ESRB
European Systemic Risk Board
European System of Financial Supervision

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Adverse macro-financial scenario for the EBA 2016 EU-wide bank stress testing exercise

The European Banking Authority (EBA) 2016 EU-wide stress testing exercise will require banks to use the presented outcome of the adverse macro-financial scenario for variables such as GDP, inflation, unemployment, asset prices and interest rates in order to estimate the potential adverse impact on profit generation and capital. The adverse scenario covers three years, starting from the first quarter of 2016, when the shocks are assumed to materialise, and ending in 2018.

1. Main risks to stability of the EU financial sector

The narrative of the adverse scenario reflects the four systemic risks identified by the ESRB General Board as representing the most material threats to the stability of the EU financial sector:

1. an abrupt reversal of compressed global risk premia, amplified by low secondary market liquidity;
2. weak profitability prospects for banks and insurers in a low nominal growth environment, amid incomplete balance sheet adjustments;
3. rising of debt sustainability concerns in the public and non-financial private sectors, amid low nominal growth;
4. prospective stress in a rapidly growing shadow banking sector, amplified by spillover and liquidity risk.

In the adverse scenario, the first systemic risk, assessed to be the most significant of the four, materialises through a change in investor preferences in the developed financial markets and, most notably, in the United States, with an increasing aversion to holding long-term fixed income securities. This induces a portfolio reallocation towards short-term instruments, causing a rise in US long-term risk-free interest rates and risk premia across all financial asset classes. The increases are amplified by limited secondary market liquidity. A protracted period of global financial market uncertainty would follow, leading to a confidence-driven contraction of domestic demand in emerging markets, in line with country-specific vulnerabilities.

The first systemic risk acts as a trigger for the vulnerabilities related to the remaining three sources of risk. In the EU this would lead, in particular, to a weakening of domestic demand, a

decline in property prices and a renewed widening of sovereign credit spreads, as well as to a sell-off by the shadow banking sector that would amplify the shocks to financial asset prices in the EU.

2. Macro-financial shocks driving the outcome of the adverse scenario

Specific macro-financial shocks that are assumed to materialise under each of the parts of the scenario are presented in Table 1.

Table 1: Main financial stability risks and assumed financial and economic shocks

Source of risk	Financial and economic shocks
An abrupt reversal of compressed global risk premia, amplified by low secondary market liquidity	- Rising long-term interest rates and risk premia in the United States and other non-EU advanced economies - Global equity price shock - Increase in the VIX volatility index and spillover to emerging market economies - Foreign demand shocks in the EU via weaker world trade - Exchange rate shocks - Oil and commodity price shocks
Weak profitability prospects for banks and insurers in a low nominal growth environment, amid incomplete balance sheet adjustments	- Investment and consumption demand shocks in EU countries - Residential and commercial property price shocks in EU countries
Rising of debt sustainability concerns in the public and non-financial private sectors, amid low nominal growth	- Country-specific shocks to sovereign credit spreads - Shocks to corporate credit spreads
Prospective stress in a rapidly growing shadow banking sector, amplified by spillover and liquidity risk	- EU-wide uniform shock to interbank money market rates - Shocks to EU financial asset prices - Shocks to financing conditions in EU countries (via shocks to household nominal wealth and user cost of capital)

Concerning the calibration of the specific shocks, the yields on long-term Treasury securities United States are assumed to rise sharply, deviating by 250 basis points (bps) from the baseline by end-2016. The increased investor risk aversion would affect the prices of European fixed income instruments, and yields on ten-year German sovereign debt would increase by about 80 basis points over the same horizon. The impact on sovereign bond yields would be lasting, so that

German ten-year bond yields would remain some 53 basis points above the baseline levels in 2018 (see Table 2).

In addition, sovereign credit spreads in the euro area would widen, reflecting broadly the market assessment of individual sovereigns' vulnerabilities.[1] Overall, long-term interest rates in the EU would be higher by 71 basis points in 2016, 80 basis points in 2017 and 68 basis points in 2018.

Table 2: Shocks to long-term interest rates in EU countries

	Shocks (basis points)			Baseline (percentages)				Adverse (percentages)		
	2016	2017	2018	2015	2016	2017	2018	2016	2017	2018
Belgium	63	75	61	0.9	1.0	1.2	1.3	1.7	2.0	1.9
Bulgaria	64	83	69	2.4	2.4	2.6	2.7	3.1	3.5	3.4
Czech Republic	79	80	72	0.6	0.7	0.9	1.0	1.5	1.7	1.7
Denmark	56	67	53	0.7	1.0	1.3	1.3	1.6	1.9	1.9
Germany	44	67	53	0.5	0.7	0.9	1.0	1.2	1.6	1.5
Ireland	81	87	74	1.2	1.3	1.5	1.6	2.1	2.4	2.3
Greece	234	162	148	10.0	8.0	8.2	8.3	10.4	9.9	9.8
Spain	98	100	87	1.8	2.0	2.2	2.2	2.9	3.2	3.1
France	55	73	60	0.9	1.1	1.3	1.4	1.6	2.0	2.0
Croatia	65	82	68	3.5	4.0	4.2	4.2	4.6	5.0	4.9
Italy	107	102	89	1.7	1.8	2.0	2.1	2.9	3.0	3.0
Cyprus	68	71	58	4.6	4.1	4.3	4.4	4.8	5.1	5.0
Latvia	56	76	63	0.9	1.1	1.3	1.4	1.7	2.1	2.0
Lithuania	62	72	59	1.4	1.7	1.9	2.0	2.3	2.6	2.6
Luxembourg	52	72	59	0.4	0.5	0.7	0.8	1.0	1.4	1.4
Hungary	210	160	160	3.4	3.4	3.7	3.7	5.5	5.3	5.3
Malta	62	76	62	1.5	1.7	1.9	1.9	2.3	2.6	2.6
Netherlands	54	70	57	0.7	0.9	1.1	1.2	1.4	1.8	1.7
Austria	55	72	58	0.8	1.0	1.2	1.3	1.5	1.9	1.9
Poland	165	158	146	2.7	2.7	2.9	2.9	4.4	4.4	4.4
Portugal	121	111	97	2.4	2.5	2.7	2.8	3.8	3.9	3.8
Romania	119	124	115	3.5	3.8	4.0	4.1	5.0	5.2	5.2
Slovenia	95	100	86	1.7	1.9	2.1	2.2	2.9	3.1	3.0
Slovakia	60	76	63	0.9	0.9	1.1	1.2	1.5	1.9	1.8
Finland	52	70	57	0.7	1.0	1.2	1.2	1.5	1.9	1.8
Sweden	66	80	64	0.7	0.9	1.2	1.2	1.5	2.0	1.9
United Kingdom	50	59	47	1.8	1.9	2.1	2.1	2.4	2.7	2.6
Euro area	**70**	**81**	**68**	**1.2**	**1.4**	**1.6**	**1.6**	**2.1**	**2.4**	**2.3**
European Union	**71**	**80**	**68**	**1.3**	**1.5**	**1.7**	**1.7**	**2.2**	**2.5**	**2.4**

Note: Due to absence of liquid benchmark bonds issued by Estonia paths of long-term interest rates are not provided for this country.

