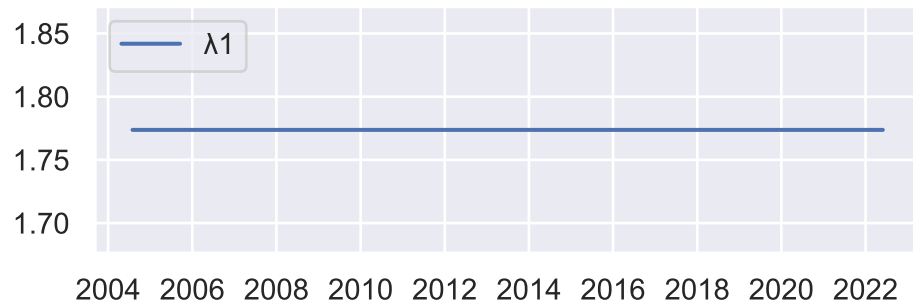
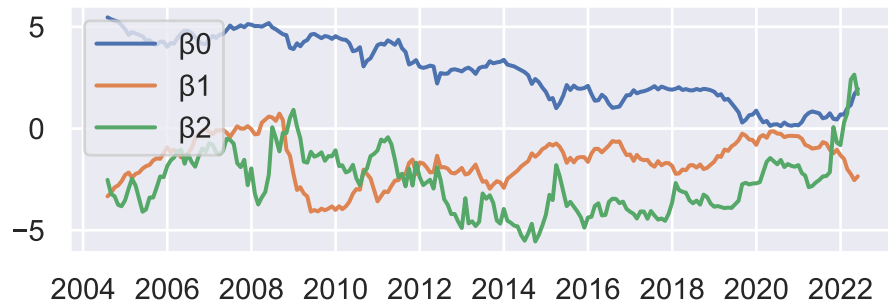
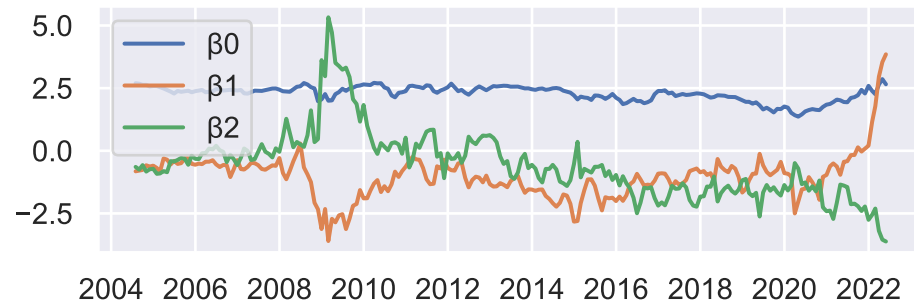


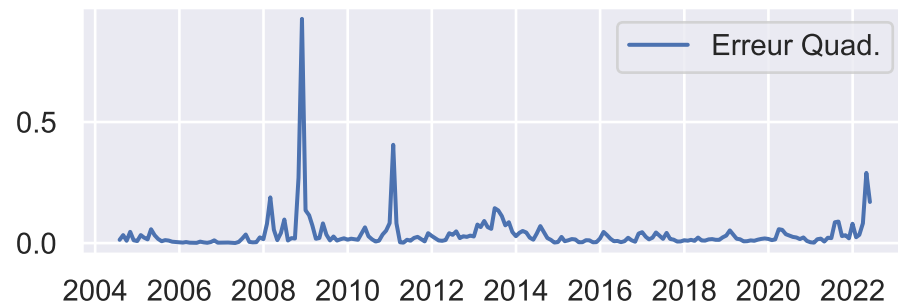
Paramètres		NS-M-juil04-juin22 - [0.5,5]	
typeModele		NS	
dateDebut		2004-07-04 00:00:00	
dateFin		2022-06-10 00:00:00	
listeBases		[baseTnMDf, baseTiMDf]	
indicTR		False	
periode		M	
nbPeriodes		12	
nbSimuls		10000	
methodOptim		SLSQP	
pasGrille		0.25	
bornesλ1		[0.5,5]	
bornesλ2		[5,10]	
listeDist		['norm', 'norminvgauss', 'skewnorm', 't']	

Evolution  $\lambda$  - TnEvolution  $\lambda$  - TiEvolution  $\beta$  - TnEvolution  $\beta$  - Ti

