1.3	-16.0	-11.4	-4.3	-28.8	-28.8	-31.6
Romania	RO	1.2	1.2	1.1	-10.0	-6.7	-2.4	-18.0	-18.0	-20.7
Slovenia	SI	2.8	2.7	2.7	-12.7	-8.8	-3.2	-22.9	-22.9	-28.9
Slovakia	SK	8.2	7.5	7.0	-20.2	-15.1	-6.0	-36.3	-36.3	-48.8
Finland	FI	1.3	1.3	1.3	-21.0	-16.0	-6.3	-37.8	-37.8	-40.2
Sweden	SE	0.7	0.7	0.7	-22.5	-17.4	-7.0	-40.5	-40.5	-41.7
Euro area	EA	2.0	2.0	2.0	-17.2	-12.5	-4.7	-30.9	-30.9	-32.2
European Union	EU	2.0	2.0	2.0	-17.4	-12.6	-4.8	-31.2	-31.2	-32.8
United Kingdom	UK	2.9	2.9	2.9	-17.0	-14.0	-5.0	-32.2	-32.2	-37.8
Norway	NO	3.7	3.7	3.7	-23.0	-18.0	-7.0	-41.3	-41.3	-47.3
United States	US	5.6	5.6	5.6	-17.0	-14.0	-5.0	-32.2	-32.2	-42.4
Japan	JP	2.0	2.0	2.0	-17.0	-14.0	-5.0	-32.2	-32.2	-36.1
Canada	CA	1.5	1.5	1.5	-17.0	-14.0	-5.0	-32.2	-32.2	-35.2
Switzerland	CH	1.6	1.6	1.6	-17.0	-14.0	-5.0	-32.2	-32.2	-35.4
Australia & New Zealand	AU	1.4	1.4	1.4	-17.0	-14.0	-5.0	-32.2	-32.2	-34.9
Turkey	TR	7.5	7.5	7.5	-17.0	-14.0	-5.0	-32.2	-32.2	-49.8
Russia	RU	2.0	2.0	2.0	-17.0	-14.0	-5.0	-32.2	-32.2	-36.1
Emerging Asia	AS	5.9	5.9	5.9	-17.0	-14.0	-5.0	-32.2	-32.2	-42.9
China	CN	6.1	6.1	6.1	-17.0	-14.0	-5.0	-32.2	-32.2	-43.2
India	IN	5.8	5.8	5.8	-17.0	-14.0	-5.0	-32.2	-32.2	-42.8
Hong Kong	HK	6.1	6.1	6.1	-17.0	-14.0	-5.0	-32.2	-32.2	-43.2
Latin America	LA	6.5	6.5	6.5	-17.0	-14.0	-5.0	-32.2	-32.2	-43.8
Brazil	BR	0.3	0.3	0.3	-17.0	-14.0	-5.0	-32.2	-32.2	-32.8
Mexico	MX	8.4	8.4	8.4	-17.0	-14.0	-5.0	-32.2	-32.2	-46.8
Chile	CL	6.4	6.4	6.4	-17.0	-14.0	-5.0	-32.2	-32.2	-43.7
Colombia	CO	6.4	6.4	6.4	-17.0	-14.0	-5.0	-32.2	-32.2	-43.8
Peru	PE	6.5	6.5	6.5	-17.0	-14.0	-5.0	-32.2	-32.2	-43.8
Rest of the world	WR	6.1	6.1	6.1	-17.0	-14.0	-5.0	-32.2	-32.2	-43.2

Notes: Public data are not available for almost any country. For this reason, the starting points are not provided. The baseline for all countries has been projected by ECB staff.



