

II. Euro foreign exchange reference rates of the European Central Bank *

1. End-of-month and daily rates

EUR 1 = CU ...

EU member countries									
	Bulgaria	Czechia	Denmark	Hungary	Poland	Romania	Sweden		
Period	Bulgarian lev BGN	Czech koruna CZK	Danish krone DKK	Hungarian forint HUF	Polish zloty PLN	Romanian leu RON	Swedish krona SEK		
2024 Feb.	1.9558	25.363	7.4540	393.48	4.3208	4.9706	11.2150		
Mar.	1.9558	25.305	7.4580	395.26	4.3123	4.9735	11.5250		
Apr.	1.9558	25.140	7.4583	390.68	4.3178	4.9759	11.7530		
May	1.9558	24.709	7.4588	388.83	4.2645	4.9767	11.4210		
June	1.9558	25.025	7.4575	395.10	4.3090	4.9773	11.3595		
July	1.9558	25.457	7.4621	395.78	4.2908	4.9749	11.6125		
Aug.	1.9558	25.031	7.4589	392.53	4.2763	4.9768	11.3355		
Sep.	1.9558	25.184	7.4560	396.88	4.2788	4.9753	11.3000		
Oct.	1.9558	25.327	7.4601	408.28	4.3508	4.9749	11.6308		
Nov.	1.9558	25.256	7.4579	411.75	4.2960	4.9774	11.5180		
Dec.	1.9558	25.185	7.4578	411.35	4.2750	4.9743	11.4590		
2025 Jan.	1.9558	25.166	7.4618	407.95	4.2130	4.9767	11.4740		
Feb.	1.9558	25.029	7.4583	399.50	4.1503	4.9768	11.1880		
2025 Feb. 10	1.9558	25.073	7.4584	403.88	4.1758	4.9769	11.2765		
11	1.9558	25.101	7.4582	403.90	4.1785	4.9769	11.2525		
12	1.9558	25.075	7.4583	402.63	4.1713	4.9767	11.2895		
13	1.9558	25.057	7.4586	401.78	4.1688	4.9771	11.2815		
14	1.9558	25.043	7.4590	402.95	4.1653	4.9770	11.2445		
17	1.9558	25.056	7.4597	401.73	4.1605	4.9770	11.2160		
18	1.9558	25.098	7.4582	401.54	4.1660	4.9773	11.2115		
19	1.9558	25.101	7.4588	402.13	4.1740	4.9774	11.2140		
20	1.9558	25.073	7.4590	402.08	4.1605	4.9778	11.1660		
21	1.9558	25.082	7.4588	404.60	4.1683	4.9773	11.1425		
24	1.9558	25.062	7.4603	401.69	4.1445	4.9772	11.1530		
25	1.9558	24.939	7.4595	401.20	4.1393	4.9774	11.1455		
26	1.9558	24.948	7.4584	400.30	4.1440	4.9773	11.1430		
27	1.9558	24.987	7.4584	399.43	4.1308	4.9763	11.1590		
28	1.9558	25.029	7.4583	399.50	4.1503	4.9768	11.1880		
Mar. 3	1.9558	25.097	7.4583	400.43	4.1708	4.9773	11.1500		
4	1.9558	25.025	7.4589	398.93	4.1593	4.9769	11.0995		
5	1.9558	25.048	7.4589	398.85	4.1500	4.9758	11.0125		
6	1.9558	25.047	7.4593	400.68	4.1770	4.9754	10.9620		

Other European and non-European countries							
	Australia	Brazil	Canada	China	Hong Kong	Iceland	India
	Australian dollar AUD	Brazilian real BRL	Canadian dollar CAD	Yuan (renminbi) CNY	Hong Kong dollar HKD	Icelandic krona ISK	Indian rupee INR
2024 Feb.	1.6684	5.4054	1.4719	7.7888	8.4735	149.30	89.7458
Mar.	1.6607	5.4032	1.4672	7.8144	8.4594	150.30	90.1365
Apr.	1.6423	5.4928	1.4672	7.7609	8.3817	150.30	89.4155
May	1.6315	5.6418	1.4804	7.8577	8.4838	149.10	90.5255
June	1.6079	5.8915	1.4670	7.7748	8.3594	148.90	89.2495
July	1.6635	6.0874	1.4977	7.8194	8.4589	149.90	90.6250
Aug.	1.6301	6.2155	1.4941	7.8585	8.6455	152.90	92.9485
Sep.	1.6166	6.0504	1.5133	7.8511	8.6933	150.70	93.8130
Oct.	1.6559	6.2635	1.5134	7.7436	8.4598	148.90	91.4930
Nov.	1.6245	6.4361	1.4796	7.6484	8.2211	145.70	89.3245
Dec.	1.6772	6.4253	1.4948	7.5833	8.0686	143.90	88.9335
2025 Jan.	1.6702	6.0677	1.5035	7.5363	8.0990	146.70	89.9945
Feb.	1.6741	6.0712	1.5019	7.5782	8.0980	145.70	90.9710
2025 Feb. 10	1.6448	5.9622	1.4798	7.5395	8.0400	146.60	90.2740
11	1.6442	5.9898	1.4789	7.5440	8.0452	146.60	89.5480
12	1.6525	5.9812	1.4830	7.5794	8.0769	146.40	90.1010
13	1.6591	6.0084	1.4844	7.5817	8.0926	146.80	90.3771
14	1.6514	6.0127	1.4856	7.6141	8.1554	147.30	90.8100
17	1.6456	5.9756	1.4861	7.6066	8.1481	146.90	90.9920
18	1.6466	5.9576	1.4844	7.6056	8.1235	146.70	90.8500
19	1.6419	5.9775	1.4821	7.6017	8.1148	146.30	90.6420
20	1.6382	5.9526	1.4841	7.5807	8.1211	145.70	90.4260
21	1.6394	5.9751	1.4856	7.5933	8.1327	145.70	90.6598
24	1.6434	5.9857	1.4876	7.5879	8.1356	145.10	90.7663
25	1.6538	6.0839	1.4969	7.6219	8.1609	145.70	91.5198
26	1.6622	6.0329	1.5054	7.6125	8.1516	145.30	91.3495
27	1.6638	6.0825	1.5040	7.6127	8.1446	145.50	91.3110
28	1.6741	6.0712	1.5019	7.5782	8.0980	145.70	90.9710
Mar. 3	1.6811	6.1590	1.5104	7.6282	8.1386	145.70	91.3530
4	1.6919	6.2132	1.5224	7.6614	8.2056	146.30	91.9903
5	1.7030	6.2938	1.5398	7.7675	8.3106	146.50	93.0873
6	1.7037	6.2088	1.5509	7.8247	8.3922	146.90	94.0080