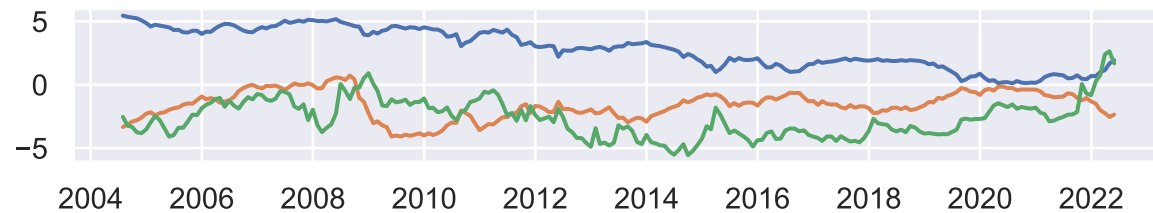
Evolution Erreurs - Tn



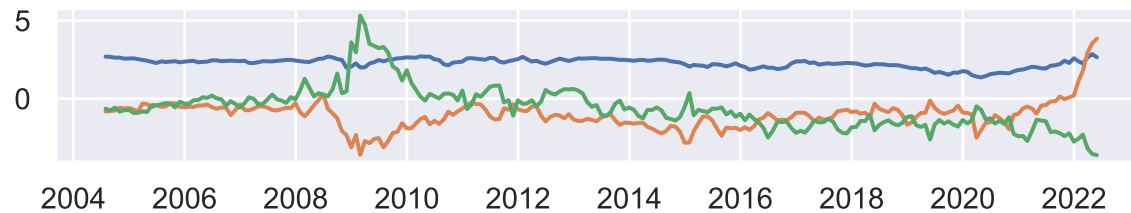
Evolution Erreurs - Ti



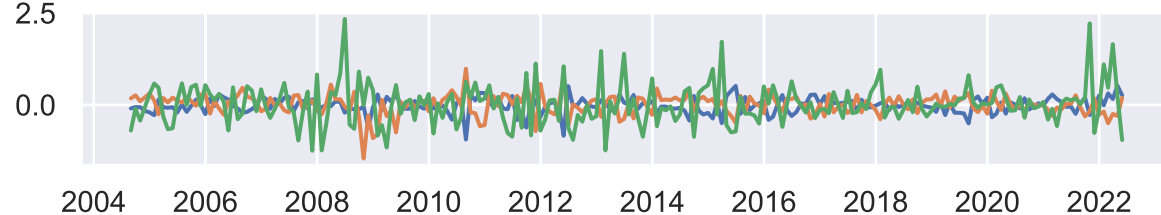
Evolution Betas - Tn



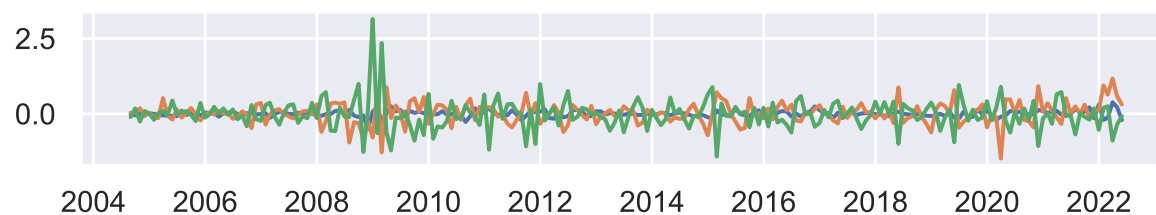
Evolution Betas - Ti



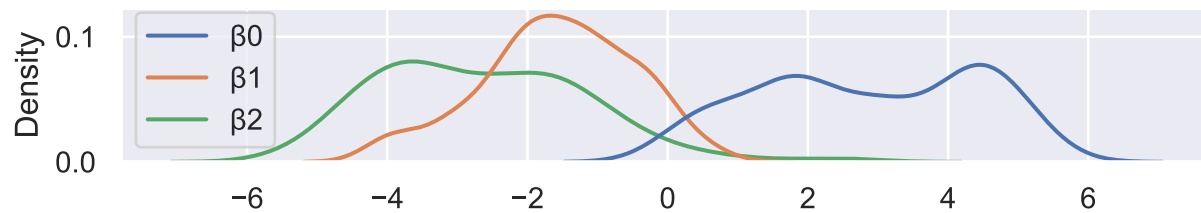
Evolution dBetas - Tn



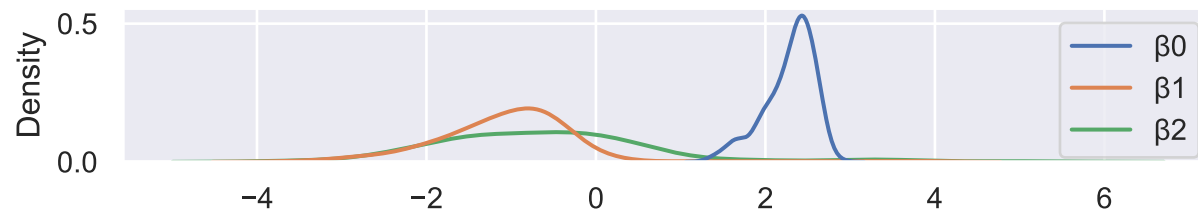
Evolution dBetas - Ti



