

II. Term structure of interest rates in the debt securities market *

a) Term structure of interest rates in the debt securities market - estimated values, listed Federal securities

% per annum

		Interest rate at a residual maturity of ... years										
End of year or month or trading day		1	2	3	4	5	6	7	8	9	10	
2013		0.13	0.24	0.44	0.69	0.95	1.21	1.47	1.70	1.92	2.11	
2014		0.10	0.10	0.10	0.06	0.02	0.12	0.24	0.36	0.49	0.60	
2015		0.39	0.35	0.26	0.14	0.01	0.13	0.28	0.42	0.56	0.70	
2016		0.84	0.80	0.76	0.65	0.51	0.35	0.18	0.03	0.10	0.22	
2017		0.72	0.64	0.50	0.34	0.18	0.02	0.12	0.25	0.37	0.48	
2018		0.70	0.65	0.56	0.44	0.31	0.18	0.06	0.06	0.16	0.25	
2019		0.69	0.63	0.58	0.54	0.49	0.44	0.37	0.31	0.25	0.19	
2020		0.73	0.75	0.77	0.77	0.75	0.72	0.68	0.65	0.61	0.57	
2021		0.73	0.68	0.62	0.56	0.50	0.44	0.38	0.33	0.28	0.24	
2022		2.39	2.59	2.55	2.50	2.47	2.47	2.48	2.50	2.51	2.53	
2023		2.97	2.35	2.04	1.91	1.87	1.88	1.92	1.96	2.01	2.06	
2023	Jan.	2.65	2.59	2.43	2.31	2.25	2.23	2.23	2.25	2.27	2.28	
	Feb.	3.17	3.11	2.92	2.78	2.69	2.65	2.63	2.63	2.64	2.65	
	Mar.	2.82	2.65	2.53	2.44	2.39	2.36	2.34	2.34	2.34	2.35	
	Apr.	2.90	2.69	2.49	2.37	2.32	2.31	2.31	2.32	2.34	2.35	
	May	2.97	2.71	2.53	2.41	2.33	2.28	2.26	2.25	2.26	2.28	
	June	3.43	3.14	2.86	2.66	2.55	2.48	2.45	2.43	2.43	2.43	
	July	3.39	3.07	2.80	2.62	2.53	2.48	2.47	2.48	2.50	2.52	
	Aug.	3.34	2.98	2.70	2.54	2.47	2.44	2.44	2.46	2.48	2.51	
	Sep.	3.58	3.19	2.92	2.80	2.76	2.76	2.78	2.80	2.84	2.87	
	Oct.	3.47	3.00	2.74	2.63	2.61	2.63	2.66	2.71	2.76	2.80	
	Nov.	3.26	2.77	2.48	2.32	2.26	2.26	2.29	2.34	2.40	2.45	
	Dec.	2.97	2.35	2.04	1.91	1.87	1.88	1.92	1.96	2.01	2.06	
2024	Jan.	3.12	2.53	2.24	2.11	2.07	2.08	2.11	2.15	2.19	2.24	
	Feb.	3.40	2.97	2.70	2.55	2.47	2.44	2.44	2.45	2.48	2.51	
	Mar.	3.29	2.82	2.54	2.37	2.29	2.26	2.26	2.27	2.30	2.33	
	Apr.	3.34	2.97	2.73	2.59	2.52	2.49	2.48	2.50	2.53	2.56	
	May	3.36	3.07	2.88	2.76	2.69	2.65	2.65	2.66	2.68	2.71	
	June	3.12	2.78	2.57	2.45	2.39	2.38	2.39	2.42	2.45	2.49	
2024	June	3	3.34	3.03	2.83	2.70	2.63	2.59	2.60	2.62	2.65	
		4	3.30	2.97	2.75	2.61	2.54	2.51	2.50	2.52	2.57	
		5	3.30	2.97	2.75	2.61	2.54	2.50	2.49	2.50	2.56	
		6	3.28	2.96	2.74	2.60	2.52	2.49	2.48	2.49	2.54	
		7	3.32	3.00	2.79	2.65	2.58	2.54	2.53	2.54	2.58	
		10	3.33	3.04	2.84	2.71	2.64	2.60	2.59	2.60	2.65	
		11	3.32	3.03	2.83	2.71	2.64	2.61	2.60	2.62	2.67	
		12	3.30	2.98	2.78	2.65	2.58	2.54	2.54	2.55	2.61	
		13	3.28	2.95	2.74	2.61	2.53	2.50	2.49	2.51	2.56	
		14	3.16	2.78	2.54	2.40	2.33	2.31	2.32	2.34	2.41	
		17	3.13	2.77	2.54	2.41	2.34	2.32	2.33	2.35	2.42	
		18	3.16	2.81	2.59	2.46	2.38	2.35	2.35	2.37	2.44	
		19	3.14	2.79	2.56	2.42	2.35	2.32	2.33	2.35	2.41	
		20	3.16	2.82	2.60	2.46	2.40	2.37	2.37	2.39	2.45	
		21	3.09	2.74	2.52	2.38	2.32	2.29	2.30	2.32	2.39	
		24	3.11	2.77	2.55	2.42	2.35	2.33	2.34	2.36	2.44	
		25	3.12	2.78	2.56	2.43	2.36	2.34	2.35	2.37	2.44	
		26	3.12	2.79	2.57	2.45	2.38	2.36	2.36	2.39	2.46	
		27	3.12	2.79	2.58	2.46	2.40	2.38	2.39	2.42	2.50	
		28	3.12	2.78	2.57	2.45	2.39	2.38	2.39	2.42	2.49	
	July	1	3.18	2.88	2.68	2.57	2.51	2.50	2.51	2.53	2.61	
Memo item: yields, derived from the term structure of interest rates, on listed Federal securities with annual coupon payments												
2024	June	28	3.12	2.79	2.58	2.46	2.40	2.39	2.40	2.42	2.45	2.49
Parameters for calculating the term structure of interest rates												
		Beta0	Beta1	Beta2	Beta3	Tau1	Tau2					
2024	June	25	1.63742	1.99420	-17.74059	17.50768	4.78065	6.03536				
		26	1.65002	1.96904	-30.00000	29.73061	5.04046	5.77331				
		27	1.76062	1.86263	-28.47143	28.07605	4.88032	5.60482				
		28	1.85201	1.78570	-20.70437	20.10891	4.63818	5.58017				
	July	1	1.64090	1.99646	-29.45686	29.73711	5.20956	6.01382				

