Does the Weather Influence Global Stock Returns?

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Internet Appendix

Table IA.1. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – With 2.5% Filter

This table presents the results of the OLS estimation of the following panel regression:

$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.1 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.63	**–0.55**	–0.45	–0.67	0.08	–0.65	–0.61	**–0.69**	0.00	–0.25	–0.48	–0.34	**–0.57**
	(0.11)	**(0.06)**	(0.37)	(0.10)	(0.85)	(0.25)	(0.25)	**(0.08)**	(0.99)	(0.59)	(0.26)	(0.41)	**(0.00)**
	[6.34]	**[6.32]**	[4.55]	[6.24]	[0.74]	[5.17]	[5.40]	**[6.18]**	[0.03]	[1.98]	[3.73]	[2.83]	**[5.23]**
WIND	–0.11	–0.26	**–0.36**	0.16	–0.06	**–0.42**	–0.36	**–0.38**	–0.21	–0.14	0.22	0.07	**–0.10**
	(0.42)	(0.13)	**(0.00)**	(0.25)	(0.68)	**(0.05)**	(0.15)	**(0.08)**	(0.38)	(0.47)	(0.32)	(0.61)	**(0.05)**
	[3.11]	[6.68]	**[8.34]**	[3.25]	[1.01]	**[6.65]**	[5.62]	**[5.88]**	[3.35]	[2.67]	[4.76]	[1.69]	**[2.01]**
RAIN	0.01	0.03	–0.02	–0.03	–0.02	–0.00	**–0.05**	–0.03	–0.01	–0.03	0.02	0.00	–0.01
	(0.58)	(0.30)	(0.44)	(0.16)	(0.53)	(0.97)	**(0.04)**	(0.48)	(0.66)	(0.12)	(0.38)	(0.92)	(0.10)
	[2.86]	[9.59]	[6.25]	[9.32]	[4.25]	[0.29]	**[2.70]**	[7.26]	[2.43]	[6.57]	[5.09]	[0.55]	[2.74]
SNOW	–0.02	–0.14	**–0.49**									0.25	–0.01
	(0.93)	(0.57)	**(0.01)**									(0.20)	(0.94)
	[0.07]	[0.72]	**[0.60]**									[0.10]	[0.00]
TEMP	**–0.18**	**–0.24**	–0.23	–0.02	0.13	**–0.34**	–0.10	–0.20	**0.51**	**–0.50**	–0.24	–0.13	**–0.18**
	(0.01)	**(0.03)**	(0.24)	(0.88)	(0.45)	**(0.02)**	(0.50)	(0.19)	**(0.00)**	**(0.00)**	(0.19)	(0.14)	**(0.00)**
	[8.50]	**[1.36]**	[8.10]	[0.82]	[3.77]	**[9.56]**	[2.69]	[5.04]	**[0.65]**	**[2.90]**	[7.39]	[4.85]	**[1.26]**
Intercept	**0.21**	**0.23**	**0.22**	0.11	–0.04	**0.32**	0.17	**0.23**	**–0.30**	**0.29**	0.12	**0.12**	**0.17**
	(0.00)	**(0.00)**	**(0.02)**	(0.25)	(0.71)	**(0.00)**	(0.12)	**(0.02)**	**(0.01)**	**(0.00)**	(0.15)	**(0.00)**	**(0.00)**
R^2	0.10	0.15	0.18	0.06	0.02	0.11	0.11	0.10	0.17	0.22	0.07	0.05	0.11
N	10,549	9,827	10,660	9,734	10,592	9,842	10,157	10,718	10,342	10,423	10,386	10,833	124,063

Table IA.1 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

Panel B: Mild Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.61	0.34	**–1.07**	0.36	–0.54	–0.96	–0.12	–0.39	–0.15	–0.43	–0.23	0.35	**–0.32**
	(0.23)	(0.56)	**(0.02)**	(0.57)	(0.47)	(0.10)	(0.84)	(0.49)	(0.83)	(0.47)	(0.64)	(0.49)	**(0.09)**
	[7.95]	[4.12]	**[2.17]**	[3.92]	[4.76]	[9.01]	[1.21]	[3.72]	[1.29]	[3.86]	[2.44]	[4.16]	**[3.20]**
WIND	0.13	–0.25	0.06	–0.31	–0.03	0.11	–0.27	–0.30	0.02	–0.10	–0.08	**–0.40**	–0.11
	(0.42)	(0.19)	(0.67)	(0.10)	(0.86)	(0.61)	(0.15)	(0.22)	(0.94)	(0.63)	(0.63)	**(0.04)**	(0.13)
	[2.92]	[5.34]	[1.21]	[6.37]	[0.48]	[1.70]	[4.78]	[4.96]	[0.24]	[1.57]	[1.44]	**[8.05]**	[1.95]
RAIN	0.00	–0.00	0.02	–0.01	0.02	**0.06**	**0.04**	0.00	–0.04	–0.03	0.02	–0.03	0.00
	(0.95)	(0.96)	(0.63)	(0.65)	(0.40)	**(0.02)**	**(0.05)**	(0.95)	(0.25)	(0.41)	(0.62)	(0.35)	(0.77)
	[0.79]	[0.77]	[4.53]	[4.17]	[6.01]	**[5.36]**	**[0.23]**	[1.07]	[9.92]	[7.71]	[5.91]	[7.65]	[0.58]
TEMP	**–0.24**	**–0.43**	–0.20	–0.30	–0.02	**–0.23**	0.03	–0.10	0.00	–0.27	–0.05	–0.18	**–0.14**
	(0.08)	**(0.00)**	(0.34)	(0.25)	(0.91)	**(0.03)**	(0.81)	(0.52)	(0.99)	(0.23)	(0.75)	(0.13)	**(0.00)**
	[9.66]	**[6.34]**	[6.01]	[7.92]	[0.57]	**[8.17]**	[1.23]	[4.13]	[0.06]	[7.15]	[1.27]	[7.05]	**[7.62]**
Intercept	**0.20**	**0.28**	**0.20**	0.26	0.04	**0.22**	0.05	0.14	0.01	0.20	0.06	**0.14**	**0.15**
	(0.00)	**(0.00)**	**(0.08)**	(0.13)	(0.73)	**(0.00)**	(0.64)	(0.23)	(0.93)	(0.13)	(0.43)	**(0.02)**	**(0.00)**
R^2	0.06	0.18	0.07	0.08	0.01	0.07	0.03	0.04	0.02	0.06	0.01	0.14	0.05
N	6,989	6,572	7,066	6,799	6,984	7,006	7,220	7,146	7,040	7,088	7,007	7,251	84,168

Table IA.1 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

Panel C: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.62	**–1.21**	–0.10	–0.45	**–1.22**	–0.35	–0.89	–0.73	–1.15	0.52	–0.19	**–0.90**	**–0.59**
	(0.12)	**(0.05)**	(0.88)	(0.43)	**(0.02)**	(0.66)	(0.20)	(0.20)	(0.16)	(0.25)	(0.66)	**(0.00)**	**(0.00)**
	[6.43]	**[2.69]**	[0.93]	[4.42]	**[9.21]**	[2.81]	[7.00]	[5.73]	[8.87]	[4.76]	[1.71]	**[9.45]**	**[5.46]**
WIND	0.14	0.15	–0.37	**0.46**	–0.01	–0.00	0.22	–0.37	–0.39	0.12	**–0.39**	–0.13	–0.03
	(0.51)	(0.50)	(0.14)	**(0.02)**	(0.97)	(1.00)	(0.32)	(0.13)	(0.12)	(0.68)	**(0.05)**	(0.54)	(0.72)
	[2.10]	[2.38]	[5.31]	**[6.94]**	[0.13]	[0.02]	[3.33]	[5.07]	[5.43]	[1.48]	**[4.65]**	[1.96]	[0.40]
RAIN	0.01	0.05	–0.01	0.02	0.02	0.04	**0.07**	**0.04**	0.02	–0.02	0.00	0.01	**0.02**
	(0.85)	(0.21)	(0.84)	(0.39)	(0.46)	(0.21)	**(0.00)**	**(0.08)**	(0.39)	(0.59)	(0.93)	(0.75)	**(0.02)**
	[2.19]	[4.16]	[1.87]	[6.29]	[6.06]	[2.54]	**[1.16]**	**[2.15]**	[6.48]	[4.27]	[0.82]	[1.84]	**[6.78]**
TEMP	–0.02	–0.02	–0.07	**0.15**	–0.04	–0.24	0.05	**–0.42**	–0.17	–0.05	–0.03	0.13	–0.04
	(0.80)	(0.88)	(0.53)	**(0.07)**	(0.68)	(0.11)	(0.79)	**(0.00)**	(0.22)	(0.74)	(0.77)	(0.12)	(0.40)
	[1.64]	[1.07]	[4.50]	**[8.46]**	[1.68]	[8.27]	[1.61]	**[0.68]**	[4.96]	[1.89]	[1.41]	[8.19]	[1.69]
Intercept	0.09	0.12	0.12	–0.09	0.12	**0.26**	0.03	**0.44**	**0.26**	0.03	0.07	0.02	**0.10**
	(0.17)	(0.16)	(0.25)	(0.25)	(0.21)	**(0.06)**	(0.87)	**(0.00)**	**(0.03)**	(0.83)	(0.45)	(0.76)	**(0.01)**
R^2	0.03	0.11	0.03	0.09	0.06	0.07	0.10	0.14	0.09	0.02	0.03	0.09	0.02
N	8,497	8,051	8,547	8,358	8,433	8,505	8,585	8,328	8,431	8,446	8,397	8,634	101,212

Table IA.2. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.2 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.46	–1.24	0.07	–1.26	0.78	**–2.51**	**–2.09**	–0.99	–0.92	–0.78	–1.24	0.81	**–1.19**
	(0.23)	(0.13)	(0.96)	(0.15)	(0.53)	**(0.05)**	**(0.08)**	(0.41)	(0.46)	(0.42)	(0.23)	(0.47)	**(0.00)**
	[1.13]	[1.08]	[0.06]	[0.97]	[0.64]	**[1.72]**	**[1.64]**	[0.82]	[0.69]	[0.57]	[0.89]	[0.56]	**[0.95]**
WIND	–0.04	–0.22	–0.51	0.09	0.27	–0.12	–0.34	–0.61	0.05	–0.12	0.42	0.52	0.03
	(0.93)	(0.53)	(0.12)	(0.85)	(0.61)	(0.84)	(0.59)	(0.21)	(0.93)	(0.80)	(0.42)	(0.25)	(0.88)
	[0.09]	[0.42]	[1.00]	[0.15]	[0.39]	[0.16]	[0.47]	[0.88]	[0.07]	[0.20]	[0.85]	[1.07]	[0.06]
RAIN	**0.08**	0.07	–0.07	0.05	–0.08	0.01	–0.08	0.05	–0.06	–0.05	0.06	–0.05	–0.01
	(0.09)	(0.18)	(0.29)	(0.37)	(0.22)	(0.86)	(0.18)	(0.43)	(0.29)	(0.16)	(0.23)	(0.34)	(0.51)
	[1.89]	[1.62]	[1.69]	[1.26]	[1.86]	[0.30]	[1.99]	[1.28]	[1.32]	[1.07]	[1.48]	[1.21]	[0.29]
SNOW	**–0.92**	**–0.78**	**–1.13**									–0.09	**–0.50**
	(0.04)	**(0.10)**	**(0.00)**									(0.91)	**(0.07)**
	[0.36]	**[0.41]**	**[0.53]**									[0.02]	**[0.06]**
TEMP	**–0.35**	**–0.78**	–0.41	–0.28	0.51	–0.53	–0.31	–0.10	**1.15**	**–1.00**	–0.55	**–0.79**	**–0.49**
	(0.05)	**(0.00)**	(0.32)	(0.55)	(0.17)	(0.13)	(0.32)	(0.73)	**(0.00)**	**(0.01)**	(0.17)	**(0.01)**	**(0.00)**
	[1.27]	**[2.80]**	[1.25]	[0.77]	[1.27]	[1.27]	[0.74]	[0.24]	**[2.22]**	**[2.33]**	[1.57]	**[2.39]**	**[2.70]**
Intercept	**0.58**	**0.64**	**0.47**	**0.48**	–0.11	**0.65**	**0.52**	0.31	**–0.59**	**0.64**	**0.39**	**0.55**	**0.52**
	(0.00)	**(0.00)**	**(0.02)**	**(0.07)**	(0.63)	**(0.01)**	**(0.03)**	(0.14)	**(0.01)**	**(0.00)**	**(0.04)**	**(0.00)**	**(0.00)**
R^2	0.07	0.20	0.10	0.02	0.05	0.06	0.08	0.03	0.18	0.16	0.08	0.15	0.12
N	10,549	9,827	10,660	9,734	10,592	9,842	10,157	10,718	10,342	10,423	10,386	10,833	124,063

Table IA.2 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

Panel B: Mild Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	0.23	**2.08**	–1.41	0.41	–0.80	**–3.96**	0.56	–0.45	0.63	–1.59	–0.45	**2.51**	–0.18
	(0.76)	**(0.02)**	(0.18)	(0.70)	(0.59)	**(0.01)**	(0.66)	(0.69)	(0.63)	(0.28)	(0.67)	**(0.01)**	(0.67)
	[0.24]	**[2.08]**	[1.36]	[0.36]	[0.69]	**[2.94]**	[0.49]	[0.38]	[0.55]	[1.34]	[0.45]	**[2.52]**	[0.16]
WIND	–0.24	0.01	0.06	–0.57	–0.54	0.85	**–0.60**	–0.58	0.19	0.16	–0.41	**–1.29**	**–0.26**
	(0.60)	(0.99)	(0.89)	(0.12)	(0.13)	(0.20)	**(0.04)**	(0.17)	(0.65)	(0.86)	(0.25)	**(0.01)**	**(0.05)**
	[0.43]	[0.01]	[0.11]	[0.91]	[0.84]	[1.08]	**[0.94]**	[0.88]	[0.28]	[0.24]	[0.69]	**[2.11]**	**[0.42]**
RAIN	–0.09	–0.08	**–0.10**	**–0.13**	0.07	**0.08**	0.01	–0.11	**–0.16**	–0.02	–0.08	**–0.13**	**–0.07**
	(0.22)	(0.39)	**(0.02)**	**(0.04)**	(0.37)	**(0.06)**	(0.88)	(0.22)	**(0.04)**	(0.86)	(0.40)	**(0.09)**	**(0.00)**
	[2.27]	[1.96]	**[2.50]**	**[3.00]**	[1.72]	**[1.83]**	[0.33]	[2.56]	**[4.06]**	[0.38]	[1.96]	**[3.08]**	**[1.67]**
TEMP	**–0.69**	**–1.05**	–0.57	**–0.87**	–0.19	**–0.96**	–0.04	–0.32	0.27	–0.49	–0.05	**–1.20**	**–0.47**
	(0.07)	**(0.00)**	(0.28)	**(0.09)**	(0.64)	**(0.00)**	(0.89)	(0.27)	(0.24)	(0.30)	(0.87)	**(0.00)**	**(0.00)**
	[2.23]	**[3.22]**	[1.43]	**[1.80]**	[0.55]	**[2.69]**	[0.13]	[1.18]	[0.84]	[1.22]	[0.13]	**[3.77]**	**[2.22]**
Intercept	**0.58**	**0.60**	**0.53**	**0.74**	0.27	**0.90**	0.19	**0.43**	–0.15	0.41	0.17	**0.79**	**0.46**
	(0.00)	**(0.00)**	**(0.07)**	**(0.03)**	(0.38)	**(0.00)**	(0.39)	**(0.06)**	(0.36)	(0.16)	(0.28)	**(0.00)**	**(0.00)**
R^2	0.13	0.28	0.09	0.12	0.03	0.24	0.03	0.06	0.07	0.05	0.04	0.62	0.11
N	6,989	6,572	7,066	6,799	6,984	7,006	7,220	7,146	7,040	7,088	7,007	7,252	84,169

Table IA.2 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.52	–0.65	0.72	–1.10	–1.42	0.23	0.07	**–1.77**	–1.60	1.28	0.12	**–2.20**	–0.71
	(0.69)	(0.69)	(0.63)	(0.48)	(0.23)	(0.92)	(0.94)	**(0.10)**	(0.30)	(0.13)	(0.91)	**(0.02)**	(0.23)
	[0.45]	[0.57]	[0.63]	[0.93]	[0.97]	[0.14]	[0.05]	**[1.06]**	[1.11]	[1.12]	[0.10]	**[0.00]**	[0.00]
WIND	0.07	0.13	–0.58	0.45	0.13	**1.35**	0.49	–0.23	0.29	–0.38	–0.62	–0.34	–0.05
	(0.89)	(0.84)	(0.22)	(0.44)	(0.85)	**(0.01)**	(0.37)	(0.73)	(0.61)	(0.54)	(0.28)	(0.52)	(0.85)
	[0.09]	[0.17]	[0.76]	[0.58]	[0.16]	**[1.58]**	[0.63]	[0.24]	[0.36]	[0.46]	[0.72]	[0.00]	[0.00]
RAIN	0.10	0.11	–0.00	0.01	0.05	**0.17**	0.10	0.06	–0.00	–0.02	–0.06	–0.01	**0.04**
	(0.15)	(0.28)	(0.96)	(0.79)	(0.56)	**(0.02)**	(0.23)	(0.29)	(0.98)	(0.72)	(0.45)	(0.88)	**(0.05)**
	[2.48]	[2.65]	[0.08]	[0.33]	[1.31]	**[3.78]**	[2.40]	[1.21]	[0.03]	[0.45]	[1.49]	[0.00]	**[0.00]**
TEMP	0.36	0.06	0.20	**0.55**	**0.56**	**–1.05**	–0.12	**–0.92**	0.05	–0.19	–0.11	**0.85**	0.05
	(0.20)	(0.78)	(0.46)	**(0.05)**	**(0.06)**	**(0.02)**	(0.82)	**(0.01)**	(0.88)	(0.51)	(0.67)	**(0.00)**	(0.74)
	[2.00]	[0.36]	[1.10]	**[2.56]**	**[2.05]**	**[2.70]**	[0.29]	**[1.77]**	[0.12]	[0.66]	[0.52]	**[0.00]**	[0.00]
Intercept	0.03	0.20	0.03	–0.24	–0.25	**0.92**	0.23	**0.98**	0.17	0.27	0.24	–0.22	**0.18**
	(0.88)	(0.25)	(0.90)	(0.38)	(0.35)	**(0.03)**	(0.62)	**(0.00)**	(0.42)	(0.25)	(0.24)	(0.14)	**(0.07)**
R^2	0.06	0.02	0.04	0.12	0.10	0.34	0.04	0.12	0.03	0.03	0.02	0.32	0.01
N	8,497	8,051	8,547	8,358	8,433	8,505	8,585	8,328	8,431	8,446	8,397	8,634	101,212

Table IA.3. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

This table presents the results of the OLS estimation of the following panel regression:

$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.3 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–1.77**	0.13	–0.49	–0.84	0.06	–0.54	–0.55	–0.61	–0.88	0.71	–0.48	–0.10	**–0.65**
	(0.03)	(0.76)	(0.37)	(0.32)	(0.92)	(0.27)	(0.45)	(0.33)	(0.41)	(0.52)	(0.52)	(0.86)	**(0.00)**
	[6.78]	[1.49]	[4.90]	[7.87]	[0.50]	[4.08]	[4.82]	[5.09]	[6.10]	[5.29]	[3.63]	[0.81]	**[5.75]**
WIND	–0.11	**–0.52**	**–0.35**	0.08	–0.06	**–1.09**	–0.57	**–0.84**	–0.25	0.01	0.13	–0.06	**–0.21**
	(0.58)	**(0.05)**	**(0.06)**	(0.73)	(0.82)	**(0.05)**	(0.13)	**(0.01)**	(0.44)	(0.97)	(0.67)	(0.76)	**(0.03)**
	[2.91]	**[2.80]**	**[8.03]**	[1.64]	[0.96]	**[6.45]**	[8.88]	**[2.27]**	[3.62]	[0.22]	[2.82]	[1.56]	**[3.92]**
RAIN	0.03	–0.00	–0.04	–0.06	–0.01	0.03	–0.06	–0.04	0.02	–0.05	0.00	0.03	–0.01
	(0.39)	(0.99)	(0.27)	(0.12)	(0.72)	(0.41)	(0.25)	(0.41)	(0.64)	(0.28)	(0.90)	(0.31)	(0.19)
	[8.03]	[0.11]	[2.09]	[6.78]	[2.44]	[7.14]	[5.76]	[9.42]	[3.84]	[1.49]	[1.10]	[7.62]	[3.29]
SNOW	**–0.79**	–0.40	–0.38									0.05	–0.15
	(0.00)	(0.35)	(0.34)									(0.87)	(0.65)
	[2.82]	[2.09]	[0.46]									[0.02]	[0.00]
TEMP	**–0.34**	**–0.42**	–0.24	–0.02	0.05	–0.33	–0.04	–0.01	**0.86**	–0.47	–0.31	–0.06	**–0.23**
	(0.02)	**(0.01)**	(0.24)	(0.92)	(0.78)	(0.11)	(0.87)	(0.96)	**(0.03)**	(0.22)	(0.21)	(0.66)	**(0.00)**
	[4.96]	**[9.58]**	[8.48]	[0.65]	[1.36]	[8.87]	[1.03]	[0.25]	**[5.83]**	[1.49]	[9.35]	[2.32]	**[3.90]**
Intercept	**0.30**	**0.29**	**0.23**	0.13	–0.02	**0.34**	0.14	0.11	**–0.52**	0.19	0.16	**0.10**	**0.20**
	(0.00)	**(0.00)**	**(0.03)**	(0.28)	(0.88)	**(0.02)**	(0.40)	(0.45)	**(0.04)**	(0.37)	(0.13)	**(0.07)**	**(0.00)**
R^2	0.20	0.21	0.11	0.06	0.00	0.17	0.10	0.13	0.22	0.07	0.04	0.01	0.08
N	11,124	10,274	11,205	10,206	11,115	10,292	10,612	11,261	10,974	11,266	10,951	11,224	130,504