* See Explanatory notes, p. 48.

II. Euro foreign exchange reference rates of the European Central Bank *

1. End-of-month and daily rates (cont'd)

EUR 1 = CU ...

Other European and non-European countries (cont'd)									
Period	Indonesia Indonesian rupiah IDR	Israel New shekel ILS	Japan Japanese yen JPY	Korea, Republic of South Korean won KRW	Malaysia Malaysian ringgit MYR	Mexico Mexican peso MXN	New Zealand New Zealand dollar NZD	Norway Norwegian krone NOK	
2024 Feb.	17,038.18	3.8736	162.53	1,447.43	5.1375	18.4969	1.7807	11.4920	
Mar.	17,157.87	3.9799	163.45	1,458.67	5.1168	17.9179	1.8092	11.6990	
Apr.	17,422.11	4.0172	168.27	1,479.67	5.1130	18.1895	1.8035	11.8150	
May	17,641.72	4.0342	170.52	1,501.11	5.1080	18.4387	1.7696	11.3830	
June	17,487.21	4.0200	171.94	1,474.86	5.0501	19.5654	1.7601	11.3965	
July	17,634.43	4.0822	162.76	1,485.96	4.9749	20.3317	1.8289	11.8175	
Aug.	17,180.03	4.0245	161.19	1,478.60	4.7901	21.7581	1.7709	11.6620	
Sep.	16,975.88	4.1491	159.82	1,469.11	4.6167	21.9842	1.7616	11.7645	
Oct.	17,105.85	4.0441	166.30	1,500.05	4.7652	21.8087	1.8220	11.9385	
Nov.	16,753.81	3.8411	158.64	1,476.11	4.6948	21.5370	1.7873	11.6805	
Dec.	16,820.88	3.7885	163.06	1,532.15	4.6454	21.5504	1.8532	11.7950	
2025 Jan.	16,941.21	3.7199	160.99	1,506.62	4.6301	21.4769	1.8391	11.7373	
Feb.	17,228.17	3.7457	156.96	1,519.92	4.6459	21.2191	1.8579	11.7245	
2025 Feb. 10	16,867.63	3.6790	156.92	1,496.81	4.6130	21.2378	1.8257	11.5745	
11	16,897.29	3.7088	157.28	1,500.70	4.6148	21.2848	1.8284	11.5755	
12	16,953.65	3.7259	159.22	1,505.97	4.6354	21.3163	1.8391	11.6620	
13	17,024.53	3.7162	159.79	1,507.52	4.6287	21.4383	1.8447	11.7145	
14	16,980.33	3.7341	160.09	1,509.50	4.6470	21.3146	1.8352	11.6515	
17	16,993.02	3.7239	158.67	1,511.85	4.6437	21.3510	1.8263	11.6415	
18	17,067.58	3.7177	158.55	1,506.32	4.6442	21.1919	1.8338	11.6590	
19	17,081.19	3.6976	158.41	1,504.72	4.6343	21.1954	1.8252	11.6290	
20	17,011.80	3.6986	156.60	1,500.62	4.6262	21.2619	1.8227	11.6090	
21	17,077.52	3.7211	157.46	1,500.16	4.6240	21.2714	1.8186	11.6290	
24	17,044.56	3.7334	156.81	1,494.52	4.6160	21.3703	1.8213	11.6355	
25	17,160.65	3.7569	157.19	1,505.11	4.6449	21.4940	1.8337	11.6638	
26	17,171.68	3.7475	156.70	1,504.35	4.6447	21.4685	1.8419	11.6895	
27	17,238.38	3.7184	156.73	1,511.87	4.6565	21.3501	1.8434	11.7015	
28	17,228.17	3.7457	156.96	1,519.92	4.6459	21.2191	1.8579	11.7245	
Mar. 3	17,216.08	3.7616	158.33	1,526.42	4.6737	21.4253	1.8669	11.6950	
4	17,328.15	3.8177	156.50	1,537.13	4.7153	21.9418	1.8720	11.8080	
5	17,496.99	3.8750	160.09	1,551.65	4.7369	22.0091	1.8832	11.8200	
6	17,670.84	3.9023	159.24	1,563.53	4.7799	22.0272	1.8810	11.7160	