* Interest rates on (theoretical) zero coupon bonds without a default risk, estimated according to the procedure outlined in the explanatory notes. The estimates are based on the prices of Federal bonds, five-year Federal notes and Federal Treasury notes with

a residual maturity of at least three months. The interest rates are estimated using a non-linear, parametric approach.

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still: a) Term structure of interest rates in the debt securities market - estimated values, listed Federal securities

% per annum

		Interest rate at a residual maturity of ... years									
End of year or month or trading day		11	12	13	14	15	16	17	18	19	20
2013		2.28	2.42	2.55	2.66	2.75	2.82	2.87	2.92	2.95	2.97
2014		0.71	0.81	0.90	0.98	1.05	1.12	1.18	1.23	1.27	1.32
2015		0.82	0.94	1.04	1.14	1.22	1.30	1.36	1.41	1.46	1.50
2016		0.33	0.42	0.49	0.56	0.62	0.67	0.72	0.76	0.80	0.83
2017		0.57	0.66	0.74	0.81	0.87	0.92	0.97	1.02	1.06	1.10
2018		0.33	0.40	0.47	0.52	0.57	0.62	0.66	0.69	0.73	0.76
2019		-	0.14	-	0.04	-	0.00	0.04	0.11	0.13	0.16
2020		-	0.53	-	0.46	-	0.43	-	0.37	-	0.32
2021		-	0.20	-	0.13	-	0.10	-	0.05	-	0.01
2022		2.55	2.56	2.57	2.57	2.58	2.58	2.57	2.57	2.56	2.55
2023		2.11	2.15	2.19	2.22	2.25	2.27	2.28	2.30	2.30	2.31
2023	Jan.	2.30	2.32	2.33	2.34	2.34	2.35	2.34	2.34	2.33	2.32
	Feb.	2.66	2.67	2.67	2.68	2.68	2.68	2.68	2.67	2.67	2.66
	Mar.	2.36	2.38	2.39	2.40	2.42	2.42	2.43	2.44	2.44	2.44
	Apr.	2.37	2.38	2.39	2.40	2.41	2.41	2.42	2.43	2.43	2.44
	May	2.30	2.32	2.35	2.37	2.40	2.42	2.43	2.45	2.46	2.46
	June	2.43	2.43	2.43	2.43	2.44	2.44	2.44	2.44	2.44	2.44
	July	2.54	2.56	2.58	2.59	2.61	2.62	2.63	2.63	2.63	2.63
	Aug.	2.53	2.56	2.58	2.60	2.62	2.63	2.64	2.65	2.65	2.65
	Sep.	2.90	2.92	2.95	2.97	2.99	3.00	3.02	3.02	3.03	3.03
	Oct.	2.84	2.88	2.92	2.95	2.98	3.00	3.02	3.04	3.05	3.06
	Nov.	2.51	2.56	2.60	2.64	2.66	2.69	2.70	2.71	2.71	2.72
	Dec.	2.11	2.15	2.19	2.22	2.25	2.27	2.28	2.30	2.30	2.31
2024	Jan.	2.28	2.32	2.35	2.38	2.41	2.43	2.44	2.46	2.47	2.47