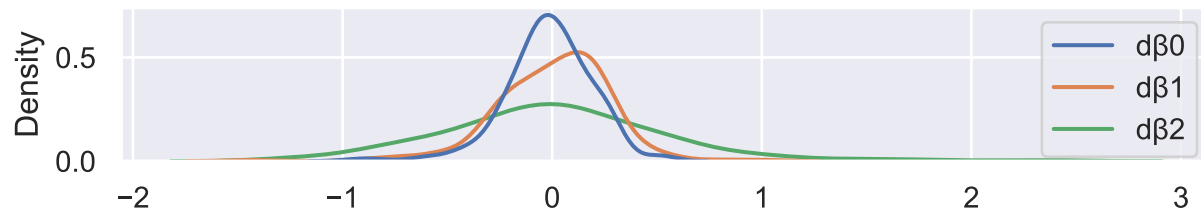
Densité Betas - Tn



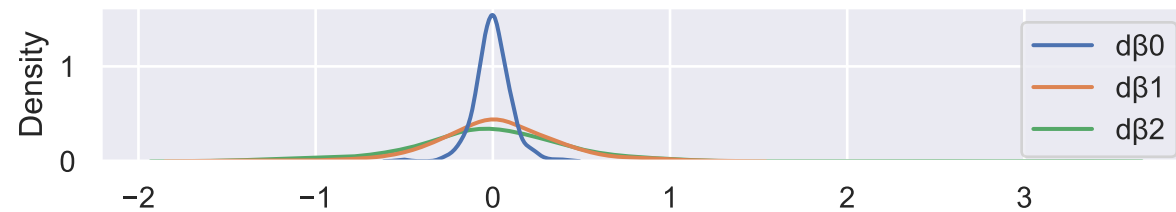
Densité Betas - Ti



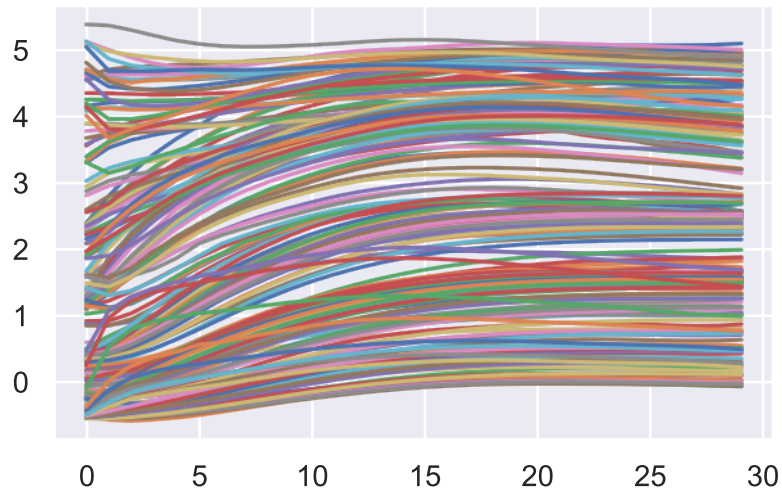
Densité dBetas - Tn



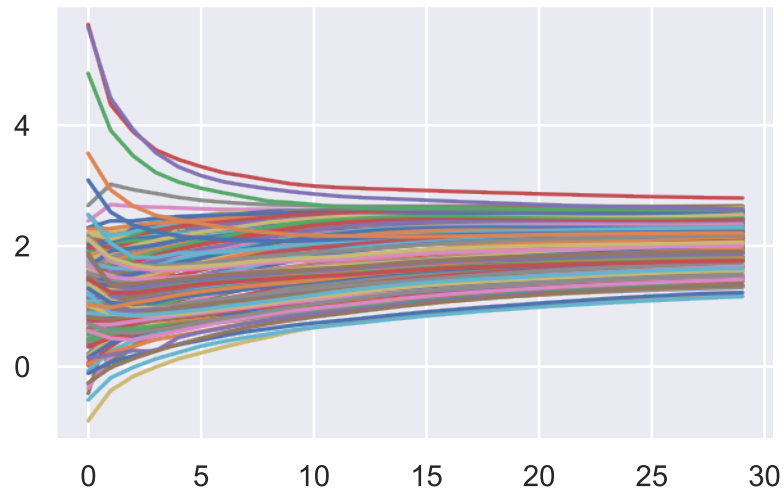
Densité dBetas - Ti



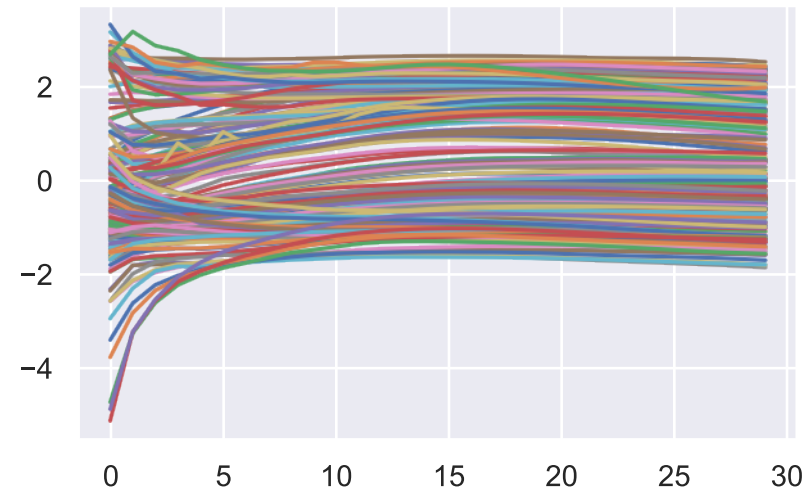
Courbes observées -  $T_n$



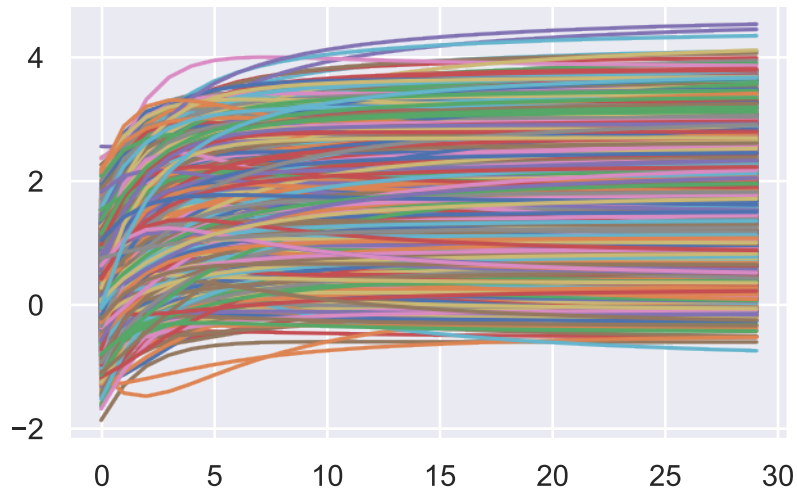
Courbes observées -  $T_i$