[1] The shocks to sovereign credit spreads have been calibrated on the basis of the daily historical time series starting from 3 August 2012, i.e. since the ECB announcement concerning Outright Monetary Transactions. It takes into account the dependence structure between sovereign credit spreads of individual euro area countries.

Table 3: Exchange rate shocks

(percentage deviations from baseline levels)

	2016	2017	2018
EURCZK	8.4	13.5	13.5
EURHRK	6.3	10.0	10.0
EURHUF	14.5	23.2	23.2
EURPLN	15.0	24.0	24.0
EURRON	5.0	8.0	8.0
EURCHF	-14.2	-22.8	-22.8

Note: positive shocks imply an appreciation of the euro.

Against the backdrop of global financial tensions, bilateral nominal exchange rates of the central and eastern European (CEE) countries against the euro would depreciate sharply, by between 8% and 24% in the course of 2016, corresponding to the historical exchange rate volatilities. Subsequently, these exchange rates would remain stable at the weaker levels for the remainder of the exercise horizon. The increase in bond yields in the CEE countries would be stronger than that observed in the euro area and western European non-euro area countries. At the same time, the Swiss franc would appreciate by 23% against the euro (see Table 3). These exchange rate movements would take place despite the implied strong fundamental misalignment of the respective currencies that would not begin to correct before end-2018.

More generally, the global increase in risk premia has effects well beyond fixed income markets. Global equity prices would decline by 36% by the end of 2016[2]. As a result, and amplified by a sell-off by shadow banking entities,[3] EU stock prices would fall, on an annual basis, by 25% in comparison with the baseline scenario in 2016, followed by a mild recovery that would reduce the average deviation from the baseline scenario to about 16% in 2018 (see Table 4). Commodity prices would also be affected, responding to financial shocks and the expected weakening of global economic growth, with oil prices falling by about 48% in 2016 compared with the baseline projection of about 54 US dollars per barrel, standing at about 44% below baseline levels in 2017 and 2018. Money market rates (three-month interbank offered rates) in all EU countries would rise by about 33 basis points compared with the baseline scenario in 2016, reflecting a higher credit premium. This additional credit premium would decline to 23 basis points in 2017 and 6 basis points in 2018. As monetary policy is assumed to follow the expectations implied by the baseline scenario also under the adverse scenario, this increase should not be interpreted as being driven by monetary policy decisions.

Tighter financing conditions caused by a reduction in the availability of funding from shadow banking entities would contribute directly to a contraction in economic activity. It is assumed that banks would respond by tightening lending standards on loans to the private non-financial sector. This funding shock is represented by country-specific shocks to the cost of corporate credit and loans to households, via an increase in the user cost of capital and a reduction in the financial

[2] The annual average reduction in global stock prices would amount to 22%.

[3] The impact of a shadow banking sell-off was calibrated using simulations, whereby specific shocks were applied to default probabilities of shadow banking entities in order to obtain the response of other asset prices.

wealth of households respectively. The corresponding impact on 2018 GDP is estimated to be limited to about 0.12%.[4]

Table 4: Stock price shocks

(annual average percentage deviations from baseline levels)

	2016	2017	2018
Belgium	-25.5	-24.3	-16.1
Bulgaria	-10.3	-12.4	-8.2
Czech Republic	-23.3	-20.9	-13.9
Denmark	-20.4	-22.0	-14.6
Germany	-24.6	-25.6	-17.0
Estonia	-14.1	-16.9	-11.2
Ireland	-25.6	-25.0	-16.6
Greece	-26.4	-23.6	-15.7
Spain	-26.0	-24.9	-16.6
France	-28.0	-26.5	-17.6
Croatia	-12.1	-14.7	-9.7
Italy	-28.8	-25.3	-16.8
Cyprus	-21.4	-23.1	-15.4
Latvia	-10.0	-10.3	-6.8
Lithuania	-12.2	-15.2	-10.1
Luxembourg	-22.1	-20.7	-13.7
Hungary	-17.4	-19.9	-13.2
Malta	-11.2	-13.8	-9.2
Netherlands	-25.5	-25.5	-16.9
Austria	-30.5	-25.4	-16.9
Poland	-19.4	-19.9	-13.2
Portugal	-24.0	-20.3	-13.5
Romania	-18.6	-22.1	-14.7
Slovenia	-9.8	-12.1	-8.0
Slovakia	-11.4	-13.4	-8.9
Finland	-23.0	-25.4	-16.9
Sweden	-23.9	-24.7	-16.4
United Kingdom	-25.3	-24.6	-16.3
Euro area	**-26.2**	**-25.2**	**-16.7**
European Union	**-25.4**	**-24.7**	**-16.4**

Note: the baseline assumes unchanged stock prices in 2016-18.

[4] This impact was calibrated on the basis of aggregate data on cross-sectorial holdings of debt instruments issued by banks and bank deposits by financial institutions other than banks and insurers. The resulting outflows of funds were translated into an impact on GDP using a Dynamic Stochastic General Equilibrium (DSGE) model, and replicating that impact with shocks to the user cost of capital and household financial wealth.

Finally, swap rates would respond to the increase in money market rates and long-term government bond yields. Depending on the maturity, euro swap rates would increase by between 44 and 58 basis points in 2016 compared with the baseline, and remain elevated until 2018. Detailed paths for swap rates for the US dollar and most EU currencies are presented in the annex.

The increased global uncertainty would reduce global economic growth, notably through confidence and financial spillovers to emerging market economies (EMEs), spanning all major emerging market regions (Asia, Latin America, emerging Europe). The spillovers give rise to a sudden re-assessment of growth expectations in these countries. In turn, sizeable capital outflows from EMEs lead to a reduction in emerging market asset prices, causing domestic demand in these economies to suffer from both tighter financing conditions and business and consumer confidence shocks. This would have an impact on the EU economies through trade channels, as foreign demand for EU exports would be materially reduced.

The estimated impact of the above-mentioned financial and real shocks on economic activity in the countries outside the EU would be sizeable, in particular for EMEs that are also commodity exporters (see Table 5). Cumulative GDP growth in the developed economies would be between 2.5% and 5% lower than under the baseline scenario in 2016-17. By 2018, as the impact of the shocks would begin to wear off, GDP growth rates would approach those projected under the baseline scenario. Among the main emerging economies, the impact would be particularly strong for Brazil, Russia and Turkey, while for China and India total GDP would stand about 4.5% below the baseline projections in 2018. Overall, the demand for EU exports would stand nearly 8% below the baseline projection in 2017 and 6.5% below the baseline in 2018.

The global shocks are also assumed to negatively affect confidence, resulting in country-specific reductions in private consumption and investment in all EU countries. Lower consumer confidence, together with increased risk premia, would additionally cause a slowdown in property market activity, both in the residential and commercial property segments. The exogenous shocks to house prices reflect the country-specific misalignment of house prices with regard to estimated fundamental levels and historical volatility of house prices. These shocks, which overall drive the house prices down by about 6%, are supplemented with a common shock of about 7.5% affecting all EU countries and some country-specific exogenous add-ons[5] calibrated according to the assessment of national competent authorities. Commercial property prices are also affected by a common shock, calibrated in a uniform way for all EU countries at about 7%.