Other European and non-European countries (cont'd)									
Period	Philippines Philippine peso PHP	Singapore Singapore dollar SGD	South Africa South African rand ZAR	Switzerland Swiss franc CHF	Thailand Thai baht THB	Turkey Turkish lira TRY	United Kingdom Pound sterling GBP	United States US dollar USD	
2024 Feb.	60.858	1.4570	20.9007	0.9534	38.909	33.8067	0.85655	1.0826	
Mar.	60.797	1.4587	20.5226	0.9766	39.412	34.9487	0.85510	1.0811	
Apr.	61.830	1.4593	20.0682	0.9787	39.732	34.7045	0.85478	1.0718	
May	63.604	1.4663	20.2927	0.9818	39.925	34.9691	0.85365	1.0852	
June	62.560	1.4513	19.4970	0.9634	39.319	35.1868	0.84638	1.0705	
July	63.218	1.4491	19.7400	0.9533	38.629	35.9085	0.84380	1.0828	
Aug.	62.309	1.4441	19.5358	0.9416	37.541	37.7651	0.84120	1.1087	
Sep.	62.740	1.4342	19.2258	0.9439	36.107	38.2693	0.83543	1.1196	
Oct.	63.364	1.4377	19.1869	0.9412	36.754	37.2680	0.83753	1.0882	
Nov.	61.939	1.4159	19.0777	0.9309	36.217	36.6390	0.83205	1.0562	
Dec.	60.301	1.4164	19.6188	0.9412	35.676	36.7372	0.82918	1.0389	
2025 Jan.	60.682	1.4091	19.3588	0.9449	34.915	37.2655	0.83608	1.0393	
Feb.	60.355	1.4037	19.1917	0.9394	35.567	38.0186	0.82608	1.0411	
2025 Feb. 10	60.011	1.3972	19.0069	0.9396	34.993	37.1484	0.83283	1.0320	
11	60.050	1.3995	19.0894	0.9429	35.220	37.2200	0.83355	1.0324	
12	60.291	1.4031	19.1398	0.9457	35.367	37.4321	0.83338	1.0370	
13	60.312	1.4033	19.2471	0.9421	35.227	37.5150	0.83313	1.0390	
14	60.487	1.4052	19.2555	0.9442	35.238	37.9486	0.83215	1.0478	
17	60.757	1.4050	19.3112	0.9440	35.310	37.9484	0.83133	1.0473	
18	60.846	1.4036	19.2608	0.9425	35.222	37.8958	0.83025	1.0447	
19	60.651	1.4008	19.3298	0.9435	35.157	37.8746	0.82838	1.0434	
20	60.462	1.3966	19.2480	0.9423	35.099	37.9226	0.82823	1.0443	
21	60.640	1.3994	19.2450	0.9420	35.183	38.1023	0.82760	1.0465	
24	60.581	1.4002	19.2037	0.9415	35.066	38.0941	0.82830	1.0466	
25	60.832	1.4047	19.2862	0.9386	35.380	38.2742	0.82908	1.0497	
26	60.733	1.4035	19.2857	0.9392	35.388	38.2126	0.82868	1.0487	
27	60.632	1.4049	19.2947	0.9407	35.522	38.1682	0.82673	1.0477	
28	60.355	1.4037	19.1917	0.9394	35.567	38.0186	0.82608	1.0411	
Mar. 3	60.436	1.4106	19.5068	0.9428	35.691	38.1487	0.82530	1.0465	
4	60.797	1.4151	19.5569	0.9371	35.582	38.4845	0.82788	1.0557	
5	61.383	1.4301	19.7222	0.9514	36.012	38.9615	0.83500	1.0694	
6	61.924	1.4387	19.7579	0.9565	36.399	39.3233	0.83790	1.0796	

* See Explanatory notes, p. 48.

II. Euro foreign exchange reference rates of the European Central Bank *

2. Annual and monthly averages +

EUR 1 = CU ...