1.6 Long-term rates

		Starting point rates (%)	Baseline rates (%)				Adverse rates (%)		
		2020	2021	2022	2023	2021	2022	2023	
Belgium	BE	-0.13	-0.28	-0.17	-0.05	-0.02	0.30	0.30	
Bulgaria	BG	0.34	0.53	0.61	0.69	-0.09	0.26	0.26	
Czech Republic	CZ	0.80	0.80	1.33	1.49	1.18	1.47	1.47	
Denmark	DK	-0.34	-0.41	-0.35	-0.25	-1.27	-0.68	-0.68	
Germany	DE	-0.47	-0.53	-0.46	-0.39	-1.11	-0.79	-0.79	
Estonia	EE								
Ireland	IE	-0.25	-0.18	-0.08	0.03	-0.69	-0.36	-0.36	
Greece	GR	1.31	0.82	0.90	0.99	1.82	2.15	2.15	
Spain	ES	0.41	0.20	0.36	0.53	0.92	1.24	1.24	
France	FR	-0.14	-0.28	-0.17	-0.05	-0.78	-0.46	-0.46	
Croatia	HR	0.88	1.03	1.29	1.55	1.46	1.27	1.27	
Italy	IT	1.17	0.81	1.03	1.24	1.68	2.01	2.01	
Cyprus	CY	0.89	0.36	0.44	0.53	1.41	1.73	1.73	
Latvia	LV	-0.03	-0.20	-0.12	-0.03	0.08	0.41	0.41	
Lithuania	LT	0.27	0.10	0.18	0.26	0.38	0.71	0.71	
Luxembourg	LU	-0.42	-0.53	-0.45	-0.36	-1.06	-0.73	-0.73	
Hungary	HU	2.17	2.02	2.14	2.26	1.88	2.50	2.50	
Malta	MT	0.48	0.34	0.42	0.50	1.00	1.32	1.32	
Netherlands	NL	-0.32	-0.43	-0.36	-0.28	-0.96	-0.64	-0.64	
Austria	AT	-0.22	-0.34	-0.24	-0.14	-0.86	-0.53	-0.53	
Poland	PL	1.53	0.72	0.65	0.59	1.08	1.86	1.86	
Portugal	PT	0.42	0.16	0.33	0.51	0.94	1.26	1.26	
Romania	RO	4.07	3.91	4.03	4.15	4.01	4.86	4.86	
Slovenia	SI	0.17	0.00	0.11	0.22	0.28	0.61	0.61	
Slovakia	SK	-0.02	-0.34	-0.26	-0.18	-0.66	-0.34	-0.34	
Finland	FI	-0.23	-0.34	-0.25	-0.16	-0.87	-0.54	-0.54	
Sweden	SE	-0.05	-0.20	-0.08	0.04	-0.77	-0.23	-0.23	
Euro area	EA	0.04	-0.11	0.01	0.13	0.02	0.17	0.18	
European Union	EU	0.18	0.01	0.13	0.24	0.61	0.73	0.71	
United Kingdom	UK	0.30	0.43	0.54	0.64	-0.31	0.20	0.20	
Norway	NO	1.49	1.49	1.49	1.49	0.84	1.05	1.05	
United States	US	0.90	0.99	1.13	1.27	0.47	0.79	0.79	
Japan	JP	0.00	0.11	0.20	0.29	-0.09	0.04	0.04	
Canada	CA	0.76	1.24	1.92	2.25	0.64	0.94	0.94	
Switzerland	CH	-0.77	-0.94	-0.83	-0.72	-1.15	-1.03	-1.03	
Australia	AU	0.92	0.92	0.92	0.98	0.42	0.72	0.72	
New Zealand	NZ	0.89	0.77	0.77	0.83	0.57	0.53	0.53	
Turkey	TR	12.78	11.77	11.24	10.87	11.72	12.48	12.48	
Russia	RU	6.27	6.50	6.62	7.08	6.45	6.96	6.96	
Emerging Asia	AS	3.32	3.44	3.44	3.45	2.88	3.20	3.20	
China	CN	2.95	3.07	3.08	3.10	2.35	2.65	2.65	
India	IN	6.07	6.18	6.19	6.20	5.47	5.57	5.57	
Hong Kong	HK	0.79	0.79	0.79	0.79	-0.20	0.79	0.79	
Latin America	LA	6.05	6.05	6.05	6.05	6.76	7.08	7.08	
Brazil	BR	7.30	7.30	7.30	7.30	7.05	8.18	8.18	
Mexico	MX	6.32	6.32	6.32	6.32	5.57	6.86	6.86	
Chile	CL	2.79	2.79	2.79	2.79	2.54	2.84	2.84	
Colombia	CO	6.28	6.28	6.28	6.28	5.53	6.66	6.66	
Peru	PE	4.10	4.10	4.10	4.10	4.65	5.17	5.17	
Ukraine	UA	6.62	6.62	6.62	6.62	7.17	7.69	7.69	
Angola	AO	6.00	6.00	6.00	6.00	6.55	7.08	7.08	
Macao	MC	3.23	3.23	3.23	3.23	3.78	4.08	4.08	
Mozambique	MZ	10.10	10.10	10.10	10.10	10.65	11.17	11.17	
South Africa	ZA	9.40	9.40	9.40	9.40	9.45	9.75	9.75	
Rest of the world	WR	2.57	2.57	2.57	2.57	3.12	3.64	3.64	

Notes: Projections based on markets' expectations as of the fourth quarter of 2020 are used as baseline forecasts for EU countries. The baseline for other countries is based on projections from



the October 2020 IMF World Economic Outlook. For countries for which no projections were available, the rates were assumed to remain at the same level as at the cut-off date. Owing to the recent issuance only of liquid benchmark bonds by Estonia, dated the second quarter of 2020, and given the absence of historical series, paths of long-term interest rates are not provided for this country.

1.7 Stock prices

	Deviation from the starting point (%)		
	2021	2022	2023
European Union	-50	-45	-35
United Kingdom	-50	-45	-35
Norway	-50	-45	-35
United States	-50	-45	-35
Japan	-50	-45	-35
Canada	-50	-45	-35
Switzerland	-50	-45	-35
Australia & New Zealand	-50	-45	-35
Rest of the World	-65	-58	-40

Note: Under the baseline, stock prices are assumed to remain unchanged.

1.8 iTraxx indices

	Historical level 2020	Baseline level			Adverse level		
		2021	2022	2023	2021	2022	2023
iTraxx Overall 5Y	64	56	62	70	230	225	210
iTraxx Crossover 5Y	363	355	361	369	659	654	639
iTraxx Sen. financials 5Y	77	69	75	83	316	311	296
iTraxx Sub. financials 5Y	160	152	158	166	564	559	544

Note: Under the baseline, iTraxx indexes are assumed to follow the growth of the swap rates.

1.9 Foreign demand and commodity prices

	Level deviation from starting point (%)		
	2021	2022	2023
Oil prices	-5.6	-5.0	-5.3
Non-oil commodity prices	-21.0	-22.7	-14.6
Metal prices	-21.1	-30.0	-23.5
EU foreign demand	-6.8	-10.3	-12.8
Euro area foreign demand	-8.7	-11.6	-13.2

Note: Under the baseline scenario, commodity prices are assumed to remain at the same level as at the cut-off date.