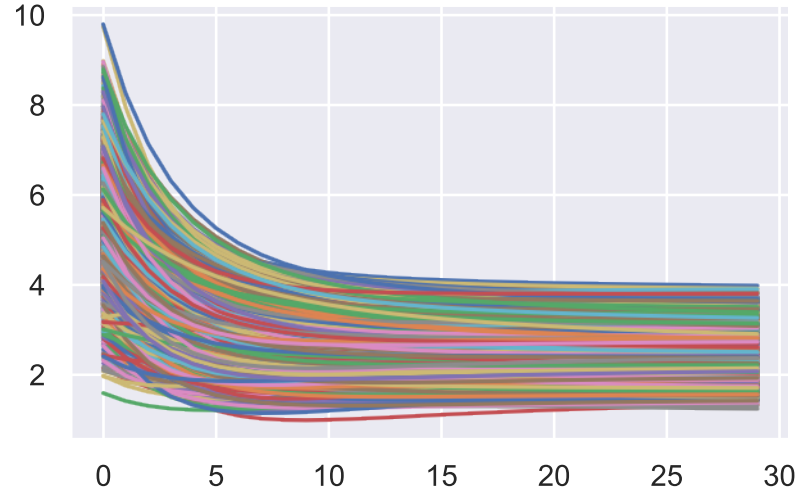
Courbes observées -  $T_r$



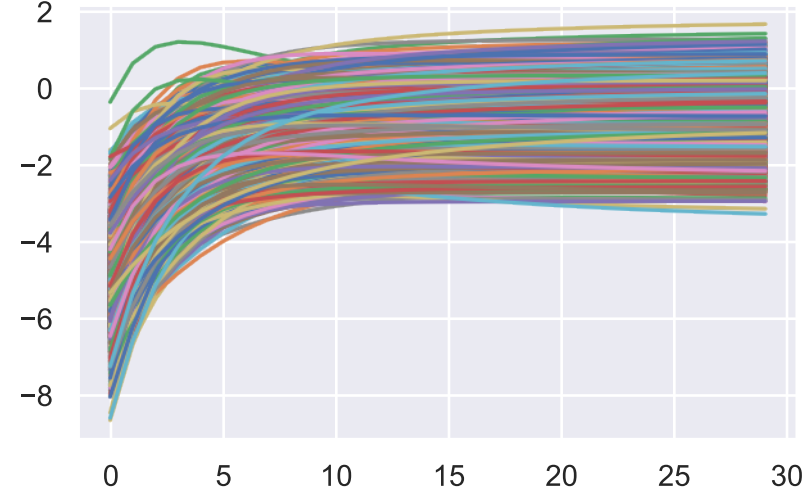
Courbes simulées -  $T_n$

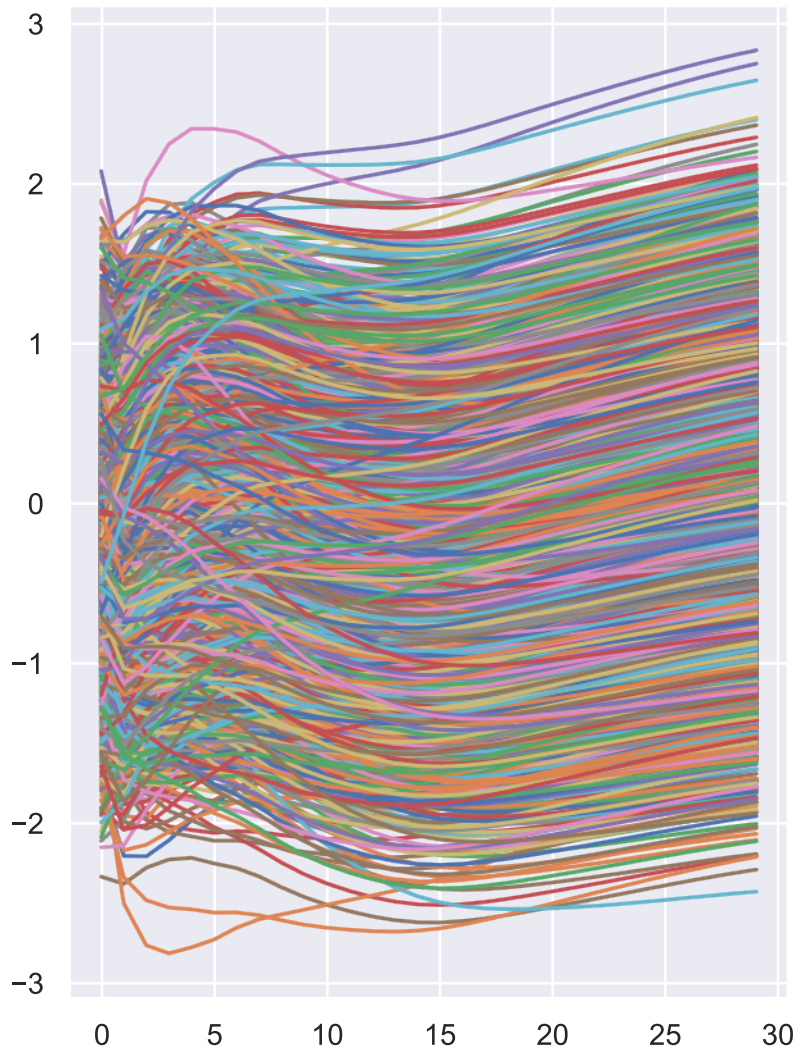
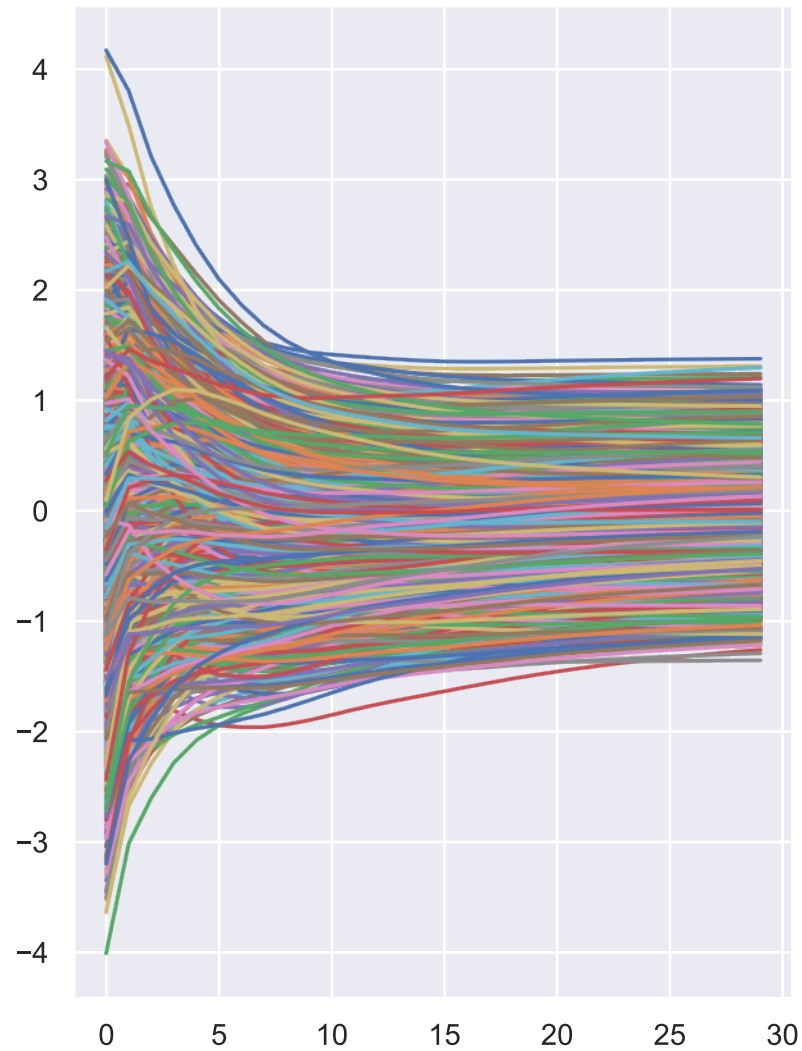
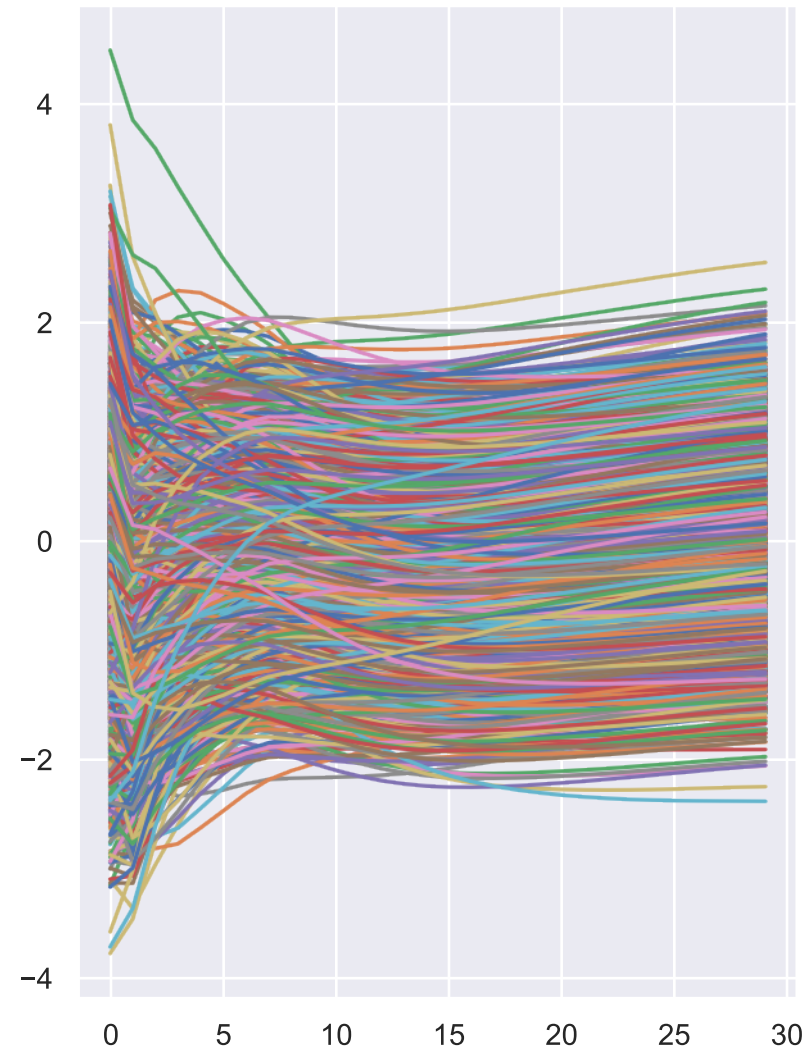


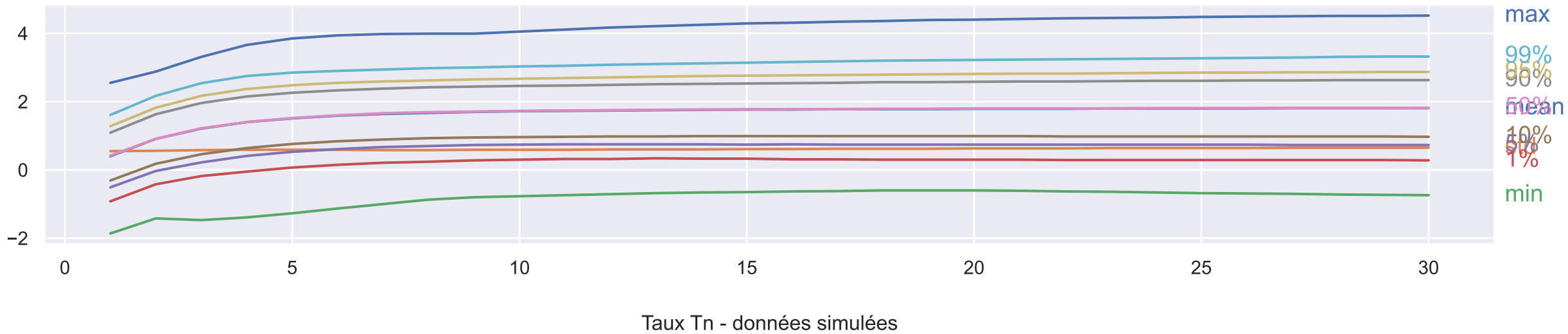
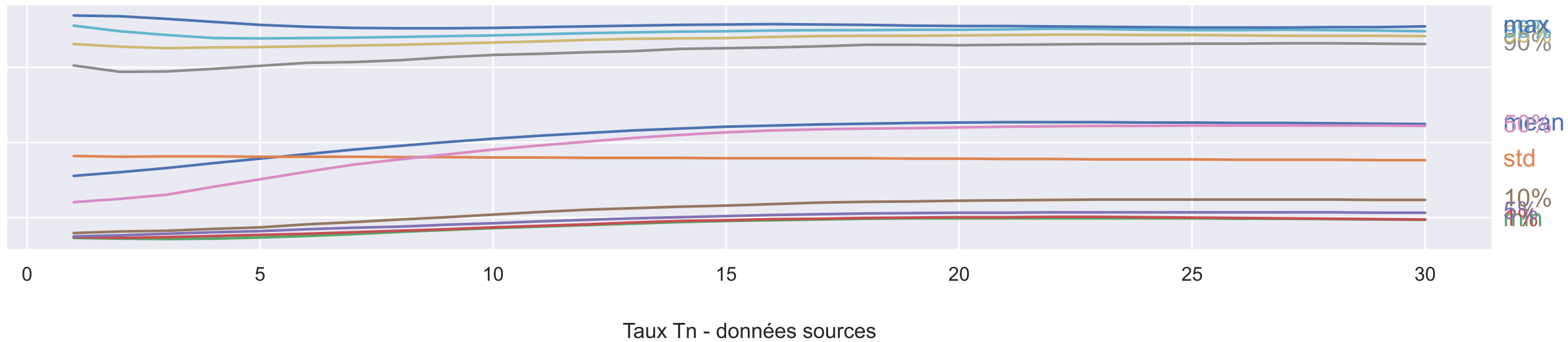
Courbes simulées -  $T_i$