EU member countries								
Period	Bulgaria	Czechia	Denmark	Hungary	Poland	Romania	Sweden	
	Bulgarian lev BGN	Czech koruna CZK	Danish krone DKK	Hungarian forint HUF	Polish zloty PLN	Romanian leu RON	Swedish krona SEK	
2023	1.9558	24.004	7.4509	381.85	4.5420	4.9467	11.4788	
2024	1.9558	25.120	7.4589	395.30	4.3058	4.9746	11.4325	
2023 Jan.	1.9558	23.958	7.4383	396.03	4.6974	4.9242	11.2051	
Feb.	1.9558	23.712	7.4447	384.91	4.7415	4.9087	11.1725	
Mar.	1.9558	23.683	7.4456	385.01	4.6893	4.9263	11.2276	
Apr.	1.9558	23.437	7.4518	375.34	4.6320	4.9365	11.3370	
May	1.9558	23.595	7.4485	372.37	4.5345	4.9477	11.3697	
June	1.9558	23.695	7.4492	370.60	4.4608	4.9600	11.6766	
July	1.9558	23.892	7.4508	379.04	4.4431	4.9411	11.6343	
Aug.	1.9558	24.108	7.4522	385.05	4.4601	4.9411	11.8117	
Sep.	1.9558	24.380	7.4566	386.43	4.5981	4.9656	11.8417	
Oct.	1.9558	24.584	7.4604	385.33	4.5124	4.9682	11.6472	
Nov.	1.9558	24.485	7.4581	379.19	4.4020	4.9703	11.5475	
Dec.	1.9558	24.478	7.4556	381.80	4.3335	4.9707	11.2028	
2024 Jan.	1.9558	24.716	7.4572	382.04	4.3648	4.9749	11.2834	
Feb.	1.9558	25.232	7.4550	388.04	4.3256	4.9746	11.2500	
Mar.	1.9558	25.292	7.4566	395.09	4.3069	4.9708	11.3054	
Apr.	1.9558	25.278	7.4596	392.41	4.3026	4.9730	11.5910	
May	1.9558	24.819	7.4606	387.18	4.2796	4.9754	11.6186	
June	1.9558	24.779	7.4592	394.76	4.3209	4.9767	11.2851	
July	1.9558	25.299	7.4606	392.84	4.2817	4.9730	11.5324	
Aug.	1.9558	25.179	7.4614	394.70	4.2917	4.9766	11.4557	
Sep.	1.9558	25.099	7.4600	394.86	4.2761	4.9744	11.3577	
Oct.	1.9558	25.298	7.4593	401.90	4.3170	4.9750	11.4048	
Nov.	1.9558	25.301	7.4583	409.25	4.3317	4.9762	11.5828	
Dec.	1.9558	25.136	7.4589	411.99	4.2704	4.9749	11.5040	
2025 Jan.	1.9558	25.163	7.4609	411.73	4.2467	4.9752	11.4797	
Feb.	1.9558	25.077	7.4592	403.13	4.1722	4.9770	11.2474	

Other European and non-European countries							
Period	Australia	Brazil	Canada	China	Hong Kong	Iceland	India
	Australian dollar AUD	Brazilian real BRL	Canadian dollar CAD	Yuan (renminbi) CNY	Hong Kong dollar HKD	Icelandic krona ISK	Indian rupee INR
2023	1.6288	5.4010	1.4595	7.6600	8.4650	149.13	89.3001
2024	1.6397	5.8283	1.4821	7.7875	8.4454	149.31	90.5563
2023 Jan.	1.5523	5.6047	1.4474	7.3173	8.4217	154.06	88.1441
Feb.	1.5514	5.5386	1.4400	7.3244	8.4077	153.11	88.5004
Mar.	1.6034	5.5784	1.4649	7.3807	8.4026	149.89	88.1159
Apr.	1.6389	5.4995	1.4792	7.5561	8.6093	149.62	89.9311
May	1.6346	5.4092	1.4687	7.5948	8.5167	150.47	89.4602
June	1.6157	5.2695	1.4414	7.7653	8.4899	149.35	89.1134
July	1.6423	5.3099	1.4618	7.9482	8.6437	146.79	90.8395
Aug.	1.6818	5.3427	1.4703	7.9096	8.5370	143.87	90.3518
Sep.	1.6622	5.2770	1.4458	7.7967	8.3640	144.46	88.7372
Oct.	1.6637	5.3509	1.4474	7.7200	8.2648	146.50	87.8937
Nov.	1.6634	5.2963	1.4828	7.8087	8.4380	151.44	90.0102
Dec.	1.6321	5.3428	1.4653	7.7870	8.5152	150.55	90.8009
2024 Jan.	1.6422	5.3569	1.4631	7.8201	8.5244	149.43	90.6347
Feb.	1.6533	5.3559	1.4564	7.7651	8.4432	148.68	89.5608
Mar.	1.6586	5.4157	1.4726	7.8297	8.5049	149.04	90.2515
Apr.	1.6469	5.4975	1.4661	7.7658	8.4006	150.35	89.4676
May	1.6317	5.5529	1.4780	7.8206	8.4458	150.00	90.1573
June	1.6206	5.7884	1.4750	7.8051	8.4023	149.36	89.8106
July	1.6257	6.0053	1.4868	7.8750	8.4684	149.43	90.6557
Aug.	1.6559	6.1193	1.5049	7.8736	8.5849	151.84	92.4062
Sep.	1.6398	6.1528	1.5037	7.8611	8.6528	152.21	93.0808
Oct.	1.6250	6.1195	1.4993	7.7276	8.4726	149.07	91.6266
Nov.	1.6267	6.1729	1.4855	7.6617	8.2699	146.72	89.6717
Dec.	1.6529	6.3843	1.4915	7.6298	8.1459	145.24	89.0453
2025 Jan.	1.6626	6.2408	1.4904	7.5560	8.0605	145.40	89.3418
Feb.	1.6528	6.0053	1.4893	7.5749	8.1031	146.26	90.6346

* See Explanatory notes, p. 48. + Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB.

II. Euro foreign exchange reference rates of the European Central Bank *

2. Annual and monthly averages + (cont'd)

EUR 1 = CU ...