1.10 Exchange rates

	Historical rates	Baseline rates			Adverse rates		
	2020	2021	2022	2023	2021	2022	2023
EURCZK	27.21	27.21	27.21	27.21	29.04	29.49	29.82
EURDKK	7.44	7.44	7.44	7.44	7.44	7.44	7.44
EURHRK	7.57	7.57	7.57	7.57	8.08	8.21	8.30
EURHUF	362.64	362.64	362.64	362.64	387.00	393.09	397.44
EURPLN	4.54	4.54	4.54	4.54	4.84	4.92	4.97
EURRON	4.87	4.87	4.87	4.87	5.20	5.28	5.34
EURSEK	10.40	10.40	10.40	10.40	10.40	10.40	10.40
EURGBP	0.91	0.91	0.91	0.91	0.91	0.91	0.91
EURNOK	10.93	10.93	10.93	10.93	10.93	10.93	10.93
EURUSD	1.18	1.18	1.18	1.18	1.18	1.18	1.18
EURCHF	1.07	1.07	1.07	1.07	1.07	1.07	1.07
EURTRY	9.36	9.36	9.36	9.36	10.72	11.06	11.90
EURRUB	91.32	91.32	91.32	91.32	104.52	107.82	116.07
EURBRL	6.63	6.63	6.63	6.63	7.59	7.83	8.42
EURMXN	25.03	25.03	25.03	25.03	28.65	29.55	31.81
EURCLP	927.40	927.40	927.40	927.40	1061.45	1094.97	1178.75
EURAUD	1.65	1.65	1.65	1.65	1.65	1.65	1.65
EURCAD	1.55	1.55	1.55	1.55	1.55	1.55	1.55
EURHKD	9.12	9.12	9.12	9.12	9.12	9.12	9.12
EURZAR	19.36	19.36	19.36	19.36	22.16	22.86	24.61
EURBGN	1.95583	1.95583	1.95583	1.95583	1.95583	1.95583	1.95583
EURCOP	4510.18	4510.18	4510.18	4510.18	5162.12	5325.11	5732.58
EURINR	86.51	86.51	86.51	86.51	99.71	103.01	111.25
EURCNY	7.92	7.92	7.92	7.92	7.92	7.92	7.92
EURJPY	123.80	123.80	123.80	123.80	123.80	123.80	123.80
EURNZD	1.77	1.77	1.77	1.77	1.77	1.77	1.77
EURPEN	4.23	4.23	4.23	4.23	4.84	5.00	5.38
EURUAH	33.35	33.35	33.35	33.35	38.17	39.38	42.39
EURAOA	761.90	761.90	761.90	761.90	872.04	899.57	968.40
EURMOP	9.40	9.40	9.40	9.40	10.76	11.09	11.94
EURMZN	69.90	69.90	69.90	69.90	80.00	82.53	88.84
EUR-rest of the world	1.18	1.18	1.18	1.18	1.35	1.39	1.50

Note: An adverse rate higher than the baseline rate implies an appreciation of the euro.



1.11 Swap rates

	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
EUR	1M	-0.38	-0.54	-0.54	-0.50	-0.54	-0.54	-0.54
	3M	-0.38	-0.54	-0.54	-0.50	-0.54	-0.54	-0.54
	1Y	-0.38	-0.52	-0.51	-0.45	-0.58	-0.54	-0.54
	2Y	-0.39	-0.49	-0.47	-0.41	-0.61	-0.54	-0.54
	3Y	-0.39	-0.47	-0.43	-0.36	-0.64	-0.54	-0.54
	5Y	-0.33	-0.41	-0.36	-0.27	-0.71	-0.54	-0.54
	7Y	-0.26	-0.36	-0.28	-0.18	-0.77	-0.54	-0.54
	10Y	-0.13	-0.28	-0.17	-0.05	-0.87	-0.54	-0.54
	20Y	0.13	0.02	0.14	0.26	-0.87	-0.54	-0.54
	30Y	0.13	0.02	0.14	0.26	-0.87	-0.54	-0.54
CZK	1M	0.87	0.44	1.12	1.27	0.82	0.82	0.82
	3M	0.82	0.42	1.06	1.20	0.82	0.82	0.82
	1Y	0.78	0.48	1.11	1.25	0.79	0.82	0.82
	2Y	0.82	0.54	1.15	1.30	0.76	0.82	0.82
	3Y	0.86	0.59	1.20	1.35	0.73	0.82	0.82
	5Y	0.91	0.71	1.29	1.44	0.68	0.82	0.82
	7Y	0.95	0.83	1.39	1.54	0.62	0.82	0.82
	10Y	1.00	1.00	1.53	1.69	0.53	0.82	0.82
	20Y	1.15	1.15	1.76	1.94	0.53	0.82	0.82
	30Y	1.21	1.21	1.85	2.05	0.53	0.82	0.82
DKK	1M	-0.32	-0.16	-0.20	-0.17	-0.16	-0.16	-0.16
	3M	-0.24	-0.16	-0.20	-0.17	-0.16	-0.16	-0.16
	1Y	-0.14	-0.12	-0.15	-0.11	-0.22	-0.16	-0.16
	2Y	-0.17	-0.08	-0.10	-0.06	-0.28	-0.16	-0.16
	3Y	-0.17	-0.05	-0.05	0.00	-0.33	-0.16	-0.16
	5Y	-0.12	0.03	0.04	0.11	-0.45	-0.16	-0.16
	7Y	-0.06	0.10	0.14	0.21	-0.57	-0.16	-0.16
	10Y	0.29	0.21	0.28	0.38	-0.75	-0.16	-0.16
	20Y	0.28	0.21	0.27	0.37	-0.75	-0.16	-0.16
	30Y	0.28	0.21	0.27	0.37	-0.75	-0.16	-0.16
HRK	1M	0.02	0.06	0.10	0.14	0.02	0.02	0.02
	3M	0.02	0.06	0.10	0.14	0.02	0.02	0.02
	1Y	0.11	0.16	0.22	0.28	0.04	0.02	0.02
	2Y	0.19	0.26	0.34	0.42	0.06	0.02	0.02
	3Y	0.28	0.35	0.46	0.56	0.08	0.02	0.02
	5Y	0.45	0.55	0.69	0.84	0.12	0.02	0.02
	7Y	0.62	0.74	0.93	1.12	0.15	0.02	0.02
	10Y	0.88	1.03	1.29	1.55	0.21	0.02	0.02
	20Y	0.88	1.03	1.29	1.55	0.21	0.02	0.02
	30Y	0.88	1.03	1.29	1.55	0.21	0.02	0.02
HUF	1M	0.68	0.68	0.68	0.68	0.68	0.68	0.68
	3M	0.68	0.68	0.68	0.68	0.68	0.68	0.68
	1Y	0.74	0.76	0.77	0.78	0.62	0.68	0.68
	2Y	0.82	0.84	0.86	0.88	0.56	0.68	0.68
	3Y	0.90	0.91	0.95	0.98	0.50	0.68	0.68
	5Y	1.10	1.07	1.12	1.18	0.37	0.68	0.68
	7Y	1.31	1.22	1.30	1.38	0.25	0.68	0.68
	10Y	1.60	1.45	1.57	1.69	0.06	0.68	0.68
	20Y	2.15	1.95	2.10	2.27	0.06	0.68	0.68
	30Y	2.15	1.95	2.10	2.27	0.06	0.68	0.68