Table IA.3 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

Panel B: Mild Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–1.75**	0.50	**–1.80**	–0.32	0.20	–0.35	–0.78	–0.59	0.37	–0.52	0.41	–1.32	**–0.64**
	(0.08)	(0.58)	**(0.03)**	(0.77)	(0.85)	(0.75)	(0.43)	(0.47)	(0.71)	(0.48)	(0.69)	(0.28)	**(0.07)**
	[5.77]	[6.31]	**[1.73]**	[3.68]	[1.66]	[3.48]	[7.84]	[5.59]	[3.18]	[4.63]	[4.29]	[6.50]	**[6.46]**
WIND	0.46	–0.21	0.42	–0.04	–0.06	**0.89**	–0.33	–0.14	–0.49	0.12	–0.26	–0.12	0.05
	(0.22)	(0.68)	(0.18)	(0.92)	(0.87)	**(0.08)**	(0.28)	(0.69)	(0.27)	(0.65)	(0.53)	(0.73)	(0.81)
	[1.33]	[4.65]	[9.04]	[0.89]	[0.91]	**[4.86]**	[6.02]	[2.40]	[7.39]	[1.90]	[4.53]	[2.43]	[0.87]
RAIN	0.01	–0.01	–0.04	–0.04	–0.01	–0.03	0.07	–0.05	–0.05	**–0.12**	–0.02	0.12	–0.01
	(0.87)	(0.91)	(0.30)	(0.62)	(0.82)	(0.61)	(0.43)	(0.54)	(0.44)	**(0.00)**	(0.84)	(0.10)	(0.53)
	[4.31]	[2.79]	[1.57]	[2.15]	[3.02]	[8.10]	[8.91]	[4.60]	[3.41]	**[9.89]**	[4.70]	[5.28]	[4.19]
TEMP	**–0.44**	–0.24	**–0.61**	–0.29	–0.06	0.19	–0.01	**–0.39**	0.23	–0.36	–0.11	–0.31	**–0.23**
	(0.05)	(0.15)	**(0.09)**	(0.37)	(0.85)	(0.55)	(0.97)	**(0.09)**	(0.38)	(0.36)	(0.66)	(0.14)	**(0.00)**
	[9.68]	[9.51]	**[9.55]**	[8.25]	[1.55]	[6.97]	[0.26]	**[5.73]**	[7.25]	[9.34]	[3.11]	[2.49]	**[2.61]**
Intercept	**0.35**	**0.20**	**0.44**	0.28	0.01	–0.12	0.12	**0.34**	–0.12	0.25	0.08	**0.26**	**0.21**
	(0.00)	**(0.02)**	**(0.02)**	(0.15)	(0.98)	(0.59)	(0.51)	**(0.05)**	(0.57)	(0.29)	(0.51)	**(0.02)**	**(0.00)**
R^2	0.11	0.02	0.15	0.02	0.00	0.08	0.03	0.05	0.04	0.06	0.01	0.10	0.04
N	7,694	7,164	7,672	7,461	7,718	7,632	7,820	7,749	7,721	7,870	7,661	7,813	91,975

Table IA.3 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – No Filter

Panel C: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.25	–1.40	–0.90	–0.76	–0.98	–0.06	–0.61	–0.49	0.05	0.85	0.03	–0.25	**–0.38**
	(0.56)	(0.17)	(0.21)	(0.43)	(0.16)	(0.94)	(0.53)	(0.48)	(0.96)	(0.31)	(0.96)	(0.74)	**(0.09)**
	[2.77]	[5.10]	[8.40]	[7.34]	[7.23]	[0.51]	[4.91]	[3.83]	[0.35]	[7.22]	[0.26]	[2.58]	**[3.48]**
WIND	0.41	0.29	–0.08	–0.01	**–0.81**	–0.07	0.11	–0.59	**–0.58**	0.29	–0.27	–0.60	–0.11
	(0.37)	(0.39)	(0.85)	(0.98)	**(0.02)**	(0.78)	(0.63)	(0.15)	**(0.09)**	(0.21)	(0.32)	(0.13)	(0.35)
	[6.58]	[4.77]	[1.07]	[0.18]	**[1.09]**	[1.03]	[1.71]	[8.06]	**[7.78]**	[3.37]	[3.11]	[8.77]	[1.64]
RAIN	–0.00	–0.00	0.08	0.03	–0.06	–0.01	0.05	–0.01	–0.01	–0.09	–0.00	0.05	0.00
	(0.99)	(0.96)	(0.13)	(0.61)	(0.35)	(0.84)	(0.17)	(0.81)	(0.87)	(0.12)	(0.97)	(0.37)	(0.94)
	[0.11]	[0.78]	[1.62]	[7.06]	[5.69]	[2.34]	[5.57]	[3.58]	[2.29]	[1.59]	[0.46]	[3.70]	[0.45]
TEMP	0.11	–0.08	0.01	0.20	–0.19	–0.17	0.09	–0.47	–0.31	–0.20	**–0.20**	0.09	–0.06
	(0.37)	(0.66)	(0.95)	(0.30)	(0.26)	(0.43)	(0.76)	(0.11)	(0.26)	(0.32)	**(0.06)**	(0.48)	(0.34)
	[8.18]	[5.52]	[0.64]	[0.95]	[7.66]	[5.66]	[2.55]	[1.65]	[8.72]	[6.64]	**[8.82]**	[5.74]	[2.70]
Intercept	–0.02	0.17	0.07	–0.08	**0.28**	0.19	0.01	**0.49**	0.33	0.09	**0.15**	0.03	**0.11**
	(0.81)	(0.23)	(0.69)	(0.65)	**(0.04)**	(0.34)	(0.98)	**(0.04)**	(0.12)	(0.58)	**(0.09)**	(0.72)	**(0.03)**
R^2	0.02	0.07	0.03	0.03	0.07	0.01	0.02	0.07	0.05	0.04	0.02	0.06	0.01
N	9,228	8,724	9,243	9,084	9,194	9,132	9,242	9,028	9,090	9,202	9,117	9,215	109,499

Table IA.4. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.4 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.87	–1.02	–0.04	–1.37	0.66	**–2.30**	**–2.21**	–0.99	–1.35	–0.63	–1.31	0.73	**–1.28**
	(0.15)	(0.22)	(0.98)	(0.16)	(0.59)	**(0.06)**	**(0.07)**	(0.42)	(0.29)	(0.49)	(0.22)	(0.51)	**(0.00)**
	[1.43]	[0.88]	[0.03]	[1.06]	[0.54]	**[1.57]**	**[1.73]**	[0.82]	[1.00]	[0.45]	[0.93]	[0.51]	**[1.03]**
WIND	–0.04	–0.27	–0.48	0.06	0.16	–0.40	–0.43	–0.77	0.02	–0.00	0.36	0.45	–0.01
	(0.93)	(0.40)	(0.13)	(0.88)	(0.75)	(0.50)	(0.52)	(0.12)	(0.97)	(1.00)	(0.47)	(0.34)	(0.98)
	[0.08]	[0.52]	[0.95]	[0.11]	[0.24]	[0.55]	[0.60]	[1.12]	[0.03]	[0.00]	[0.72]	[0.93]	[0.01]
RAIN	0.08	0.05	–0.08	0.04	–0.06	0.02	–0.09	0.05	–0.05	–0.04	0.05	–0.03	–0.01
	(0.10)	(0.25)	(0.26)	(0.45)	(0.25)	(0.72)	(0.20)	(0.46)	(0.43)	(0.19)	(0.28)	(0.52)	(0.59)
	[2.07]	[1.25]	[1.88]	[1.04]	[1.55]	[0.59]	[2.12]	[1.16]	[1.02]	[0.91]	[1.31]	[0.85]	[0.23]
SNOW	**–1.31**	**–0.94**	**–1.07**									–0.05	**–0.59**
	(0.01)	**(0.05)**	**(0.01)**									(0.95)	**(0.05)**
	[0.52]	**[0.50]**	**[0.52]**									[0.01]	**[0.08]**
TEMP	**–0.40**	**–0.84**	–0.40	–0.23	0.46	–0.53	–0.31	–0.02	**1.25**	**–0.98**	–0.52	**–0.70**	**–0.49**
	(0.04)	**(0.00)**	(0.32)	(0.60)	(0.22)	(0.13)	(0.36)	(0.94)	**(0.00)**	**(0.02)**	(0.17)	**(0.03)**	**(0.00)**
	[1.45]	**[2.98]**	[1.20]	[0.65]	[1.16]	[1.27]	[0.73]	[0.06]	**[2.37]**	**[2.31]**	[1.48]	**[2.14]**	**[2.68]**
Intercept	**0.60**	**0.64**	**0.46**	**0.46**	–0.10	**0.65**	**0.52**	0.26	**–0.65**	**0.60**	**0.37**	**0.52**	**0.51**
	(0.00)	**(0.00)**	**(0.02)**	**(0.07)**	(0.68)	**(0.01)**	**(0.04)**	(0.23)	**(0.01)**	**(0.00)**	**(0.04)**	**(0.00)**	**(0.00)**
R^2	0.11	0.22	0.10	0.02	0.04	0.06	0.10	0.04	0.23	0.15	0.07	0.11	0.12
N	11,124	10,274	11,205	10,206	11,115	10,292	10,612	11,261	10,974	11,266	10,951	11,224	130,504

Table IA.4 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

Panel B: Mild Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.10	**1.95**	–1.75	–0.33	–0.14	**–3.26**	0.40	–0.32	0.84	–1.22	–0.15	**1.96**	–0.22
	(0.90)	**(0.03)**	(0.11)	(0.72)	(0.92)	**(0.03)**	(0.76)	(0.76)	(0.46)	(0.33)	(0.89)	**(0.06)**	(0.59)
	[0.10]	**[1.96]**	[1.65]	[0.28]	[0.12]	**[2.60]**	[0.35]	[0.27]	[0.72]	[1.03]	[0.15]	**[1.97]**	[0.19]
WIND	–0.14	0.11	0.21	–0.42	**–0.64**	**1.09**	**–0.69**	–0.49	0.01	0.29	–0.47	**–1.12**	**–0.18**
	(0.73)	(0.76)	(0.62)	(0.29)	**(0.09)**	**(0.03)**	**(0.04)**	(0.22)	(0.99)	(0.71)	(0.22)	**(0.03)**	**(0.06)**
	[0.24]	[0.19]	[0.37]	[0.66]	**[1.00]**	**[1.49]**	**[1.08]**	[0.75]	[0.01]	[0.45]	[0.78]	**[1.85]**	**[0.29]**
RAIN	–0.08	–0.08	**–0.12**	**–0.13**	0.04	0.04	–0.01	–0.14	**–0.17**	–0.06	–0.07	–0.07	**–0.07**
	(0.31)	(0.40)	**(0.00)**	**(0.08)**	(0.63)	(0.42)	(0.94)	(0.15)	**(0.04)**	(0.53)	(0.43)	(0.43)	**(0.00)**
	[1.98]	[1.95]	**[2.80]**	**[2.94]**	[0.94]	[0.99]	[0.17]	[3.33]	**[4.29]**	[1.33]	[1.77]	[1.54]	**[1.81]**
TEMP	**–0.70**	**–0.92**	–0.65	**–0.88**	–0.20	**–0.73**	–0.08	–0.42	0.35	–0.53	–0.10	**–1.15**	**–0.48**
	(0.02)	**(0.01)**	(0.20)	**(0.05)**	(0.60)	**(0.02)**	(0.77)	(0.10)	(0.16)	(0.19)	(0.72)	**(0.00)**	**(0.00)**
	[2.23]	**[2.86]**	[1.62]	**[1.81]**	[0.56]	**[2.20]**	[0.30]	[1.51]	[1.09]	[1.32]	[0.26]	**[3.63]**	**[2.28]**
Intercept	**0.59**	**0.54**	**0.58**	**0.75**	0.23	**0.71**	0.23	**0.48**	–0.21	0.40	0.18	**0.77**	**0.45**
	(0.00)	**(0.00)**	**(0.04)**	**(0.01)**	(0.41)	**(0.00)**	(0.33)	**(0.01)**	(0.24)	(0.11)	(0.28)	**(0.00)**	**(0.00)**
R^2	0.12	0.23	0.12	0.11	0.03	0.19	0.03	0.08	0.08	0.06	0.04	0.49	0.12
N	7,694	7,164	7,672	7,461	7,718	7,632	7,820	7,749	7,721	7,870	7,661	7,814	91,976

Table IA.4 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – No Filter

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.46	–0.69	0.65	–1.51	–1.10	0.23	–0.02	–1.61	–1.12	**1.40**	0.09	**–1.75**	–0.61
	(0.69)	(0.64)	(0.64)	(0.34)	(0.25)	(0.91)	(0.98)	(0.11)	(0.41)	**(0.10)**	(0.92)	**(0.04)**	(0.22)
	[0.40]	[0.60]	[0.56]	[1.29]	[0.77]	[0.14]	[0.01]	[0.96]	[0.78]	**[1.22]**	[0.08]	**[0.00]**	[0.00]
WIND	0.13	0.17	–0.35	0.32	–0.30	**1.31**	0.41	–0.32	0.26	–0.37	–0.56	–0.59	–0.09
	(0.80)	(0.79)	(0.45)	(0.57)	(0.59)	**(0.01)**	(0.37)	(0.62)	(0.64)	(0.52)	(0.28)	(0.29)	(0.68)
	[0.16]	[0.22]	[0.46]	[0.41]	[0.39]	**[1.57]**	[0.52]	[0.33]	[0.33]	[0.44]	[0.65]	[0.00]	[0.00]
RAIN	**0.10**	0.07	0.03	0.04	0.01	**0.14**	0.08	0.03	–0.02	–0.03	–0.05	0.01	0.03
	(0.07)	(0.46)	(0.55)	(0.41)	(0.89)	**(0.04)**	(0.27)	(0.55)	(0.76)	(0.54)	(0.47)	(0.86)	(0.12)
	[2.55]	[1.73]	[0.81]	[0.99]	[0.31]	**[3.22]**	[2.09]	[0.67]	[0.49]	[0.63]	[1.27]	[0.00]	[0.00]
TEMP	0.37	0.02	0.19	**0.51**	0.42	**–0.97**	–0.11	**–0.93**	0.01	–0.23	–0.20	**0.79**	0.02
	(0.13)	(0.94)	(0.47)	**(0.09)**	(0.10)	**(0.02)**	(0.83)	**(0.02)**	(0.98)	(0.39)	(0.39)	**(0.00)**	(0.88)
	[2.05]	[0.09]	[1.03]	**[2.39]**	[1.56]	**[2.52]**	[0.28]	**[1.75]**	[0.02]	[0.81]	[0.92]	**[0.00]**	[0.00]
Intercept	0.00	0.22	0.01	–0.19	–0.14	**0.84**	0.23	**0.97**	0.17	0.28	0.28	–0.20	**0.19**
	(0.99)	(0.15)	(0.97)	(0.51)	(0.56)	**(0.03)**	(0.61)	**(0.00)**	(0.46)	(0.20)	(0.13)	(0.21)	**(0.04)**
R^2	0.07	0.01	0.03	0.12	0.06	0.28	0.03	0.11	0.02	0.03	0.03	0.29	0.01
N	9,228	8,724	9,243	9,084	9,194	9,132	9,242	9,028	9,090	9,202	9,117	9,215	109,499

Table IA.5. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables With 3% Filter

This table presents the results of the OLS estimation of the following panel regression:

$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 3.0% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 3.0% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.5 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables With 3% Filter

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.55	**–0.65**	–0.57	–0.71	–0.10	–0.49	–0.49	–0.70	–0.22	–0.13	–0.52	–0.43	**–0.59**
	(0.27)	**(0.04)**	(0.28)	(0.21)	(0.84)	(0.37)	(0.42)	(0.13)	(0.76)	(0.80)	(0.30)	(0.31)	**(0.00)**
	[5.48]	**[7.44]**	[5.73]	[6.53]	[0.93]	[3.90]	[4.30]	[6.32]	[1.76]	[1.02]	[3.94]	[3.57]	**[5.42]**
WIND	–0.09	–0.20	**–0.37**	0.22	–0.13	**–0.50**	–0.47	**–0.40**	–0.15	–0.06	0.20	0.06	–0.09
	(0.56)	(0.24)	**(0.00)**	(0.25)	(0.49)	**(0.04)**	(0.16)	**(0.08)**	(0.58)	(0.80)	(0.39)	(0.69)	(0.15)
	[2.38]	[5.07]	**[8.54]**	[4.36]	[2.08]	**[7.95]**	[7.31]	**[6.27]**	[2.39]	[1.19]	[4.27]	[1.54]	[1.84]
RAIN	–0.01	0.02	–0.03	**–0.04**	–0.02	0.00	–0.05	–0.02	–0.00	–0.02	0.02	–0.00	**–0.01**
	(0.72)	(0.48)	(0.34)	**(0.06)**	(0.44)	(0.99)	(0.11)	(0.65)	(0.90)	(0.37)	(0.46)	(0.99)	**(0.10)**
	[2.34]	[6.75]	[8.31]	**[1.99]**	[5.52]	[0.08]	[3.23]	[4.84]	[0.93]	[5.36]	[5.17]	[0.05]	**[3.34]**
SNOW	0.03	–0.11	**–0.41**									0.33	0.04
	(0.93)	(0.64)	**(0.06)**									(0.17)	(0.84)
	[0.11]	[0.53]	**[0.50]**									[0.14]	[0.00]
TEMP	**–0.17**	**–0.26**	–0.23	–0.03	0.11	**–0.43**	–0.06	–0.22	**0.46**	**–0.67**	–0.18	–0.10	**–0.18**
	(0.05)	**(0.02)**	(0.24)	(0.88)	(0.56)	**(0.01)**	(0.72)	(0.14)	**(0.03)**	**(0.00)**	(0.34)	(0.39)	**(0.00)**
	[8.24]	**[2.48]**	[8.16]	[0.91]	[3.01]	**[1.91]**	[1.61]	[5.53]	**[9.36]**	**[7.60]**	[5.56]	[3.48]	**[1.11]**
Intercept	**0.20**	**0.24**	**0.23**	0.10	–0.02	**0.37**	0.15	**0.25**	**–0.27**	**0.37**	0.10	**0.11**	**0.17**
	(0.00)	**(0.00)**	**(0.02)**	(0.35)	(0.88)	**(0.00)**	(0.24)	**(0.02)**	**(0.05)**	**(0.00)**	(0.28)	**(0.01)**	**(0.00)**
R^2	0.09	0.15	0.17	0.07	0.03	0.13	0.12	0.08	0.12	0.28	0.05	0.04	0.10
N	10,769	9,977	10,873	9,899	10,779	10,000	10,323	10,907	10,538	10,676	10,576	10,997	126,314

Table IA.5 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables With 3% Filter