Courbes simulées -  $T_r$



Chocs simulés -  $T_n$ Chocs simulés -  $T_i$ Chocs simulés -  $T_r$ 



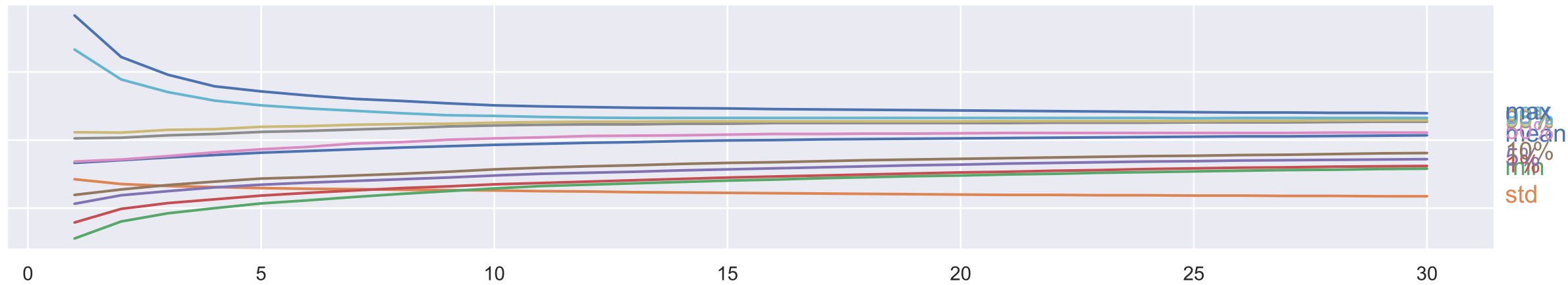
Maturités		1	10	30
	count	215.0	215.0	215.0
	mean	1.11	2.1	2.49
	std	1.64	1.6	1.53
	min	-0.54	-0.28	-0.06
	1%	-0.52	-0.26	-0.05
	5%	-0.5	-0.15	0.13
	10%	-0.41	0.08	0.47
	50%	0.41	1.81	2.44
	90%	4.05	4.33	4.62
	95%	4.62	4.66	4.83
	99%	5.11	4.85	4.96
	max	5.38	5.05	5.09

Taux Tn - données sources

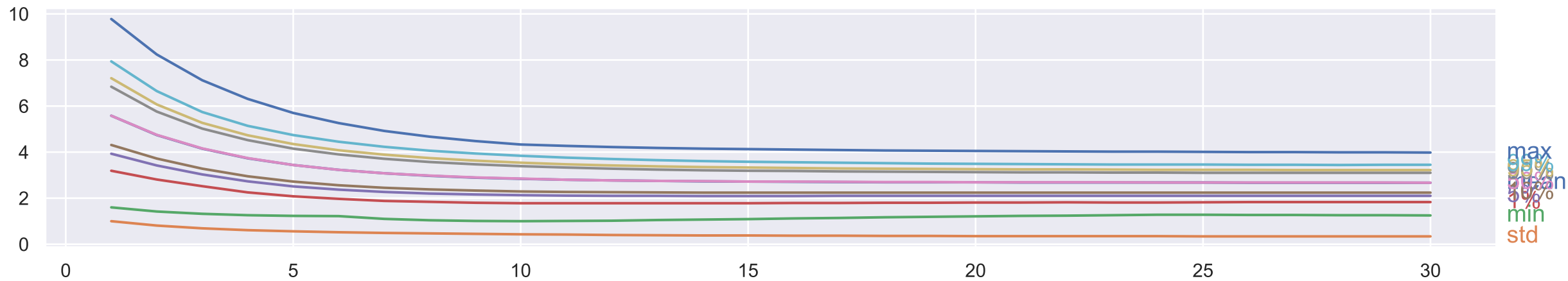
Maturités		1	10	30
	count	10000.0	10000.0	10000.0
	mean	0.4	1.72	1.81
	std	0.55	0.59	0.65
	min	-1.86	-0.77	-0.74
	1%	-0.92	0.3	0.28
	5%	-0.51	0.74	0.73
	10%	-0.31	0.96	0.97
	50%	0.42	1.73	1.82
	90%	1.09	2.46	2.63
	95%	1.28	2.67	2.87
	99%	1.61	3.03	3.32
	max	2.55	4.05	4.52

Taux Tn - données simulées





Taux Ti - données sources



Taux Ti - données simulées

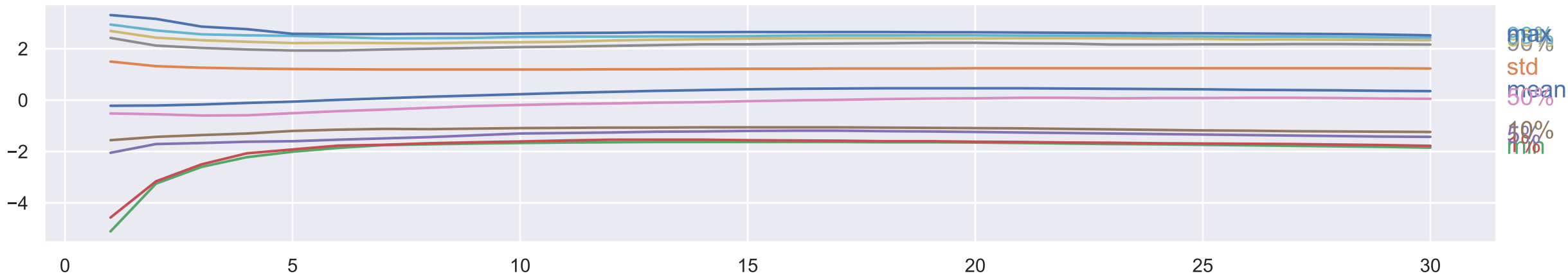


Maturités		1	10	30
	count	215.0	215.0	215.0
	mean	1.33	1.86	2.14
	std	0.85	0.52	0.35
	min	-0.89	0.58	1.16
	1%	-0.42	0.7	1.24
	5%	0.13	0.96	1.44
	10%	0.39	1.14	1.62
	50%	1.37	2.05	2.22
	90%	2.05	2.43	2.54
	95%	2.23	2.51	2.58
	99%	4.66	2.71	2.65
	max	5.66	3.02	2.79