	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
PLN	1M	0.60	0.22	0.22	0.22	0.22	0.22	0.22
	3M	0.65	0.24	0.24	0.24	0.22	0.22	0.22
	1Y	0.59	0.24	0.23	0.22	0.14	0.22	0.22
	2Y	0.64	0.24	0.22	0.20	0.06	0.22	0.22
	3Y	0.69	0.24	0.21	0.18	-0.02	0.22	0.22
	5Y	0.85	0.25	0.19	0.15	-0.17	0.22	0.22
	7Y	0.99	0.29	0.22	0.17	-0.33	0.22	0.22
	10Y	1.14	0.33	0.26	0.20	-0.56	0.22	0.22
	20Y	1.42	0.41	0.32	0.24	-0.56	0.22	0.22
	30Y	1.47	0.43	0.33	0.25	-0.56	0.22	0.22
RON	1M	2.37	2.00	2.00	2.79	2.00	2.00	2.00
	3M	2.37	2.00	2.00	2.79	2.00	2.00	2.00
	1Y	2.35	2.03	2.04	2.77	1.91	2.00	2.00
	2Y	2.35	2.06	2.08	2.74	1.83	2.00	2.00
	3Y	2.32	2.09	2.13	2.72	1.74	2.00	2.00
	5Y	2.39	2.15	2.21	2.67	1.57	2.00	2.00
	7Y	2.43	2.21	2.29	2.62	1.40	2.00	2.00
	10Y	2.46	2.30	2.42	2.54	1.15	2.00	2.00
	20Y	2.57	2.41	2.53	2.66	1.15	2.00	2.00
	30Y	2.76	2.59	2.72	2.86	1.15	2.00	2.00
SEK	1M	0.10	0.10	0.10	0.10	0.10	0.10	0.10
	3M	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	1Y	0.05	0.11	0.12	0.13	0.04	0.09	0.09
	2Y	0.05	0.12	0.14	0.17	-0.01	0.09	0.09
	3Y	0.07	0.13	0.17	0.20	-0.07	0.09	0.09
	5Y	0.15	0.16	0.22	0.28	-0.17	0.09	0.09
	7Y	0.24	0.19	0.27	0.35	-0.28	0.09	0.09
	10Y	0.38	0.23	0.34	0.46	-0.44	0.09	0.09
	20Y	0.62	0.37	0.56	0.76	-0.44	0.09	0.09
	30Y	0.56	0.34	0.51	0.69	-0.44	0.09	0.09
GBP	1M	0.31	0.31	0.31	0.31	0.31	0.31	0.31
	3M	0.31	0.31	0.31	0.31	0.31	0.31	0.31
	1Y	0.30	0.34	0.35	0.36	0.26	0.31	0.31
	2Y	0.30	0.36	0.38	0.41	0.21	0.31	0.31
	3Y	0.32	0.39	0.42	0.46	0.16	0.31	0.31
	5Y	0.38	0.43	0.49	0.55	0.06	0.31	0.31
	7Y	0.43	0.48	0.56	0.65	-0.04	0.31	0.31
	10Y	0.51	0.56	0.67	0.79	-0.19	0.31	0.31
	20Y	0.62	0.67	0.81	0.96	-0.19	0.31	0.31
	30Y	0.62	0.67	0.81	0.96	-0.19	0.31	0.31
NOK	1M	0.57	0.26	0.37	0.64	0.57	0.57	0.57
	3M	0.68	0.31	0.44	0.76	0.57	0.57	0.57
	1Y	0.78	0.39	0.51	0.79	0.55	0.57	0.57
	2Y	0.77	0.47	0.58	0.83	0.53	0.57	0.57
	3Y	0.79	0.55	0.64	0.86	0.51	0.57	0.57
	5Y	0.89	0.71	0.78	0.94	0.47	0.57	0.57
	7Y	0.99	0.87	0.91	1.01	0.43	0.57	0.57
	10Y	1.12	1.12	1.12	1.12	0.37	0.57	0.57
	20Y	1.25	1.25	1.25	1.25	0.37	0.57	0.57
	30Y	1.25	1.25	1.25	1.25	0.37	0.57	0.57