Other European and non-European countries (cont'd)								
Period	Indonesia Indonesian rupiah IDR	Israel New shekel ILS	Japan Japanese yen JPY	Korea, Republic of South Korean won KRW	Malaysia Malaysian ringgit MYR	Mexico Mexican peso MXN	New Zealand New Zealand dollar NZD	Norway Norwegian krone NOK
2023	16,479.62	3.9880	151.99	1,412.88	4.9320	19.1830	1.7622	11.4248
2024	17,157.68	4.0067	163.85	1,475.40	4.9503	19.8314	1.7880	11.6290
2023 Jan.	16,427.04	3.7126	140.54	1,341.38	4.6589	20.4573	1.6851	10.7149
Feb.	16,232.58	3.7975	142.38	1,368.77	4.6794	19.9543	1.7016	10.9529
Mar.	16,364.98	3.8742	143.01	1,398.25	4.7816	19.7242	1.7242	11.2858
Apr.	16,313.20	3.9877	146.51	1,452.07	4.8561	19.8195	1.7673	11.5187
May	16,116.84	3.9863	148.93	1,442.31	4.9119	19.2755	1.7481	11.7330
June	16,194.88	3.9502	153.15	1,406.43	5.0208	18.6993	1.7686	11.7164
July	16,639.99	4.0546	155.94	1,419.16	5.0754	18.7085	1.7758	11.3474
Aug.	16,639.40	4.0861	157.96	1,443.24	5.0294	18.5202	1.8195	11.4127
Sep.	16,424.67	4.0793	157.80	1,424.53	5.0024	18.4757	1.8012	11.4525
Oct.	16,646.67	4.2034	158.04	1,427.33	5.0142	19.0882	1.7916	11.6284
Nov.	16,853.56	4.1118	161.84	1,412.57	5.0667	18.7877	1.8033	11.7958
Dec.	16,910.33	4.0057	157.21	1,423.13	5.0826	18.7665	1.7556	11.5333
2024 Jan.	17,049.43	4.0493	159.46	1,447.18	5.1105	18.6268	1.7673	11.3501
Feb.	16,898.59	3.9345	161.38	1,437.37	5.1468	18.4425	1.7618	11.3843
Mar.	17,063.66	3.9442	162.77	1,448.12	5.1272	18.2610	1.7869	11.5214
Apr.	17,258.77	4.0240	165.03	1,469.42	5.1139	18.0066	1.7992	11.6828
May	17,375.67	4.0062	168.54	1,474.96	5.0971	18.1549	1.7819	11.5988
June	17,595.94	4.0074	169.81	1,485.38	5.0680	19.6134	1.7539	11.4178
July	17,623.29	3.9902	171.17	1,499.62	5.0737	19.6397	1.7985	11.7160
Aug.	17,347.75	4.1079	161.06	1,488.61	4.8605	21.0823	1.8112	11.7895
Sep.	17,020.23	4.1452	159.08	1,478.72	4.7341	21.7625	1.7845	11.7852
Oct.	16,988.19	4.1020	163.20	1,484.59	4.6883	21.4603	1.7917	11.7907
Nov.	16,817.07	3.9523	163.23	1,482.25	4.7141	21.6152	1.7967	11.7408
Dec.	16,810.95	3.7896	161.08	1,506.85	4.6728	21.2338	1.8217	11.7447
2025 Jan.	16,832.40	3.7450	161.92	1,503.60	4.6232	21.2951	1.8393	11.7456
Feb.	17,020.42	3.7149	158.09	1,505.02	4.6261	21.3268	1.8337	11.6574

Other European and non-European countries (cont'd)								
Period	Philippines Philippine peso PHP	Singapore Singapore dollar SGD	South Africa South African rand ZAR	Switzerland Swiss franc CHF	Thailand Thai baht THB	Turkey Turkish lira TRY	United Kingdom Pound sterling GBP	United States US dollar USD
2023	60.163	1.4523	19.9551	0.9718	37.631	25.7597	0.86979	1.0813
2024	62.007	1.4458	19.8297	0.9526	38.181	35.5734	0.84662	1.0824
2023 Jan.	59.162	1.4283	18.4320	0.9961	35.840	20.2312	0.88212	1.0769
Feb.	58.743	1.4262	19.1765	0.9905	36.486	20.1981	0.88550	1.0715
Mar.	58.581	1.4354	19.5602	0.9908	36.912	20.3491	0.88192	1.0706
Apr.	60.807	1.4609	19.9205	0.9846	37.549	21.2267	0.88115	1.0968
May	60.604	1.4555	20.6864	0.9751	37.166	21.4918	0.87041	1.0868
June	60.475	1.4596	20.3033	0.9764	37.852	25.7697	0.85861	1.0840
July	60.690	1.4753	20.1074	0.9663	38.243	29.3212	0.85856	1.1058
Aug.	61.461	1.4735	20.4723	0.9588	38.195	29.3788	0.85892	1.0909
Sep.	60.665	1.4562	20.2780	0.9600	38.301	28.8643	0.86158	1.0684
Oct.	59.994	1.4462	20.1390	0.9547	38.549	29.4506	0.86798	1.0563
Nov.	60.285	1.4575	20.0397	0.9634	38.327	30.9786	0.87045	1.0808
Dec.	60.593	1.4533	20.3373	0.9441	38.176	31.7243	0.86168	1.0903
2024 Jan.	61.090	1.4569	20.5161	0.9368	38.401	32.8165	0.85873	1.0905
Feb.	60.486	1.4513	20.5082	0.9462	38.709	33.2644	0.85466	1.0795
Mar.	60.736	1.4573	20.4955	0.9656	39.079	34.8229	0.85524	1.0872
Apr.	61.171	1.4554	20.2378	0.9761	39.454	34.6926	0.85658	1.0728
May	62.523	1.4606	19.9079	0.9830	39.607	34.8605	0.85564	1.0812
June	63.177	1.4547	19.8144	0.9616	39.492	35.0667	0.84643	1.0759
July	63.416	1.4602	19.7950	0.9676	39.324	35.6969	0.84332	1.0844
Aug.	62.710	1.4488	19.8651	0.9450	38.263	37.1098	0.85150	1.1012
Sep.	62.256	1.4396	19.5634	0.9414	37.012	37.8238	0.84021	1.1106
Oct.	62.655	1.4283	19.1609	0.9386	36.411	37.3473	0.83496	1.0904
Nov.	62.410	1.4206	19.0553	0.9355	36.596	36.6237	0.83379	1.0630
Dec.	61.203	1.4144	19.0606	0.9339	35.794	36.6588	0.82804	1.0479
2025 Jan.	60.479	1.4092	19.3821	0.9414	35.444	36.8091	0.83908	1.0354
Feb.	60.443	1.4022	19.2451	0.9413	35.189	37.6927	0.83071	1.0413