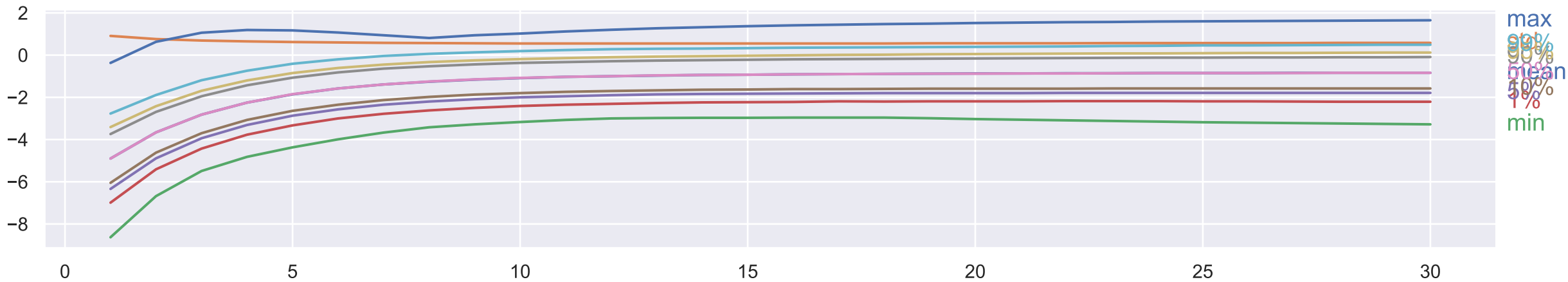
Taux Ti - données sources

Maturités		1	10	30
	count	10000.0	10000.0	10000.0
	mean	5.58	2.84	2.67
	std	1.0	0.43	0.34
	min	1.6	1.0	1.25
	1%	3.19	1.78	1.83
	5%	3.93	2.13	2.1
	10%	4.31	2.29	2.24
	50%	5.58	2.85	2.67
	90%	6.84	3.39	3.1
	95%	7.21	3.54	3.22
	99%	7.94	3.84	3.45
	max	9.78	4.33	3.98

Taux Ti - données simulées



Taux Tr - données sources



Taux Tr - données simulées

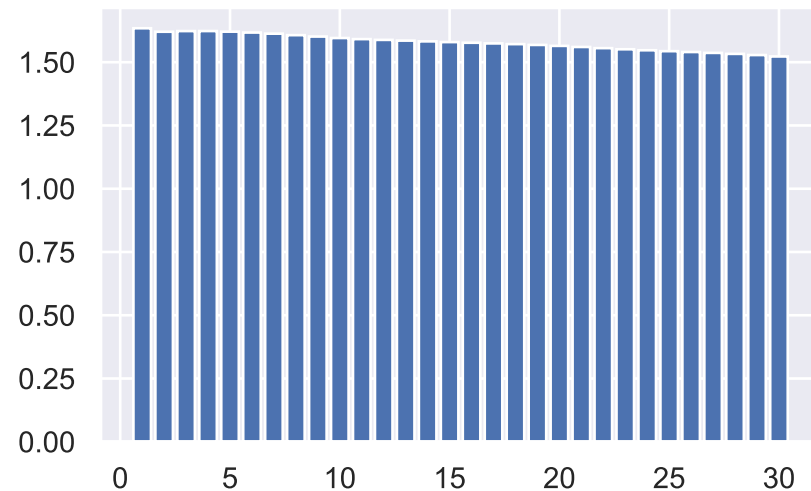
Maturités		1	10	30
	count	215.0	215.0	215.0
	mean	-0.22	0.23	0.35
	std	1.5	1.19	1.23
	min	-5.11	-1.67	-1.85
	1%	-4.57	-1.61	-1.78
	5%	-2.05	-1.3	-1.43
	10%	-1.56	-1.09	-1.24
	50%	-0.52	-0.19	0.05
	90%	2.42	2.06	2.16
	95%	2.69	2.25	2.33
	99%	2.94	2.46	2.43
	max	3.31	2.59	2.52

Taux Tr - données sources

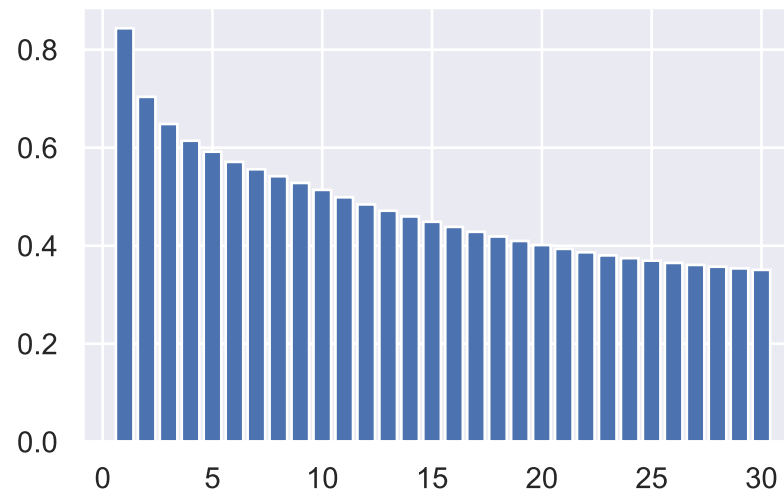
Maturités		1	10	30
	count	10000.0	10000.0	10000.0
	mean	-4.9	-1.09	-0.84
	std	0.91	0.55	0.58
	min	-8.63	-3.17	-3.28
	1%	-6.99	-2.41	-2.21
	5%	-6.34	-2.0	-1.79
	10%	-6.05	-1.8	-1.58
	50%	-4.9	-1.08	-0.84
	90%	-3.74	-0.37	-0.09
	95%	-3.41	-0.19	0.12
	99%	-2.77	0.19	0.49
	max	-0.37	1.02	1.65