	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
USD	1M	0.69	0.69	0.69	0.69	0.69	0.69	0.69
	3M	0.69	0.69	0.69	0.69	0.69	0.69	0.69
	1Y	0.55	0.72	0.73	0.74	0.65	0.69	0.69
	2Y	0.50	0.75	0.78	0.80	0.62	0.69	0.69
	3Y	0.51	0.78	0.82	0.86	0.59	0.69	0.69
	5Y	0.59	0.84	0.91	0.98	0.53	0.69	0.69
	7Y	0.71	0.90	1.00	1.09	0.46	0.69	0.69
	10Y	0.90	0.99	1.13	1.27	0.37	0.69	0.69
	20Y	1.10	1.20	1.37	1.53	0.37	0.69	0.69
	30Y	1.13	1.24	1.42	1.59	0.37	0.69	0.69
CHF	1M	-0.67	-0.42	0.08	0.08	-0.67	-0.67	-0.67
	3M	-0.67	-0.42	0.08	0.08	-0.67	-0.67	-0.67
	1Y	-0.68	-0.39	0.11	0.11	-0.68	-0.67	-0.67
	2Y	-0.68	-0.35	0.15	0.15	-0.69	-0.67	-0.67
	3Y	-0.66	-0.32	0.19	0.18	-0.71	-0.67	-0.67
	5Y	-0.57	-0.25	0.26	0.25	-0.73	-0.67	-0.67
	7Y	-0.46	-0.19	0.33	0.32	-0.75	-0.67	-0.67
	10Y	-0.31	-0.09	0.44	0.42	-0.79	-0.67	-0.67
	20Y	-0.10	0.13	0.66	0.64	-0.79	-0.67	-0.67
	30Y	-0.18	0.24	1.23	1.20	-0.79	-0.67	-0.67
TRY	1M	10.59	9.59	9.07	8.71	10.59	10.59	10.59
	3M	10.74	9.73	9.20	8.84	10.59	10.59	10.59
	1Y	11.25	9.87	9.34	8.97	10.51	10.59	10.59
	2Y	11.76	10.01	9.48	9.11	10.43	10.59	10.59
	3Y	12.27	10.15	9.62	9.25	10.36	10.59	10.59
	5Y	12.27	10.43	9.90	9.53	10.21	10.59	10.59
	7Y	12.27	10.71	10.18	9.81	10.05	10.59	10.59
	10Y	12.14	11.13	10.59	10.23	9.83	10.59	10.59
	20Y	12.14	11.13	10.59	10.23	9.83	10.59	10.59
	30Y	12.14	11.13	10.59	10.23	9.83	10.59	10.59
RUB	1M	5.35	5.85	6.60	7.10	5.85	5.85	5.85
	3M	5.35	5.85	6.60	7.10	5.85	5.85	5.85
	1Y	5.36	5.93	6.62	7.12	5.80	5.85	5.85
	2Y	5.41	6.01	6.64	7.13	5.75	5.85	5.85
	3Y	5.56	6.09	6.65	7.14	5.70	5.85	5.85
	5Y	5.85	6.25	6.69	7.16	5.60	5.85	5.85
	7Y	6.10	6.41	6.72	7.19	5.50	5.85	5.85
	10Y	6.42	6.64	6.77	7.22	5.34	5.85	5.85
	20Y	6.41	6.64	6.76	7.21	5.34	5.85	5.85
	30Y	6.41	6.64	6.76	7.21	5.34	5.85	5.85
BRL	1M	7.30	7.30	7.30	7.30	7.30	7.30	7.30
	3M	7.30	7.30	7.30	7.30	6.93	6.93	6.93
	1Y	7.30	7.30	7.30	7.30	6.82	6.93	6.93
	2Y	7.30	7.30	7.30	7.30	6.70	6.93	6.93
	3Y	7.30	7.30	7.30	7.30	6.59	6.93	6.93
	5Y	7.30	7.30	7.30	7.30	6.37	6.93	6.93
	7Y	7.30	7.30	7.30	7.30	6.14	6.93	6.93
	10Y	7.30	7.30	7.30	7.30	5.80	6.93	6.93
	20Y	7.30	7.30	7.30	7.30	5.80	6.93	6.93
	30Y	7.30	7.30	7.30	7.30	5.80	6.93	6.93



	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
MXN	1M	5.61	5.61	5.61	5.61	5.61	5.61	5.61
	3M	5.61	5.61	5.61	5.61	5.61	5.61	5.61
	1Y	5.68	5.68	5.68	5.68	5.48	5.61	5.61
	2Y	5.75	5.75	5.75	5.75	5.35	5.61	5.61
	3Y	5.83	5.83	5.83	5.83	5.23	5.61	5.61
	5Y	5.97	5.97	5.97	5.97	4.97	5.61	5.61
	7Y	6.11	6.11	6.11	6.11	4.71	5.61	5.61
	10Y	6.32	6.32	6.32	6.32	4.32	5.61	5.61
	20Y	6.32	6.32	6.32	6.32	4.32	5.61	5.61
	30Y	6.32	6.32	6.32	6.32	4.32	5.61	5.61
CLP	1M	0.75	0.75	0.75	0.75	0.75	0.75	0.75
	3M	0.75	0.75	0.75	0.75	0.75	0.75	0.75
	1Y	0.75	0.93	0.93	0.93	0.78	0.81	0.81
	2Y	0.89	1.10	1.10	1.10	0.80	0.86	0.86
	3Y	1.08	1.28	1.28	1.28	0.83	0.92	0.92
	5Y	1.59	1.63	1.63	1.63	0.88	1.03	1.03
	7Y	2.06	1.98	1.98	1.98	0.93	1.14	1.14
	10Y	2.51	2.51	2.51	2.51	1.01	1.31	1.31
	20Y	2.76	2.76	2.76	2.76	1.01	1.31	1.31
	30Y	2.80	2.80	2.80	2.80	1.01	1.31	1.31
AUD	1M	0.26	0.26	0.26	0.26	0.26	0.26	0.26
	3M	0.27	0.27	0.27	0.27	0.27	0.27	0.27
	1Y	0.26	0.34	0.34	0.34	0.28	0.31	0.31
	2Y	0.28	0.40	0.40	0.42	0.28	0.34	0.34
	3Y	0.33	0.47	0.47	0.49	0.29	0.38	0.38
	5Y	0.46	0.60	0.60	0.63	0.30	0.45	0.45
	7Y	0.65	0.73	0.73	0.78	0.31	0.52	0.52
	10Y	0.93	0.93	0.93	1.00	0.33	0.63	0.63
	20Y	1.25	1.25	1.25	1.34	0.33	0.63	0.63
	30Y	1.25	1.25	1.25	1.34	0.33	0.63	0.63
CAD	1M	0.88	0.94	1.71	2.15	0.88	0.88	0.88
	3M	0.90	0.97	1.75	2.21	0.90	0.90	0.90
	1Y	0.81	1.04	1.82	2.26	0.91	0.94	0.94
	2Y	0.81	1.11	1.88	2.31	0.92	0.98	0.98
	3Y	0.86	1.18	1.94	2.36	0.93	1.02	1.02
	5Y	0.97	1.33	2.06	2.46	0.94	1.09	1.09
	7Y	1.08	1.47	2.18	2.55	0.96	1.17	1.17
	10Y	1.21	1.69	2.37	2.70	0.99	1.29	1.29
	20Y	1.54	2.14	3.01	3.43	0.99	1.29	1.29
	30Y	1.55	2.16	3.03	3.46	0.99	1.29	1.29
HKD	1M	1.13	1.05	1.06	1.06	1.13	1.13	1.13
	3M	1.13	1.05	1.06	1.06	1.05	1.05	1.05
	1Y	0.96	1.05	1.06	1.06	0.95	1.05	1.05
	2Y	0.90	1.05	1.06	1.06	0.85	1.05	1.05
	3Y	0.91	1.05	1.06	1.07	0.75	1.05	1.05
	5Y	0.96	1.06	1.07	1.07	0.56	1.05	1.05
	7Y	1.05	1.06	1.07	1.07	0.36	1.05	1.05
	10Y	1.15	1.06	1.07	1.08	0.06	1.05	1.05
	20Y	1.31	1.21	1.22	1.22	0.06	1.05	1.05
	30Y	1.31	1.21	1.22	1.22	0.06	1.05	1.05