[5] These add-ons were requested for Denmark, Ireland and Slovakia. Overall, these add-ons amount to about 7.5% for Denmark, about 4% for Ireland, and about 11% for Slovakia.

Table 5: Key scenario results for the non-EU economies

(growth rates in percentages, percentage point deviations from baseline level)

Real GDP

	Baseline growth rates (percentages)			Deviations from baseline growth (percentage points)			Adverse growth rates (percentages)			Level deviation from baseline in 2018
	2016	2017	2018	2016	2017	2018	2016	2017	2018	
Advanced economies										
United States	2.8	2.7	2.6	-1.6	-2.4	0.0	1.2	0.3	2.7	-3.9
Japan	1.4	0.5	0.7	-1.7	-1.3	-0.2	-0.4	-0.8	0.5	-3.2
Canada	2.5	2.7	2.6	-1.0	-1.5	0.0	1.4	1.1	2.6	-2.5
Norway	1.1	1.9	1.9	-3.6	-1.6	0.4	-2.4	0.3	2.3	-4.6
Switzerland	1.3	1.4	1.6	-2.1	-2.0	0.0	-0.8	-0.6	1.6	-4.0
Australia and New Zealand	2.5	2.7	2.7	-1.7	-1.4	-0.7	0.8	1.3	2.0	-3.7
Russia	-0.5	1.0	1.5	-7.6	-2.8	0.6	-8.1	-1.8	2.1	-9.7
Turkey	3.2	3.4	3.5	-7.6	-2.5	-0.1	-4.4	0.9	3.4	-9.7
Emerging Asia	5.9	5.8	6.4	-3.9	-1.1	0.2	2.0	4.7	6.5	-4.5
China	6.5	6.2	6.0	-3.1	-1.8	0.1	3.4	4.4	6.1	-4.5
India	7.4	7.5	7.3	-4.6	-0.2	0.0	2.8	7.3	7.3	-4.5
Hong Kong	2.4	2.6	2.8	-4.8	0.3	1.3	-2.4	2.8	4.1	-3.2
Latin America	1.2	2.0	2.5	-4.7	-1.8	0.6	-3.5	0.2	3.1	-5.7
Brazil	-0.5	1.2	1.6	-5.3	-1.6	1.2	-5.9	-0.4	2.8	-5.8
Chile	2.5	3.0	3.2	-5.0	-1.7	0.7	-2.5	1.3	3.9	-5.8
Mexico	2.8	3.0	3.2	-3.1	-2.2	-0.5	-0.3	0.8	2.7	-5.6
Peru	3.3	4.0	4.0	-5.0	-1.7	0.7	-1.7	2.3	4.7	-5.8
Rest of the World	3.8	4.2	4.4	-3.4	-1.7	0.5	0.5	2.5	4.9	-4.3

CPI

	Baseline inflation rates (percentages)			Deviations from baseline inflation rates (percentage points)			Adverse inflation rates (percentages)			Price level deviation from baseline in 2018
	2016	2017	2018	2016	2017	2018	2016	2017	2018	
Advanced economies										
United States	2.1	2.3	2.4	-0.3	-0.7	0.4	1.8	1.6	2.8	-0.6
Japan	0.8	1.7	1.2	-0.3	-0.5	-0.2	0.5	1.2	1.0	-1.0
Canada	1.9	2.3	2.2	-0.3	-0.4	0.0	1.6	1.9	2.2	-0.7
Norway	2.8	2.4	2.0	-2.3	-0.8	0.4	0.5	1.6	2.4	-2.6
Switzerland	0.4	1.0	1.5	-1.1	-1.5	-1.6	-0.7	-0.5	-0.1	-4.1
Australia and New Zealand	2.5	2.3	2.4	-1.0	-1.0	-0.5	1.5	1.4	1.9	-2.4
Russia	8.0	6.0	4.5	-6.5	-3.8	1.0	1.5	2.2	5.5	-8.5
Turkey	7.7	7.5	7.5	-6.9	-3.1	1.8	0.8	4.4	9.3	-7.6
Emerging Asia	3.2	3.4	3.5	-2.5	-1.8	-1.2	0.8	1.5	2.3	-5.2
China	3.0	2.2	2.5	-1.1	-2.0	-1.7	1.9	0.2	0.8	-4.6
India	6.7	5.4	5.1	-1.7	-0.2	0.0	5.0	5.2	5.1	-1.8
Hong Kong	3.5	3.1	3.2	-3.1	-2.0	-1.4	0.4	1.1	1.8	-6.2
Latin America	10.7	9.6	9.0	-4.3	-2.5	-0.1	6.4	7.1	8.9	-6.1
Brazil	5.6	5.2	5.0	-3.0	-2.4	-0.1	2.7	2.8	4.9	-5.1
Chile	3.7	3.0	3.0	-6.7	-3.4	-0.5	-3.1	-0.4	2.5	-10.0
Mexico	3.1	3.0	3.0	-1.6	-2.9	-2.2	1.5	0.1	0.8	-6.4
Peru	2.8	2.1	2.0	-6.7	-3.4	-0.5	-3.9	-1.3	1.6	-10.0
Rest of the World	6.0	5.5	5.0	-2.3	-2.3	-1.0	3.7	3.2	4.0	-5.2

	Foreign demand - level deviation from baseline in percent		
	2016	2017	2018
Euro area	-5.5	-6.7	-5.2
European Union	-6.3	-7.9	-6.5

3. Results for the euro area and European Union

As a combined result of the foreign demand shocks, financial shocks and domestic demand shocks in the EU, the scenario implies a deviation of EU GDP from its baseline level by 3.1% in 2016, 6.3% in 2017 and 7.1% in 2018.[6] The implied EU real GDP growth rates under the adverse scenario over the three years of the exercise amounts to -1.2%, -1.3% and +0.7% respectively (see Table 6).