* See Explanatory notes, p. 48. + Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB.

II. Euro foreign exchange reference rates of the European Central Bank *

3. End-of-year rates and annual averages

EUR 1 = CU ...

Period	EU member countries							
	Bulgaria Bulgarian lev BGN	Croatia ¹ Kuna HRK	Czechia Czech koruna CZK	Denmark Danish krone DKK	Hungary Hungarian forint HUF	Latvia ¹ Latvian lats LVL	Lithuania ¹ Lithuanian litas LTL	Poland Polish zloty PLN
	End of year							
2011	1.9558	7.5370	25.787	7.4342	314.58	0.699500	3.4528	4.4580
2012	1.9558	7.5575	25.151	7.4610	292.30	0.697700	3.4528	4.0740
2013	1.9558	7.6265	27.427	7.4593	297.04	0.702804	3.4528	4.1543
2014	1.9558	7.6580	27.735	7.4453	315.54	–	3.4528	4.2732
2015	1.9558	7.6380	27.023	7.4626	315.98	–	–	4.2639
2016	1.9558	7.5597	27.021	7.4344	309.83	–	–	4.4103
2017	1.9558	7.4400	25.535	7.4449	310.33	–	–	4.1770
2018	1.9558	7.4125	25.724	7.4673	320.98	–	–	4.3014
2019	1.9558	7.4395	25.408	7.4715	330.53	–	–	4.2568
2020	1.9558	7.5519	26.242	7.4409	363.89	–	–	4.5597
2021	1.9558	7.5156	24.858	7.4364	369.19	–	–	4.5969
2022	1.9558	7.5365	24.116	7.4365	400.87	–	–	4.6808
2023	1.9558	–	24.724	7.4529	382.80	–	–	4.3395
2024	1.9558	–	25.185	7.4578	411.35	–	–	4.2750
	Annual averages +							
2011	1.9558	7.4390	24.590	7.4506	279.37	0.7063	3.4528	4.1206
2012	1.9558	7.5217	25.149	7.4437	289.25	0.6973	3.4528	4.1847
2013	1.9558	7.5786	25.980	7.4579	296.87	0.7015	3.4528	4.1975
2014	1.9558	7.6344	27.536	7.4548	308.71	–	3.4528	4.1843
2015	1.9558	7.6137	27.279	7.4587	310.00	–	–	4.1841
2016	1.9558	7.5333	27.034	7.4452	311.44	–	–	4.3632
2017	1.9558	7.4637	26.326	7.4386	309.19	–	–	4.2570
2018	1.9558	7.4182	25.647	7.4532	318.89	–	–	4.2615
2019	1.9558	7.4180	25.670	7.4661	325.30	–	–	4.2976
2020	1.9558	7.5384	26.455	7.4542	351.25	–	–	4.4430
2021	1.9558	7.5284	25.640	7.4370	358.52	–	–	4.5652
2022	1.9558	7.5349	24.566	7.4396	391.29	–	–	4.6861
2023	1.9558	–	24.004	7.4509	381.85	–	–	4.5420
2024	1.9558	–	25.120	7.4589	395.30	–	–	4.3058