	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
ZAR	1M	4.46	4.46	4.46	4.46	4.46	4.46	4.46
	3M	4.55	4.55	4.55	4.55	4.46	4.46	4.46
	1Y	4.32	4.83	4.83	4.83	4.63	4.66	4.66
	2Y	4.51	5.12	5.12	5.12	4.80	4.86	4.86
	3Y	4.86	5.40	5.40	5.40	4.98	5.07	5.07
	5Y	5.71	5.97	5.97	5.97	5.33	5.48	5.48
	7Y	6.50	6.54	6.54	6.54	5.67	5.88	5.88
	10Y	7.39	7.39	7.39	7.39	6.19	6.49	6.49
	20Y	8.23	8.23	8.23	8.23	6.19	6.49	6.49
	30Y	8.26	8.26	8.26	8.26	6.19	6.49	6.49
BGN	1M	-0.13	-0.30	-0.30	-0.25	-0.12	-0.12	-0.12
	3M	-0.12	-0.28	-0.28	-0.24	-0.12	-0.12	-0.12
	1Y	-0.05	-0.19	-0.18	-0.13	-0.15	-0.12	-0.12
	2Y	0.05	-0.04	-0.02	0.04	-0.19	-0.12	-0.12
	3Y	0.17	0.09	0.13	0.20	-0.23	-0.12	-0.12
	5Y	0.39	0.31	0.37	0.45	-0.30	-0.12	-0.12
	7Y	0.53	0.43	0.51	0.61	-0.37	-0.12	-0.12
	10Y	0.81	0.66	0.78	0.90	-0.48	-0.12	-0.12
	20Y	1.87	2.01	2.13	2.25	-0.48	-0.12	-0.12
	30Y	1.69	1.83	1.95	2.07	-0.48	-0.12	-0.12
COP	1M	3.05	3.05	3.05	3.05	3.05	3.05	3.05
	3M	3.39	3.39	3.39	3.39	3.39	3.39	3.39
	1Y	3.16	3.16	3.16	3.16	3.37	3.40	3.40
	2Y	3.48	3.48	3.48	3.48	3.35	3.41	3.41
	3Y	3.77	3.77	3.77	3.77	3.33	3.42	3.42
	5Y	4.16	4.16	4.16	4.16	3.29	3.44	3.44
	7Y	4.64	4.64	4.64	4.64	3.25	3.46	3.46
	10Y	5.18	5.18	5.18	5.18	3.18	3.48	3.48
	20Y	6.08	6.08	6.08	6.08	3.18	3.48	3.48
	30Y	6.08	6.08	6.08	6.08	3.18	3.48	3.48
INR	1M	4.97	4.97	4.97	4.97	4.97	4.97	4.97
	3M	4.97	4.97	4.97	4.97	4.97	4.97	4.97
	1Y	4.97	4.97	4.97	4.97	4.95	4.97	4.97
	2Y	4.97	4.97	4.97	4.97	4.94	4.97	4.97
	3Y	5.30	5.30	5.30	5.30	4.93	4.97	4.97
	5Y	5.60	5.60	5.60	5.60	4.91	4.97	4.97
	7Y	5.59	5.59	5.59	5.59	4.89	4.97	4.97
	10Y	5.56	5.56	5.56	5.56	4.86	4.97	4.97
	20Y	5.56	5.56	5.56	5.56	4.86	4.97	4.97
	30Y	5.56	5.56	5.56	5.56	4.86	4.97	4.97
JPY	1M	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02
	3M	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
	1Y	-0.03	-0.01	0.00	0.01	-0.04	-0.02	-0.02
	2Y	-0.04	0.01	0.03	0.05	-0.05	-0.02	-0.02
	3Y	-0.05	0.03	0.06	0.08	-0.06	-0.02	-0.02
	5Y	-0.05	0.06	0.11	0.15	-0.09	-0.02	-0.02
	7Y	-0.02	0.09	0.16	0.22	-0.12	-0.02	-0.02
	10Y	0.04	0.14	0.23	0.32	-0.16	-0.02	-0.02
	20Y	0.23	0.91	1.48	2.05	-0.16	-0.02	-0.02
	30Y	0.31	1.27	2.06	2.85	-0.16	-0.02	-0.02