Taux Tr - données simulées

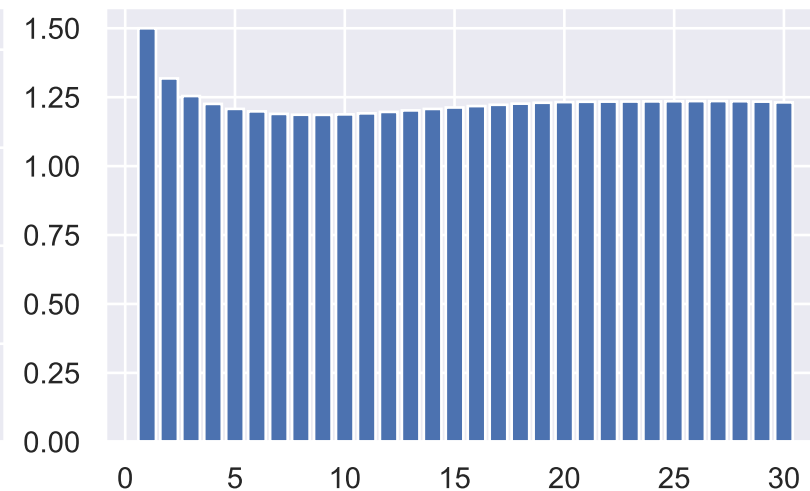
Evolution Vol Initiale - Tn



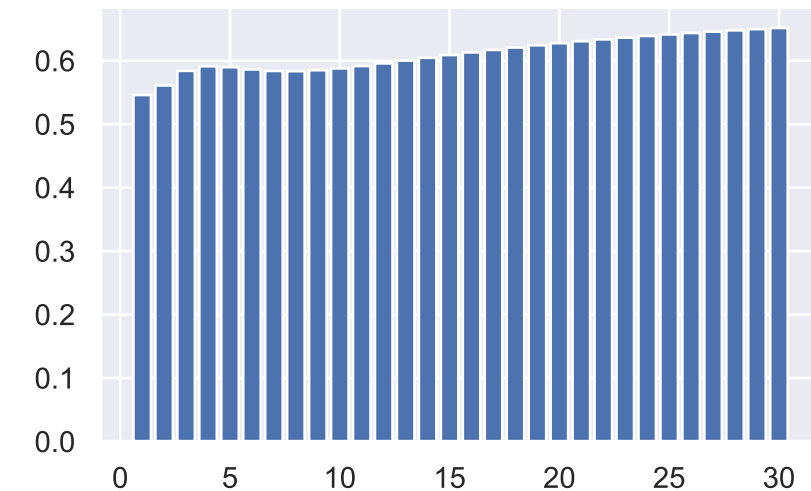
Evolution Vol Initiale - Ti



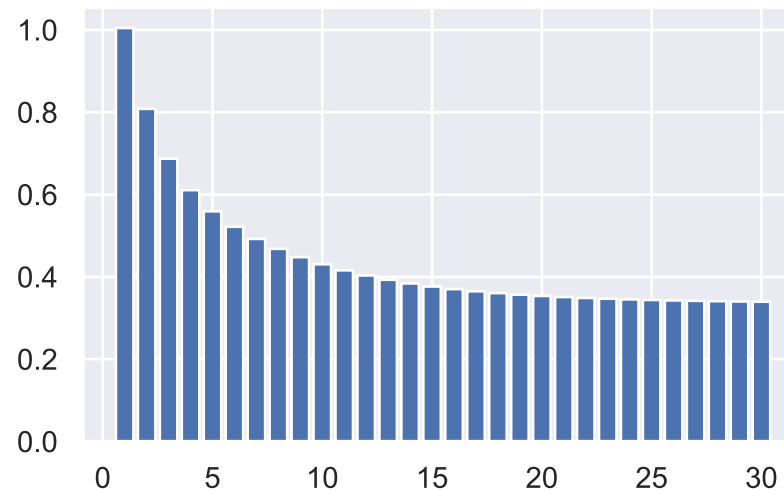
Evolution Vol Initiale - Tr



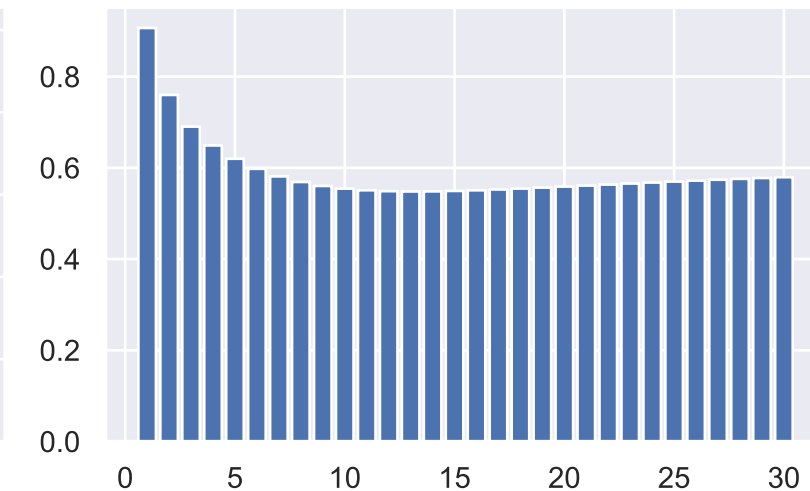
Evolution Vol Simulée - Tn



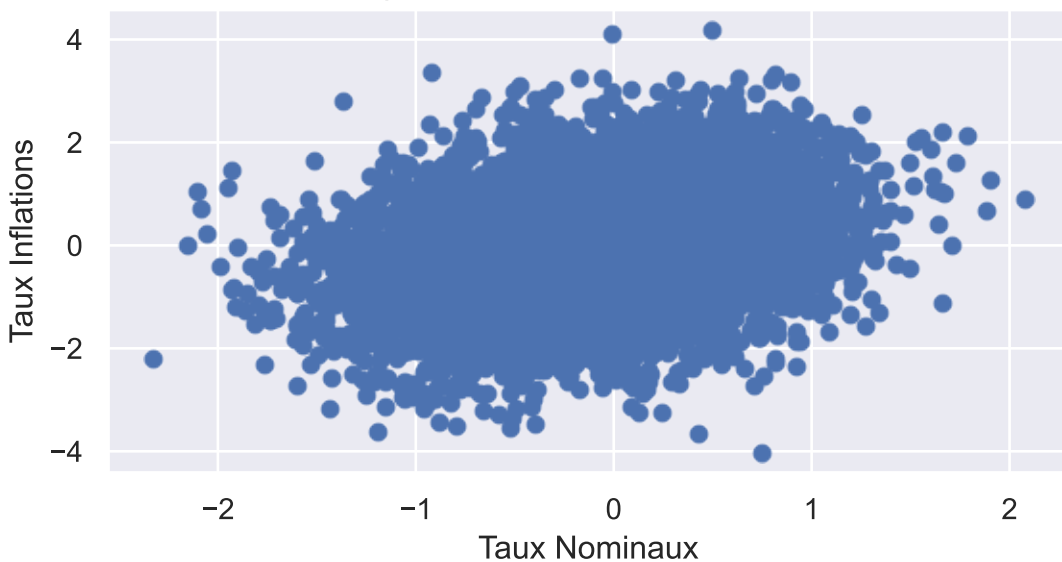
Evolution Vol Simulée - Ti



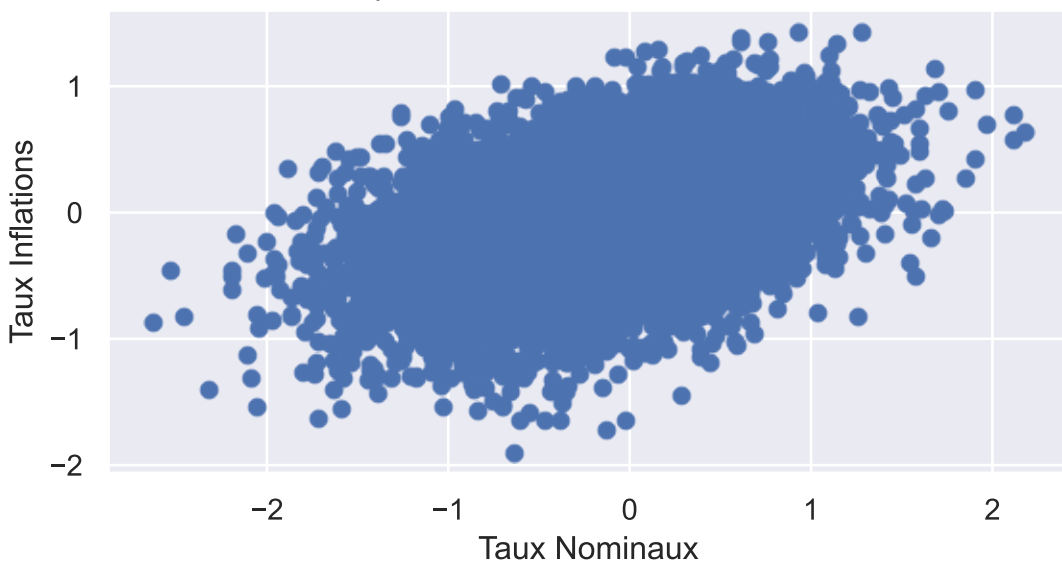