	Feb.	2.54	2.57	2.60	2.62	2.64	2.65	2.66	2.67	2.68	2.68
	Mar.	2.36	2.39	2.42	2.44	2.46	2.48	2.49	2.50	2.50	2.50
	Apr.	2.59	2.63	2.65	2.68	2.70	2.71	2.72	2.73	2.73	2.73
	May	2.74	2.77	2.80	2.83	2.85	2.87	2.88	2.89	2.89	2.89
	June	2.53	2.57	2.60	2.63	2.65	2.67	2.68	2.69	2.70	2.70
2024	June	3	2.69	2.72	2.75	2.77	2.80	2.82	2.83	2.84	2.84
		4	2.61	2.64	2.67	2.70	2.72	2.74	2.75	2.76	2.77
		5	2.59	2.63	2.66	2.68	2.71	2.72	2.74	2.75	2.75
		6	2.58	2.61	2.64	2.66	2.69	2.71	2.72	2.73	2.74
		7	2.61	2.65	2.67	2.70	2.72	2.74	2.75	2.76	2.77
		10	2.68	2.71	2.74	2.77	2.79	2.81	2.83	2.84	2.85
		11	2.70	2.74	2.77	2.79	2.82	2.83	2.85	2.86	2.86
		12	2.64	2.68	2.71	2.74	2.76	2.78	2.80	2.81	2.82
		13	2.60	2.63	2.66	2.69	2.71	2.73	2.75	2.76	2.76
		14	2.45	2.49	2.52	2.55	2.58	2.59	2.61	2.62	2.62
		17	2.45	2.49	2.51	2.54	2.56	2.57	2.58	2.59	2.59
		18	2.47	2.51	2.54	2.56	2.59	2.60	2.62	2.63	2.63
		19	2.45	2.48	2.52	2.54	2.57	2.58	2.60	2.61	2.61
		20	2.49	2.52	2.55	2.58	2.60	2.62	2.63	2.64	2.64
		21	2.43	2.47	2.50	2.53	2.56	2.58	2.59	2.60	2.61
		24	2.48	2.52	2.55	2.58	2.60	2.62	2.64	2.65	2.65
		25	2.48	2.52	2.55	2.58	2.61	2.63	2.64	2.65	2.66
		26	2.50	2.53	2.57	2.60	2.62	2.64	2.65	2.66	2.67
		27	2.54	2.57	2.61	2.63	2.66	2.68	2.69	2.70	2.70
		28	2.53	2.57	2.60	2.63	2.65	2.67	2.68	2.69	2.70
	July	1	2.65	2.69	2.72	2.75	2.78	2.80	2.81	2.82	2.83
Memo item: yields, derived from the term structure of interest rates, on listed Federal securities with annual coupon payments											
2024	June	28	2.52	2.56	2.58	2.61	2.63	2.65	2.66	2.66	2.67
Parameters for calculating the term structure of interest rates											
		Beta0	Beta1	Beta2	Beta3	Tau1	Tau2				
2024	June	25	1.63742	1.99420	- 17.74059	17.50768	4.78065	6.03536			
		26	1.65002	1.96904	- 30.00000	29.73061	5.04046	5.77331			
		27	1.76062	1.86263	- 28.47143	28.07605	4.88032	5.60482			
		28	1.85201	1.78570	- 20.70437	20.10891	4.63818	5.58017			
	July	1	1.64090	1.99646	- 29.45686	29.73711	5.20956	6.01382			