	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
NZD	1M	0.42	0.17	0.17	0.17	0.42	0.42	0.42
	3M	0.42	0.17	0.17	0.17	0.42	0.42	0.42
	1Y	0.42	0.23	0.23	0.23	0.42	0.42	0.42
	2Y	0.39	0.29	0.29	0.30	0.42	0.42	0.42
	3Y	0.41	0.34	0.34	0.36	0.43	0.42	0.42
	5Y	0.50	0.46	0.46	0.49	0.43	0.42	0.42
	7Y	0.66	0.58	0.58	0.62	0.44	0.42	0.42
	10Y	0.87	0.75	0.75	0.81	0.45	0.42	0.42
	20Y	1.29	1.11	1.11	1.20	0.45	0.42	0.42
	30Y	1.29	1.11	1.11	1.20	0.45	0.42	0.42
PEN	1M	2.50	2.50	2.50	2.50	2.50	2.50	
	3M	2.50	2.50	2.50	2.50	2.33	2.33	
	1Y	2.50	2.50	2.50	2.50	2.27	2.33	
	2Y	2.50	2.50	2.50	2.50	2.22	2.33	
	3Y	2.50	2.50	2.50	2.50	2.17	2.33	
	5Y	2.50	2.50	2.50	2.50	2.06	2.33	
	7Y	2.50	2.50	2.50	2.50	1.96	2.33	
	10Y	2.50	2.50	2.50	2.50	1.80	2.33	
	20Y	2.50	2.50	2.50	2.50	1.80	2.33	
	30Y	2.50	2.50	2.50	2.50	1.80	2.33	
UAH	1M	10.51	10.51	10.51	10.51	10.51	10.51	
	3M	10.51	10.51	10.51	10.51	10.33	10.33	
	1Y	10.51	10.51	10.51	10.51	10.28	10.33	
	2Y	10.51	10.51	10.51	10.51	10.23	10.33	
	3Y	10.51	10.51	10.51	10.51	10.17	10.33	
	5Y	10.51	10.51	10.51	10.51	10.07	10.33	
	7Y	10.51	10.51	10.51	10.51	9.96	10.33	
	10Y	10.51	10.51	10.51	10.51	9.81	10.33	
	20Y	10.51	10.51	10.51	10.51	9.81	10.33	
	30Y	10.51	10.51	10.51	10.51	9.81	10.33	
AOA	1M	16.53	16.53	16.53	16.53	16.53	16.53	
	3M	16.53	16.53	16.53	16.53	16.36	16.36	
	1Y	16.53	16.53	16.53	16.53	16.30	16.36	
	2Y	16.53	16.53	16.53	16.53	16.25	16.36	
	3Y	16.53	16.53	16.53	16.53	16.20	16.36	
	5Y	16.53	16.53	16.53	16.53	16.09	16.36	
	7Y	16.53	16.53	16.53	16.53	15.99	16.36	
	10Y	16.53	16.53	16.53	16.53	15.83	16.36	
	20Y	16.53	16.53	16.53	16.53	15.83	16.36	
	30Y	16.53	16.53	16.53	16.53	15.83	16.36	
MOP	1M	1.08	1.08	1.08	1.08	1.30	1.30	
	3M	1.30	1.30	1.30	1.30	1.30	1.30	
	1Y	1.49	1.49	1.49	1.49	1.25	1.28	
	2Y	1.49	1.49	1.49	1.49	1.20	1.26	
	3Y	1.49	1.49	1.49	1.49	1.15	1.24	
	5Y	1.49	1.49	1.49	1.49	1.05	1.20	
	7Y	1.49	1.49	1.49	1.49	0.94	1.15	
	10Y	1.49	1.49	1.49	1.49	0.79	1.09	
	20Y	1.49	1.49	1.49	1.49	0.79	1.09	
	30Y	1.49	1.49	1.49	1.49	0.79	1.09	



	Starting point rates (%)	Baseline rates (%)			Adverse rates (%)			
		2020	2021	2022	2023	2021	2022	2023
MZN	1M	11.44	11.44	11.44	11.44	11.44	11.44	11.44
	3M	11.44	11.44	11.44	11.44	11.26	11.26	11.26
	1Y	11.44	11.44	11.44	11.44	11.21	11.26	11.26
	2Y	11.44	11.44	11.44	11.44	11.16	11.26	11.26
	3Y	11.44	11.44	11.44	11.44	11.11	11.26	11.26
	5Y	11.44	11.44	11.44	11.44	11.00	11.26	11.26
	7Y	11.44	11.44	11.44	11.44	10.90	11.26	11.26
	10Y	11.44	11.44	11.44	11.44	10.74	11.26	11.26
	20Y	11.44	11.44	11.44	11.44	10.74	11.26	11.26
	30Y	11.44	11.44	11.44	11.44	10.74	11.26	11.26
CNY	1M	2.11	2.11	2.11	2.11	2.11	2.11	2.11
	3M	2.24	2.24	2.24	2.24	2.11	2.11	2.11
	1Y	2.51	2.51	2.51	2.51	2.08	2.11	2.11
	2Y	2.51	2.51	2.51	2.51	2.05	2.11	2.11
	3Y	2.51	2.51	2.51	2.51	2.02	2.11	2.11
	5Y	2.51	2.51	2.51	2.51	1.96	2.11	2.11
	7Y	2.51	2.51	2.51	2.51	1.90	2.11	2.11
	10Y	2.51	2.51	2.51	2.51	1.81	2.11	2.11
	20Y	2.51	2.51	2.51	2.51	1.81	2.11	2.11
	30Y	2.51	2.51	2.51	2.51	1.81	2.11	2.11
RoW	1M	1.18	1.18	1.18	1.18	1.18	1.18	1.18
	3M	1.18	1.18	1.18	1.18	1.00	1.00	1.00
	1Y	1.18	1.18	1.18	1.18	0.95	1.00	1.00
	2Y	1.18	1.18	1.18	1.18	0.90	1.00	1.00
	3Y	1.18	1.18	1.18	1.18	0.84	1.00	1.00
	5Y	1.18	1.18	1.18	1.18	0.74	1.00	1.00
	7Y	1.18	1.18	1.18	1.18	0.63	1.00	1.00
	10Y	1.18	1.18	1.18	1.18	0.48	1.00	1.00
	20Y	1.18	1.18	1.18	1.18	0.48	1.00	1.00
	30Y	1.18	1.18	1.18	1.18	0.48	1.00	1.00

Notes: For the long-term rates of the “Latin America” and “emerging Asia” regions, the US dollar (USD) swap rate curve should be considered as reference swap rate curve. Projections based on market expectations as at the fourth quarter of 2020 are used as baseline forecasts for EU countries. The baseline for other countries is based on projections from the October 2020 IMF World Economic Outlook. For countries for which no baseline projections were available, the rates were assumed to remain at the same level as at the cut-off date. For the Bulgarian lev (BGN), the Bulgarian central bank provided values for the swap rates for the purpose of the exercise. For other geographies and maturities, swap rate starting points were interpolated/extrapolated wherever they were unavailable.



2 Annex: Detailed risk assessments

2.1 ESRB risk assessment

At its meeting on 15 December 2020 the General Board considered a number of vulnerabilities in the EU financial system, including the following.