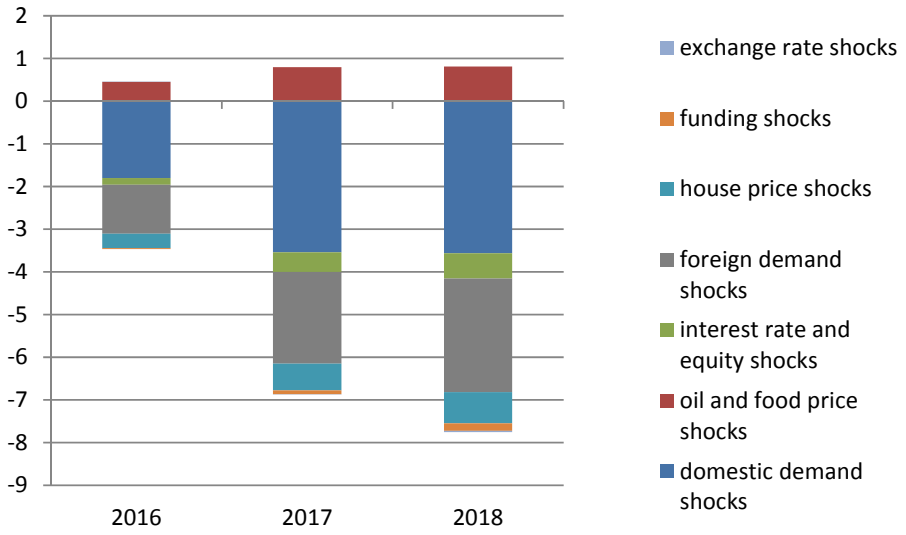
Table 6: GDP growth in EU countries

	Baseline growth rates (percentages)			Deviations (percentage points)			Adverse growth rates (percentages)			Level deviation 2018 (percentages)
	2016	2017	2018	2016	2017	2018	2016	2017	2018	
Belgium	1.3	1.7	1.6	-2.9	-4.0	-1.0	-1.6	-2.3	0.6	-7.6
Bulgaria	1.5	2.0	2.1	-2.9	-5.0	-2.1	-1.5	-3.0	0.0	-9.5
Czech Republic	2.4	2.7	1.8	-4.5	-5.1	-1.4	-2.1	-2.4	0.4	-10.4
Denmark	2.0	1.8	1.8	-4.1	-3.9	0.1	-2.1	-2.0	1.8	-7.6
Germany	1.9	1.9	1.6	-3.5	-3.0	-0.3	-1.6	-1.1	1.3	-6.6
Estonia	2.6	2.6	2.1	-5.5	-5.6	-1.1	-3.0	-3.0	1.0	-11.6
Ireland	4.5	3.5	3.6	-4.6	-4.6	-1.9	-0.1	-1.2	1.7	-10.4
Greece	-1.3	2.7	3.1	-4.4	-5.5	-1.5	-5.7	-2.8	1.6	-10.9
Spain	2.7	2.4	2.0	-2.0	-3.3	-1.8	0.6	-0.8	0.2	-6.7
France	1.4	1.7	1.6	-2.0	-2.7	-1.1	-0.6	-1.1	0.6	-5.6
Croatia	1.4	1.7	1.5	-5.3	-4.3	0.9	-3.9	-2.6	2.4	-8.4
Italy	1.5	1.4	1.7	-1.8	-2.6	-1.7	-0.4	-1.1	0.0	-5.9
Cyprus	1.5	2.0	2.2	-3.2	-3.2	-0.3	-1.7	-1.3	1.9	-6.5
Latvia	3.0	3.3	2.6	-5.0	-7.4	-3.7	-1.9	-4.1	-1.1	-14.8
Lithuania	2.6	3.4	1.7	-5.0	-4.9	0.9	-2.5	-1.5	2.6	-8.6
Luxembourg	3.2	3.0	3.3	-4.3	-3.6	-0.7	-1.1	-0.7	2.6	-8.2
Hungary	2.2	2.5	1.9	-1.7	-2.8	-0.5	0.5	-0.3	1.4	-4.8
Malta	3.6	3.1	2.7	-4.6	-4.6	0.2	-0.9	-1.5	2.9	-8.4
Netherlands	2.1	2.3	1.4	-3.0	-3.9	-1.9	-1.0	-1.6	-0.4	-8.4
Austria	1.5	1.4	1.3	-3.1	-3.7	-1.1	-1.7	-2.3	0.2	-7.6
Poland	3.5	3.5	3.0	-2.6	-4.0	-2.5	0.9	-0.5	0.5	-8.5
Portugal	1.7	1.8	1.6	-3.8	-4.4	-2.2	-2.1	-2.6	-0.6	-9.9
Romania	4.9	3.6	3.1	-7.1	-3.6	-1.1	-2.2	0.0	2.0	-11.0
Slovenia	1.9	2.5	1.3	-4.2	-4.4	-0.2	-2.3	-1.9	1.2	-8.4
Slovakia	2.8	3.3	4.0	-5.3	-7.3	-1.5	-2.5	-4.0	2.5	-13.1
Finland	0.7	1.1	1.6	-3.4	-5.3	0.1	-2.7	-4.1	1.6	-8.3
Sweden	2.8	2.7	2.0	-3.5	-6.1	-4.9	-0.7	-3.4	-2.9	-13.5
United Kingdom	2.4	2.2	1.2	-4.6	-2.9	0.4	-2.2	-0.7	1.6	-6.8
Euro Area	**1.8**	**1.9**	**1.7**	**-2.8**	**-3.2**	**-1.1**	**-1.0**	**-1.3**	**0.6**	**-6.8**
European Union	**2.0**	**2.1**	**1.7**	**-3.2**	**-3.3**	**-1.0**	**-1.2**	**-1.3**	**0.7**	**-7.1**

[6] NiGEM (a global econometric model maintained by the UK National Institute of Economic and Social Research), together with BVAR and GVAR (Bayesian and Global Vector Autoregressive) models, were used to estimate the impact of the scenario on non-EU economies and capture the trade spillovers from the rest of the world to the EU. Intra-EU trade channels are embedded in the stress test elasticities: a multi-country, EU-wide simulation tool based on impulse response functions (from European System of Central Banks – ESCB – central bank models). This tool is used to translate exogenous shocks to domestic demand, house prices, financial asset prices, interest rates and foreign demand in individual EU countries into a consistent macro-financial scenario.

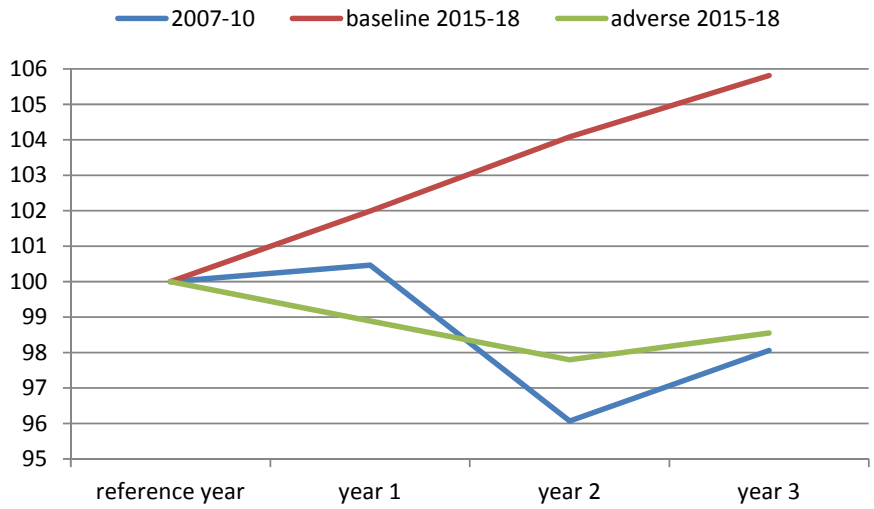
The major part of the impact on GDP is driven by the domestic demand factors, namely the exogenously set reductions in consumption and investment, which collectively reduce EU real GDP by about 3.6% compared with the baseline by 2018 (see Chart 1). Assumed shocks to foreign demand contribute a further 2.7% to the total 2018 deviation of EU GDP from the baseline. The combined impact of interest rate, house price and stock price shocks is somewhat weaker. The positive contribution of lower commodity prices and weaker exchange rates to EU GDP moderates the negative deviation from the baseline by about 0.8%. In combination with substantially lower headline inflation, the impact on nominal GDP would be particularly pronounced.