Panel B: Mild Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.70	0.43	**–1.41**	0.07	–0.01	–0.67	–0.07	–0.37	–0.13	–0.14	–0.07	0.04	–0.32
	(0.16)	(0.50)	**(0.01)**	(0.91)	(0.99)	(0.31)	(0.92)	(0.51)	(0.87)	(0.79)	(0.90)	(0.95)	(0.15)
	[9.70]	[5.30]	**[5.70]**	[0.79]	[0.07]	[6.31]	[0.69]	[3.53]	[1.09]	[1.22]	[0.71]	[0.46]	[3.10]
WIND	0.21	–0.25	0.19	–0.19	–0.07	0.21	–0.34	–0.35	–0.03	0.09	–0.08	**–0.42**	–0.07
	(0.15)	(0.20)	(0.20)	(0.40)	(0.72)	(0.30)	(0.13)	(0.10)	(0.90)	(0.48)	(0.78)	**(0.02)**	(0.37)
	[4.92]	[5.45]	[3.75]	[3.75]	[1.18]	[3.26]	[5.99]	[6.00]	[0.41]	[1.45]	[1.30]	**[8.40]**	[1.31]
RAIN	0.02	–0.04	–0.01	–0.04	0.01	**0.06**	0.02	–0.02	–0.06	**–0.07**	0.02	0.00	–0.01
	(0.77)	(0.45)	(0.80)	(0.29)	(0.77)	**(0.00)**	(0.37)	(0.76)	(0.10)	**(0.08)**	(0.67)	(0.93)	(0.25)
	[4.83]	[2.45]	[2.64]	[1.06]	[2.35]	**[6.48]**	[5.80]	[6.18]	[5.02]	**[8.34]**	[6.06]	[1.12]	[2.76]
TEMP	–0.21	**–0.45**	–0.28	–0.26	0.04	–0.12	–0.01	–0.15	–0.01	**–0.40**	0.03	–0.16	**–0.16**
	(0.13)	**(0.00)**	(0.28)	(0.25)	(0.85)	(0.39)	(0.96)	(0.27)	(0.91)	**(0.05)**	(0.85)	(0.28)	**(0.00)**
	[9.15]	**[7.30]**	[8.12]	[6.88]	[1.05]	[4.25]	[0.33]	[6.18]	[0.43]	**[0.71]**	[0.80]	[6.31]	**[8.55]**
Intercept	**0.21**	**0.29**	**0.23**	0.23	–0.01	0.12	0.09	**0.19**	0.01	**0.25**	0.00	**0.15**	**0.15**
	(0.00)	**(0.00)**	**(0.08)**	(0.13)	(0.95)	(0.23)	(0.54)	**(0.07)**	(0.88)	**(0.05)**	(0.99)	**(0.04)**	**(0.00)**
R^2	0.05	0.18	0.11	0.04	0.00	0.05	0.03	0.05	0.03	0.10	0.01	0.10	0.04
N	7,210	6,745	7,262	7,012	7,241	7,214	7,418	7,338	7,254	7,338	7,221	7,443	86,696

Table IA.5 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables With 3% Filter

Panel C: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–0.91**	**–1.38**	–0.00	–1.00	**–0.89**	–0.47	–0.90	**–1.04**	–1.13	0.67	–0.18	**–1.03**	**–0.66**
	(0.01)	**(0.04)**	(1.00)	(0.13)	**(0.08)**	(0.53)	(0.15)	**(0.03)**	(0.11)	(0.16)	(0.72)	**(0.00)**	**(0.00)**
	[9.65]	**[4.32]**	[0.04]	[9.79]	**[6.81]**	[3.88]	[7.18]	**[8.22]**	[8.88]	[6.32]	[1.60]	**[0.79]**	**[6.17]**
WIND	0.16	0.08	–0.14	0.33	–0.05	–0.04	0.15	–0.48	–0.26	–0.06	–0.13	–0.27	–0.04
	(0.50)	(0.73)	(0.63)	(0.12)	(0.87)	(0.85)	(0.52)	(0.11)	(0.32)	(0.86)	(0.58)	(0.29)	(0.62)
	[2.49]	[1.32]	[1.91]	[5.04]	[0.68]	[0.65]	[2.29]	[6.71]	[3.69]	[0.71]	[1.57]	[3.97]	[0.58]
RAIN	0.02	0.04	–0.00	0.05	0.00	0.05	**0.06**	0.03	0.02	0.00	–0.01	**0.03**	**0.03**
	(0.51)	(0.33)	(0.92)	(0.11)	(0.95)	(0.14)	**(0.02)**	(0.45)	(0.50)	(0.99)	(0.79)	**(0.08)**	**(0.02)**
	[6.62]	[2.74]	[1.06]	[3.06]	[0.58]	[4.46]	**[7.56]**	[6.99]	[6.41]	[0.14]	[2.29]	**[0.24]**	**[7.25]**
TEMP	0.01	–0.01	–0.03	0.14	–0.08	–0.23	0.08	**–0.41**	–0.15	–0.08	–0.01	**0.17**	–0.02
	(0.89)	(0.92)	(0.79)	(0.12)	(0.50)	(0.18)	(0.74)	**(0.01)**	(0.32)	(0.66)	(0.95)	**(0.05)**	(0.62)
	[0.81]	[0.66]	[2.01]	[7.97]	[3.10]	[7.89]	[2.26]	**[0.33]**	[4.51]	[3.06]	[0.32]	**[0.46]**	[0.92]
Intercept	0.09	0.12	0.07	–0.05	0.13	0.26	0.02	**0.46**	**0.24**	0.06	0.03	–0.00	**0.09**
	(0.18)	(0.13)	(0.55)	(0.58)	(0.18)	(0.10)	(0.91)	**(0.00)**	**(0.05)**	(0.71)	(0.71)	(1.00)	**(0.01)**
R^2	0.05	0.11	0.00	0.10	0.03	0.06	0.06	0.12	0.06	0.02	0.01	0.12	0.02
N	8,736	8,272	8,786	8,590	8,694	8,714	8,828	8,576	8,642	8,671	8,666	8,824	103,999

Table IA.6. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables With 3% Filter

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 3.0% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 3.0% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.6 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables With 3% Filter

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.35	–1.31	–0.01	–1.26	0.64	**–2.36**	**–2.01**	–0.99	–1.07	–0.72	–1.28	0.68	**–1.20**
	(0.28)	(0.12)	(0.99)	(0.18)	(0.61)	**(0.05)**	**(0.10)**	(0.42)	(0.41)	(0.45)	(0.22)	(0.54)	**(0.00)**
	[1.05]	[1.14]	[0.01]	[0.97]	[0.52]	**[1.61]**	**[1.58]**	[0.82]	[0.81]	[0.51]	[0.91]	[0.48]	**[0.96]**
WIND	–0.01	–0.17	–0.51	0.13	0.20	–0.19	–0.41	–0.62	0.09	–0.06	0.40	0.51	0.04
	(0.98)	(0.62)	(0.11)	(0.75)	(0.71)	(0.74)	(0.54)	(0.22)	(0.86)	(0.91)	(0.45)	(0.27)	(0.86)
	[0.03]	[0.32]	[1.00]	[0.22]	[0.29]	[0.25]	[0.57]	[0.89]	[0.14]	[0.10]	[0.81]	[1.05]	[0.07]
RAIN	0.06	0.06	–0.07	0.04	–0.08	0.01	–0.08	0.06	–0.05	–0.04	0.06	–0.05	–0.01
	(0.18)	(0.23)	(0.27)	(0.44)	(0.19)	(0.83)	(0.21)	(0.37)	(0.38)	(0.21)	(0.22)	(0.36)	(0.49)
	[1.58]	[1.44]	[1.79]	[1.07]	[1.91]	[0.35]	[2.02]	[1.42]	[1.21]	[0.95]	[1.51]	[1.21]	[0.31]
SNOW	**–0.89**	**–0.75**	**–1.06**									–0.03	–0.46
	(0.08)	**(0.10)**	**(0.01)**									(0.97)	(0.12)
	[0.35]	**[0.39]**	**[0.50]**									[0.01]	[0.06]
TEMP	**–0.33**	**–0.79**	–0.40	–0.27	0.48	**–0.58**	–0.29	–0.11	**1.09**	**–1.10**	–0.50	**–0.74**	**–0.48**
	(0.07)	**(0.00)**	(0.33)	(0.56)	(0.19)	**(0.09)**	(0.37)	(0.71)	**(0.00)**	**(0.01)**	(0.21)	**(0.02)**	**(0.00)**
	[1.20]	**[2.83]**	[1.21]	[0.76]	[1.21]	**[1.38]**	[0.68]	[0.27]	**[2.13]**	**[2.53]**	[1.43]	**[2.25]**	**[2.65]**
Intercept	**0.56**	**0.63**	**0.47**	**0.47**	–0.09	**0.68**	**0.50**	0.32	**–0.55**	**0.68**	**0.36**	**0.54**	**0.51**
	(0.00)	**(0.00)**	**(0.02)**	**(0.08)**	(0.69)	**(0.01)**	**(0.04)**	(0.13)	**(0.02)**	**(0.00)**	**(0.06)**	**(0.00)**	**(0.00)**
R^2	0.06	0.20	0.10	0.02	0.05	0.06	0.09	0.03	0.17	0.18	0.07	0.13	0.12
N	10,769	9,977	10,873	9,899	10,779	10,000	10,323	10,907	10,538	10,676	10,576	10,997	126,314

Table IA.6 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables With 3% Filter

Panel B: Mild Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	0.13	**2.13**	–1.64	0.23	–0.39	**–3.61**	0.60	–0.43	0.66	–1.34	–0.31	**2.27**	–0.16
	(0.86)	**(0.02)**	(0.12)	(0.81)	(0.78)	**(0.02)**	(0.64)	(0.69)	(0.61)	(0.33)	(0.77)	**(0.02)**	(0.70)
	[0.13]	**[2.12]**	[1.56]	[0.20]	[0.34]	**[2.77]**	[0.53]	[0.37]	[0.57]	[1.12]	[0.31]	**[2.28]**	[0.14]
WIND	–0.19	–0.01	0.15	–0.47	–0.55	0.91	**–0.64**	–0.60	0.14	0.29	–0.41	**–1.27**	**–0.23**
	(0.67)	(0.99)	(0.72)	(0.21)	(0.12)	(0.16)	**(0.03)**	(0.19)	(0.73)	(0.71)	(0.27)	**(0.01)**	**(0.04)**
	[0.33]	[0.01]	[0.27]	[0.75]	[0.87]	[1.19]	**[1.00]**	[0.92]	[0.21]	[0.44]	[0.67]	**[2.10]**	**[0.37]**
RAIN	–0.08	–0.11	**–0.12**	**–0.14**	0.06	**0.08**	–0.00	–0.12	**–0.18**	–0.04	–0.08	–0.11	**–0.08**
	(0.31)	(0.26)	**(0.01)**	**(0.03)**	(0.45)	**(0.08)**	(1.00)	(0.20)	**(0.03)**	(0.62)	(0.43)	(0.17)	**(0.00)**
	[2.03]	[2.65]	**[2.84]**	**[3.34]**	[1.40]	**[1.92]**	[0.00]	[2.97]	**[4.41]**	[1.08]	[1.90]	[2.54]	**[1.86]**
TEMP	**–0.65**	**–1.04**	–0.60	**–0.82**	–0.16	**–0.86**	–0.07	–0.36	0.24	–0.57	0.01	**–1.15**	**–0.48**
	(0.07)	**(0.00)**	(0.25)	**(0.09)**	(0.70)	**(0.00)**	(0.81)	(0.18)	(0.29)	(0.19)	(0.98)	**(0.00)**	**(0.00)**
	[2.09]	**[3.18]**	[1.52]	**[1.72]**	[0.44]	**[2.49]**	[0.25]	[1.32]	[0.76]	[1.43]	[0.02]	**[3.64]**	**[2.24]**
Intercept	**0.57**	**0.60**	**0.55**	**0.71**	0.23	**0.81**	0.21	**0.46**	–0.14	0.44	0.13	**0.78**	**0.46**
	(0.00)	**(0.00)**	**(0.06)**	**(0.02)**	(0.44)	**(0.00)**	(0.37)	**(0.03)**	(0.39)	(0.11)	(0.42)	**(0.00)**	**(0.00)**
R^2	0.11	0.28	0.11	0.11	0.03	0.21	0.03	0.07	0.07	0.06	0.03	0.57	0.11
N	7,210	6,745	7,262	7,012	7,241	7,214	7,418	7,338	7,254	7,338	7,221	7,444	86,697

Table IA.6 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables With 3% Filter

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.73	–0.76	0.78	–1.47	–1.17	0.13	0.03	**–1.97**	–1.57	1.37	0.09	**–2.24**	–0.75
	(0.57)	(0.62)	(0.60)	(0.36)	(0.29)	(0.95)	(0.97)	**(0.06)**	(0.25)	(0.11)	(0.92)	**(0.01)**	(0.19)
	[0.63]	[0.66]	[0.67]	[1.25]	[0.81]	[0.08]	[0.02]	**[1.17]**	[1.10]	[1.20]	[0.08]	**[0.00]**	[0.00]
WIND	0.09	0.07	–0.40	0.36	0.09	**1.31**	0.42	–0.30	0.37	–0.50	–0.43	–0.44	–0.05
	(0.87)	(0.91)	(0.40)	(0.54)	(0.89)	**(0.01)**	(0.42)	(0.66)	(0.50)	(0.42)	(0.43)	(0.41)	(0.82)
	[0.11]	[0.10]	[0.52]	[0.46]	[0.12]	**[1.54]**	[0.55]	[0.32]	[0.46]	[0.59]	[0.50]	[0.00]	[0.00]
RAIN	0.11	0.10	–0.00	0.03	0.04	**0.17**	0.08	0.04	–0.00	–0.00	–0.07	0.01	**0.04**
	(0.10)	(0.32)	(0.99)	(0.52)	(0.66)	**(0.01)**	(0.27)	(0.47)	(0.99)	(0.93)	(0.37)	(0.76)	**(0.04)**
	[2.65]	[2.50]	[0.02]	[0.80]	[0.98]	**[3.75]**	[2.12]	[0.89]	[0.02]	[0.11]	[1.63]	[0.00]	**[0.00]**
TEMP	0.37	0.06	0.22	**0.53**	**0.51**	**–1.04**	–0.10	**–0.91**	0.05	–0.21	–0.10	**0.85**	0.05
	(0.16)	(0.76)	(0.40)	**(0.05)**	**(0.07)**	**(0.02)**	(0.84)	**(0.01)**	(0.87)	(0.46)	(0.70)	**(0.00)**	(0.68)
	[2.06]	[0.37]	[1.23]	**[2.49]**	**[1.89]**	**[2.66]**	[0.26]	**[1.73]**	[0.12]	[0.74]	[0.44]	**[0.00]**	[0.00]
Intercept	0.03	0.20	–0.01	–0.20	–0.23	**0.91**	0.23	**0.99**	0.17	0.29	0.21	–0.22	**0.17**
	(0.88)	(0.24)	(0.95)	(0.43)	(0.38)	**(0.03)**	(0.62)	**(0.00)**	(0.43)	(0.22)	(0.28)	(0.13)	**(0.06)**
R^2	0.07	0.02	0.04	0.12	0.08	0.32	0.03	0.12	0.03	0.04	0.02	0.33	0.01
N	8,736	8,272	8,786	8,590	8,694	8,714	8,828	8,576	8,642	8,671	8,666	8,824	103,999

Table IA.7. Ordinary Least Square (OLS) Regressions of Daily Return on Deviations of Weather Variables from Their Monthly Averages

This table presents the results of the OLS estimation of the following panel regression:
$r_{it} = \alpha + \beta_1 SKC\_D_{it} + \beta_2 WIND\_D_{it} + \beta_3 RAIN\_D_{it} + \beta_4 SNOW\_D_{it} + \beta_5 TEMP\_D_{it} + \varepsilon_{it}$.
Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are deviations from their full-sample, monthly country average; the suffix "_D" indicates differences with respect to the country monthly average weather.

All raw weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.7 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Deviations of Weather Variables from Their Monthly Averages

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.44	–0.46	–0.62	**–0.78**	0.31	–0.77	–0.74	–0.63	0.12	–0.06	–0.14	–0.24	**–0.48**
	(0.38)	(0.32)	(0.21)	**(0.07)**	(0.55)	(0.27)	(0.29)	(0.21)	(0.83)	(0.90)	(0.76)	(0.61)	**(0.00)**
	[3.84]	[4.75]	[6.05]	**[7.35]**	[2.69]	[5.91]	[5.30]	[4.83]	[0.86]	[0.41]	[0.95]	[1.82]	**[3.90]**
WIND	–0.20	–0.20	**–0.34**	0.25	–0.05	–0.45	–0.40	–0.27	–0.23	–0.08	**0.44**	0.05	**–0.11**
	(0.22)	(0.37)	**(0.02)**	(0.18)	(0.80)	(0.13)	(0.23)	(0.33)	(0.43)	(0.76)	**(0.07)**	(0.81)	**(0.09)**
	[4.35]	[4.08]	**[6.08]**	[4.03]	[0.64]	[5.79]	[4.88]	[3.25]	[2.88]	[1.16]	**[7.09]**	[0.89]	**[1.75]**
RAIN	0.01	0.03	–0.02	–0.03	–0.01	0.00	**–0.04**	–0.03	–0.00	**–0.03**	0.01	–0.00	**–0.01**
	(0.58)	(0.24)	(0.56)	(0.19)	(0.56)	(0.92)	**(0.06)**	(0.49)	(0.92)	**(0.06)**	(0.65)	(0.88)	**(0.07)**
	[3.10]	[1.03]	[4.71]	[9.09]	[3.95]	[0.79]	**[1.79]**	[7.85]	[0.49]	**[8.70]**	[2.88]	[0.88]	**[3.05]**
SNOW	0.08	–0.28	**–0.51**									**0.51**	0.03
	(0.80)	(0.47)	**(0.04)**									**(0.07)**	(0.94)
	[0.30]	[0.92]	**[0.74]**									**[0.86]**	[0.00]
TEMP	–0.19	**–0.37**	–0.34	–0.04	0.24	**–0.34**	–0.11	–0.16	**0.65**	**–0.56**	**–0.37**	–0.19	**–0.14**
	(0.15)	**(0.03)**	(0.13)	(0.84)	(0.25)	**(0.06)**	(0.60)	(0.47)	**(0.00)**	**(0.01)**	**(0.08)**	(0.18)	**(0.01)**
	[7.14]	**[3.36]**	[8.82]	[1.21]	[6.26]	**[8.65]**	[2.53]	[3.28]	**[2.16]**	**[2.81]**	**[9.41]**	[5.81]	**[3.74]**
Intercept	**0.10**	**0.10**	**0.07**	**0.07**	**0.03**	**0.04**	**0.04**	**0.04**	–0.02	0.01	0.02	**0.06**	**0.05**
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.07)**	**(0.03)**	**(0.02)**	**(0.03)**	(0.29)	(0.75)	(0.21)	**(0.00)**	**(0.00)**
R^2	0.10	0.19	0.21	0.07	0.04	0.08	0.10	0.06	0.21	0.20	0.13	0.07	0.04
N	10,549	9,827	10,660	9,734	10,592	9,842	10,157	10,718	10,342	10,423	10,386	10,833	124,063

Table IA.7 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Deviations of Weather Variables from Their Monthly Averages

Panel B: Mild Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.53	0.32	**–0.85**	0.08	–0.36	–0.92	0.14	–0.09	0.09	–0.19	–0.03	0.37	–0.21
	(0.35)	(0.63)	**(0.04)**	(0.90)	(0.62)	(0.16)	(0.82)	(0.88)	(0.91)	(0.75)	(0.96)	(0.47)	(0.27)
	[6.04]	[3.55]	**[8.58]**	[0.83]	[2.78]	[7.23]	[1.15]	[0.65]	[0.70]	[1.70]	[0.28]	[3.88]	[1.93]
WIND	0.26	**–0.29**	0.19	–0.29	**0.36**	–0.06	–0.26	–0.28	0.01	–0.01	–0.01	**–0.45**	–0.09
	(0.18)	**(0.07)**	(0.26)	(0.27)	**(0.07)**	(0.86)	(0.32)	(0.37)	(0.97)	(0.95)	(0.96)	**(0.07)**	(0.18)
	[4.15]	**[4.66]**	[2.85]	[4.46]	**[4.22]**	[0.65]	[3.19]	[3.23]	[0.13]	[0.16]	[0.16]	**[6.50]**	[1.21]
RAIN	–0.00	–0.00	–0.01	–0.01	0.02	**0.06**	0.03	–0.01	–0.03	–0.04	0.02	–0.03	–0.00
	(0.95)	(0.94)	(0.88)	(0.85)	(0.57)	**(0.05)**	(0.13)	(0.93)	(0.46)	(0.28)	(0.67)	(0.38)	(0.83)
	[0.90]	[1.02]	[1.43]	[1.77]	[3.95]	**[5.08]**	[8.92]	[1.49]	[6.84]	[0.42]	[5.36]	[7.45]	[0.38]
TEMP	–0.24	**–0.38**	–0.29	–0.28	0.09	–0.31	–0.12	–0.17	0.32	–0.28	–0.17	**–0.43**	**–0.20**
	(0.22)	**(0.07)**	(0.21)	(0.37)	(0.68)	(0.11)	(0.54)	(0.52)	(0.13)	(0.32)	(0.51)	**(0.02)**	**(0.02)**
	[5.81]	**[9.16]**	[6.56]	[6.56]	[1.64]	[5.90]	[2.09]	[2.84]	[5.31]	[5.25]	[3.57]	**[0.12]**	**[4.09]**
Intercept	**0.08**	**0.08**	**0.06**	**0.08**	0.01	**0.04**	**0.05**	**0.03**	–0.00	0.02	0.02	**0.05**	**0.04**
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	(0.72)	**(0.06)**	**(0.00)**	**(0.04)**	(0.94)	(0.38)	(0.17)	**(0.00)**	**(0.00)**
R^2	0.05	0.10	0.07	0.05	0.03	0.06	0.03	0.02	0.04	0.04	0.01	0.18	0.02
N	6,989	6,572	7,066	6,799	6,984	7,006	7,220	7,146	7,040	7,088	7,007	7,251	84,168