Period	EU member countries (cont'd)		Other European and non-European countries					
	Romania Romanian leu RON	Sweden Swedish krona SEK	Australia Australian dollar AUD	Brazil Brazilian real BRL	Canada Canadian dollar CAD	China Yuan (renminbi) CNY	Hong Kong Hong Kong dollar HKD	Iceland Icelandic krona ISK ²
	End of year							
2011	4.3233	8.9120	1.2723	2.4159	1.3215	8.1588	10.0510	–
2012	4.4445	8.5820	1.2712	2.7036	1.3137	8.2207	10.2260	–
2013	4.4710	8.8591	1.5423	3.2576	1.4671	8.3491	10.6933	–
2014	4.4828	9.3930	1.4829	3.2207	1.4063	7.5358	9.4170	–
2015	4.5240	9.1895	1.4897	4.3117	1.5116	7.0608	8.4376	–
2016	4.5390	9.5525	1.4596	3.4305	1.4188	7.3202	8.1751	–
2017	4.6585	9.8438	1.5346	3.9729	1.5039	7.8044	9.3720	–
2018	4.6635	10.2548	1.6220	4.4440	1.5605	7.8751	8.9675	133.20
2019	4.7830	10.4468	1.5995	4.5157	1.4598	7.8205	8.7473	135.80
2020	4.8683	10.0343	1.5896	6.3735	1.5633	8.0225	9.5142	156.10
2021	4.9490	10.2503	1.5615	6.3101	1.4393	7.1947	8.8333	147.60
2022	4.9495	11.1218	1.5693	5.6386	1.4440	7.3582	8.3163	151.50
2023	4.9756	11.0960	1.6263	5.3618	1.4642	7.8509	8.6314	150.50
2024	4.9743	11.4590	1.6772	6.4253	1.4948	7.5833	8.0686	143.90
	Annual averages +							
2011	4.2391	9.0298	1.3484	2.3265	1.3761	8.9960	10.8362	–
2012	4.4593	8.7041	1.2407	2.5084	1.2842	8.1052	9.9663	–
2013	4.4190	8.6515	1.3777	2.8687	1.3684	8.1646	10.3016	–
2014	4.4437	9.0985	1.4719	3.1211	1.4661	8.1857	10.3025	–
2015	4.4454	9.3535	1.4777	3.7004	1.4186	6.9733	8.6014	–
2016	4.4904	9.4689	1.4883	3.8561	1.4659	7.3522	8.5922	–
2017	4.5688	9.6351	1.4732	3.6054	1.4647	7.6290	8.8045	–
2018	4.6540	10.2583	1.5797	4.3085	1.5294	7.8081	9.2559	127.89
2019	4.7453	10.5891	1.6109	4.4134	1.4855	7.7355	8.7715	137.28
2020	4.8383	10.4848	1.6549	5.8943	1.5300	7.8747	8.8587	154.59
2021	4.9215	10.1465	1.5749	6.3779	1.4826	7.6282	9.1932	150.15
2022	4.9313	10.6296	1.5167	5.4399	1.3695	7.0788	8.2451	142.24
2023	4.9467	11.4788	1.6288	5.4010	1.4595	7.6600	8.4650	149.13
2024	4.9746	11.4325	1.6397	5.8283	1.4821	7.7875	8.4454	149.31

* See Explanatory notes, p. 48. + Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB. ¹ Accession to the euro

area, see p. 7 (Table I. 1.). ² The ECB did not fix euro foreign exchange reference rates for the Icelandic krona from 4 December 2008 to 31 January 2018.

II. Euro foreign exchange reference rates of the European Central Bank *

3. End-of-year rates and annual averages (cont'd)

EUR 1 = CU ...

Other European and non-European countries (cont'd)									
India	Indonesia	Israel	Japan	Korea, Republic of	Malaysia	Mexico	New Zealand	Norway	
Indian rupee INR	Indonesian rupiah IDR	New shekel ILS ¹	Japanese yen JPY	South Korean won KRW	Malaysian ringgit MYR	Mexican peso MXN	New Zealand dollar NZD	Norwegian krone NOK	
End of year									
2011	68.7130	11,731.47	4.9453	100.20	1,498.69	4.1055	18.0512	1.6737	7.7540
2012	72.5600	12,713.97	4.9258	113.61	1,406.23	4.0347	17.1845	1.6045	7.3483
2013	85.3660	16,764.78	4.7880	144.72	1,450.93	4.5221	18.0731	1.6762	8.3630
2014	76.7190	15,076.10	4.7200	145.23	1,324.80	4.2473	17.8679	1.5525	9.0420
2015	72.0215	15,039.99	4.2481	131.07	1,280.78	4.6959	18.9145	1.5923	9.6030
2016	71.5935	14,173.43	4.0477	123.40	1,269.36	4.7287	21.7719	1.5158	9.0863
2017	76.6055	16,239.12	4.1635	135.01	1,279.61	4.8536	23.6612	1.6850	9.8403
2018	79.7298	16,500.00	4.2972	125.85	1,277.93	4.7317	22.4921	1.7056	9.9483
2019	80.1870	15,595.60	3.8845	121.94	1,296.28	4.5953	21.2202	1.6653	9.8638
2020	89.6605	17,240.76	3.9447	126.49	1,336.00	4.9340	24.4160	1.6984	10.4703
2021	84.2292	16,100.42	3.5159	130.38	1,346.38	4.7184	23.1438	1.6579	9.9888
2022	88.1710	16,519.82	3.7554	140.66	1,344.09	4.6984	20.8560	1.6798	10.5138
2023	91.9045	17,079.71	3.9993	156.33	1,433.66	5.0775	18.7231	1.7504	11.2405
2024	88.9335	16,820.88	3.7885	163.06	1,532.15	4.6454	21.5504	1.8532	11.7950
Annual averages +									
2011	64.8859	12,206.51	4.9775	110.96	1,541.23	4.2558	17.2877	1.7600	7.7934
2012	68.5973	12,045.73	4.9536	102.49	1,447.69	3.9672	16.9029	1.5867	7.4751
2013	77.9300	13,857.50	4.7948	129.66	1,453.91	4.1855	16.9641	1.6206	7.8067
2014	81.0406	15,748.92	4.7449	140.31	1,398.14	4.3446	17.6550	1.5995	8.3544
2015	71.1956	14,870.39	4.3122	134.31	1,256.54	4.3373	17.6157	1.5930	8.9496
2016	74.3717	14,720.83	4.2489	120.20	1,284.18	4.5835	20.6673	1.5886	9.2906
2017	73.5324	15,118.01	4.0622	126.71	1,276.74	4.8527	21.3286	1.5897	9.3270
2018	80.7332	16,803.22	4.2423	130.40	1,299.07	4.7634	22.7054	1.7065	9.5975
2019	78.8361	15,835.27	3.9901	122.01	1,305.32	4.6374	21.5565	1.6998	9.8511
2020	84.6392	16,627.37	3.9258	121.85	1,345.58	4.7959	24.5194	1.7561	10.7228
2021	87.4392	16,920.72	3.8208	129.88	1,354.06	4.9015	23.9852	1.6724	10.1633
2022	82.6864	15,625.25	3.5345	138.03	1,358.07	4.6279	21.1869	1.6582	10.1026
2023	89.3001	16,479.62	3.9880	151.99	1,412.88	4.9320	19.1830	1.7622	11.4248
2024	90.5563	17,157.68	4.0067	163.85	1,475.40	4.9503	19.8314	1.7880	11.6290