Chart 1: Contributions of individual adverse shocks to deviation of real EU GDP from baseline (percentage points)



In a historical perspective, the adverse scenario, leading to a total reduction in EU GDP by 1.7% in 2018 from the 2015 level, is slightly less severe than the 2008-10 period when the EU economy contracted by about 2.0% over three years. The recession considered under the adverse scenario is longer but shallower than the 2008-10 events (see Chart 2).

Chart 2: EU real GDP under the baseline and adverse scenarios in a historical perspective



Note: Level of real GDP level is normalised to 100 in the reference year.

The Harmonised Index of Consumer Prices (HICP) inflation rate in the EU under the adverse scenario is well below the baseline scenario, by -2.0 p.p. in 2016, -1.9 p.p. in 2017 and -2.1 p.p. in 2018 (see Table 7). Following a sharp reduction in energy and food commodity prices in early 2016, under the adverse scenario HICP inflation would reach -0.9% in 2016. Prices would fall slightly in 2017 and 2018, with annual inflation rates of -0.2% and -0.2% respectively.

The projected inflation is initially driven by much lower commodity prices, which explain a large majority of the deviation of HICP inflation rate from the baseline scenario in 2016. Over time, the deviation is increasingly explained by the impact on prices of weaker aggregate demand, both domestic and foreign.

Table 7: HICP inflation in EU countries

	Baseline inflation rate (percentages)			Deviations (percentage points)			Adverse inflation rate (percentages)			Price level deviation 2018 (percentages)
	2016	2017	2018	2016	2017	2018	2016	2017	2018	
Belgium	1.7	1.5	1.5	-1.9	-3.2	-2.4	-0.2	-1.7	-0.9	-7.2
Bulgaria	0.7	1.1	1.8	-2.2	-1.7	-1.2	-1.5	-0.6	0.6	-5.0
Czech Republic	1.0	1.6	1.9	-0.7	-2.0	-4.3	0.2	-0.4	-2.4	-6.8
Denmark	1.5	1.9	2.1	-1.8	-1.3	-1.3	-0.3	0.6	0.8	-4.3
Germany	1.0	1.7	2.1	-2.4	-2.2	-2.6	-1.3	-0.5	-0.5	-6.8
Estonia	1.8	2.9	3.3	-3.7	-4.0	-3.0	-1.9	-1.1	0.2	-10.1
Ireland	1.4	1.6	1.5	-0.9	-1.6	-1.1	0.6	0.0	0.4	-3.5
Greece	1.0	0.9	1.0	-1.8	-4.0	-5.5	-0.8	-3.1	-4.5	-10.8
Spain	0.7	1.2	1.6	-2.6	-0.8	-0.6	-1.9	0.5	1.0	-3.9
France	0.9	1.3	1.6	-1.5	-0.8	-0.5	-0.5	0.5	1.0	-2.7
Croatia	0.9	1.7	2.2	0.7	-1.7	-2.8	1.6	0.0	-0.6	-3.7
Italy	1.0	1.9	2.8	-1.1	-1.7	-2.5	-0.1	0.3	0.3	-5.1
Cyprus	0.6	1.3	1.5	-3.0	-1.5	-1.4	-2.5	-0.2	0.1	-5.7
Latvia	1.4	2.1	2.0	-3.1	-4.7	-4.6	-1.7	-2.6	-2.6	-11.7
Lithuania	0.6	2.2	2.6	-1.9	-2.5	-1.9	-1.3	-0.3	0.7	-6.0
Luxembourg	1.7	1.7	1.7	-3.2	-0.7	-0.5	-1.5	1.0	1.2	-4.3
Hungary	1.9	2.5	2.4	-2.5	-0.8	-0.7	-0.6	1.8	1.6	-3.9
Malta	1.8	2.2	2.1	-1.8	-1.6	-3.3	0.1	0.6	-1.2	-6.4
Netherlands	1.2	1.5	1.7	-1.3	-0.9	-1.9	-0.1	0.6	-0.2	-4.0
Austria	1.8	2.0	2.1	-3.3	-0.9	-1.0	-1.5	1.1	1.1	-5.0
Poland	1.4	1.9	2.1	-1.1	-1.4	-3.5	0.2	0.5	-1.3	-5.8
Portugal	1.1	1.3	1.6	-2.4	-3.2	-2.6	-1.3	-1.9	-1.0	-7.9
Romania	-0.3	2.3	2.3	-2.2	-4.0	-5.4	-2.5	-1.7	-3.1	-10.9
Slovenia	0.8	1.4	1.3	-2.6	-3.5	-2.7	-1.8	-2.1	-1.4	-8.5
Slovakia	1.0	1.6	1.5	-1.9	-3.7	-4.9	-0.8	-2.2	-3.4	-10.0
Finland	0.6	1.5	2.4	-2.7	-3.7	-4.9	-2.1	-2.2	-2.6	-10.8
Sweden	1.5	1.7	1.8	-5.3	-2.0	-1.2	-3.9	-0.3	0.6	-8.2
United Kingdom	1.5	1.7	1.9	-2.0	-3.0	-3.0	-0.6	-1.3	-1.1	-7.7
Euro Area	**1.0**	**1.6**	**1.9**	**-1.9**	**-1.7**	**-1.9**	**-0.9**	**-0.1**	**0.1**	**-5.3**
European Union	**1.1**	**1.6**	**2.0**	**-2.0**	**-1.9**	**-2.1**	**-0.9**	**-0.2**	**-0.2**	**-5.8**

The adverse scenario implies a substantial increase in the EU unemployment rate, instead of a slight reduction expected under the baseline scenario. The EU unemployment rate would reach 11.6% in 2018, some 2.8 percentage points higher than the baseline (see Table 8).

Residential property prices in the EU would fall, reflecting the assumed exogenous shocks as well as their reaction to the general deterioration in the economic outlook. Overall, EU residential property prices would stand about 21.3% below the baseline levels by 2018 (see Table 9), having contracted by about 10.7% from the 2015 levels.

Commercial property prices, similar to residential property prices, would deviate downwards from the levels consistent with the baseline economic projections. By 2018, prime commercial property prices would contract by about 15% from their 2015 levels, and stand about 23% below the baseline projections (see Table 10).