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a residual maturity of at least three months. The interest rates are estimated using a non-linear, parametric approach.

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still: a) Term structure of interest rates in the debt securities market - estimated values, listed Federal securities

% per annum

		Interest rate at a residual maturity of ... years											
End of year or month or trading day		21	22	23	24	25	26	27	28	29	30		
2013		2.99	2.99	2.99	2.98	2.97	2.96	2.94	2.92	2.89	2.86		
2014		1.36	1.39	1.43	1.46	1.48	1.51	1.53	1.55	1.57	1.59		
2015		1.53	1.56	1.57	1.59	1.59	1.60	1.60	1.59	1.59	1.58		
2016		0.86	0.89	0.91	0.94	0.96	0.98	1.00	1.01	1.03	1.04		
2017		1.13	1.16	1.19	1.22	1.24	1.26	1.28	1.30	1.32	1.34		
2018		0.78	0.81	0.83	0.85	0.87	0.89	0.90	0.92	0.93	0.95		
2019		0.21	0.23	0.25	0.26	0.28	0.29	0.31	0.32	0.33	0.34		
2020		–	0.26	–	0.25	–	0.21	–	0.17	–	0.15	–	0.14
2021		0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.12		
2022		2.53	2.52	2.50	2.48	2.47	2.45	2.43	2.41	2.39	2.36		
2023		2.31	2.31	2.30	2.30	2.29	2.28	2.27	2.25	2.24	2.22		
2023	Jan.	2.31	2.30	2.28	2.26	2.24	2.22	2.20	2.18	2.16	2.13		
	Feb.	2.65	2.63	2.62	2.60	2.58	2.57	2.55	2.53	2.51	2.48		
	Mar.	2.43	2.42	2.41	2.40	2.39	2.37	2.36	2.34	2.32	2.29		
	Apr.	2.44	2.44	2.45	2.45	2.45	2.46	2.46	2.46	2.46	2.46		
	May	2.47	2.47	2.46	2.46	2.44	2.43	2.42	2.40	2.38	2.36		
	June	2.44	2.44	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45		
	July	2.63	2.62	2.62	2.61	2.60	2.58	2.57	2.56	2.54	2.52		
	Aug.	2.65	2.65	2.64	2.63	2.62	2.61	2.60	2.59	2.57	2.56		
	Sep.	3.03	3.03	3.03	3.02	3.02	3.01	3.00	2.99	2.98	2.96		
	Oct.	3.07	3.07	3.07	3.07	3.06	3.06	3.05	3.04	3.03	3.02		
	Nov.	2.71	2.71	2.70	2.69	2.68	2.67	2.66	2.65	2.63	2.62		
	Dec.	2.31	2.31	2.30	2.30	2.29	2.28	2.27	2.25	2.24	2.22		
2024	Jan.	2.48	2.48	2.47	2.47	2.46	2.45	2.44	2.43	2.41	2.40		
	Feb.	2.67	2.67	2.66	2.65	2.64	2.63	2.62	2.60	2.59	2.57		
	Mar.	2.50	2.50	2.49	2.49	2.48	2.47	2.45	2.44	2.43	2.41		
	Apr.	2.73	2.72	2.71	2.70	2.69	2.68	2.66	2.65	2.63	2.62		