- **Widespread defaults in the private sector due to a deep global recession:** A potential severe recession may lead to widespread defaults and insolvencies in the real economy, accompanied by significant, more broadly based and deeper price corrections in real estate markets. Sharp rises in unemployment, economic imbalances, inequality and political instability represent further risks in this respect.
- **Difficult macroeconomic environment for banks, insurers and pension schemes:** The risks in this connection include disrupted provision of financial services to the real economy amidst a deep economic recession and low interest rates, high credit risk and a sharp increase in non-performing loans. Idiosyncratic failures of financial institutions with consequences for the entire financial system could materialise.
- **Instability and pockets of illiquidity in financial markets:** Among the risks in this connection are (i) disorderly asset price adjustments with widespread market malfunctioning; (ii) destabilising levels of volatility affecting more leveraged positions in particular and leading to significantly tighter financial conditions; (iii) large-scale fire-sales triggered for instance by widespread rating downgrades; and (iv) disruptions with strong contagion to the whole financial system.
- **Re-emergence of sovereign financing risk and debt sustainability concerns:** Risks in this regard are (i) increased indebtedness of the public sector generating widespread concerns about sovereign debt sustainability and financing risk; (ii) some EU issuers losing market access; and (iii) elevated moral hazard with strong contagion and feedback loops affecting national financial institutions.

In addition, the General Board took note of the risks to financial stability which might result from climate change and from disruptions to critical financial infrastructures.



2.2 ECB risk assessment

The four systemic vulnerabilities identified by the ECB in its latest (November 2020) **Financial Stability Review**¹⁶ as representing the most material threats to the stability of the EU financial sector in the fourth quarter of 2020 consist of:

- **Growing vulnerability of asset prices to correction:** The re-emergence of risk-taking and some stretched asset prices raise the risk of market corrections.
- **Rising debt servicing challenges for firms, households and sovereigns:** The coronavirus pandemic, and its impact on macroeconomic prospects as well as sovereign, corporate and household balance sheets, continues to dominate the outlook for euro area financial stability. Near-term financial stability risks are contained by massive policy support, but a premature end to schemes could challenge corporates and households.
- **Further weakening of bank profitability amid higher credit losses:** Medium-term vulnerabilities have increased with rising debt burdens and signs of an adverse sovereign-corporate-bank feedback loop emerging. Euro area banks, which have been resilient so far, face a combination of growing asset quality concerns, persistent structural problems and ongoing pressures on profitability.
- **Increasing credit and liquidity risk of non-banks amid renewed risk-taking.**

2.3 EBA Risk Dashboard

The EBA's Risk Dashboard relating to the third quarter of 2020 was published on 13 January 2021¹⁷ and summarises the evolution of risks in its five main categories as:

Asset quality:

- Risk level previous Risk Dashboard: High.
- Risk level current Risk Dashboard: High.
- Short-term outlook: Increasing.

Market risk:

- Risk level previous Risk Dashboard: High.

¹⁶ See "**Financial Stability Review**", ECB, November 2020.

¹⁷ See "**EBA Risk Dashboard**", for data as of Q3 2020, EBA, January 2021.



- Risk level current Risk Dashboard: High.
- Short-term outlook: Stable.

Liquidity and funding:

- Risk level previous Risk Dashboard: Medium.
- Risk level current Risk Dashboard: Medium.
- Short-term outlook: Stable.

Profitability:

- Risk level previous Risk Dashboard: High.
- Risk level current Risk Dashboard: High.
- Short-term outlook: Increasing.

Operational resilience:

- Risk level previous Risk Dashboard: Medium.
- Risk level current Risk Dashboard: Medium.
- Short-term outlook: Stable.

The Risk Dashboard summarises the development as follows:

Capital ratios continued their rise in Q3 2020. Due to a further increase in capital and contraction in risk weighted assets, the CET1 ratio grew by 40bps to 15.1% on a fully loaded basis. The growth in capital was not least supported by a slightly rising share of retained earnings in own funds. The dispersion, as reflected in the 5th and 95th percentile, widened for the CET1 fully loaded ratio. The leverage ratio (on a fully phased in definition of Tier 1 capital) similarly increased from 5.2% in Q2 to 5.5% in Q3. The rise in the leverage ratio reverted its sudden contraction in Q1.

A further deterioration in asset quality is not yet reflected in Q3 data. The non-performing loan (NPL) ratio continued its decline, from 2.9% in Q2 to 2.8% in Q3, supported by a contraction in the NPL volume and rising total loans and advances. The forborne loan (FBL) ratio remained unchanged at 2%. The FBL volume rose by around 2.5% QoQ. The share of stage 2 loans in total loans (at amortised cost) slightly contracted in Q3 by 20bps to 8%. At the same time the share of stage 1 loans increased by 20bps, whereas the share of stage 3 loans remained unchanged. The most significant change of coverages ratios was for stage 2 loans (up from 3.8% to 4.1%), whereas it remained the same for stage 1 (0.2%) and contracted by 10bps to 46.6% for stage 3 loans.

Loans under non-expired moratoria declined from around EUR 810bn in Q2 to around EUR 587bn in Q3. During the same period the volume of loans with expired moratoria increased from EUR 82bn to EUR 350bn (all referring to EBA-compliant moratoria). The share of stage 2 loans under non-expired moratoria increased from 16.7% to 20.2% (17% for exposures with expired



moratoria) in contrast to the declining trend in the share of stage 2 loans (for total loans). Loans under public guarantee schemes increased from around EUR 184bn to EUR 289bn in Q3. For these loans the share of stage 2 loans reached 4.9%. The coverage through public guarantees was nearly 70% for these exposures.

Profitability partially recovered. Return on equity (RoE) increased from 0.5% in Q2 to a still subdued level of 2.5% in Q3. The rise was driven by a contraction in cost of risk (down from 86bps in Q2 to 74bps in Q3). Total net operating income increased slightly, supported mainly by lower losses in net trading income. The share of net trading income in total net operating income rose from -1.5% in Q2 to -0.5%. Net interest income declined (share in total operating income down from 60.3% to 59.8%) and net fee and commission income remained roughly unchanged (20bps down to 30.2%). The cost to income ratio declined from 66.6% to 64.7% in Q3. The decrease was mainly supported by the decline of the numerator.

The loan to deposit ratio further declined from 116% to 113.6% driven by strongly rising client deposits. The asset encumbrance ratio increased from 27.5% to 27.9%. The liquidity coverage ratio (LCR) again rose to new heights, reaching 171.3%, up from 166% in Q2