Table 8: Unemployment rate in EU countries

	Baseline unemployment rate (percentages)			Deviations (percentage points)			Adverse unemployment rate (percentages)		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Belgium	8.4	7.9	7.7	0.4	2.3	4.2	8.8	10.2	11.9
Bulgaria	9.4	8.8	8.7	0.3	1.5	2.3	9.7	10.3	11.0
Czech Republic	5.0	4.8	4.9	0.4	1.2	1.4	5.4	6.0	6.3
Denmark	5.8	5.5	5.5	1.4	4.2	5.3	7.2	9.7	10.8
Germany	4.9	5.2	5.4	0.5	1.3	1.9	5.4	6.5	7.3
Estonia	6.5	7.6	7.8	1.7	4.8	5.0	8.2	12.4	12.8
Ireland	8.7	7.9	8.1	1.0	3.2	4.6	9.7	11.1	12.7
Greece	25.8	24.4	23.0	0.9	2.1	2.8	26.7	26.5	25.8
Spain	20.5	19.0	18.2	0.8	2.3	3.3	21.3	21.3	21.5
France	10.4	10.2	10.1	0.1	0.4	0.9	10.5	10.6	11.1
Croatia	15.6	14.7	13.8	1.0	3.1	4.0	16.6	17.8	17.8
Italy	11.8	11.6	11.3	0.3	1.2	2.2	12.1	12.8	13.5
Cyprus	14.5	13.2	11.9	0.8	2.1	2.6	15.3	15.3	14.5
Latvia	9.5	8.8	9.7	1.4	4.3	6.5	10.9	13.1	16.2
Lithuania	8.6	8.1	9.0	0.2	0.5	0.5	8.8	8.6	9.5
Luxembourg	5.8	5.8	5.9	0.1	0.6	1.2	5.9	6.4	7.1
Hungary	6.7	6.2	6.3	0.1	0.8	1.1	6.8	7.0	7.4
Malta	5.7	5.8	5.7	0.0	0.8	1.0	5.7	6.6	6.7
Netherlands	6.6	6.3	6.3	0.3	2.2	4.3	6.9	8.5	10.6
Austria	6.1	6.0	5.9	0.6	1.1	1.7	6.7	7.1	7.6
Poland	7.2	6.8	7.0	0.8	3.8	6.1	8.0	10.6	13.1
Portugal	11.7	10.8	11.0	0.7	2.5	4.2	12.4	13.3	15.2
Romania	6.6	6.5	6.5	0.8	1.6	1.7	7.4	8.1	8.2
Slovenia	9.2	8.7	8.3	1.6	3.3	4.6	10.8	12.0	12.9
Slovakia	10.5	9.6	9.7	0.9	3.1	4.6	11.4	12.7	14.3
Finland	9.5	9.4	9.1	1.1	1.4	1.4	10.6	10.8	10.5
Sweden	7.7	7.4	7.4	0.5	2.7	5.2	8.2	10.1	12.6
United Kingdom	5.4	5.5	5.7	2.1	3.5	3.9	7.5	9.0	9.6
Euro area	**10.6**	**10.3**	**10.1**	**0.4**	**1.4**	**2.3**	**11.0**	**11.7**	**12.4**
European Union	**9.2**	**8.9**	**8.9**	**0.7**	**1.9**	**2.8**	**9.9**	**10.8**	**11.6**

In comparison with the adverse scenario of the 2014 EU-wide stress testing exercise,[7] this scenario would result at the end of the horizon in a similarly-sized deviation from baseline of EU GDP level (-7.1% compared with -7.0% in the 2014 exercise) and a much stronger deviation of the price level (-5.8% and -2.8% respectively) from the baseline. The impact on GDP is driven primarily by more severe domestic demand shocks, as foreign demand shocks are less severe than in the 2014 scenario and lower commodity prices stimulate growth in the EU economy. Owing to a more favourable baseline projection than in the 2014 exercise, GDP over the three-year horizon falls by -1.7% in the adverse scenario, which is slightly higher than the -2.1% assumed in the 2014 exercise. Consumer prices fall by 1.3% over the horizon in the adverse scenario, while they were assumed to increase by 1.7% in the 2014 exercise.

[7] See ESRB (2014), *EBA/SSM stress test: The macroeconomic adverse scenario*, 17 April, available at https://www.eba.europa.eu/documents/10180/669262/2014-04-29_ESRB_Adverse_macroeconomic_scenario_-_specification_and_results_finall_version.pdf

The impact of both scenarios on the EU unemployment rate and residential property prices is similar. The change in residential property prices over the horizon, however, is somewhat less adverse in this scenario (-10.7%) than in the 2014 exercise (-15.4%), again owing to a substantially more favourable baseline. As the impact of this scenario on commercial property prices is stronger than that assumed in the 2014 exercise, the change over the horizon is also more adverse (-15.0%, compared to -8.3% in 2014).

Table 9: Residential property prices in EU countries

	Baseline inflation rate (percentages)			Deviations (percentage points)			Adverse inflation rate (percentages)			Price level deviation 2018 (percentages)
	2016	2017	2018	2016	2017	2018	2016	2017	2018	
Belgium	0.6	1.7	2.4	-10.7	-6.5	-4.5	-10.1	-4.8	-2.1	-20.0
Bulgaria	-1.4	-1.0	1.0	-9.7	-7.6	-7.0	-11.1	-8.6	-6.0	-22.5
Czech Republic	5.3	5.7	5.1	-15.3	-9.3	-3.6	-10.0	-3.6	1.4	-24.7
Denmark	4.9	4.8	5.0	-15.6	-9.0	-5.1	-10.7	-4.2	-0.1	-26.0
Germany	5.6	6.3	5.7	-10.9	-6.8	-4.3	-5.4	-0.5	1.4	-19.5
Estonia	6.0	5.0	4.5	-11.0	-13.9	-11.7	-5.0	-8.9	-7.2	-30.9
Ireland	8.7	6.3	7.0	-10.7	-7.3	-8.0	-2.0	-1.0	-1.0	-22.3
Greece	-2.3	3.6	0.8	-10.7	-8.0	-6.0	-13.0	-4.5	-5.2	-22.8
Spain	7.5	7.8	7.1	-13.0	-8.5	-6.4	-5.5	-0.7	0.6	-23.8
France	0.5	1.5	2.3	-9.1	-5.8	-3.8	-8.7	-4.3	-1.5	-17.4
Croatia	1.2	3.1	3.9	-9.1	-8.6	-9.4	-7.9	-5.4	-5.5	-24.1
Italy	2.0	4.1	5.9	-11.6	-6.2	-4.4	-9.6	-2.1	1.5	-20.2
Cyprus	3.4	5.0	4.5	-9.8	-5.7	-3.8	-6.4	-0.7	0.7	-17.6
Latvia	4.1	4.5	3.2	-10.8	-6.3	-5.2	-6.7	-1.9	-2.0	-20.0
Lithuania	2.9	7.7	5.8	-12.4	-14.3	-8.5	-9.5	-6.6	-2.7	-29.9
Luxembourg	5.8	5.7	7.3	-15.4	-11.7	-6.9	-9.6	-6.0	0.4	-28.9
Hungary	6.1	7.1	5.1	-11.3	-6.2	-3.8	-5.2	0.9	1.4	-18.9
Malta	9.7	8.6	6.2	-11.2	-11.6	-10.7	-1.4	-3.0	-4.5	-27.9
Netherlands	6.0	5.9	5.9	-9.9	-7.2	-7.4	-3.9	-1.3	-1.5	-21.4
Austria	2.3	2.9	3.2	-15.0	-8.9	-3.3	-12.7	-6.1	-0.1	-24.6
Poland	4.2	4.5	4.8	-10.0	-8.6	-13.6	-5.8	-4.1	-8.8	-27.8
Portugal	4.7	4.5	4.2	-12.0	-7.9	-5.4	-7.3	-3.4	-1.2	-22.4
Romania	3.7	6.9	6.6	-13.6	-14.0	-11.6	-9.9	-7.1	-5.0	-32.7
Slovenia	4.2	6.4	5.2	-11.9	-7.7	-5.4	-7.6	-1.3	-0.3	-22.1
Slovakia	4.7	6.7	7.4	-10.4	-10.7	-11.4	-5.7	-4.0	-4.0	-27.6
Finland	1.7	2.9	4.8	-12.3	-7.2	-0.5	-10.6	-4.3	4.3	-18.6
Sweden	4.8	3.6	2.6	-24.0	-16.3	-6.1	-19.2	-12.7	-3.5	-38.9
United Kingdom	4.5	3.9	2.0	-11.3	-7.1	-3.5	-6.8	-3.2	-1.5	-19.8
Euro Area	**3.7**	**4.6**	**4.9**	**-11.0**	**-6.9**	**-4.8**	**-7.3**	**-2.3**	**0.1**	**-20.2**
European Union	**3.9**	**4.5**	**4.3**	**-11.6**	**-7.4**	**-4.9**	**-7.7**	**-2.9**	**-0.6**	**-21.3**