Table IA.7 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Deviations of Weather Variables from Their Monthly Averages

Panel C: Hot Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.73	–0.88	0.08	–0.06	**–1.44**	–0.82	–0.35	0.23	–0.34	0.69	0.06	–0.87	**–0.42**
	(0.18)	(0.38)	(0.92)	(0.94)	**(0.03)**	(0.26)	(0.60)	(0.80)	(0.68)	(0.17)	(0.92)	(0.11)	**(0.03)**
	[5.06]	[6.14]	[0.48]	[0.34]	**[7.60]**	[4.30]	[1.71]	[1.05]	[1.91]	[3.88]	[0.35]	[6.80]	**[2.51]**
WIND	–0.01	0.19	**–0.65**	0.32	0.03	–0.19	–0.01	–0.27	–0.47	0.25	**–0.45**	–0.02	–0.10
	(0.95)	(0.49)	**(0.00)**	(0.26)	(0.91)	(0.49)	(0.98)	(0.39)	(0.11)	(0.45)	**(0.03)**	(0.92)	(0.24)
	[0.16]	[2.57]	**[7.75]**	[3.63]	[0.34]	[2.16]	[0.07]	[2.93]	[4.98]	[2.37]	**[4.29]**	[0.25]	[1.15]
RAIN	–0.00	0.03	–0.02	0.00	0.02	0.04	**0.08**	**0.04**	0.04	–0.02	0.00	–0.01	**0.02**
	(0.97)	(0.35)	(0.65)	(0.99)	(0.58)	(0.17)	**(0.00)**	**(0.10)**	(0.23)	(0.59)	(0.98)	(0.36)	**(0.08)**
	[0.53]	[0.12]	[4.79]	[0.06]	[4.33]	[2.53]	**[3.50]**	**[2.07]**	[9.88]	[4.85]	[0.25]	[4.31]	**[4.87]**
TEMP	–0.10	–0.11	–0.48	–0.04	–0.22	0.02	0.22	0.36	0.52	0.22	0.11	–0.46	–0.06
	(0.73)	(0.62)	(0.15)	(0.87)	(0.39)	(0.94)	(0.38)	(0.49)	(0.27)	(0.45)	(0.77)	(0.16)	(0.60)
	[1.40]	[1.66]	[6.69]	[0.55]	[2.79]	[0.29]	[2.58]	[3.79]	[6.00]	[2.60]	[1.32]	[6.49]	[0.82]
Intercept	**0.06**	**0.07**	**0.04**	**0.05**	**0.03**	**0.05**	**0.05**	**0.04**	**0.04**	0.02	0.01	**0.07**	**0.04**
	(0.00)	**(0.00)**	**(0.02)**	**(0.00)**	**(0.07)**	**(0.00)**	**(0.01)**	**(0.02)**	**(0.01)**	(0.29)	(0.39)	**(0.00)**	**(0.00)**
R^2	0.02	0.03	0.14	0.02	0.05	0.04	0.07	0.04	0.08	0.03	0.03	0.06	0.01
N	8,497	8,051	8,547	8,358	8,433	8,505	8,585	8,328	8,431	8,446	8,397	8,634	101,212

Table IA.8. Logit Regressions of the Probability of a Positive Daily Return on Deviations of Weather Variables from Their Monthly Averages

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC\_D_{it}+\beta_2 WIND\_D_{it}+\beta_3 RAIN\_D_{it}+\beta_4 SNOW\_D_{it}+\beta_5 TEMP\_D_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are deviations from their full-sample, monthly country average; the suffix "_D" indicates differences with respect to the country monthly average weather.

All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.8 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Deviations of Weather Variables from Their Monthly Averages

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.77	–1.00	–0.38	**–1.82**	1.25	–1.66	–1.58	–0.83	–0.73	0.23	–0.18	0.99	**–0.87**
	(0.16)	(0.42)	(0.74)	**(0.06)**	(0.33)	(0.26)	(0.28)	(0.57)	(0.56)	(0.81)	(0.86)	(0.43)	**(0.01)**
	[1.21]	[0.80]	[0.32]	**[1.45]**	[1.02]	[1.17]	[1.04]	[0.60]	[0.54]	[0.17]	[0.11]	[0.64]	**[0.63]**
WIND	–0.25	–0.08	–0.38	–0.19	0.12	–0.24	–0.68	–0.83	–0.18	–0.32	0.73	0.55	–0.11
	(0.64)	(0.85)	(0.36)	(0.72)	(0.78)	(0.74)	(0.35)	(0.16)	(0.80)	(0.60)	(0.10)	(0.34)	(0.54)
	[0.43]	[0.12]	[0.60]	[0.26]	[0.15]	[0.28]	[0.77]	[0.95]	[0.24]	[0.45]	[1.10]	[0.90]	[0.15]
RAIN	**0.10**	**0.09**	–0.05	0.03	–0.09	0.02	–0.09	0.04	–0.04	**–0.07**	0.04	–0.07	–0.02
	(0.03)	**(0.05)**	(0.42)	(0.52)	(0.18)	(0.83)	(0.15)	(0.58)	(0.54)	**(0.04)**	(0.43)	(0.20)	(0.33)
	[2.44]	**[2.23]**	[1.27]	[0.87]	[2.21]	[0.39]	[2.29]	[0.91]	[0.96]	**[1.72]**	[1.12]	[1.74]	[0.49]
SNOW	–0.79	–0.77	**–1.23**									0.41	–0.34
	(0.19)	(0.24)	**(0.00)**									(0.64)	(0.48)
	[0.06]	[0.07]	**[0.15]**									[0.00]	[0.01]
TEMP	–0.26	**–1.16**	–0.73	–0.68	0.45	–0.48	–0.34	–0.35	**1.42**	**–1.25**	**–0.90**	**–0.96**	**–0.44**
	(0.37)	**(0.00)**	(0.12)	(0.19)	(0.28)	(0.23)	(0.48)	(0.46)	**(0.00)**	**(0.01)**	**(0.08)**	**(0.02)**	**(0.00)**
	[0.75]	**[3.25]**	[1.68]	[1.64]	[1.07]	[1.11]	[0.72]	[0.68]	**[2.76]**	**[2.82]**	**[2.18]**	**[2.56]**	**[1.03]**
Intercept	**0.38**	**0.29**	**0.24**	**0.30**	**0.23**	**0.19**	**0.18**	**0.16**	0.05	**0.08**	**0.15**	**0.36**	**0.22**
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	(0.25)	**(0.04)**	**(0.00)**	**(0.00)**	**(0.00)**
R^2	0.07	0.26	0.13	0.07	0.04	0.02	0.07	0.03	0.21	0.19	0.12	0.15	0.03
N	10,549	9,827	10,660	9,734	10,592	9,842	10,157	10,718	10,342	10,423	10,386	10,833	12,4063

Table IA.8 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Deviations of Weather Variables from Their Monthly Averages

Panel B: Mild Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	0.26	**1.89**	–1.13	–0.43	–0.80	**–3.75**	–0.19	–0.03	0.58	–1.23	–0.30	**1.87**	–0.31
	(0.74)	**(0.07)**	(0.17)	(0.72)	(0.60)	**(0.02)**	(0.88)	(0.98)	(0.69)	(0.37)	(0.79)	**(0.04)**	(0.39)
	[0.25]	**[1.77]**	[1.00]	[0.36]	[0.62]	**[2.75]**	[0.13]	[0.02]	[0.45]	[1.10]	[0.27]	**[1.72]**	[0.26]
WIND	0.22	–0.19	**0.56**	–0.34	0.33	0.70	–0.71	–0.18	0.06	–0.09	–0.16	**–1.29**	–0.16
	(0.65)	(0.57)	**(0.06)**	(0.57)	(0.43)	(0.32)	(0.11)	(0.73)	(0.92)	(0.90)	(0.78)	**(0.02)**	(0.25)
	[0.29]	[0.26]	**[0.76]**	[0.43]	[0.38]	[0.76]	[0.77]	[0.19]	[0.07]	[0.10]	[0.19]	**[1.66]**	[0.20]
RAIN	–0.07	–0.07	**–0.13**	**–0.11**	0.06	**0.14**	0.02	–0.09	–0.12	–0.01	–0.08	–0.10	**–0.05**
	(0.39)	(0.48)	**(0.01)**	**(0.10)**	(0.46)	**(0.01)**	(0.83)	(0.36)	(0.18)	(0.88)	(0.42)	(0.17)	**(0.00)**
	[1.86]	[1.72]	**[3.33]**	**[2.63]**	[1.42]	**[3.59]**	[0.48]	[2.13]	[3.04]	[0.32]	[2.00]	[2.52]	**[1.30]**
TEMP	–0.40	**–0.77**	–0.75	–0.76	–0.09	–0.23	–0.54	0.01	0.57	–0.12	–0.42	**–1.46**	**–0.43**
	(0.39)	**(0.06)**	(0.16)	(0.24)	(0.85)	(0.62)	(0.15)	(0.98)	(0.18)	(0.84)	(0.35)	**(0.00)**	**(0.01)**
	[0.79]	**[1.55]**	[1.52]	[1.49]	[0.17]	[0.41]	[0.88]	[0.02]	[0.95]	[0.22]	[0.85]	**[3.02]**	**[0.81]**
Intercept	**0.27**	**0.23**	**0.19**	**0.21**	0.07	**0.15**	**0.14**	**0.13**	0.05	0.07	**0.10**	**0.28**	**0.16**
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	(0.10)	**(0.00)**	**(0.00)**	**(0.00)**	(0.23)	(0.11)	**(0.00)**	**(0.00)**	**(0.00)**
R^2	0.03	0.11	0.11	0.07	0.01	0.13	0.04	0.01	0.05	0.02	0.04	0.36	0.02
N	6,989	6,572	7,066	6,799	6,984	7,006	7,220	7,146	7,040	7,088	7,007	7,251	84,168

Table IA.8 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Deviations of Weather Variables from Their Monthly Averages

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.10	–0.16	1.53	1.22	–1.97	–2.53	0.99	–0.12	1.98	**2.41**	2.08	–1.86	0.21
	(0.91)	(0.93)	(0.44)	(0.45)	(0.20)	(0.13)	(0.55)	(0.94)	(0.16)	**(0.01)**	(0.11)	(0.29)	(0.43)
	[0.06]	[0.09]	[0.86]	[0.61]	[0.97]	[1.16]	[0.41]	[0.05]	[1.01]	**[1.29]**	[1.29]	[1.21]	[0.11]
WIND	–0.49	0.22	**–1.28**	–0.02	0.44	**1.29**	–0.21	–0.49	–0.38	–0.35	**–1.06**	–0.43	–0.24
	(0.28)	(0.77)	**(0.00)**	(0.97)	(0.41)	**(0.02)**	(0.73)	(0.52)	(0.58)	(0.52)	**(0.04)**	(0.46)	(0.25)
	[0.52]	[0.25]	**[1.39]**	[0.02]	[0.44]	**[1.29]**	[0.21]	[0.49]	[0.36]	[0.32]	**[0.97]**	[0.43]	[0.24]
RAIN	0.05	0.07	–0.06	–0.02	0.04	**0.15**	0.13	0.05	0.01	–0.04	–0.09	**–0.08**	0.01
	(0.58)	(0.44)	(0.38)	(0.71)	(0.64)	**(0.03)**	(0.14)	(0.44)	(0.91)	(0.47)	(0.29)	**(0.04)**	(0.41)
	[1.15]	[1.76]	[1.56]	[0.45]	[1.05]	**[3.63]**	[3.18]	[1.34]	[0.21]	[1.05]	[2.22]	**[1.98]**	[0.36]
TEMP	0.07	–0.29	–1.04	0.10	–0.16	**–1.20**	0.88	0.76	1.27	–0.05	–0.48	**–1.37**	–0.25
	(0.89)	(0.54)	(0.10)	(0.81)	(0.83)	**(0.09)**	(0.34)	(0.44)	(0.23)	(0.93)	(0.42)	**(0.03)**	(0.37)
	[0.09]	[0.35]	[1.32]	[0.13]	[0.18]	**[1.31]**	[0.88]	[0.73]	[1.31]	[0.05]	[0.58]	**[1.61]**	[0.28]
Intercept	**0.27**	**0.24**	**0.17**	**0.17**	**0.14**	**0.21**	**0.18**	**0.13**	**0.15**	**0.16**	**0.13**	**0.27**	**0.18**
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**
R^2	0.01	0.02	0.16	0.01	0.03	0.16	0.05	0.02	0.05	0.04	0.08	0.11	0.01
N	8,497	8,051	8,547	8,358	8,433	8,505	8,585	8,328	8,431	8,446	8,397	8,634	101,212

Table IA.9. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Extreme Weather

This table presents the results of the OLS estimation of the following panel regression:
$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.
Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. Observations with extreme weather conditions are excluded from the sample. Extreme weather conditions are defined as follows: a) daily SKC is below the 5th or above the 95th percentiles of the monthly, country-specific distribution; b) daily TEMP is below the 5th or above the 95th percentiles of the monthly, country-specific distribution; c) daily WIND is above the 95th percentile of the monthly, country-specific distribution; or d) daily SNOW is above the 95th percentile of the monthly, country-specific distribution.

All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.9 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Extreme Weather

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–1.15**	**–1.24**	–0.35	**–1.02**	–0.55	–0.58	–0.82	**–1.12**	0.08	–0.60	–0.27	–0.25	**–0.74**
	(0.03)	**(0.00)**	(0.56)	**(0.03)**	(0.30)	(0.35)	(0.17)	**(0.02)**	(0.90)	(0.30)	(0.64)	(0.58)	**(0.00)**
	[1.00]	**[3.19]**	[3.05]	**[9.21]**	[4.20]	[4.21]	[6.83]	**[9.48]**	[0.58]	[4.58]	[1.93]	[1.89]	**[6.23]**
WIND	–0.13	0.03	**–0.45**	0.12	–0.08	**–0.51**	**–0.42**	–0.29	–0.34	–0.20	0.28	0.18	–0.08
	(0.49)	(0.90)	**(0.01)**	(0.47)	(0.71)	**(0.02)**	**(0.03)**	(0.25)	(0.21)	(0.22)	(0.27)	(0.41)	(0.13)
	[3.27]	[0.64]	**[0.00]**	[2.38]	[1.23]	**[7.79]**	**[6.28]**	[4.49]	[5.29]	[3.60]	[5.63]	[3.93]	[1.51]
RAIN	0.01	0.04	–0.01	–0.03	–0.01	0.01	**–0.06**	–0.01	0.01	–0.02	0.01	–0.01	–0.00
	(0.61)	(0.19)	(0.82)	(0.16)	(0.62)	(0.84)	**(0.06)**	(0.76)	(0.83)	(0.25)	(0.73)	(0.73)	(0.51)
	[3.69]	[3.51]	[2.49]	[9.27]	[3.95]	[1.70]	**[5.72]**	[3.34]	[1.58]	[4.53]	[2.54]	[2.43]	[1.27]
SNOW	0.13	0.13	**–0.79**									**0.45**	–0.06
	(0.79)	(0.69)	**(0.00)**									**(0.06)**	(0.76)
	[0.35]	[0.47]	**[0.65]**									**[0.19]**	[0.00]
TEMP	**–0.19**	–0.18	–0.18	–0.04	0.02	–0.30	**–0.45**	–0.19	**0.48**	**–0.38**	–0.06	–0.04	**–0.16**
	(0.07)	(0.10)	(0.31)	(0.84)	(0.91)	(0.13)	**(0.01)**	(0.36)	**(0.01)**	**(0.05)**	(0.80)	(0.71)	**(0.00)**
	[7.96]	[7.95]	[5.71]	[1.02]	[0.59]	[7.38]	**[0.47]**	[4.38]	**[8.93]**	**[8.76]**	[1.56]	[1.32]	**[0.42]**
Intercept	**0.23**	**0.22**	**0.20**	0.13	0.05	**0.30**	**0.42**	**0.24**	**–0.28**	**0.25**	0.04	0.07	**0.17**
	(0.00)	**(0.00)**	**(0.02)**	(0.20)	(0.73)	**(0.03)**	**(0.00)**	**(0.06)**	**(0.02)**	**(0.01)**	(0.76)	(0.18)	**(0.00)**
R^2	0.13	0.14	0.20	0.09	0.03	0.10	0.18	0.10	0.13	0.13	0.03	0.03	0.08
N	8,304	7,706	8,287	7,624	8,402	8,073	8,257	8,790	8,228	8,280	8,174	8,589	98,714

Table IA.9 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Extreme Weather

Panel B: Mild Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.66	0.44	**–1.22**	0.01	–0.97	–0.67	–0.58	–0.54	–0.68	–0.54	–0.62	**1.02**	**–0.42**
	(0.25)	(0.47)	**(0.00)**	(0.98)	(0.26)	(0.26)	(0.40)	(0.38)	(0.43)	(0.44)	(0.27)	**(0.05)**	**(0.05)**
	[8.50]	[5.56]	**[4.15]**	[0.15]	[7.88]	[6.45]	[5.77]	[4.74]	[5.92]	[4.90]	[6.81]	**[2.02]**	**[4.05]**
WIND	–0.19	**–0.50**	0.17	–0.37	–0.01	0.02	**–0.41**	–0.34	0.11	–0.11	0.19	–0.37	**–0.14**
	(0.37)	**(0.04)**	(0.43)	(0.17)	(0.95)	(0.96)	**(0.01)**	(0.36)	(0.55)	(0.74)	(0.40)	(0.15)	**(0.04)**
	[3.87]	**[0.37]**	[3.51]	[7.19]	[0.17]	[0.24]	**[7.06]**	[5.50]	[1.52]	[1.74]	[3.34]	[7.15]	**[2.42]**
RAIN	0.01	–0.03	0.05	–0.02	0.06	**0.06**	0.03	–0.01	–0.07	–0.03	0.04	–0.05	0.00
	(0.89)	(0.55)	(0.24)	(0.69)	(0.16)	**(0.02)**	(0.30)	(0.90)	(0.12)	(0.43)	(0.43)	(0.19)	(0.75)
	[1.53]	[0.08]	[3.35]	[4.95]	[3.89]	**[6.13]**	[7.89]	[2.07]	[6.24]	[6.95]	[2.11]	[4.46]	[0.73]
TEMP	**–0.45**	**–0.65**	–0.17	–0.29	–0.26	–0.08	0.01	–0.06	–0.15	–0.34	–0.13	–0.10	**–0.16**
	(0.00)	**(0.00)**	(0.49)	(0.34)	(0.21)	(0.56)	(0.96)	(0.75)	(0.23)	(0.16)	(0.43)	(0.52)	**(0.00)**
	[5.81]	**[1.90]**	[4.40]	[6.84]	[6.89]	[3.06]	[0.35]	[2.27]	[4.60]	[8.32]	[3.36]	[3.45]	**[7.82]**
Intercept	**0.30**	**0.39**	0.18	0.27	0.20	0.12	0.10	0.12	0.12	**0.25**	0.12	0.08	**0.16**
	(0.00)	**(0.00)**	(0.16)	(0.18)	(0.19)	(0.26)	(0.42)	(0.37)	(0.24)	**(0.10)**	(0.20)	(0.31)	**(0.00)**
R^2	0.18	0.34	0.08	0.06	0.07	0.04	0.06	0.04	0.07	0.07	0.04	0.13	0.05
N	5,757	5,483	5,826	5,544	5,650	5,794	6,034	6,015	5,693	5,713	5,750	5,933	69,192

Table IA.9 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Extreme Weather

Panel C: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.44	**–1.11**	–0.53	–0.31	–1.07	–0.65	–0.74	–0.69	–1.23	0.25	–0.23	**–0.85**	**–0.60**
	(0.26)	**(0.09)**	(0.32)	(0.64)	(0.15)	(0.44)	(0.34)	(0.17)	(0.18)	(0.55)	(0.56)	**(0.03)**	**(0.00)**
	[4.50]	**[1.64]**	[5.08]	[2.99]	[7.84]	[4.98]	[4.82]	[5.21]	[9.16]	[2.25]	[2.05]	**[8.81]**	**[5.48]**
WIND	**0.54**	0.22	–0.06	0.45	0.28	–0.19	0.54	–0.46	–0.19	0.06	–0.10	0.09	0.12
	(0.01)	(0.52)	(0.84)	(0.17)	(0.43)	(0.45)	(0.13)	(0.19)	(0.62)	(0.87)	(0.72)	(0.79)	(0.21)
	[7.28]	[3.17]	[0.82]	[5.99]	[3.64]	[2.57]	[7.70]	[6.14]	[2.55]	[0.72]	[1.07]	[1.10]	[1.68]
RAIN	0.02	0.08	–0.04	–0.00	0.03	0.04	**0.06**	0.04	0.04	–0.01	0.03	0.03	**0.03**
	(0.70)	(0.12)	(0.22)	(1.00)	(0.33)	(0.30)	**(0.01)**	(0.24)	(0.28)	(0.79)	(0.48)	(0.28)	**(0.01)**
	[4.64]	[4.63]	[1.84]	[0.03]	[8.01]	[1.11]	**[8.10]**	[0.44]	[1.41]	[2.37]	[6.69]	[7.55]	**[7.72]**
TEMP	–0.03	–0.02	–0.02	0.16	–0.01	**–0.35**	0.17	**–0.42**	–0.18	–0.11	–0.03	0.14	–0.04
	(0.72)	(0.85)	(0.84)	(0.15)	(0.94)	**(0.04)**	(0.46)	**(0.02)**	(0.28)	(0.53)	(0.71)	(0.11)	(0.48)
	[2.17]	[1.67]	[1.55]	[8.58]	[0.38]	**[1.83]**	[5.28]	**[1.28]**	[5.38]	[4.07]	[1.66]	[8.97]	[1.66]
Intercept	0.07	0.11	0.09	–0.10	0.06	**0.37**	–0.09	**0.44**	**0.26**	0.09	0.05	–0.01	**0.09**
	(0.27)	(0.28)	(0.40)	(0.38)	(0.63)	**(0.03)**	(0.64)	**(0.00)**	**(0.06)**	(0.54)	(0.53)	(0.93)	**(0.05)**
R^2	0.06	0.12	0.04	0.07	0.07	0.10	0.13	0.13	0.08	0.01	0.01	0.07	0.03
N	7,051	6,656	7,024	6,900	6,989	7,101	7,290	7,040	6,988	6,985	6,992	7,164	84,180

Table IA.10. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Extreme Weather

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. Observations with extreme weather conditions are excluded from the sample. Extreme weather conditions are defined as follows: a) daily SKC is below the 5th or above the 95th percentiles of the monthly, country-specific distribution; b) daily TEMP is below the 5th or above the 95th percentiles of the monthly, country-specific distribution; c) daily WIND is above the 95th percentile of the monthly, country-specific distribution; or d) daily SNOW is above the 95th percentile of the monthly, country-specific distribution.