	May	2.89	2.89	2.88	2.86	2.85	2.83	2.82	2.80	2.78	2.76		
	June	2.70	2.69	2.68	2.67	2.66	2.65	2.64	2.62	2.61	2.59		
2024	June	3	2.84	2.84	2.83	2.81	2.80	2.79	2.77	2.75	2.73	2.71	
		4	2.77	2.76	2.75	2.74	2.73	2.71	2.70	2.68	2.66	2.64	
		5	2.75	2.75	2.74	2.73	2.72	2.70	2.69	2.67	2.65	2.63	
		6	2.73	2.73	2.72	2.71	2.70	2.69	2.67	2.66	2.64	2.62	
		7	2.77	2.76	2.75	2.74	2.73	2.71	2.69	2.68	2.66	2.64	
		10	2.84	2.84	2.83	2.82	2.80	2.79	2.77	2.75	2.73	2.71	
		11	2.86	2.86	2.85	2.84	2.82	2.81	2.79	2.77	2.76	2.74	
		12	2.82	2.81	2.80	2.79	2.78	2.77	2.75	2.74	2.72	2.70	
		13	2.76	2.75	2.75	2.74	2.72	2.71	2.69	2.68	2.66	2.64	
		14	2.62	2.62	2.61	2.60	2.59	2.58	2.57	2.55	2.54	2.52	
		17	2.59	2.58	2.58	2.57	2.56	2.55	2.54	2.52	2.51	2.50	
		18	2.63	2.63	2.61	2.60	2.58	2.57	2.55	2.54	2.52	2.50	
		19	2.60	2.60	2.59	2.58	2.57	2.55	2.54	2.52	2.51	2.49	
		20	2.64	2.64	2.63	2.62	2.61	2.60	2.58	2.57	2.55	2.54	
		21	2.61	2.60	2.59	2.59	2.57	2.56	2.55	2.53	2.52	2.50	
		24	2.65	2.65	2.64	2.63	2.62	2.60	2.59	2.57	2.56	2.54	
		25	2.65	2.65	2.64	2.63	2.62	2.61	2.59	2.58	2.56	2.54	
		26	2.67	2.66	2.65	2.64	2.63	2.62	2.61	2.59	2.57	2.56	
		27	2.70	2.69	2.69	2.68	2.66	2.65	2.64	2.62	2.61	2.59	
		28	2.70	2.69	2.68	2.67	2.66	2.65	2.64	2.62	2.61	2.59	
	July	1	2.82	2.82	2.81	2.80	2.78	2.77	2.75	2.74	2.72	2.70	
Memo item: yields, derived from the term structure of interest rates, on listed Federal securities with annual coupon payments													
2024	June	28	2.67	2.67	2.66	2.66	2.65	2.64	2.63	2.62	2.61	2.60	
Parameters for calculating the term structure of interest rates													
		Beta0	Beta1		Beta2		Beta3		Tau1		Tau2		
2024	June	25	1.63742	1.99420		– 17.74059		17.50768		4.78065		6.03536	
		26	1.65002	1.96904		– 30.00000		29.73061		5.04046		5.77331	
		27	1.76062	1.86263		– 28.47143		28.07605		4.88032		5.60482	
		28	1.85201	1.78570		– 20.70437		20.10891		4.63818		5.58017	
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a residual maturity of at least three months. The interest rates are estimated using a non-linear, parametric approach.