Other European and non-European countries (cont'd)									
Philippines	Russian Federation	Singapore	South Africa	Switzerland	Thailand	Turkey	United Kingdom	United States	
Philippine peso PHP	Russian rouble RUB ²	Singapore dollar SGD	South African rand ZAR	Swiss franc CHF	Thai baht THB	Turkish lira TRY	Pound sterling GBP	US dollar USD	
End of year									
2011	56.754	41.7650	1.6819	10.4830	1.2156	40.991	2.4432	0.83530	1.2939
2012	54.107	40.3295	1.6111	11.1727	1.2072	40.347	2.3551	0.81610	1.3194
2013	61.289	45.3246	1.7414	14.5660	1.2276	45.178	2.9605	0.83370	1.3791
2014	54.436	72.3370	1.6058	14.0353	1.2024	39.910	2.8320	0.77890	1.2141
2015	50.999	80.6736	1.5417	16.9530	1.0835	39.248	3.1765	0.73395	1.0887
2016	52.268	64.3000	1.5234	14.4570	1.0739	37.726	3.7072	0.85618	1.0541
2017	59.795	69.3920	1.6024	14.8054	1.1702	39.121	4.5464	0.88723	1.1993
2018	60.113	79.7153	1.5591	16.4594	1.1269	37.052	6.0588	0.89453	1.1450
2019	56.900	69.9563	1.5111	15.7773	1.0854	33.415	6.6843	0.85080	1.1234
2020	59.125	91.4671	1.6218	18.0219	1.0802	36.727	9.1131	0.89903	1.2271
2021	57.763	85.3004	1.5279	18.0625	1.0331	37.653	15.2335	0.84028	1.1326
2022	59.320	–	1.4300	18.0986	0.9847	36.835	19.9649	0.88693	1.0666
2023	61.283	–	1.4591	20.3477	0.9260	37.973	32.6531	0.86905	1.1050
2024	60.301	–	1.4164	19.6188	0.9412	35.676	36.7372	0.82918	1.0389
Annual averages +									
2011	60.260	40.8846	1.7489	10.0970	1.2326	42.429	2.3378	0.86788	1.3920
2012	54.246	39.9262	1.6055	10.5511	1.2053	39.928	2.3135	0.81087	1.2848
2013	56.428	42.3370	1.6619	12.8330	1.2311	40.830	2.5335	0.84926	1.3281
2014	58.979	50.9518	1.6823	14.4037	1.2146	43.147	2.9065	0.80612	1.3285
2015	50.522	68.0720	1.5255	14.1723	1.0679	38.028	3.0255	0.72584	1.1095
2016	52.556	74.1446	1.5275	16.2645	1.0902	39.043	3.3433	0.81948	1.1069
2017	56.973	65.9383	1.5588	15.0490	1.1117	38.296	4.1206	0.87667	1.1297
2018	62.210	74.0416	1.5926	15.6186	1.1550	38.164	5.7077	0.88471	1.1810
2019	57.985	72.4553	1.5273	16.1757	1.1124	34.757	6.3578	0.87777	1.1195
2020	56.615	82.7248	1.5742	18.7655	1.0705	35.708	8.0547	0.88970	1.1422
2021	58.299	87.1527	1.5891	17.4766	1.0811	37.837	10.5124	0.85960	1.1827
2022	57.314	–	1.4512	17.2086	1.0047	36.856	17.4088	0.85276	1.0530
2023	60.163	–	1.4523	19.9551	0.9718	37.631	25.7597	0.86979	1.0813
2024	62.007	–	1.4458	19.8297	0.9526	38.181	35.5734	0.84662	1.0824

* See Explanatory notes, p. 48. + Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB. ¹ Up to December 2010,

ECB indicative rates. ² The ECB has suspended the publication of the euro foreign exchange reference rate against the Russian rouble with effect from 2 March 2022.

II. Euro foreign exchange reference rates of the European Central Bank*

4. Exchange rates of major currencies



* See explanatory notes, p. 48. ¹ Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB.