

Appendix A Supplementary figures and tables

Predicted	Actual	
	Negative	Positive
	Negative -	True Negative (TN)
		False Negative (FN)
Positive -	False Positive (FP)	True Positive (TP)

Fig. S1 Idealized confusion matrix

Table S1 Coefficient values for each predictor per model. Variables are sorted by decreasing absolute value.

Simple		Frequency		Cumulative		All		Forward		Backward	
07_TX	3.80	07_TX90p	1.82	07_TX90pDD	1.63	07_TX90p	1.62	07_TX90p	1.93	07_TX	2.51
07_PP	-1.95	07_PP1t1	1.74	07_SPltn05	-1.10	07_TX	1.19	07_PP1t1	1.55	07_PP	-1.63
09_TN	-1.05	04_TN10p	0.75	04_TN10pDD	-1.08	07_PP1t1	1.05	07_TX	1.36	04_TN10pDD	-1.21
04_TX	-0.65	06_PP1t1	0.62	08_SPltn05	-0.67	04_TN10pDD	-0.94	04_TN10pDD	-1.19	07_TX90p	1.16
08_PP	-0.51	08_PP1t1	0.61	05_TN10pDD	0.60	06_PP1t1	0.61	08_PP1t1	0.82	05_TN10pDD	0.94
05_TN	0.43	08_TX90p	0.28	06_SPltn05	-0.45	08_PP1t1	0.60	05_TN10pDD	0.72	04_TX90pDD	0.87
04_PP	-0.41	05_TN10p	-0.17	05_SPgt05	0.44	05_TN10pDD	0.52	06_SPltn05	-0.48	05_TX	-0.83
08_TX	0.38			08_TX90pDD	0.34	05_SPltn05	-0.47	08_PP	-0.38	04_SPltn05	0.82
05_TX	-0.34			09_TN10pDD	-0.25	05_SPgt05	0.43	05_SPltn05	-0.36	05_SPltn05	-0.81
09_TX	-0.27			05_SPltn05	-0.16	07_SPltn05	-0.41	09_TX	-0.33	04_PP	-0.72
06_PP	-0.20			04_SPltn05	0.06	08_SPltn05	-0.32	06_TN10pDD	0.30	08_SPltn05	-0.72
						08_TX90pDD	0.29	04_PP	-0.27	06_TN10pDD	0.54
						06_SPltn05	-0.24	07_PP90p	-0.21	04_TX	-0.47
						09_TX	-0.21	05_TX	-0.09	06_SPltn05	-0.44
						06_TN10pDD	0.20			08_TX	0.31
						07_PP	-0.19				
						04_PP	-0.15				
						09_TN10pDD	-0.10				
						04_TN10p	0.08				
						04_TX	-0.07				
						08_PP	-0.01				

1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104

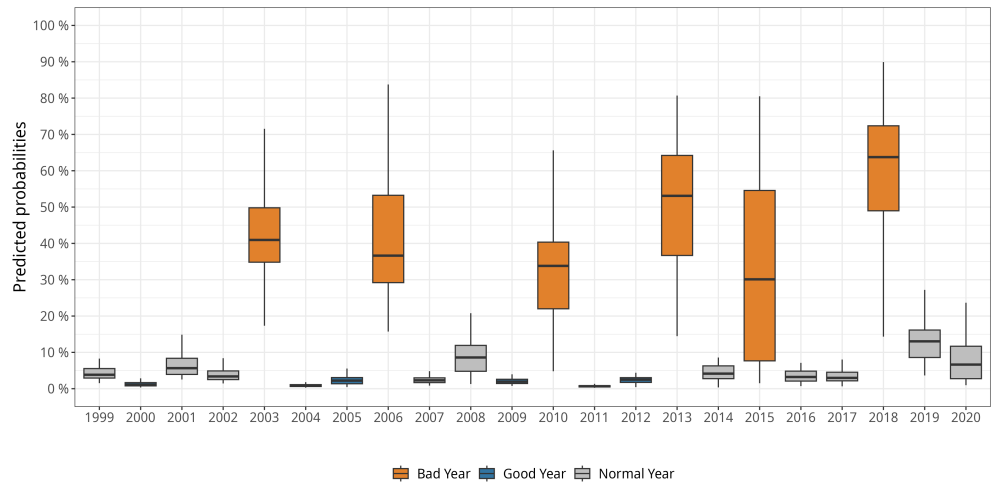


Fig. S2 Year-to-year distribution of the predicted probability in group *All*. Orange-coloured boxplots correspond to the 6 "bad years" and blue-coloured to the 6 "good years"

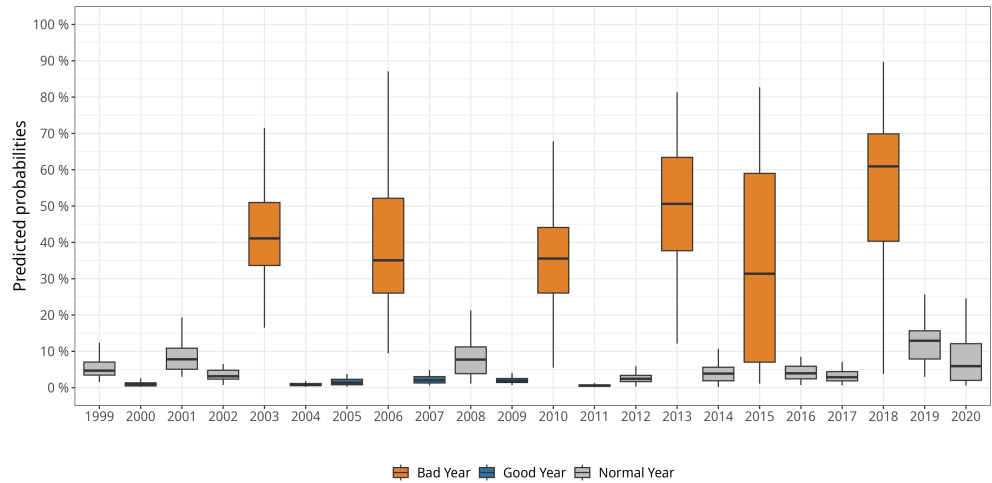


Fig. S3 Year-to-year distribution of the predicted probability in group *Forward*. Orange-coloured boxplots correspond to the 6 "bad years" and blue-coloured to the 6 "good years"

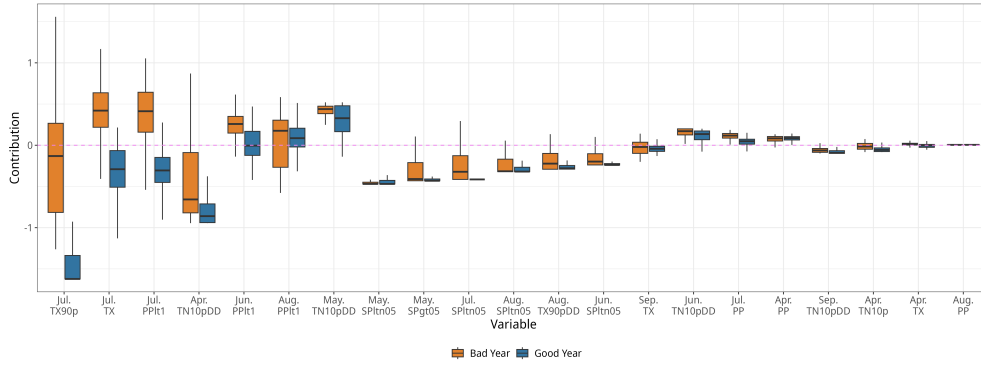


Fig. S4 Composite distribution of the variable contribution to the predicted probabilities in *All* group. The variables in x-axis are organized by absolute coefficient values (as in Table S1). The dashed-horizontal violet line indicates a "null contribution". Composites were made using the 6 "bad years" (orange-coloured boxplots) and the 6 "good years" (blue-coloured boxplots).

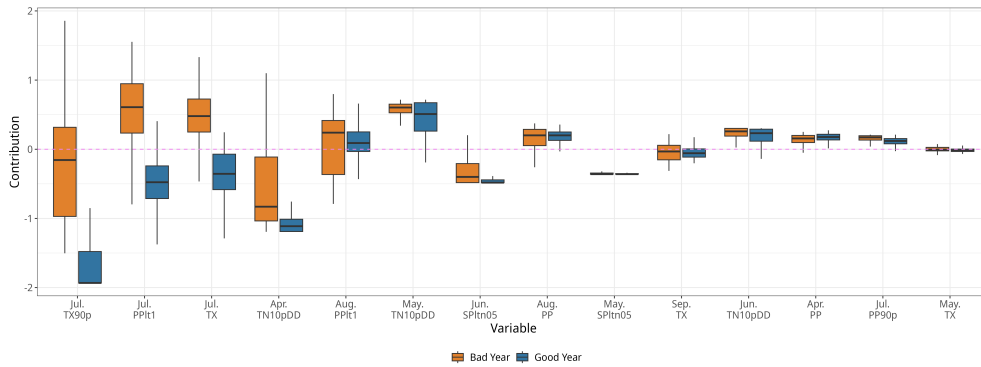


Fig. S5 Composite distribution of the variable contribution to the predicted probabilities in *Forward* group. The variables in x-axis are organized by absolute coefficient values (as in Table S1). The dashed-horizontal violet line indicates a "null contribution". Composites were made using the 6 "bad years" (orange-coloured boxplots) and the 6 "good years" (blue-coloured boxplots).