Evolution Vol Simulée - Tr



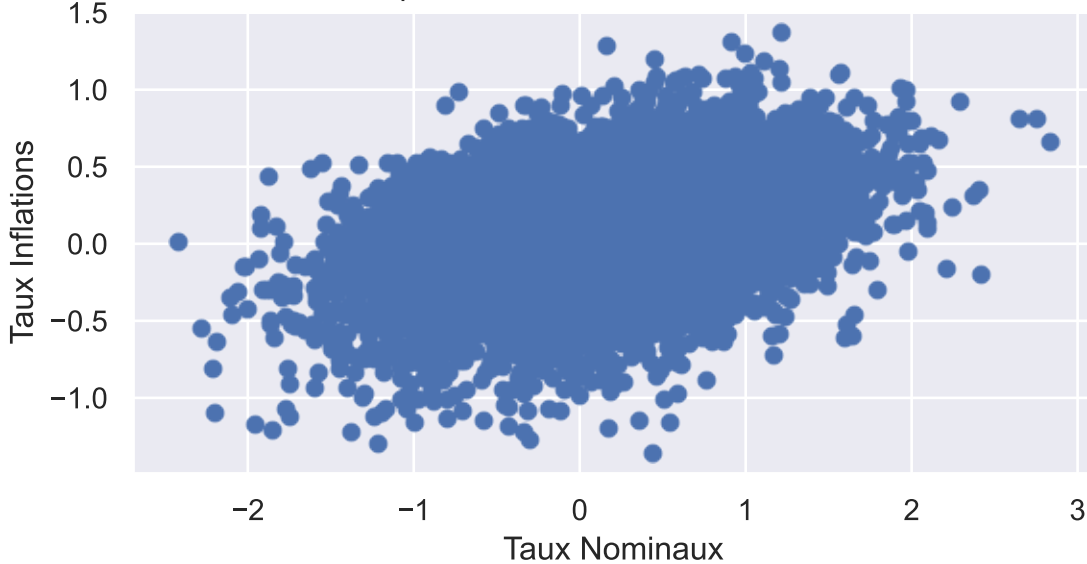
Dispersion des chocs - Maturité = 1



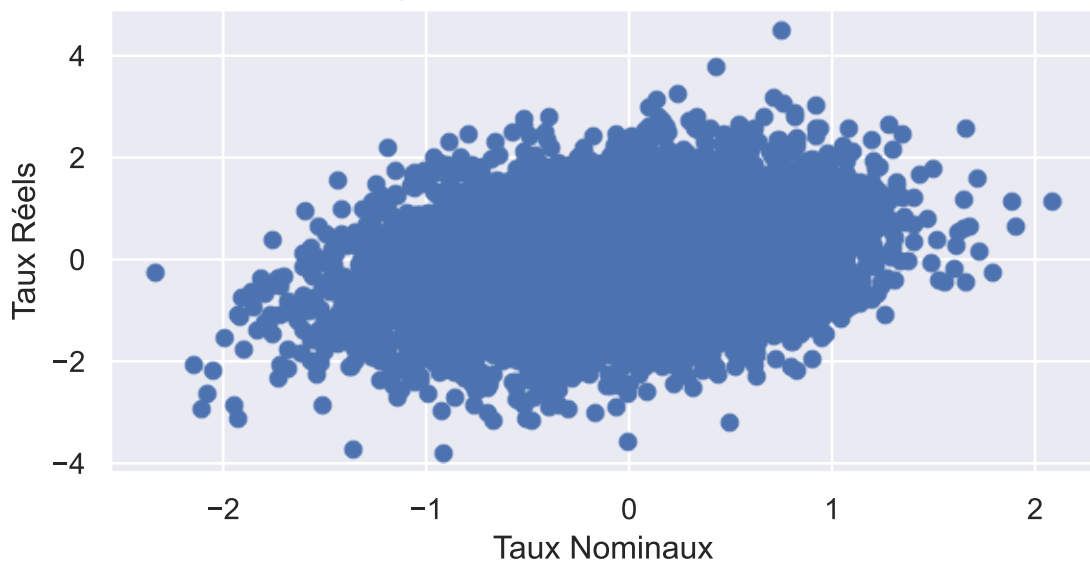
Dispersion des chocs - Maturité = 10



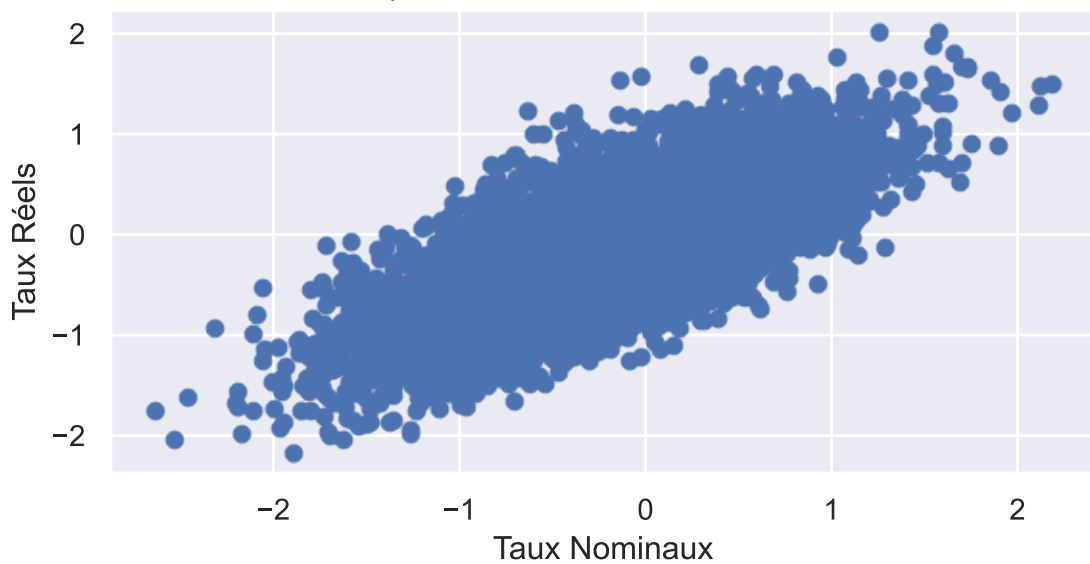
Dispersion des chocs - Maturité = 30



Dispersion des chocs - Maturité = 1



Dispersion des chocs - Maturité = 10



Dispersion des chocs - Maturité = 30