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b) Term structure of interest rates in the debt securities market - estimated values, Pfandbriefe

% per annum

		Interest rate at a residual maturity of ... years									
End of year or month or trading day		1	2	3	4	5	6	7	8	9	10
2013		0.50	0.60	0.84	1.12	1.40	1.67	1.92	2.15	2.37	2.58
2014		0.25	0.23	0.27	0.34	0.44	0.54	0.65	0.76	0.87	0.97
2015		0.10	0.10	0.14	0.25	0.39	0.54	0.69	0.84	0.97	1.09
2016		–	0.03	0.07	0.06	0.09	0.16	0.26	0.38	0.51	0.63
2017		–	0.12	–	0.03	0.08	0.20	0.33	0.46	0.59	0.72
2018		–	0.11	–	0.04	0.04	0.15	0.29	0.44	0.59	0.73
2019		–	0.21	–	0.20	–	0.15	0.09	–	0.02	0.05
2020		–	0.42	–	0.40	–	0.37	–	0.31	–	0.28
2021		–	0.41	–	0.23	–	0.07	0.03	0.09	0.15	0.29
2022		3.22	3.33	3.28	3.26	3.26	3.26	3.27	3.28	3.29	3.28
2023		3.53	3.01	2.79	2.71	2.71	2.73	2.76	2.80	2.83	2.86
2023	Jan.	3.34	3.29	3.15	3.08	3.05	3.04	3.05	3.05	3.06	3.07
	Feb.	3.66	3.74	3.64	3.53	3.47	3.43	3.41	3.41	3.40	3.40
	Mar.	3.63	3.48	3.36	3.29	3.26	3.24	3.23	3.23	3.22	3.22
	Apr.	3.83	3.55	3.38	3.29	3.26	3.24	3.23	3.23	3.24	3.24
	May	3.87	3.61	3.36	3.24	3.19	3.17	3.17	3.17	3.18	3.18
	June	4.07	3.93	3.69	3.51	3.41	3.34	3.31	3.29	3.27	3.26
	July	4.08	3.80	3.57	3.45	3.38	3.35	3.34	3.33	3.33	3.33
	Aug.	4.03	3.74	3.52	3.41	3.35	3.33	3.32	3.32	3.33	3.33
	Sep.	4.18	3.90	3.73	3.66	3.63	3.62	3.63	3.63	3.64	3.65
	Oct.	4.03	3.72	3.55	3.49	3.49	3.52	3.55	3.59	3.61	3.64
	Nov.	3.84	3.49	3.29	3.20	3.16	3.17	3.19	3.22	3.26	3.30
	Dec.	3.53	3.01	2.79	2.71	2.71	2.73	2.76	2.80	2.83	2.86
2024	Jan.	3.62	3.15	2.96	2.90	2.91	2.93	2.96	3.00	3.02	3.05
	Feb.	3.90	3.55	3.35	3.24	3.20	3.18	3.19	3.21	3.23	3.26
	Mar.	3.81	3.43	3.21	3.08	3.01	2.99	2.99	3.01	3.04	3.07
	Apr.	3.85	3.58	3.40	3.29	3.23	3.21	3.21	3.22	3.25	3.28
	May	3.86	3.63	3.47	3.37	3.32	3.29	3.29	3.30	3.32	3.34
	June	3.72	3.42	3.28	3.22	3.20	3.19	3.20	3.22	3.23	3.25
2024	June 3	3.85	3.62	3.46	3.35	3.30	3.27	3.26	3.27	3.29	3.31
	4	3.82	3.56	3.39	3.28	3.23	3.20	3.20	3.21	3.23	3.25
	5	3.82	3.55	3.37	3.27	3.21	3.18	3.18	3.19	3.22	3.24
	6	3.80	3.54	3.36	3.26	3.20	3.17	3.17	3.18	3.20	3.23
	7	3.83	3.57	3.40	3.29	3.24	3.21	3.21	3.22	3.24	3.27
	10	3.84	3.61	3.46	3.36	3.31	3.28	3.27	3.28	3.30	3.32
	11	3.78	3.57	3.44	3.35	3.30	3.27	3.27	3.27	3.29	3.31
	12	3.83	3.60	3.44	3.35	3.29	3.26	3.26	3.27	3.29	3.31
	13	3.76	3.50	3.38	3.32	3.28	3.27	3.26	3.26	3.26	3.27
	14	3.76	3.44	3.29	3.21	3.17	3.16	3.16	3.17	3.18	3.20
	17	3.75	3.42	3.27	3.20	3.16	3.14	3.14	3.15	3.16	3.18
	18	3.76	3.44	3.29	3.21	3.17	3.16	3.16	3.16	3.18	3.19
	19	3.75	3.42	3.26	3.18	3.15	3.13	3.13	3.14	3.16	3.17
	20	3.76	3.43	3.28	3.21	3.17	3.16	3.16	3.17	3.18	3.20
	21	3.73	3.40	3.25	3.18	3.14	3.13	3.13	3.14	3.16	3.18
	24	3.72	3.40	3.26	3.19	3.15	3.14	3.15	3.16	3.18	3.20
	25	3.71	3.40	3.26	3.19	3.15	3.14	3.15	3.16	3.17	3.19
	26	3.72	3.40	3.26	3.19	3.16	3.15	3.16	3.17	3.19	3.21
	27	3.72	3.43	3.29	3.22	3.20	3.19	3.19	3.21	3.22	3.24
	28	3.72	3.42	3.28	3.22	3.20	3.19	3.20	3.22	3.23	3.25
July	1	3.75	3.45	3.33	3.26	3.24	3.23	3.24	3.25	3.27	3.29
Memo item: yields, derived from the term of structure of interest rates, on Pfandbriefe with annual coupon payments											
2024	June 28	3.72	3.42	3.29	3.23	3.21	3.20	3.21	3.22	3.23	3.25
Parameters for calculating the term structure of interest rates											
		Beta0	Beta1	Beta2	Beta3	Tau1	Tau2				
2024	June 25	3.57072	– 0.47650	2.41522	– 1.66301	0.20000	2.93486				
	26	3.56700	– 0.14316	1.96397	– 1.63800	0.22390	2.80368				
	27	3.57948	– 0.09518	1.80956	– 1.54693	0.22614	2.81021				
	28	3.58106	– 0.66291	2.57524	– 1.54433	0.20000	2.69019				
July	1	3.59903	– 0.70745	2.60443	– 1.46126	0.20000	2.70556				