All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.10 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Extreme Weather

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–2.22	**–2.00**	–0.10	**–2.67**	–0.35	**–3.30**	**–2.93**	–1.70	–1.17	–1.30	–0.33	1.59	**–1.47**
	(0.10)	**(0.06)**	(0.94)	**(0.03)**	(0.82)	**(0.02)**	**(0.02)**	(0.23)	(0.47)	(0.28)	(0.76)	(0.20)	**(0.00)**
	[1.65]	**[1.62]**	[0.07]	**[2.01]**	[0.24]	**[2.07]**	**[1.87]**	[1.28]	[0.78]	[0.93]	[0.22]	[1.03]	**[1.09]**
WIND	–0.09	0.21	–0.66	0.10	0.47	–0.43	–0.56	–0.45	0.40	–0.18	0.44	0.77	0.11
	(0.86)	(0.65)	(0.15)	(0.85)	(0.41)	(0.48)	(0.24)	(0.29)	(0.53)	(0.67)	(0.52)	(0.20)	(0.63)
	[0.18]	[0.38]	[1.25]	[0.16]	[0.66]	[0.57]	[0.66]	[0.62]	[0.57]	[0.31]	[0.84]	[1.48]	[0.18]
RAIN	0.07	**0.11**	–0.04	0.06	–0.07	0.07	–0.09	0.06	0.01	–0.00	0.03	–0.09	0.00
	(0.26)	**(0.08)**	(0.55)	(0.31)	(0.41)	(0.40)	(0.22)	(0.44)	(0.88)	(0.96)	(0.66)	(0.13)	(0.78)
	[1.70]	**[2.72]**	[0.95]	[1.48]	[1.62]	[1.61]	[1.91]	[1.51]	[0.22]	[0.06]	[0.74]	[2.18]	[0.12]
SNOW	–0.63	–0.26	**–1.29**									–0.09	–0.45
	(0.24)	(0.70)	**(0.00)**									(0.93)	(0.14)
	[0.19]	[0.12]	**[0.52]**									[0.01]	[0.05]
TEMP	–0.28	**–0.80**	–0.21	–0.13	0.49	–0.33	**–0.87**	0.04	**1.14**	**–0.67**	–0.34	–0.43	**–0.45**
	(0.23)	**(0.00)**	(0.60)	(0.83)	(0.31)	(0.40)	**(0.01)**	(0.91)	**(0.00)**	**(0.10)**	(0.42)	(0.25)	**(0.00)**
	[0.91]	**[2.60]**	[0.58]	[0.31]	[1.10]	[0.72]	**[1.58]**	[0.08]	**[1.96]**	**[1.44]**	[0.87]	[1.15]	**[2.49]**
Intercept	**0.60**	**0.62**	**0.41**	0.48	–0.08	**0.59**	**0.95**	0.25	**–0.60**	**0.52**	0.26	**0.35**	**0.51**
	(0.00)	**(0.00)**	**(0.02)**	(0.14)	(0.80)	**(0.05)**	**(0.00)**	(0.35)	**(0.01)**	**(0.01)**	(0.21)	**(0.03)**	**(0.00)**
R^2	0.060	0.201	0.092	0.057	0.052	0.089	0.147	0.039	0.126	0.064	0.025	0.090	0.092
N	8,304	7,706	8,287	7,624	8,402	8,073	8,257	8,790	8,228	8,280	8,174	8,589	98,714

Table IA.10 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Extreme Weather

Panel B: Mild Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	0.03	**1.91**	–1.42	0.07	–1.06	**–3.16**	–0.61	–1.54	0.30	–2.26	–1.04	**3.24**	–0.36
	(0.97)	**(0.01)**	(0.17)	(0.95)	(0.49)	**(0.06)**	(0.65)	(0.23)	(0.86)	(0.20)	(0.41)	**(0.00)**	(0.47)
	[0.03]	**[1.82]**	[1.39]	[0.05]	[0.83]	**[2.33]**	[0.54]	[1.18]	[0.26]	[1.84]	[1.03]	**[3.27]**	[0.30]
WIND	**–1.12**	–0.26	–0.05	**–0.97**	–0.34	0.62	**–0.77**	–0.61	0.48	0.54	0.09	**–1.06**	–0.28
	(0.04)	(0.67)	(0.93)	**(0.06)**	(0.41)	(0.46)	**(0.08)**	(0.24)	(0.28)	(0.68)	(0.82)	**(0.04)**	(0.21)
	[1.78]	[0.40]	[0.08]	**[1.39]**	[0.49]	[0.72]	**[1.15]**	[0.87]	[0.68]	[0.76]	[0.15]	**[1.73]**	[0.42]
RAIN	–0.06	–0.10	–0.05	**–0.12**	0.09	0.08	–0.01	–0.12	**–0.25**	0.02	–0.04	**–0.17**	**–0.07**
	(0.35)	(0.30)	(0.39)	**(0.09)**	(0.36)	(0.17)	(0.94)	(0.16)	**(0.02)**	(0.81)	(0.64)	**(0.10)**	**(0.00)**
	[1.44]	[2.14]	[1.25]	**[2.76]**	[2.16]	[1.73]	[0.19]	[2.93]	**[6.26]**	[0.44]	[1.03]	**[3.99]**	**[1.60]**
TEMP	**–1.24**	**–1.50**	–0.45	–1.03	–0.50	**–1.03**	–0.03	–0.37	0.29	–0.74	0.01	**–1.00**	**–0.48**
	(0.01)	**(0.00)**	(0.42)	(0.11)	(0.18)	**(0.02)**	(0.91)	(0.39)	(0.27)	(0.22)	(0.97)	**(0.03)**	**(0.00)**
	[3.26]	**[3.68]**	[0.99]	[1.77]	[1.28]	**[2.85]**	[0.12]	[1.34]	[0.88]	[1.62]	[0.03]	**[2.87]**	**[2.09]**
Intercept	**0.86**	**0.85**	0.48	**0.88**	0.44	**0.93**	0.27	0.52	–0.17	0.55	0.16	**0.65**	**0.48**
	(0.00)	**(0.00)**	(0.13)	**(0.02)**	(0.12)	**(0.01)**	(0.24)	(0.14)	(0.39)	(0.13)	(0.35)	**(0.00)**	**(0.00)**
R^2	0.384	0.405	0.048	0.137	0.047	0.190	0.037	0.081	0.146	0.097	0.023	0.443	0.107
N	5,757	5,483	5,826	5,544	5,650	5,794	6,034	6,015	5,693	5,713	5,750	5,933	69,192

Table IA.10 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Extreme Weather

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.35	–0.40	0.07	–1.55	–1.28	–0.10	0.42	–1.84	–2.62	0.45	–0.68	**–2.33**	–1.01
	(0.79)	(0.80)	(0.96)	(0.37)	(0.45)	(0.97)	(0.68)	(0.12)	(0.17)	(0.57)	(0.55)	**(0.02)**	(0.10)
	[0.30]	[0.35]	[0.06]	[1.32]	[0.82]	[0.06]	[0.24]	[1.03]	[1.72]	[0.39]	[0.60]	**[1.86]**	[0.82]
WIND	0.72	0.30	–0.01	–0.09	0.47	0.76	1.07	0.11	0.68	–0.30	0.01	–0.28	0.14
	(0.18)	(0.75)	(0.99)	(0.92)	(0.53)	(0.35)	(0.15)	(0.90)	(0.36)	(0.64)	(0.99)	(0.72)	(0.69)
	[0.81]	[0.36]	[0.02]	[0.11]	[0.54]	[0.76]	[1.32]	[0.11]	[0.80]	[0.32]	[0.01]	[0.27]	[0.17]
RAIN	**0.18**	0.12	–0.07	–0.02	0.05	**0.18**	0.09	0.09	0.05	0.00	–0.03	–0.03	**0.05**
	(0.00)	(0.31)	(0.19)	(0.77)	(0.58)	**(0.02)**	(0.24)	(0.19)	(0.50)	(0.93)	(0.73)	(0.64)	**(0.03)**
	[4.24]	[2.94]	[1.68]	[0.48]	[1.24]	**[3.81]**	[2.22]	[1.80]	[1.24]	[0.11]	[0.67]	[0.77]	**[1.21]**
TEMP	0.42	0.01	0.26	0.48	**0.70**	**–1.19**	–0.03	**–0.98**	0.27	–0.20	0.01	**1.08**	0.10
	(0.14)	(0.95)	(0.36)	(0.14)	**(0.03)**	**(0.02)**	(0.96)	**(0.05)**	(0.48)	(0.49)	(0.97)	**(0.00)**	(0.54)
	[2.36]	[0.08]	[1.47]	[2.29]	**[2.48]**	**[2.86]**	[0.07]	**[1.93]**	[0.74]	[0.72]	[0.04]	**[4.95]**	[0.40]
Intercept	–0.07	0.23	–0.02	–0.11	–0.40	**1.08**	0.11	**1.00**	0.02	0.32	0.14	**–0.39**	0.14
	(0.71)	(0.26)	(0.94)	(0.74)	(0.18)	**(0.03)**	(0.82)	**(0.01)**	(0.93)	(0.18)	(0.45)	**(0.06)**	(0.19)
R^2	0.124	0.026	0.033	0.107	0.129	0.307	0.059	0.132	0.087	0.011	0.010	0.454	0.016
N	7,051	6,656	7,024	6,900	6,989	7,101	7,290	7,040	6,988	6,985	6,992	7,164	84,180

Table IA.11. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding RAIN

This table presents the results of the OLS estimation of the following panel regression: $r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 SNOW_{it} + \beta_4 TEMP_{it} + \varepsilon_{it}$. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.11 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding RAIN

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.59	–0.42	–0.57	**–0.83**	–0.02	–0.66	**–0.85**	**–0.84**	–0.05	–0.39	–0.39	–0.33	**–0.62**
	(0.11)	(0.16)	(0.22)	**(0.05)**	(0.97)	(0.23)	**(0.08)**	**(0.01)**	(0.93)	(0.39)	(0.36)	(0.41)	**(0.00)**
	[5.96]	[4.84]	[5.73]	**[7.75]**	[0.15]	[5.21]	**[7.57]**	**[7.53]**	[0.41]	[3.06]	[2.99]	[2.76]	**[5.71]**
WIND	–0.10	–0.23	**–0.38**	0.14	–0.07	**–0.42**	–0.37	**–0.39**	–0.21	–0.17	0.25	0.07	**–0.11**
	(0.46)	(0.18)	**(0.00)**	(0.33)	(0.66)	**(0.05)**	(0.14)	**(0.06)**	(0.36)	(0.37)	(0.26)	(0.58)	**(0.03)**
	[2.85]	[5.92]	**[8.83]**	[2.75]	[1.09]	**[6.66]**	[5.78]	**[6.08]**	[3.48]	[3.21]	[5.30]	[1.74]	**[2.18]**
SNOW	–0.02	–0.14	**–0.48**									0.25	–0.01
	(0.94)	(0.56)	**(0.01)**									(0.20)	(0.95)
	[0.06]	[0.73]	**[0.59]**									[0.11]	[0.00]
TEMP	**–0.18**	**–0.23**	–0.23	–0.02	0.14	**–0.34**	–0.07	–0.19	**0.51**	**–0.51**	–0.23	–0.13	**–0.18**
	(0.01)	**(0.03)**	(0.25)	(0.92)	(0.43)	**(0.02)**	(0.64)	(0.20)	**(0.00)**	**(0.00)**	(0.20)	(0.15)	**(0.00)**
	[8.38]	**[1.04]**	[8.04]	[0.55]	[3.92]	**[9.54]**	[1.94]	[4.86]	**[0.65]**	**[3.12]**	[7.15]	[4.82]	**[1.31]**
Intercept	**0.20**	**0.23**	**0.23**	0.11	–0.04	**0.32**	0.16	**0.23**	**–0.30**	**0.30**	0.12	**0.12**	**0.17**
	(0.00)	**(0.00)**	**(0.02)**	(0.25)	(0.71)	**(0.00)**	(0.17)	**(0.02)**	**(0.01)**	**(0.00)**	(0.17)	**(0.00)**	**(0.00)**
R^2	0.10	0.14	0.17	0.04	0.02	0.11	0.08	0.09	0.17	0.21	0.07	0.05	0.11
N	10,549	9,827	10,660	9,734	10,592	9,842	10,157	10,718	10,342	10,423	10,386	10,833	124,063

Table IA.11 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding RAIN

Panel B: Mild Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.60	0.33	**–1.01**	0.30	–0.45	–0.76	–0.01	–0.38	–0.31	–0.57	–0.14	0.23	**–0.32**
	(0.23)	(0.56)	**(0.03)**	(0.62)	(0.51)	(0.17)	(0.99)	(0.54)	(0.63)	(0.33)	(0.75)	(0.63)	**(0.10)**
	[7.82]	[3.99]	**[1.46]**	[3.32]	[3.96]	[7.12]	[0.11]	[3.59]	[2.67]	[5.12]	[1.46]	[2.78]	**[3.12]**
WIND	0.13	–0.25	0.07	–0.31	–0.03	0.09	–0.28	–0.30	0.01	–0.11	–0.07	**–0.42**	–0.11
	(0.41)	(0.17)	(0.63)	(0.11)	(0.86)	(0.67)	(0.14)	(0.22)	(0.95)	(0.60)	(0.67)	**(0.03)**	(0.13)
	[2.96]	[5.37]	[1.33]	[6.37]	[0.50]	[1.40]	[4.95]	[4.97]	[0.20]	[1.73]	[1.25]	**[8.52]**	[1.94]
TEMP	**–0.24**	**–0.43**	–0.21	–0.29	–0.03	**–0.25**	0.02	–0.10	0.01	–0.26	–0.05	–0.18	**–0.14**
	(0.08)	**(0.00)**	(0.33)	(0.26)	(0.87)	**(0.02)**	(0.87)	(0.50)	(0.91)	(0.24)	(0.73)	(0.13)	**(0.00)**
	[9.67]	**[6.34]**	[6.16]	[7.72]	[0.87]	**[8.73]**	[0.84]	[4.17]	[0.42]	[6.92]	[1.36]	[6.99]	**[7.63]**
Intercept	**0.20**	**0.28**	**0.20**	0.25	0.05	**0.23**	0.06	0.14	0.00	0.20	0.06	**0.15**	**0.15**
	(0.00)	**(0.00)**	**(0.08)**	(0.13)	(0.71)	**(0.00)**	(0.59)	(0.21)	(0.97)	(0.13)	(0.44)	**(0.01)**	**(0.00)**
R^2	0.06	0.18	0.07	0.08	0.01	0.05	0.02	0.04	0.01	0.05	0.00	0.13	0.05
N	6,989	6,572	7,066	6,799	6,984	7,006	7,220	7,146	7,040	7,088	7,007	7,251	84,168

Table IA.11 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding RAIN

Panel C: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–0.60**	**–1.08**	–0.12	–0.38	**–1.14**	–0.18	–0.53	–0.50	–1.03	0.44	–0.18	**–0.88**	**–0.49**
	(0.10)	**(0.06)**	(0.85)	(0.49)	**(0.03)**	(0.82)	(0.44)	(0.37)	(0.20)	(0.41)	(0.65)	**(0.00)**	**(0.01)**
	[6.20]	**[1.32]**	[1.12]	[3.68]	**[8.60]**	[1.42]	[4.18]	[3.97]	[7.96]	[4.08]	[1.60]	**[9.22]**	**[4.59]**
WIND	0.14	0.16	–0.37	**0.46**	–0.01	–0.01	0.22	–0.37	–0.39	0.12	**–0.38**	–0.13	–0.03
	(0.51)	(0.47)	(0.14)	**(0.03)**	(0.96)	(0.97)	(0.33)	(0.13)	(0.12)	(0.67)	**(0.04)**	(0.54)	(0.71)
	[2.12]	[2.52]	[5.30]	**[6.83]**	[0.17]	[0.15]	[3.31]	[5.11]	[5.42]	[1.53]	**[4.65]**	[1.95]	[0.42]
TEMP	–0.03	–0.02	–0.07	**0.15**	–0.04	–0.25	0.04	**–0.43**	–0.17	–0.05	–0.03	0.13	–0.04
	(0.78)	(0.83)	(0.53)	**(0.07)**	(0.65)	(0.11)	(0.82)	**(0.00)**	(0.21)	(0.75)	(0.77)	(0.12)	(0.37)
	[1.72]	[1.55]	[4.46]	**[8.42]**	[1.80]	[8.46]	[1.31]	**[0.92]**	[5.08]	[1.80]	[1.41]	[8.16]	[1.79]
Intercept	0.10	0.12	0.12	–0.09	0.12	**0.27**	0.03	**0.44**	**0.26**	0.03	0.07	0.02	**0.10**
	(0.16)	(0.16)	(0.25)	(0.25)	(0.20)	**(0.07)**	(0.87)	**(0.00)**	**(0.03)**	(0.84)	(0.45)	(0.76)	**(0.02)**
R^2	0.03	0.09	0.03	0.08	0.05	0.05	0.03	0.12	0.08	0.01	0.03	0.09	0.02
N	8,497	8,051	8,547	8,358	8,433	8,505	8,585	8,328	8,431	8,446	8,397	8,634	101,212

Table IA.12. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding RAIN

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 SNOW_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.12 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding RAIN

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.14	–0.95	–0.30	–0.99	0.31	**–2.44**	**–2.52**	–0.70	–1.24	–1.03	–0.94	0.60	**–1.25**
	(0.35)	(0.22)	(0.78)	(0.26)	(0.81)	**(0.04)**	**(0.02)**	(0.50)	(0.26)	(0.29)	(0.37)	(0.59)	**(0.00)**
	[0.88]	[0.83]	[0.26]	[0.77]	[0.25]	**[1.67]**	**[1.98]**	[0.58]	[0.94]	[0.74]	[0.68]	[0.42]	**[1.01]**
WIND	0.04	–0.15	**–0.57**	0.13	0.24	–0.11	–0.35	–0.59	0.00	–0.17	0.50	0.46	0.02
	(0.93)	(0.65)	**(0.08)**	(0.79)	(0.65)	(0.84)	(0.57)	(0.22)	(1.00)	(0.72)	(0.33)	(0.29)	(0.92)
	[0.08]	[0.29]	**[1.13]**	[0.22]	[0.36]	[0.16]	[0.49]	[0.84]	[0.00]	[0.29]	[1.01]	[0.96]	[0.04]
SNOW	**–0.88**	**–0.78**	**–1.11**									–0.14	**–0.50**
	(0.04)	**(0.09)**	**(0.00)**									(0.86)	**(0.08)**
	[0.34]	**[0.41]**	**[0.52]**									[0.02]	**[0.06]**
TEMP	**–0.33**	**–0.77**	–0.40	–0.29	0.53	–0.54	–0.26	–0.12	**1.15**	**–1.02**	–0.53	**–0.81**	**–0.49**
	(0.06)	**(0.00)**	(0.33)	(0.54)	(0.15)	(0.13)	(0.41)	(0.71)	**(0.00)**	**(0.01)**	(0.19)	**(0.01)**	**(0.00)**
	[1.19]	**[2.75]**	[1.23]	[0.80]	[1.34]	[1.29]	[0.62]	[0.27]	**[2.22]**	**[2.35]**	[1.51]	**[2.45]**	**[2.70]**
Intercept	**0.56**	**0.62**	**0.48**	**0.47**	–0.12	**0.65**	**0.49**	0.32	**–0.57**	**0.65**	**0.37**	**0.57**	**0.52**
	(0.00)	**(0.00)**	**(0.02)**	**(0.07)**	(0.62)	**(0.01)**	**(0.04)**	(0.14)	**(0.01)**	**(0.00)**	**(0.05)**	**(0.00)**	**(0.00)**
R^2	0.054	0.184	0.090	0.018	0.037	0.055	0.065	0.023	0.174	0.152	0.064	0.137	0.118
N	10,549	9,827	10,660	9,734	10,592	9,842	10,157	10,718	10,342	10,423	10,386	10,833	124,063

Table IA.12 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding RAIN

Panel B: Mild Countries

	Jan (1)	**Feb** (2)	**Mar** (3)	**Apr** (4)	**May** (5)	**Jun** (6)	**Jul** (7)	**Aug** (8)	**Sep** (9)	**Oct** (10)	**Nov** (11)	**Dec** (12)	**All** (13)
SKC	–0.11	**1.75**	**–1.81**	–0.10	–0.53	**–3.67**	0.60	–0.78	–0.02	–1.66	–0.77	**1.89**	–0.46
	(0.90)	**(0.05)**	**(0.08)**	(0.93)	(0.69)	**(0.01)**	(0.63)	(0.48)	(0.99)	(0.25)	(0.43)	**(0.04)**	(0.27)
	[0.12]	**[1.75]**	**[1.75]**	[0.08]	[0.46]	**[2.71]**	[0.53]	[0.68]	[0.02]	[1.41]	[0.77]	**[1.86]**	[0.41]
WIND	–0.30	–0.04	0.02	–0.57	–0.54	0.82	**–0.60**	–0.56	0.18	0.15	–0.45	**–1.36**	**–0.27**
	(0.51)	(0.91)	(0.96)	(0.12)	(0.13)	(0.21)	**(0.03)**	(0.19)	(0.68)	(0.87)	(0.20)	**(0.02)**	**(0.05)**
	[0.53]	[0.06]	[0.04]	[0.91]	[0.84]	[1.04]	**[0.95]**	[0.86]	[0.27]	[0.23]	[0.75]	**[2.20]**	**[0.44]**
TEMP	**–0.69**	**–1.05**	–0.53	–0.80	–0.23	**–0.98**	–0.04	–0.30	0.31	–0.48	–0.04	**–1.28**	**–0.47**
	(0.07)	**(0.00)**	(0.31)	(0.11)	(0.60)	**(0.00)**	(0.88)	(0.32)	(0.20)	(0.31)	(0.90)	**(0.00)**	**(0.00)**
	[2.22]	**[3.19]**	[1.34]	[1.67]	[0.63]	**[2.73]**	[0.15]	[1.09]	[0.98]	[1.20]	[0.10]	**[3.95]**	**[2.20]**
Intercept	**0.59**	**0.61**	**0.53**	**0.71**	0.28	**0.92**	0.19	**0.41**	–0.17	0.41	0.18	**0.84**	**0.46**
	(0.00)	**(0.00)**	**(0.07)**	**(0.03)**	(0.36)	**(0.00)**	(0.39)	**(0.08)**	(0.33)	(0.16)	(0.27)	**(0.00)**	**(0.00)**
R^2	0.112	0.268	0.064	0.085	0.024	0.229	0.027	0.040	0.019	0.053	0.027	0.608	0.103
N	6,989	6,572	7,066	6,799	6,984	7,006	7,220	7,146	7,040	7,088	7,007	7,251	84,168

Table IA.12 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding RAIN

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–0.22	–0.36	0.71	–1.05	–1.23	0.89	0.54	–1.49	–1.61	1.20	–0.13	**–2.22**	–0.56
	(0.87)	(0.82)	(0.63)	(0.47)	(0.31)	(0.70)	(0.61)	(0.15)	(0.30)	(0.19)	(0.90)	**(0.01)**	(0.33)
	[0.19]	[0.31]	[0.62]	[0.89]	[0.84]	[0.55]	[0.37]	[0.89]	[1.12]	[1.05]	[0.11]	**[1.85]**	[0.46]
WIND	0.08	0.15	–0.58	0.45	0.12	**1.31**	0.49	–0.23	0.29	–0.38	–0.63	–0.34	–0.05
	(0.88)	(0.82)	(0.22)	(0.44)	(0.86)	**(0.01)**	(0.38)	(0.72)	(0.61)	(0.54)	(0.27)	(0.52)	(0.84)
	[0.11]	[0.20]	[0.75]	[0.57]	[0.15]	**[1.54]**	[0.63]	[0.25]	[0.36]	[0.45]	[0.73]	[0.39]	[0.06]
TEMP	0.34	0.05	0.20	**0.55**	**0.55**	**–1.08**	–0.13	**–0.94**	0.05	–0.19	–0.11	**0.85**	0.04
	(0.22)	(0.84)	(0.46)	**(0.05)**	**(0.06)**	**(0.02)**	(0.80)	**(0.01)**	(0.88)	(0.51)	(0.67)	**(0.00)**	(0.76)
	[1.91]	[0.27]	[1.10]	**[2.56]**	**[2.02]**	**[2.75]**	[0.33]	**[1.79]**	[0.12]	[0.65]	[0.52]	**[4.09]**	[0.17]
Intercept	0.03	0.21	0.03	–0.24	–0.25	**0.93**	0.23	**0.99**	0.17	0.27	0.24	–0.22	**0.18**
	(0.86)	(0.25)	(0.90)	(0.38)	(0.35)	**(0.03)**	(0.61)	**(0.00)**	(0.42)	(0.25)	(0.23)	(0.14)	**(0.07)**
R^2	0.047	0.004	0.045	0.116	0.090	0.269	0.014	0.111	0.031	0.028	0.016	0.321	0.004
N	8,497	8,051	8,547	8,358	8,433	8,505	8,585	8,328	8,431	8,446	8,397	8,634	101,212

Table IA.13. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables, SIM and SAD

This table presents the results of the OLS estimation of the following panel regression:

$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \beta_6 SIM_t + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit. SIM is an indicator variable that equals one during the months of November through April, and zero otherwise. In Columns 2, 5, and 8, we replace the SIM indicator variable by a seasonal affective disorder variable, SAD, calculated following Kamstra, Kramer and Levi (2003). Columns 3, 6, and 9 present the baseline all-months regressions, with country fixed effects (coefficients of country fixed effects not reported for brevity).

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. We present results for the "All months" only. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN and SIM, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.13 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables, SIM and SAD

	Panel A. Cold Countries			*Panel B. Mild Countries*			*Panel C. Hot Countries*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SKC	**–0.56**	**–0.59**	**–0.58**	–0.29	**–0.31**	**–0.32**	**–0.58**	**–0.66**	**–0.45**
	(0.00)	**(0.00)**	**(0.00)**	(0.13)	**(0.09)**	**(0.08)**	**(0.00)**	**(0.00)**	**(0.01)**
	[5.12]	**[5.41]**	**[5.30]**	[2.84]	**[3.05]**	**[3.17]**	**[5.38]**	**[6.44]**	**[4.20]**
WIND	**–0.12**	**–0.10**	–0.08	–0.11	**–0.10**	–0.01	–0.02	–0.02	–0.04
	(0.02)	**(0.06)**	(0.25)	(0.10)	**(0.09)**	(0.91)	(0.78)	(0.82)	(0.64)
	[2.35]	**[1.92]**	[1.54]	[2.07]	**[1.83]**	[0.17]	[0.35]	[0.32]	[0.65]
RAIN	–0.01	–0.01	–0.01	0.00	0.00	–0.00	**0.02**	**0.02**	**0.02**
	(0.11)	(0.13)	(0.14)	(0.70)	(0.99)	(0.86)	**(0.02)**	**(0.04)**	**(0.02)**
	[2.69]	[2.54]	[2.37]	[0.78]	[0.02]	[0.35]	**[6.81]**	**[6.98]**	**[6.59]**
SNOW	0.01	0.12	–0.00						
	(0.94)	(0.48)	(0.98)						
	[0.00]	[0.00]	[0.00]						
TEMP	**–0.10**	**–0.17**	**–0.18**	**–0.09**	**–0.15**	**–0.15**	–0.03	–0.05	–0.04
	(0.01)	**(0.00)**	**(0.00)**	**(0.05)**	**(0.00)**	**(0.00)**	(0.47)	(0.31)	(0.65)
	[6.12]	**[1.04]**	**[1.37]**	**[4.92]**	**[7.78]**	**[7.91]**	[1.45]	[2.24]	[1.68]
SIM	**0.03**			0.02			0.00		
	(0.01)			(0.11)			(0.78)		
	[6.82]			[1.27]			[8.28]		
SAD		**0.00**			0.00			0.00	
		(0.05)			(0.22)			(0.51)	
		[0.83]			[0.26]			[0.20]	
Intercept	**0.12**	**0.17**	**0.16**	**0.11**	**0.15**	**0.14**	**0.09**	**0.11**	0.09
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.04)**	**(0.01)**	(0.15)
R^2	0.13	0.12	0.12	0.05	0.05	0.06	0.02	0.03	0.06
N	124,063	117,438	124,063	84,168	81,078	84,168	101,212	83,806	101,212
Country FE	N	N	Y	N	N	Y	N	N	Y

Table IA.14. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables, SIM and SAD

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it}+\beta_6 SIM_t)}}$,

where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit. SIM is an indicator variable that equals one during the months of May through November, and zero otherwise. In Columns 2, 5, and 8, we replace the SIM indicator variable by a seasonal affective disorder variable, SAD, calculated following Kamstra, Kramer and Levi (2003). Columns 3, 6, and 9 present the baseline all-months regressions, with country fixed effects (coefficients of country fixed effects not reported for brevity).

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. We present results for the "All months" only. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN and SIM, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.14 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables, SIM and SAD

	Panel A. Cold Countries			*Panel B. Mild Countries*			*Panel C. Hot Countries*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SKC	**–1.16**	**–1.23**	**–1.07**	–0.12	–0.16	–0.57	–0.59	–1.00	–0.35
	(0.00)	**(0.00)**	**(0.00)**	(0.77)	(0.71)	(0.13)	(0.23)	(0.10)	(0.49)
	[0.94]	**[0.99]**	**[0.86]**	[0.10]	[0.14]	[0.50]	[0.00]	[0.00]	[0.28]
WIND	–0.01	0.05	–0.03	**–0.27**	**–0.27**	–0.08	0.01	0.06	–0.06
	(0.95)	(0.84)	(0.85)	**(0.04)**	**(0.04)**	(0.55)	(0.98)	(0.83)	(0.82)
	[0.03]	[0.08]	[0.06]	**[0.44]**	**[0.44]**	[0.13]	[0.00]	[0.00]	[0.07]
RAIN	–0.01	–0.00	–0.02	**–0.07**	**–0.07**	**–0.05**	**0.04**	**0.05**	0.02
	(0.53)	(0.80)	(0.47)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.05)**	**(0.01)**	(0.35)
	[0.28]	[0.11]	[0.37]	**[1.66]**	**[1.68]**	**[1.13]**	**[0.00]**	**[0.00]**	[0.46]
SNOW	–0.43	–0.32	–0.26						
	(0.15)	(0.25)	(0.34)						
	[0.05]	[0.04]	[0.03]						
TEMP	**–0.26**	**–0.50**	**–0.50**	**–0.39**	**–0.48**	**–0.47**	0.11	0.08	–0.25
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	(0.35)	(0.61)	(0.34)
	[1.49]	**[2.74]**	**[2.79]**	**[1.84]**	**[2.26]**	**[2.21]**	[0.00]	[0.00]	[1.03]
SIM	**0.09**			0.03			0.05		
	(0.00)			(0.28)			(0.17)		
	[1.14]			[0.40]			[0.00]		
SAD		**0.02**			0.01			0.00	
		(0.00)			(0.31)			(0.52)	
		[0.00]			[0.00]			[0.00]	
Intercept	**0.36**	**0.52**	**0.49**	**0.39**	**0.46**	**0.45**	0.10	0.17	0.24
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	(0.27)	(0.13)	(0.25)
R^2	0.14	0.13	0.24	0.12	0.12	0.19	0.02	0.02	0.11
N	124,063	117,438	124,063	84,169	81,078	84,168	101,212	83,806	101,212
Country FE	N	N	Y	N	N	Y	N	N	Y

Table IA.15. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – Two Regions

This table presents the results of the OLS estimation of the following panel regression: $r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, and B present the results for the cold and hot countries, respectively. We define cold and hot regions based on the 50th percentile of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.15 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – Two Regions

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–0.66**	–0.25	–0.29	–0.11	–0.03	**–1.05**	–0.35	–0.39	0.40	–0.34	–0.25	–0.15	**–0.39**
	(0.08)	(0.43)	(0.52)	(0.79)	(0.95)	**(0.04)**	(0.43)	(0.32)	(0.45)	(0.44)	(0.52)	(0.68)	**(0.01)**
	[7.04]	[2.82]	[2.77]	[1.03]	[0.21]	**[7.89]**	[3.09]	[3.68]	[3.30]	[2.81]	[1.90]	[1.34]	**[3.52]**
WIND	–0.02	**–0.30**	**–0.26**	–0.03	–0.02	–0.18	**–0.39**	**–0.41**	–0.22	–0.18	0.17	–0.10	**–0.12**
	(0.86)	**(0.06)**	**(0.02)**	(0.85)	(0.89)	(0.34)	**(0.04)**	**(0.03)**	(0.26)	(0.32)	(0.35)	(0.48)	**(0.01)**
	[0.58]	**[7.27]**	**[5.82]**	[0.59]	[0.34]	[2.92]	**[6.25]**	**[6.32]**	[3.64]	[3.32]	[3.46]	[2.44]	**[2.44]**
RAIN	0.01	0.04	–0.02	–0.03	–0.01	0.02	–0.03	–0.02	–0.03	–0.03	0.02	–0.00	–0.01
	(0.78)	(0.13)	(0.45)	(0.14)	(0.81)	(0.55)	(0.16)	(0.60)	(0.16)	(0.16)	(0.33)	(0.84)	(0.16)
	[1.64]	[1.72]	[5.51]	[8.90]	[1.40]	[4.36]	[8.29]	[4.60]	[7.00]	[6.90]	[4.83]	[1.01]	[2.19]
SNOW	0.04	–0.21	**–0.50**									0.19	–0.02
	(0.86)	(0.35)	**(0.00)**									(0.36)	(0.91)
	[0.04]	[0.28]	**[0.20]**									[0.00]	[0.00]
TEMP	**–0.20**	**–0.30**	**–0.29**	–0.03	0.16	**–0.36**	–0.06	–0.18	**0.39**	**–0.39**	–0.23	**–0.15**	**–0.17**
	(0.01)	**(0.01)**	**(0.09)**	(0.84)	(0.31)	**(0.00)**	(0.59)	(0.18)	**(0.02)**	**(0.01)**	(0.13)	**(0.09)**	**(0.00)**
	[9.87]	**[4.62]**	**[0.81]**	[0.99]	[4.63]	**[1.65]**	[1.97]	[5.32]	**[9.41]**	**[0.01]**	[7.54]	**[5.70]**	**[0.20]**
Intercept	**0.20**	**0.24**	**0.23**	0.11	–0.06	**0.33**	0.13	**0.20**	**–0.24**	**0.25**	0.11	**0.13**	**0.16**
	(0.00)	**(0.00)**	**(0.01)**	(0.22)	(0.56)	**(0.00)**	(0.12)	**(0.02)**	**(0.04)**	**(0.01)**	(0.13)	**(0.00)**	**(0.00)**
R^2	0.10	0.19	0.14	0.02	0.02	0.11	0.07	0.08	0.12	0.15	0.06	0.06	0.09
N	14,110	13,174	14,255	13,219	14,130	13,371	13,817	14,306	13,871	14,014	13,950	14,558	166,775

Table IA.15 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – Two Regions

Panel B: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.50	–0.75	–0.56	–0.69	**–0.86**	–0.09	–0.76	**–0.64**	**–1.05**	0.23	–0.30	**–0.52**	**–0.54**
	(0.19)	(0.14)	(0.25)	(0.16)	**(0.08)**	(0.85)	(0.14)	**(0.10)**	**(0.05)**	(0.56)	(0.40)	**(0.05)**	**(0.00)**
	[5.19]	[8.36]	[5.43]	[6.80]	**[7.55]**	[0.88]	[7.75]	**[6.13]**	**[9.74]**	[2.05]	[2.73]	**[5.36]**	**[5.30]**
WIND	0.10	0.05	–0.24	0.20	0.01	0.02	0.11	–0.27	–0.16	0.01	**–0.30**	–0.19	–0.04
	(0.56)	(0.76)	(0.19)	(0.32)	(0.96)	(0.90)	(0.53)	(0.15)	(0.45)	(0.95)	**(0.07)**	(0.25)	(0.47)
	[1.76]	[0.94]	[3.92]	[3.26]	[0.15]	[0.35]	[1.81]	[4.23]	[2.20]	[0.17]	**[4.08]**	[3.12]	[0.64]
RAIN	0.01	0.01	0.01	0.02	0.02	0.04	**0.07**	0.03	0.03	–0.02	0.01	0.00	**0.02**
	(0.74)	(0.74)	(0.86)	(0.32)	(0.32)	(0.14)	**(0.00)**	(0.34)	(0.22)	(0.43)	(0.81)	(0.92)	**(0.02)**
	[3.55]	[3.39]	[1.41]	[5.84]	[6.37]	[1.32]	**[9.18]**	[7.99]	[7.59]	[5.54]	[2.19]	[0.58]	**[5.43]**
TEMP	–0.09	–0.05	–0.10	0.05	0.06	**–0.20**	0.03	**–0.26**	0.14	–0.03	–0.04	0.09	**–0.04**
	(0.15)	(0.39)	(0.19)	(0.40)	(0.52)	**(0.06)**	(0.81)	**(0.03)**	(0.25)	(0.75)	(0.51)	(0.17)	**(0.09)**
	[7.67]	[4.26]	[7.56]	[3.25]	[2.87]	**[7.76]**	[1.02]	**[7.54]**	[4.65]	[1.45]	[2.54]	[7.01]	**[2.57]**
Intercept	**0.14**	**0.13**	**0.15**	0.03	0.01	**0.21**	0.05	**0.30**	–0.02	0.03	0.08	0.04	**0.10**
	(0.00)	**(0.00)**	**(0.02)**	(0.66)	(0.91)	**(0.03)**	(0.66)	**(0.00)**	(0.81)	(0.71)	(0.11)	(0.41)	**(0.00)**
R^2	0.04	0.04	0.05	0.04	0.04	0.05	0.06	0.08	0.06	0.01	0.02	0.05	0.02
N	11,925	11,276	12,018	11,672	11,879	11,982	12,145	11,886	11,942	11,943	11,840	12,161	142,669

Table IA.16. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – Two Regions

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, and B present the results for the cold and hot countries, respectively. We define cold and hot regions based on the 50th percentile of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.16 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – Two Regions