Table 10: Prime commercial property prices in EU countries

	Baseline inflation rate (percentages)			Deviations (percentage points)			Adverse inflation rate (percentages)			Price level deviation 2018 (percentages)
	2016	2017	2018	2016	2017	2018	2016	2017	2018	
Belgium	-1.1	-1.0	-0.8	-4.1	-5.8	-0.8	-5.2	-6.8	-1.5	-10.4
Bulgaria	-1.0	-1.4	1.3	-8.2	-9.4	-8.3	-9.2	-10.8	-7.0	-23.9
Czech Republic	-0.2	-0.2	-0.6	-9.5	-9.9	-1.7	-9.7	-10.1	-2.3	-19.8
Denmark	2.9	2.9	3.4	-12.3	-10.8	-10.0	-9.4	-7.8	-6.6	-28.8
Germany	4.7	6.0	6.1	-8.2	-11.4	-4.6	-3.6	-5.5	1.4	-21.4
Estonia	4.7	2.1	3.1	-10.4	-15.2	-11.7	-5.8	-13.1	-8.6	-32.1
Ireland	6.1	2.9	3.3	-9.8	-11.5	-11.5	-3.7	-8.6	-8.2	-28.4
Greece	-2.3	2.8	1.0	-8.5	-9.6	-9.4	-10.9	-6.8	-8.4	-24.9
Spain	3.6	3.5	3.0	-6.8	-7.8	-2.8	-3.2	-4.4	0.3	-16.0
France	2.7	3.4	3.5	-4.5	-7.7	-7.4	-1.7	-4.4	-3.9	-17.9
Croatia	0.7	1.5	1.9	-7.3	-8.5	-9.7	-6.6	-7.0	-7.8	-23.1
Italy	2.1	3.8	5.0	-9.9	-10.4	-3.2	-7.8	-6.6	1.8	-21.2
Cyprus	-0.7	5.9	2.8	-8.4	-9.9	-8.3	-9.1	-4.0	-5.5	-23.7
Latvia	3.2	1.6	1.3	-9.1	-9.7	-9.1	-5.9	-8.1	-7.8	-25.0
Lithuania	3.8	4.3	2.0	-10.2	-13.3	-8.7	-6.4	-9.0	-6.8	-28.1
Luxembourg	4.4	3.9	4.7	-10.6	-9.4	-8.5	-6.2	-5.5	-3.9	-25.0
Hungary	2.9	3.0	2.2	-8.1	-9.7	-4.7	-5.2	-6.6	-2.5	-20.4
Malta	5.8	2.8	2.3	-8.6	-9.8	-9.4	-2.7	-7.1	-7.1	-24.6
Netherlands	5.2	5.4	5.0	-10.5	-12.0	-12.6	-5.4	-6.6	-7.6	-29.8
Austria	0.6	0.7	0.8	-6.7	-9.0	-8.8	-6.0	-8.3	-8.0	-22.4
Poland	8.2	5.5	-0.4	-4.5	-9.9	-13.5	3.8	-4.4	-13.9	-24.9
Portugal	3.8	3.6	3.4	-8.7	-9.6	-5.4	-4.9	-5.9	-2.0	-21.2
Romania	0.5	3.2	3.5	-9.7	-10.1	-9.6	-9.2	-6.9	-6.1	-26.1
Slovenia	-1.7	-3.1	3.3	-10.4	-6.9	-6.7	-12.1	-10.0	-3.3	-22.3
Slovakia	1.7	3.7	4.0	-10.1	-13.8	-13.1	-8.4	-10.1	-9.1	-31.7
Finland	0.9	1.0	2.8	-9.1	-6.8	-5.4	-8.3	-5.8	-2.7	-19.6
Sweden	3.0	2.6	1.5	-14.7	-13.0	-6.5	-11.7	-10.4	-5.0	-29.9
United Kingdom	1.5	-0.3	0.4	-12.3	-10.9	-11.2	-10.8	-11.2	-10.8	-30.4
Euro area	**3.1**	**4.0**	**4.2**	**-7.6**	**-9.6**	**-5.6**	**-4.5**	**-5.7**	**-1.5**	**-20.4**
European Union	**2.9**	**3.2**	**3.3**	**-8.6**	**-10.0**	**-6.8**	**-5.6**	**-6.7**	**-3.5**	**-22.6**