* Interest rates on (theoretical) zero coupon bonds, estimated according to the procedure outlined in the explanatory notes. The estimates are based on the prices of Pfandbriefe (mortgage Pfandbriefe and public Pfandbriefe) with a residual maturity of

at least three months. The interest rates are estimated using a non-linear, parametric approach.

II. Term structure of interest rates in the debt securities market *

b) Term structure of interest rates in the debt securities market - estimated values, Pfandbriefe

% per annum

		Interest rate at a residual maturity of ... years											
End of year or month or trading day		11	12	13	14	15	16	17	18	19	20		
2013													
2014													
2015													
2016													
2017		1.05	1.15	1.24	1.32	1.39	1.46	1.52	1.57	1.62	1.67		
2018		1.07	1.17	1.25	1.32	1.38	1.44	1.49	1.54	1.58	1.62		
2019		0.36	0.41	0.47	0.52	0.57	0.62	0.66	0.71	0.76	0.81		
2020		–	0.09	–	0.01	0.04	0.08	0.13	0.17	0.22	0.27	0.32	
2021			0.41		0.52	0.58	0.63	0.69	0.74	0.79	0.84	0.89	
2022			3.28		3.27	3.26	3.23	3.21	3.19	3.17	3.15	3.13	
2023			2.88		2.90	2.92	2.94	2.96	2.97	2.98	2.99	3.00	3.01
2023	Jan.		3.08		3.08	3.08	3.07	3.07	3.06	3.05	3.03	3.02	3.00
	Feb.		3.40		3.40	3.40	3.39	3.38	3.37	3.35	3.34	3.32	3.32
	Mar.		3.22		3.21	3.21	3.20	3.20	3.19	3.18	3.17	3.16	3.16
	Apr.		3.24		3.24	3.25	3.25	3.24	3.24	3.24	3.23	3.22	3.22
	May		3.19		3.19	3.20	3.20	3.21	3.21	3.21	3.21	3.21	3.21
	June		3.25		3.24	3.24	3.23	3.22	3.22	3.22	3.21	3.21	3.21
	July		3.33		3.33	3.33	3.34	3.34	3.34	3.34	3.34	3.34	3.34
	Aug.		3.34		3.35	3.35	3.36	3.37	3.37	3.37	3.38	3.38	3.38
	Sep.		3.66		3.67	3.68	3.69	3.70	3.70	3.71	3.71	3.72	3.72
	Oct.		3.66		3.68	3.69	3.71	3.72	3.73	3.74	3.75	3.75	3.76
	Nov.		3.33		3.36	3.39	3.41	3.43	3.44	3.45	3.45	3.46	3.46
	Dec.		2.88		2.90	2.92	2.94	2.96	2.97	2.98	2.99	3.00	3.01
2024	Jan.		3.07		3.09	3.11	3.12	3.13	3.14	3.15	3.16	3.17	3.18
	Feb.		3.28		3.31	3.32	3.34	3.35	3.36	3.37	3.37	3.37	3.37
	Mar.		3.11		3.14	3.17	3.19	3.22	3.23	3.25	3.26	3.26	3.27
	Apr.		3.31		3.34	3.37	3.39	3.42	3.43	3.44	3.45	3.46	3.46
	May		3.37		3.39	3.42	3.44	3.46	3.48	3.49	3.50	3.51	3.51
	June		3.27		3.29	3.31	3.32	3.34	3.35	3.36	3.37	3.38	3.39