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.42	–0.47	0.22	–0.88	0.36	**–3.86**	–1.43	–0.79	0.14	–1.27	–0.75	1.11	**–0.89**
	(0.15)	(0.54)	(0.83)	(0.24)	(0.74)	**(0.00)**	(0.16)	(0.45)	(0.90)	(0.17)	(0.42)	(0.24)	**(0.01)**
	[1.17]	[0.40]	[0.18]	[0.68]	[0.28]	**[2.43]**	[1.13]	[0.68]	[0.11]	[0.99]	[0.55]	[0.84]	**[0.71]**
WIND	0.01	–0.29	–0.35	–0.18	–0.01	0.40	–0.57	–0.54	–0.05	–0.02	0.34	–0.18	–0.08
	(0.98)	(0.36)	(0.24)	(0.67)	(0.99)	(0.48)	(0.20)	(0.16)	(0.90)	(0.97)	(0.44)	(0.69)	(0.65)
	[0.02]	[0.56]	[0.67]	[0.31]	[0.01]	[0.55]	[0.81]	[0.76]	[0.08]	[0.03]	[0.66]	[0.37]	[0.13]
RAIN	0.05	0.07	–0.07	0.01	–0.03	0.03	–0.05	0.04	**–0.11**	–0.06	0.05	**–0.08**	–0.02
	(0.29)	(0.13)	(0.18)	(0.87)	(0.59)	(0.61)	(0.38)	(0.43)	**(0.03)**	(0.16)	(0.32)	**(0.08)**	(0.17)
	[1.26]	[1.60]	[1.80]	[0.21]	[0.76]	[0.73]	[1.26]	[1.04]	**[2.55]**	[1.45]	[1.13]	**[1.94]**	[0.50]
SNOW	**–0.89**	**–0.90**	**–1.19**									–0.46	**–0.53**
	(0.05)	**(0.03)**	**(0.00)**									(0.58)	**(0.05)**
	[0.23]	**[0.31]**	**[0.37]**									[0.05]	**[0.04]**
TEMP	**–0.53**	**–0.84**	**–0.60**	–0.39	0.32	**–0.72**	–0.30	–0.33	**0.86**	**–0.71**	–0.52	**–0.79**	**–0.50**
	(0.01)	**(0.00)**	**(0.09)**	(0.33)	(0.37)	**(0.02)**	(0.20)	(0.23)	**(0.01)**	**(0.05)**	(0.13)	**(0.01)**	**(0.00)**
	[2.04]	**[3.17]**	**[1.95]**	[1.05]	[0.85]	**[1.93]**	[0.83]	[0.89]	**[2.00]**	**[1.70]**	[1.59]	**[2.59]**	**[2.60]**
Intercept	**0.62**	**0.63**	**0.52**	**0.54**	–0.00	**0.79**	**0.49**	**0.45**	**–0.45**	**0.53**	**0.35**	**0.62**	**0.52**
	(0.00)	**(0.00)**	**(0.00)**	**(0.02)**	(0.99)	**(0.00)**	**(0.01)**	**(0.02)**	**(0.04)**	**(0.01)**	**(0.04)**	**(0.00)**	**(0.00)**
R^2	0.10	0.21	0.11	0.03	0.02	0.13	0.05	0.03	0.13	0.10	0.06	0.19	0.12
N	14,110	13,174	14,255	13,219	14,130	13,371	13,817	14,306	13,871	14,014	13,950	14,558	166,775

Table IA.16 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – Two Regions

Panel B: Hot Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	0.16	0.38	–0.28	–0.95	–1.27	0.31	0.49	–1.20	–1.41	0.54	–0.14	–0.89	–0.41
	(0.87)	(0.76)	(0.80)	(0.44)	(0.22)	(0.81)	(0.54)	(0.23)	(0.22)	(0.51)	(0.85)	(0.35)	(0.36)
	[0.14]	[0.35]	[0.25]	[0.83]	[1.04]	[0.25]	[0.44]	[1.02]	[1.18]	[0.46]	[0.13]	[0.00]	[0.00]
WIND	–0.20	0.26	–0.52	0.14	–0.04	**1.04**	0.17	–0.53	0.39	–0.50	**–0.74**	**–0.85**	–0.18
	(0.68)	(0.55)	(0.25)	(0.77)	(0.92)	**(0.01)**	(0.71)	(0.26)	(0.40)	(0.34)	**(0.06)**	**(0.09)**	(0.33)
	[0.29]	[0.38]	[0.76]	[0.20]	[0.06]	**[1.34]**	[0.23]	[0.73]	[0.49]	[0.66]	**[0.96]**	**[0.00]**	[0.00]
RAIN	0.04	0.01	–0.04	0.00	0.06	**0.15**	0.07	0.00	0.01	0.01	–0.09	–0.00	0.01
	(0.57)	(0.90)	(0.47)	(0.97)	(0.41)	**(0.01)**	(0.29)	(0.97)	(0.80)	(0.81)	(0.24)	(0.94)	(0.43)
	[1.02]	[0.23]	[1.02]	[0.03]	[1.46]	**[3.68]**	[1.82]	[0.05]	[0.32]	[0.32]	[2.12]	[0.00]	[0.00]
TEMP	0.12	0.05	0.06	0.27	**0.54**	–0.51	0.12	–0.29	**0.63**	0.26	–0.07	**0.42**	0.02
	(0.51)	(0.72)	(0.76)	(0.17)	**(0.03)**	(0.11)	(0.69)	(0.40)	**(0.01)**	(0.19)	(0.69)	**(0.07)**	(0.83)
	[0.91]	[0.35]	[0.40]	[1.55]	**[2.44]**	[1.73]	[0.35]	[0.76]	**[1.91]**	[1.16]	[0.40]	**[0.00]**	[0.00]
Intercept	0.19	0.16	0.18	0.01	–0.24	**0.47**	0.03	0.45	**–0.34**	–0.07	**0.22**	0.06	**0.18**
	(0.10)	(0.12)	(0.22)	(0.97)	(0.26)	**(0.08)**	(0.91)	(0.14)	**(0.09)**	(0.64)	**(0.06)**	(0.67)	**(0.01)**
R^2	0.02	0.01	0.02	0.04	0.10	0.15	0.02	0.04	0.10	0.04	0.05	0.17	0.00
N	11,925	11,276	12,018	11,672	11,879	11,982	12,145	11,886	11,942	11,943	11,840	12,161	142,669

Table IA.17. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – Four Regions

This table presents the results of the OLS estimation of the following panel regression:

$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A and B present the results for the cold and hot countries, respectively. For brevity, we omit reporting results for the mild and warm countries. We define cold, mild, warm, and hot regions based on the 25th, 50th and 75th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.17 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – Four Regions

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.73	–0.26	–0.35	**–0.68**	0.09	–0.53	–0.70	–0.57	0.73	–0.03	–0.61	–0.43	**–0.46**
	(0.17)	(0.51)	(0.55)	**(0.10)**	(0.88)	(0.54)	(0.43)	(0.33)	(0.27)	(0.95)	(0.22)	(0.34)	**(0.02)**
	[6.89]	[2.73]	[3.36]	**[6.40]**	[0.72]	[4.11]	[5.07]	[4.50]	[5.43]	[0.22]	[4.64]	[3.52]	**[4.03]**
WIND	–0.13	**–0.24**	**–0.47**	0.28	–0.00	**–0.73**	–0.46	**–0.46**	0.09	–0.10	0.24	–0.02	**–0.13**
	(0.46)	**(0.07)**	**(0.00)**	(0.14)	(1.00)	**(0.00)**	(0.12)	**(0.10)**	(0.71)	(0.66)	(0.40)	(0.92)	**(0.02)**
	[3.40]	**[5.58]**	**[9.87]**	[5.17]	[0.02]	**[1.08]**	[6.53]	**[6.78]**	[1.28]	[1.86]	[4.85]	[0.39]	**[2.35]**
RAIN	0.00	0.03	–0.02	**–0.05**	–0.02	0.02	**–0.06**	–0.03	–0.02	–0.02	0.01	0.01	–0.01
	(0.81)	(0.44)	(0.66)	**(0.08)**	(0.42)	(0.53)	**(0.07)**	(0.55)	(0.50)	(0.39)	(0.70)	(0.62)	(0.19)
	[1.55]	[9.68]	[4.64]	**[3.70]**	[5.92]	[5.32]	**[4.99]**	[8.03]	[4.94]	[4.25]	[2.62]	[3.67]	[2.71]
SNOW	–0.02	–0.18	**–0.46**									0.26	–0.04
	(0.93)	(0.42)	**(0.03)**									(0.18)	(0.83)
	[0.13]	[1.56]	**[1.11]**									[0.33]	[0.00]
TEMP	**–0.21**	**–0.29**	–0.21	–0.07	0.15	**–0.31**	–0.16	–0.08	**0.62**	**–0.53**	**–0.35**	–0.09	**–0.17**
	(0.05)	**(0.08)**	(0.36)	(0.70)	(0.46)	**(0.07)**	(0.35)	(0.62)	**(0.00)**	**(0.01)**	**(0.08)**	(0.35)	**(0.00)**
	[9.77]	**[2.93]**	[6.78]	[2.25]	[4.40]	**[9.45]**	[4.28]	[2.15]	**[3.34]**	**[4.02]**	**[0.76]**	[3.14]	**[1.59]**
Intercept	**0.23**	**0.23**	**0.21**	0.11	–0.06	**0.33**	0.22	0.16	**–0.43**	**0.29**	**0.18**	**0.12**	**0.17**
	(0.00)	**(0.00)**	**(0.06)**	(0.25)	(0.70)	**(0.01)**	(0.15)	(0.21)	**(0.00)**	**(0.00)**	**(0.06)**	**(0.00)**	**(0.00)**
R^2	0.14	0.15	0.18	0.09	0.03	0.16	0.13	0.09	0.22	0.22	0.12	0.04	0.10
N	7,504	6,967	7,587	6,726	7,501	6,816	7,074	7,702	7,360	7,439	7,405	7,741	87,822

Table IA.17 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables – Four Regions

Panel B: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–0.60**	**–2.70**	**–1.56**	–1.13	–1.04	0.03	–0.25	–0.15	–1.59	**1.14**	0.16	**–0.90**	**–0.90**
	(0.10)	**(0.00)**	**(0.00)**	(0.10)	(0.20)	(0.96)	(0.75)	(0.83)	(0.13)	**(0.04)**	(0.78)	**(0.06)**	**(0.00)**
	[6.38]	**[8.74]**	**[4.91]**	[1.25]	[7.33]	[0.21]	[1.18]	[0.66]	[8.94]	**[9.24]**	[1.41]	**[9.76]**	**[6.61]**
WIND	0.23	0.35	–0.52	**0.63**	0.27	0.28	0.45	–0.45	**–0.74**	0.28	0.10	–0.37	0.05
	(0.51)	(0.19)	(0.21)	**(0.01)**	(0.46)	(0.36)	(0.10)	(0.34)	**(0.08)**	(0.46)	(0.75)	(0.22)	(0.70)
	[3.32]	[5.28]	[7.01]	**[9.30]**	[3.74]	[3.95]	[6.38]	[5.65]	**[9.98]**	[3.42]	[1.07]	[5.06]	[0.67]
RAIN	–0.03	0.05	0.02	0.03	0.02	0.05	**0.09**	0.04	0.02	–0.00	–0.02	0.01	**0.02**
	(0.63)	(0.19)	(0.35)	(0.36)	(0.65)	(0.16)	**(0.00)**	(0.14)	(0.58)	(0.93)	(0.64)	(0.68)	**(0.04)**
	[8.38]	[4.91]	[6.14]	[8.95]	[5.12]	[3.91]	**[4.76]**	[0.96]	[5.47]	[0.86]	[4.18]	[3.21]	**[6.53]**
TEMP	**–0.26**	**–0.24**	**–0.26**	0.15	**–0.32**	–0.06	**0.52**	0.15	–0.26	**0.71**	0.12	0.05	**–0.12**
	(0.09)	**(0.04)**	**(0.05)**	(0.32)	**(0.05)**	(0.84)	**(0.06)**	(0.65)	(0.51)	**(0.00)**	(0.63)	(0.63)	**(0.00)**
	[2.19]	**[1.26]**	**[9.88]**	[4.36]	**[6.86]**	[0.99]	**[6.89]**	[1.67]	[3.10]	**[2.15]**	[3.03]	[2.05]	**[2.57]**
Intercept	**0.28**	**0.36**	**0.35**	–0.07	**0.33**	0.07	**–0.43**	–0.07	0.38	**–0.65**	–0.10	0.10	**0.18**
	(0.01)	**(0.00)**	**(0.01)**	(0.64)	**(0.05)**	(0.82)	**(0.05)**	(0.80)	(0.26)	**(0.00)**	(0.67)	(0.29)	**(0.00)**
R^2	0.11	0.43	0.16	0.19	0.09	0.05	0.19	0.05	0.13	0.14	0.01	0.08	0.04
N	5,525	5,128	5,680	5,488	5,569	5,531	5,689	5,597	5,479	5,585	5,468	5,716	66,455

Table IA.18. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – Four Regions

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A and B present the results for the cold and hot countries, respectively. For brevity, we omit reporting results for the mild and warm countries. We define cold, mild, warm, and hot regions based on the 25th, 50th and 75th percentiles of the full sample's distribution of annual temperatures. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.18 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – Four Regions

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.23	–0.74	0.65	–1.33	–0.22	–1.57	–2.11	–1.28	0.29	–0.33	**–1.78**	–0.08	**–1.03**
	(0.45)	(0.40)	(0.61)	(0.21)	(0.89)	(0.38)	(0.24)	(0.36)	(0.85)	(0.79)	**(0.09)**	(0.94)	**(0.02)**
	[0.88]	[0.60]	[0.56]	[1.03]	[0.17]	[1.06]	[1.36]	[0.93]	[0.20]	[0.24]	**[1.24]**	[0.06]	**[0.79]**
WIND	–0.37	0.18	–0.27	0.02	0.31	–0.21	–0.58	–0.82	**0.70**	–0.20	0.60	0.54	0.06
	(0.52)	(0.51)	(0.45)	(0.98)	(0.65)	(0.75)	(0.45)	(0.20)	**(0.05)**	(0.74)	(0.33)	(0.34)	(0.84)
	[0.73]	[0.32]	[0.50]	[0.03]	[0.43]	[0.28]	[0.73]	[1.11]	**[0.96]**	[0.32]	[1.12]	[1.06]	[0.10]
RAIN	0.07	0.03	–0.08	–0.02	–0.05	0.03	–0.13	0.03	–0.07	–0.03	0.05	–0.03	–0.02
	(0.13)	(0.59)	(0.36)	(0.79)	(0.49)	(0.71)	(0.13)	(0.67)	(0.37)	(0.50)	(0.36)	(0.50)	(0.41)
	[1.82]	[0.78]	[1.95]	[0.41]	[1.34]	[0.81]	[2.97]	[0.85]	[1.48]	[0.66]	[1.13]	[0.84]	[0.43]
SNOW	–0.77	**–0.82**	**–0.95**									0.05	**–0.49**
	(0.14)	**(0.06)**	**(0.02)**									(0.95)	**(0.08)**
	[0.38]	**[0.55]**	**[0.58]**									[0.01]	**[0.08]**
TEMP	–0.32	**–1.00**	–0.40	–0.43	0.38	–0.34	–0.38	–0.09	**1.17**	**–0.98**	–0.72	–0.54	**–0.48**
	(0.18)	**(0.00)**	(0.38)	(0.40)	(0.31)	(0.41)	(0.35)	(0.81)	**(0.00)**	**(0.03)**	(0.10)	(0.11)	**(0.00)**
	[1.12]	**[3.40]**	[1.17]	[1.20]	[1.00]	[0.88]	[0.91]	[0.22]	**[2.28]**	**[2.34]**	[2.01]	[1.59]	**[2.80]**
Intercept	**0.57**	**0.62**	**0.39**	**0.56**	–0.01	0.50	0.58	0.32	**–0.72**	**0.59**	**0.48**	**0.50**	**0.49**
	(0.00)	**(0.00)**	**(0.05)**	**(0.08)**	(0.97)	(0.13)	(0.10)	(0.25)	**(0.01)**	**(0.00)**	**(0.02)**	**(0.00)**	**(0.00)**
R^2	0.08	0.24	0.09	0.04	0.04	0.02	0.11	0.04	0.18	0.15	0.13	0.08	0.12
N	7,504	6,967	7,587	6,726	7,501	6,816	7,074	7,702	7,360	7,439	7,405	7,741	87,822

Table IA.18 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables – Four Regions

Panel B: Hot Countries

	Jan (1)	**Feb** (2)	**Mar** (3)	**Apr** (4)	**May** (5)	**Jun** (6)	**Jul** (7)	**Aug** (8)	**Sep** (9)	**Oct** (10)	**Nov** (11)	**Dec** (12)	**All** (13)
SKC	–1.06	**–4.26**	–2.56	**–3.14**	–1.26	2.08	1.30	0.82	–2.26	2.39	0.60	**–2.16**	**–1.81**
	(0.55)	**(0.01)**	(0.12)	**(0.01)**	(0.55)	(0.36)	(0.23)	(0.62)	(0.33)	(0.13)	(0.70)	**(0.02)**	**(0.03)**
	[0.92]	**[3.31]**	[2.10]	**[2.66]**	[0.82]	[1.07]	[0.37]	[0.34]	[1.14]	[1.25]	[0.51]	**[0.00]**	**[0.00]**
WIND	0.05	0.41	–0.28	1.09	0.60	**1.84**	0.62	0.14	0.18	0.09	0.51	–0.73	0.21
	(0.96)	(0.63)	(0.69)	(0.21)	(0.59)	**(0.00)**	(0.35)	(0.91)	(0.86)	(0.92)	(0.50)	(0.40)	(0.60)
	[0.06]	[0.46]	[0.33]	[1.34]	[0.76]	**[2.10]**	[0.53]	[0.17]	[0.22]	[0.08]	[0.54]	[0.00]	[0.00]
RAIN	0.11	0.09	0.04	0.04	0.09	**0.21**	0.12	0.06	0.00	0.03	**–0.12**	0.01	**0.04**
	(0.23)	(0.35)	(0.54)	(0.43)	(0.44)	**(0.01)**	(0.18)	(0.27)	(0.96)	(0.56)	**(0.03)**	(0.89)	**(0.08)**
	[2.64]	[2.11]	[0.96]	[1.02]	[2.28]	**[4.64]**	[1.98]	[1.41]	[0.09]	[0.54]	**[2.91]**	[0.00]	**[0.00]**
TEMP	–0.25	–0.61	–0.42	0.58	0.29	0.38	**1.35**	0.05	–0.25	**1.42**	0.32	0.54	–0.25
	(0.65)	(0.14)	(0.25)	(0.23)	(0.56)	(0.47)	**(0.04)**	(0.93)	(0.72)	**(0.02)**	(0.57)	(0.20)	(0.35)
	[0.96]	[2.09]	[1.37]	[1.40]	[0.58]	[0.48]	**[1.07]**	[0.06]	[0.28]	**[1.56]**	[0.75]	[0.00]	[0.00]
Intercept	0.55	**0.90**	**0.67**	–0.20	–0.07	–0.45	**–1.12**	–0.03	0.46	**–1.17**	–0.19	0.06	**0.46**
	(0.21)	**(0.01)**	**(0.08)**	(0.63)	(0.89)	(0.36)	**(0.03)**	(0.95)	(0.49)	**(0.04)**	(0.71)	(0.86)	**(0.05)**
R^2	0.05	0.28	0.08	0.26	0.06	0.25	0.14	0.02	0.04	0.14	0.06	0.14	0.04
N	5,525	5,128	5,680	5,488	5,569	5,531	5,689	5,597	5,479	5,585	5,468	5,716	66,455

Table IA.19. Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Southern Hemisphere

This table presents the results of the OLS estimation of the following panel regression:

$r_{it} = \alpha + \beta_1 SKC_{it} + \beta_2 WIND_{it} + \beta_3 RAIN_{it} + \beta_4 SNOW_{it} + \beta_5 TEMP_{it} + \varepsilon_{it}$.

Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Observations from countries located in the Southern Hemisphere were deleted from the sample. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and adjusted R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in annualized return as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.19 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Southern Hemisphere

Panel A: Cold Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.65	–0.46	–0.41	–0.50	0.20	–0.77	–0.69	–0.72	0.36	0.03	–0.52	–0.54	**–0.53**
	(0.14)	(0.23)	(0.46)	(0.22)	(0.70)	(0.29)	(0.34)	(0.14)	(0.57)	(0.94)	(0.28)	(0.19)	**(0.00)**
	[5.96]	[4.65]	[3.95]	[4.64]	[1.65]	[5.79]	[5.25]	[5.64]	[2.60]	[0.23]	[3.71]	[4.28]	**[4.51]**
WIND	–0.10	–0.20	**–0.38**	0.20	–0.09	**–0.47**	–0.34	**–0.37**	–0.14	–0.09	0.30	0.07	**–0.09**
	(0.50)	(0.24)	**(0.00)**	(0.16)	(0.61)	**(0.04)**	(0.19)	**(0.10)**	(0.58)	(0.66)	(0.20)	(0.67)	**(0.09)**
	[2.64]	[4.94]	**[8.43]**	[3.89]	[1.34]	**[7.09]**	[5.13]	**[5.58]**	[2.08]	[1.64]	[6.14]	[1.59]	**[1.67]**
RAIN	0.01	0.03	–0.03	–0.03	–0.02	0.00	**–0.04**	–0.02	–0.02	–0.03	0.02	0.00	**–0.01**
	(0.55)	(0.27)	(0.37)	(0.13)	(0.53)	(0.96)	**(0.05)**	(0.53)	(0.50)	(0.11)	(0.42)	(0.92)	**(0.09)**
	[3.10]	[0.22]	[7.37]	[9.99]	[4.25]	[0.36]	**[2.07]**	[6.53]	[3.66]	[6.82]	[4.81]	[0.61]	**[2.84]**
SNOW	–0.02	–0.15	**–0.50**									0.25	–0.01
	(0.93)	(0.55)	**(0.01)**									(0.20)	(0.96)
	[0.08]	[0.91]	**[0.79]**									[0.21]	[0.00]
TEMP	**–0.19**	**–0.29**	–0.22	–0.00	0.14	**–0.36**	–0.09	–0.16	**0.53**	**–0.52**	–0.28	–0.13	**–0.18**
	(0.07)	**(0.06)**	(0.27)	(1.00)	(0.43)	**(0.02)**	(0.60)	(0.33)	**(0.00)**	**(0.00)**	(0.13)	(0.20)	**(0.00)**
	[8.34]	**[2.70]**	[7.69]	[0.01]	[4.21]	**[0.37]**	[2.46]	[4.00]	**[1.15]**	**[3.35]**	[8.66]	[4.67]	**[1.61]**
Intercept	**0.21**	**0.24**	**0.22**	0.08	–0.05	**0.34**	0.17	**0.20**	**–0.34**	**0.27**	0.13	**0.13**	**0.17**
	(0.00)	**(0.00)**	**(0.02)**	(0.38)	(0.69)	**(0.00)**	(0.25)	**(0.09)**	**(0.01)**	**(0.00)**	(0.13)	**(0.00)**	**(0.00)**
R^2	0.11	0.17	0.19	0.05	0.03	0.11	0.10	0.08	0.17	0.22	0.10	0.06	0.11
N	10,052	9,330	10,169	9,231	10,090	9,323	9,661	10,268	9,841	9,945	9,882	10,346	118,138

Table IA.19 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Southern Hemisphere

Panel B: Mild Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–0.33	0.09	**–1.14**	0.14	–0.59	–0.95	–0.22	**–0.99**	–0.46	–0.36	–0.38	0.27	**–0.43**
	(0.50)	(0.89)	**(0.03)**	(0.83)	(0.48)	(0.14)	(0.73)	**(0.06)**	(0.56)	(0.60)	(0.48)	(0.63)	**(0.02)**
	[4.65]	[1.12]	**[3.20]**	[1.52]	[5.11]	[8.66]	[2.17]	**[9.38]**	[3.92]	[3.28]	[4.01]	[3.42]	**[4.28]**
WIND	0.03	–0.11	0.04	–0.33	0.10	–0.02	–0.14	0.01	–0.11	–0.27	0.08	–0.44	–0.06
	(0.86)	(0.51)	(0.82)	(0.24)	(0.68)	(0.96)	(0.62)	(0.98)	(0.69)	(0.26)	(0.71)	(0.11)	(0.32)
	[0.58]	[2.39]	[0.82]	[6.55]	[1.49]	[0.22]	[2.18]	[0.11]	[1.62]	[4.01]	[1.31]	[8.52]	[1.12]
RAIN	–0.02	–0.01	0.03	–0.04	0.00	**0.05**	0.02	0.03	–0.05	–0.02	0.01	–0.00	0.00
	(0.67)	(0.88)	(0.44)	(0.23)	(0.88)	**(0.05)**	(0.27)	(0.65)	(0.11)	(0.67)	(0.89)	(0.98)	(0.99)
	[5.52]	[2.30]	[8.67]	[1.10]	[1.06]	**[3.69]**	[5.60]	[7.20]	[2.75]	[3.93]	[1.89]	[0.17]	[0.04]
TEMP	–0.17	**–0.37**	–0.17	–0.40	–0.16	**–0.23**	–0.05	–0.23	–0.00	**–0.40**	–0.15	–0.16	**–0.17**
	(0.24)	**(0.00)**	(0.48)	(0.18)	(0.40)	**(0.03)**	(0.72)	(0.11)	(0.99)	**(0.08)**	(0.26)	(0.21)	**(0.00)**
	[6.91]	**[4.64]**	[5.34]	[0.64]	[4.40]	**[7.57]**	[1.83]	[8.84]	[0.05]	**[0.59]**	[4.45]	[6.57]	**[9.57]**
Intercept	**0.17**	**0.26**	0.19	**0.33**	0.13	**0.22**	0.10	**0.25**	0.03	**0.27**	0.10	**0.14**	**0.16**
	(0.02)	**(0.00)**	(0.13)	**(0.09)**	(0.36)	**(0.01)**	(0.41)	**(0.03)**	(0.75)	**(0.05)**	(0.14)	**(0.03)**	**(0.00)**
R^2	0.03	0.11	0.07	0.10	0.02	0.06	0.01	0.06	0.05	0.11	0.02	0.11	0.06
N	6,074	5,668	6,158	5,915	6,105	6,087	6,319	6,322	6,139	6,211	6,099	6,380	73,477

Table IA.19 (Continued). Ordinary Least Square (OLS) Regressions of Daily Return on Weather Variables Excluding Southern Hemisphere

Panel C: Hot Countries													
	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	**–0.93**	**–2.41**	**–0.96**	–0.77	–0.80	0.52	–1.20	0.16	–1.30	**0.97**	–0.04	**–0.85**	**–0.78**
	(0.04)	**(0.00)**	**(0.09)**	(0.23)	(0.27)	(0.39)	(0.22)	(0.78)	(0.21)	**(0.04)**	(0.94)	**(0.07)**	**(0.00)**
	[0.00]	**[6.15]**	**[9.13]**	[7.84]	[6.79]	[3.65]	[9.66]	[1.14]	[9.03]	**[8.40]**	[0.35]	**[9.07]**	**[7.12]**
WIND	0.12	**0.50**	–0.16	**0.49**	0.28	0.05	0.32	–0.30	**–0.64**	0.37	–0.08	–0.27	0.04
	(0.71)	**(0.04)**	(0.51)	**(0.08)**	(0.39)	(0.88)	(0.35)	(0.46)	**(0.10)**	(0.33)	(0.76)	(0.31)	(0.69)
	[1.87]	**[8.20]**	[2.22]	**[7.50]**	[3.95]	[0.68]	[4.77]	[3.85]	**[8.33]**	[4.41]	[0.87]	[3.86]	[0.62]
RAIN	–0.00	0.08	0.01	0.02	0.04	0.05	**0.08**	0.01	0.01	–0.02	–0.00	0.00	**0.02**
	(0.99)	(0.15)	(0.62)	(0.58)	(0.35)	(0.18)	**(0.00)**	(0.58)	(0.75)	(0.63)	(1.00)	(0.92)	**(0.06)**
	[0.18]	[3.36]	[2.95]	[4.78]	[0.82]	[4.35]	**[4.25]**	[3.20]	[3.23]	[4.38]	[0.02]	[0.65]	**[5.97]**
TEMP	**–0.20**	–0.06	–0.05	0.11	–0.03	0.03	0.34	0.13	–0.33	**0.53**	0.02	**0.23**	–0.06
	(0.05)	(0.44)	(0.72)	(0.24)	(0.87)	(0.91)	(0.18)	(0.70)	(0.34)	**(0.00)**	(0.89)	**(0.01)**	(0.31)
	[2.24]	[3.95]	[2.41]	[4.72]	[0.91]	[0.56]	[4.57]	[1.47]	[4.16]	**[0.22]**	[0.60]	**[1.42]**	[1.54]
Intercept	**0.26**	**0.19**	0.12	–0.04	0.07	–0.03	–0.21	–0.09	0.40	**–0.51**	–0.01	–0.05	**0.11**
	(0.00)	**(0.02)**	(0.36)	(0.70)	(0.73)	(0.90)	(0.37)	(0.77)	(0.17)	**(0.00)**	(0.95)	(0.52)	**(0.03)**
R^2	0.11	0.33	0.05	0.10	0.05	0.05	0.19	0.02	0.11	0.13	0.00	0.16	0.03
N	5,635	5,209	5,827	5,595	5,690	5,651	5,836	5,743	5,606	5,720	5,585	5,862	67,959

Table IA.20. Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Southern Hemisphere

This table presents the results of the logit estimation of the following panel regression: $P(r_{it} > 0) = \frac{1}{1+e^{-(\alpha+\beta_1 SKC_{it}+\beta_2 WIND_{it}+\beta_3 RAIN_{it}+\beta_4 SNOW_{it}+\beta_5 TEMP_{it})}}$, where $P(r_{it} >0)$ is an indicator variable that is equal to 1 if the market return in country *i* on day *t* is positive, and zero otherwise. Returns are calculated using the Datastream Global Equity country indices. Returns include dividends. Observations with the absolute value of daily index return greater than 2.5% are removed from the test. All weather variables are based on the average of hourly readings between 6:00 AM and 4:00 PM local time on the day of the measurement. SKC is the average sky cover. WIND is the average wind speed (in miles per hour). RAIN is an indicator variable that is equal to 1 if the average of the hourly records of liquid precipitations (in inches) registered in the 6 hours prior to any hourly readings is positive; and zero otherwise. SNOW is equal to the average depth (in inches) of the snow cover on the ground. SNOW is set to zero in summer months and in hot and mild countries. TEMP is the daily average temperature, in Fahrenheit.

Panels A, B, and C present the results for the cold, mild, and hot countries, respectively. We define cold, mild, and hot regions based on the 33rd and 67th percentiles of the full sample's distribution of annual temperatures. Observations from countries in the Southern Hemisphere were deleted from the sample. Absolute returns greater than 2.5% were deleted from the sample. The number of observations and pseudo R-squared (in %) of each regression are also reported. *P*-values are presented in parentheses and boldfaced coefficients and associated *p*-values are significant at the 10% level or higher. Figures in brackets indicate the economic significance of the independent variables. The economic impact of a variable is the change in the dependent variable (the probability of a positive daily return) as a result of a change in that variable from the 25th to the 75th percentile (or for RAIN, from 0 to 1), holding all other variables at their sample mean values. Standard errors are clustered by day and country.

Table IA.20 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Southern Hemisphere

Panel A: Cold Countries

	Jan (1)	**Feb (2)**	**Mar (3)**	**Apr (4)**	**May (5)**	**Jun (6)**	**Jul (7)**	**Aug (8)**	**Sep (9)**	**Oct (10)**	**Nov (11)**	**Dec (12)**	**All (13)**
SKC	–1.71	–1.22	0.06	–1.05	0.63	–1.86	–1.98	–1.69	–0.56	–0.40	–1.30	0.19	**–1.25**
	(0.23)	(0.19)	(0.97)	(0.27)	(0.67)	(0.22)	(0.18)	(0.19)	(0.69)	(0.70)	(0.29)	(0.86)	**(0.00)**
	[1.19]	[0.92]	[0.05]	[0.82]	[0.47]	[1.23]	[1.35]	[1.23]	[0.39]	[0.28]	[0.86]	[0.13]	**[0.93]**
WIND	–0.05	–0.06	–0.41	–0.09	0.08	–0.00	–0.23	–0.66	0.10	–0.02	0.65	0.44	0.05
	(0.92)	(0.86)	(0.22)	(0.86)	(0.88)	(1.00)	(0.72)	(0.19)	(0.86)	(0.97)	(0.21)	(0.38)	(0.83)
	[0.10]	[0.11]	[0.78]	[0.14]	[0.11]	[0.01]	[0.31]	[0.92]	[0.15]	[0.03]	[1.24]	[0.89]	[0.08]
RAIN	**0.08**	0.08	–0.08	0.05	–0.08	0.00	–0.08	0.07	–0.06	–0.04	0.06	–0.05	–0.01
	(0.09)	(0.11)	(0.25)	(0.36)	(0.22)	(0.95)	(0.19)	(0.31)	(0.26)	(0.19)	(0.25)	(0.36)	(0.55)
	[1.91]	[1.87]	[1.87]	[1.28]	[1.86]	[0.12]	[1.99]	[1.64]	[1.43]	[1.01]	[1.45]	[1.17]	[0.27]
SNOW	**–0.89**	**–0.83**	**–1.12**									–0.08	**–0.50**
	(0.08)	**(0.08)**	**(0.00)**									(0.92)	**(0.07)**
	[0.37]	**[0.46]**	**[0.56]**									[0.01]	**[0.07]**
TEMP	–0.31	**–0.95**	–0.48	–0.20	0.50	–0.47	–0.28	–0.09	**1.17**	**–1.05**	**–0.68**	**–0.74**	**–0.50**
	(0.21)	**(0.00)**	(0.27)	(0.68)	(0.18)	(0.22)	(0.46)	(0.79)	**(0.00)**	**(0.01)**	**(0.08)**	**(0.03)**	**(0.00)**
	[1.08]	**[3.11]**	[1.39]	[0.55]	[1.32]	[1.19]	[0.69]	[0.21]	**[2.29]**	**[2.49]**	**[1.92]**	**[2.19]**	**[2.82]**
Intercept	**0.59**	**0.67**	**0.49**	**0.45**	–0.08	**0.56**	0.48	0.34	**–0.62**	**0.63**	**0.42**	**0.58**	**0.52**
	(0.00)	**(0.00)**	**(0.02)**	**(0.09)**	(0.75)	**(0.06)**	(0.13)	(0.20)	**(0.02)**	**(0.00)**	**(0.03)**	**(0.00)**	**(0.00)**
R^2	0.08	0.23	0.11	0.02	0.06	0.03	0.06	0.05	0.18	0.17	0.11	0.12	0.13
N	10,052	9,330	10,169	9,231	10,090	9,323	9,661	10,268	9,841	9,945	9,882	10,346	118,138

Table IA.20 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Southern Hemisphere

Panel B: Mild Countries

	Jan (1)	**Feb** (2)	**Mar** (3)	**Apr** (4)	**May** (5)	**Jun** (6)	**Jul** (7)	**Aug** (8)	**Sep** (9)	**Oct** (10)	**Nov** (11)	**Dec** (12)	**All** (13)
SKC	0.12	**1.86**	–1.56	–0.24	–1.33	**–3.98**	0.37	–1.36	0.06	–1.01	–0.62	**2.22**	–0.49
	(0.91)	**(0.08)**	(0.15)	(0.81)	(0.41)	**(0.03)**	(0.81)	(0.27)	(0.97)	(0.53)	(0.60)	**(0.03)**	(0.27)
	[0.13]	**[1.92]**	[1.52]	[0.20]	[1.06]	**[3.04]**	[0.32]	[1.13]	[0.05]	[0.89]	[0.62]	**[2.32]**	[0.43]
WIND	–0.37	0.29	0.09	–0.50	–0.17	0.14	–0.48	–0.50	–0.24	**–1.02**	–0.34	**–1.36**	–0.30
	(0.54)	(0.46)	(0.87)	(0.28)	(0.71)	(0.84)	(0.27)	(0.37)	(0.66)	**(0.08)**	(0.54)	**(0.06)**	(0.16)
	[0.64]	[0.49]	[0.14]	[0.74]	[0.24]	[0.17]	[0.70]	[0.71]	[0.34]	**[1.47]**	[0.53]	**[2.12]**	[0.46]
RAIN	–0.11	–0.07	–0.07	**–0.16**	0.03	**0.13**	0.02	–0.08	**–0.19**	0.05	–0.12	–0.11	**–0.06**
	(0.13)	(0.48)	(0.12)	**(0.02)**	(0.75)	**(0.00)**	(0.84)	(0.37)	**(0.02)**	(0.51)	(0.24)	(0.11)	**(0.00)**
	[2.77]	[1.74]	[1.73]	**[3.67]**	[0.62]	**[2.91]**	[0.47]	[1.83]	**[4.85]**	[1.13]	[2.97]	[2.52]	**[1.55]**
TEMP	–0.45	**–0.73**	–0.45	–0.94	**–0.63**	**–0.76**	–0.10	–0.44	0.35	–0.43	–0.21	**–1.18**	**–0.51**
	(0.25)	**(0.02)**	(0.45)	(0.13)	**(0.07)**	**(0.05)**	(0.76)	(0.16)	(0.18)	(0.43)	(0.46)	**(0.00)**	**(0.00)**
	[1.49]	**[2.37]**	[1.20]	[1.92]	**[1.63]**	**[2.08]**	[0.33]	[1.46]	[1.09]	[1.11]	[0.60]	**[3.82]**	**[2.55]**
Intercept	**0.52**	**0.48**	0.49	**0.82**	**0.57**	**0.81**	0.23	**0.56**	–0.15	0.40	**0.26**	**0.81**	**0.51**
	(0.00)	**(0.01)**	(0.14)	**(0.04)**	**(0.04)**	**(0.01)**	(0.39)	**(0.03)**	(0.41)	(0.23)	**(0.10)**	**(0.00)**	**(0.00)**
R^2	0.09	0.17	0.07	0.13	0.05	0.16	0.02	0.07	0.12	0.10	0.07	0.54	0.14
N	6,074	5,668	6,158	5,915	6,105	6,087	6,319	6,322	6,139	6,211	6,099	6,380	73,477

Table IA.20 (Continued). Logit Regressions of the Probability of a Positive Daily Return on Weather Variables Excluding Southern Hemisphere

Panel C: Hot Countries

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
SKC	–1.05	**–3.36**	–1.13	**–2.91**	–0.64	2.38	–0.21	0.10	–1.87	1.68	–0.48	**–1.73**	**–1.47**
	(0.53)	**(0.06)**	(0.52)	**(0.02)**	(0.75)	(0.11)	(0.85)	(0.94)	(0.36)	(0.22)	(0.71)	**(0.01)**	**(0.09)**
	[0.92]	**[2.92]**	[0.99]	**[2.54]**	[0.48]	[1.47]	[0.13]	[0.07]	[1.16]	[1.28]	[0.42]	**[0.00]**	**[0.00]**
WIND	–0.10	0.89	0.14	0.89	0.70	**1.36**	0.40	0.03	0.05	0.06	0.07	–0.48	0.12
	(0.92)	(0.28)	(0.72)	(0.34)	(0.50)	**(0.03)**	(0.53)	(0.98)	(0.95)	(0.95)	(0.90)	(0.53)	(0.73)
	[0.13]	[1.17]	[0.18]	[1.18]	[0.86]	**[1.62]**	[0.44]	[0.04]	[0.06]	[0.06]	[0.07]	[0.00]	[0.00]
RAIN	**0.15**	0.14	0.02	0.03	0.10	**0.21**	0.10	0.03	–0.01	0.00	–0.07	–0.04	**0.04**
	(0.05)	(0.28)	(0.70)	(0.57)	(0.47)	**(0.02)**	(0.33)	(0.55)	(0.91)	(1.00)	(0.31)	(0.26)	**(0.09)**
	[3.66]	[3.40]	[0.50]	[0.78]	[2.26]	**[4.83]**	[1.97]	[0.78]	[0.21]	[0.01]	[1.67]	[0.00]	**[0.00]**
TEMP	–0.01	–0.00	0.14	0.22	0.53	0.25	**1.00**	0.18	–0.40	0.80	–0.06	**0.90**	–0.12
	(0.98)	(0.99)	(0.71)	(0.55)	(0.21)	(0.66)	**(0.09)**	(0.74)	(0.37)	(0.14)	(0.81)	**(0.00)**	(0.58)
	[0.04]	[0.02]	[0.62]	[0.78]	[1.25]	[0.37]	**[0.97]**	[0.20]	[0.47]	[1.35]	[0.18]	**[0.00]**	[0.00]
Intercept	0.38	0.34	0.12	0.11	–0.31	–0.34	–0.73	–0.09	0.54	–0.63	0.16	**–0.24**	**0.33**
	(0.11)	(0.27)	(0.74)	(0.74)	(0.45)	(0.47)	(0.14)	(0.84)	(0.20)	(0.22)	(0.47)	**(0.06)**	**(0.07)**
R^2	0.05	0.16	0.02	0.17	0.07	0.22	0.08	0.00	0.04	0.07	0.02	0.31	0.03
N	5,635	5,209	5,827	5,595	5,690	5,651	5,836	5,743	5,606	5,720	5,585	5,862	67,959