Annex: Swap rates projections for EU currencies and the US dollar

			Baseline (percentages)			Deviation from baseline (basis points)			Adverse (percentages)		
		2015	2016	2017	2018	2016	2017	2018	2016	2017	2018
EUR	3M	0.0	-0.1	0.0	0.0	33	23	6	0.3	0.3	0.1
	6M	0.0	0.0	0.1	0.1	37	30	13	0.4	0.4	0.3
	1Y	0.0	0.1	0.3	0.4	44	45	27	0.5	0.7	0.6
	2Y	0.1	0.1	0.3	0.4	47	40	19	0.6	0.7	0.6
	3Y	0.1	0.3	0.6	0.7	55	53	29	0.8	1.1	1.0
	5Y	0.4	0.5	0.8	1.0	55	49	24	1.1	1.3	1.2
	7Y	0.6	0.8	1.2	1.3	58	55	30	1.4	1.7	1.6
	10Y	0.9	1.2	1.5	1.6	54	48	24	1.7	2.0	1.8
	20Y	1.3	1.7	1.9	2.0	51	48	26	2.2	2.4	2.3
	30Y	1.4	1.7	1.9	2.0	47	41	20	2.1	2.3	2.2
USD	3M	-	-	-	-	-	-	-	-	-	-
	6M	-	-	-	-	-	-	-	-	-	-
	1Y	0.5	1.1	2.0	3.0	42	63	51	1.5	2.7	3.5
	2Y	0.9	1.5	2.4	3.3	84	127	101	2.3	3.7	4.3
	3Y	1.2	1.8	2.8	3.6	112	168	134	2.9	4.4	5.0
	5Y	1.6	2.3	3.1	3.9	135	203	163	3.6	5.2	5.6
	7Y	1.9	2.5	3.3	4.1	142	213	170	4.0	5.5	5.8
	10Y	2.2	2.8	3.5	4.2	144	216	173	4.2	5.7	5.9
	20Y	2.5	3.1	3.7	4.3	141	212	169	4.5	5.9	5.9
	30Y	2.6	3.2	3.8	4.3	140	210	168	4.6	5.9	6.0
GBP	3M	0.6	0.7	1.1	1.2	33	23	6	1.1	1.3	1.3
	6M	0.6	0.8	1.1	1.3	32	23	8	1.1	1.4	1.3
	1Y	0.8	0.9	1.2	1.3	30	24	11	1.2	1.4	1.4
	2Y	1.0	1.1	1.3	1.4	35	33	20	1.4	1.7	1.6
	3Y	1.2	1.3	1.5	1.5	37	38	26	1.6	1.9	1.8
	5Y	1.5	1.5	1.7	1.8	37	39	28	1.9	2.1	2.1
	7Y	1.7	1.7	1.9	2.0	33	36	27	2.1	2.3	2.2
	10Y	1.9	1.9	2.1	2.1	29	32	24	2.2	2.4	2.4
	20Y	2.1	2.1	2.1	2.2	22	27	20	2.3	2.4	2.4
	30Y	2.2	2.2	2.2	2.2	19	22	17	2.4	2.4	2.4
CZK	3M	0.3	0.2	0.3	0.3	33	23	6	0.5	0.5	0.4
	6M	0.3	0.2	0.3	0.3	35	25	8	0.5	0.5	0.4
	1Y	0.3	0.1	0.2	0.2	38	29	12	0.5	0.5	0.4
	2Y	0.3	0.2	0.3	0.4	42	34	19	0.6	0.7	0.5
	3Y	0.4	0.3	0.4	0.4	44	36	22	0.7	0.7	0.6
	5Y	0.5	0.4	0.5	0.6	44	37	24	0.9	0.9	0.8
	7Y	0.7	0.6	0.7	0.7	42	36	24	1.0	1.1	1.0
	10Y	0.9	0.9	1.0	1.0	40	35	24	1.3	1.3	1.2
	20Y	1.3	1.4	1.4	1.5	30	26	18	1.7	1.7	1.7
	30Y	1.4	1.4	1.5	1.5	29	25	17	1.7	1.7	1.7
DKK	3M	-0.1	0.1	0.3	0.5	33	23	6	0.5	0.6	0.5
	6M	0.0	0.2	0.4	0.5	34	25	8	0.5	0.6	0.6
	1Y	0.1	0.2	0.4	0.6	36	29	12	0.6	0.7	0.7
	2Y	0.2	0.3	0.6	0.7	46	43	26	0.8	1.0	1.0
	3Y	0.3	0.5	0.7	0.8	48	47	31	0.9	1.2	1.1
	5Y	0.6	0.7	0.9	1.0	45	46	32	1.2	1.4	1.4
	7Y	0.8	1.0	1.2	1.3	41	44	31	1.4	1.6	1.6
	10Y	1.2	1.4	1.5	1.6	38	41	30	1.8	2.0	1.9
	20Y	1.6	1.9	2.0	2.1	31	35	26	2.2	2.4	2.4
	30Y	1.6	1.9	2.1	2.1	31	36	27	2.2	2.4	2.4
HRK	3M	1.0	1.0	1.1	1.1	33	23	6	1.3	1.3	1.2
	6M	1.3	1.1	1.2	1.3	37	34	19	1.5	1.6	1.5
	1Y	1.9	1.4	1.5	1.6	46	55	44	1.8	2.1	2.0
	2Y	2.2	1.8	1.9	2.0	34	40	32	2.2	2.3	2.3
	3Y	2.6	2.4	2.5	2.5	34	41	34	2.7	2.9	2.9
	5Y	3.3	3.1	3.1	3.2	22	27	22	3.3	3.4	3.4
	7Y	4.0	4.2	4.2	4.2	6	7	5	4.3	4.3	4.3
	10Y	4.8	4.6	4.6	4.6	0	-1	-2	4.6	4.6	4.6
	20Y	-	-	-	-	-	-	-	-	-	-
	30Y	-	-	-	-	-	-	-	-	-	-
HUF	3M	1.6	1.3	1.5	1.6	33	23	6	1.6	1.7	1.6
	6M	1.6	1.2	1.4	1.5	28	20	6	1.5	1.6	1.5
	1Y	1.6	1.2	1.3	1.4	29	20	9	1.5	1.5	1.5
	2Y	1.7	1.2	1.3	1.3	30	22	15	1.5	1.5	1.5
	3Y	1.8	1.3	1.4	1.5	33	24	18	1.7	1.7	1.6
	5Y	2.2	1.7	1.8	1.9	36	27	22	2.1	2.1	2.1
	7Y	2.5	2.2	2.3	2.3	38	28	24	2.6	2.6	2.5
	10Y	2.9	2.7	2.7	2.8	39	29	26	3.1	3.0	3.0
	20Y	3.1	2.9	3.0	3.0	34	25	20	3.3	3.2	3.2
	30Y	-	-	-	-	-	-	-	-	-	-
PLN	3M	1.7	1.6	1.7	1.8	33	23	6	1.9	1.9	1.8
	6M	1.7	1.7	1.8	1.9	42	31	15	2.1	2.1	2.0
	1Y	1.6	2.0	2.1	2.2	59	48	32	2.6	2.6	2.5
	2Y	1.7	1.9	2.0	2.1	85	75	58	2.7	2.8	2.7
	3Y	1.8	1.9	2.0	2.1	95	85	69	2.9	2.9	2.8
	5Y	2.0	2.1	2.2	2.3	104	94	78	3.1	3.1	3.0
	7Y	2.2	2.3	2.4	2.5	104	95	80	3.3	3.3	3.2
	10Y	2.4	2.5	2.6	2.6	99	91	77	3.5	3.5	3.4
	20Y	2.4	2.5	2.6	2.6	87	80	68	3.4	3.4	3.3
	30Y	2.5	2.5	2.6	2.6	75	68	58	3.3	3.3	3.2
SEK	3M	-0.2	-0.3	0.1	0.2	33	23	6	0.1	0.3	0.3
	6M	-0.2	-0.3	0.0	0.1	31	21	5	0.0	0.2	0.2
	1Y	-0.2	-0.3	0.0	0.1	34	27	12	0.0	0.3	0.2
	2Y	-0.1	-0.3	0.0	0.1	38	34	19	0.1	0.3	0.3
	3Y	0.1	-0.1	0.2	0.3	43	42	27	0.3	0.6	0.6
	5Y	0.5	0.4	0.7	0.8	44	47	33	0.9	1.2	1.1
	7Y	0.9	0.9	1.1	1.2	44	48	34	1.3	1.6	1.6
	10Y	1.3	1.4	1.6	1.7	43	48	35	1.8	2.1	2.0
	20Y	1.6	2.1	2.3	2.4	38	44	33	2.5	2.7	2.7
	30Y	1.9	2.2	2.4	2.5	39	45	34	2.6	2.9	2.8

Notes: three-month and six-month rates refer to interbank money market rates. Other data refer to swap rates.