2024	June	3	3.34		3.36	3.39	3.41	3.43	3.44	3.46	3.47	3.47	3.48
		4	3.28		3.31	3.33	3.36	3.38	3.39	3.41	3.42	3.42	3.43
		5	3.27		3.30	3.32	3.35	3.37	3.38	3.39	3.40	3.41	3.41
		6	3.26		3.29	3.32	3.34	3.36	3.38	3.39	3.40	3.41	3.41
		7	3.29		3.32	3.34	3.37	3.38	3.40	3.41	3.42	3.42	3.43
		10	3.34		3.37	3.39	3.41	3.43	3.44	3.45	3.46	3.47	3.47
		11	3.33		3.35	3.37	3.39	3.40	3.42	3.42	3.43	3.43	3.43
		12	3.34		3.36	3.39	3.41	3.43	3.45	3.46	3.47	3.48	3.48
		13	3.28		3.29	3.29	3.30	3.31	3.32	3.33	3.34	3.34	3.35
		14	3.22		3.23	3.25	3.27	3.29	3.30	3.32	3.33	3.34	3.35
		17	3.19		3.21	3.22	3.24	3.25	3.27	3.28	3.29	3.30	3.31
		18	3.21		3.22	3.24	3.26	3.27	3.29	3.30	3.31	3.32	3.33
		19	3.19		3.21	3.23	3.24	3.26	3.27	3.28	3.29	3.31	3.32
		20	3.21		3.23	3.25	3.26	3.28	3.29	3.30	3.31	3.32	3.33
		21	3.19		3.21	3.23	3.25	3.26	3.28	3.29	3.30	3.31	3.32
		24	3.21		3.23	3.25	3.27	3.29	3.30	3.31	3.33	3.34	3.35
		25	3.21		3.23	3.25	3.27	3.28	3.30	3.31	3.33	3.34	3.35
		26	3.23		3.25	3.26	3.28	3.30	3.31	3.33	3.34	3.35	3.36
		27	3.26		3.28	3.29	3.31	3.32	3.34	3.35	3.36	3.37	3.38
		28	3.27		3.29	3.31	3.32	3.34	3.35	3.36	3.37	3.38	3.39
	July	1	3.31		3.32	3.34	3.35	3.37	3.38	3.39	3.40	3.41	3.42
			Memo item: yields, derived from the term of structure of interest rates, on Pfandbriefe with annual coupon payments										
2024	June	28	3.27	3.28	3.30	3.31	3.32	3.33	3.34	3.35	3.36	3.37	
			Parameters for calculating the term structure of interest rates										
			Beta0	Beta1	Beta2	Beta3	Tau1	Tau2					
2024	June	25	3.57072	–	0.47650	–	1.66301	–	0.20000	–	2.93486		
		26	3.56700	–	0.14316	–	1.63800	–	0.22390	–	2.80368		
		27	3.57948	–	0.09518	–	1.54693	–	0.22614	–	2.81021		
		28	3.58106	–	0.66291	–	1.54433	–	0.20000	–	2.69019		
	July	1	3.59903	–	0.70745	–	1.46126	–	0.20000	–	2.70556		

* Interest rates on (theoretical) zero coupon bonds, estimated according to the procedure outlined in the explanatory notes. The estimates are based on the prices of Pfandbriefe (mortgage Pfandbriefe and public Pfandbriefe) with a residual maturity of

at least three months. The interest rates are estimated using a non-linear, parametric approach.