

## **Day-of-the-week effects in emerging stock markets**

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### **Abstract**

This paper uses both unconditional and conditional risk analysis to investigate the day-of-the-week effect in 21 emerging stock markets. In addition, risk is allowed to vary across the days of the week. Different models produce different results but overall day-of-the-week effects are present for the Philippines, Pakistan and Taiwan even after adjusting for market risk. Other countries like Argentina, Malaysia, Thailand, and Turkey exhibit day-of-the-week effects in only some of the models.

Keywords: Emerging markets; market risk

## **1. Introduction**

The day-of –the-week effect continues to be one of the more interesting stock market anomalies to study because the existence of significant day-of –the-week effects would be very useful for developing profitable trading strategies. Investors could buy stocks on days with abnormally low returns and sell stocks on days with abnormally high returns. Published research for the United States and Canada finds that daily stock market returns tend to be lower on Mondays and higher on Fridays (French (1980), Gibbons and Hess (1984), Rogalski (1984), Smirlock and Starks (1986), Flannery and Protopapadakis (1988), Kohers and Kohers (1995)). In contrast, daily returns in Pacific Rim countries tend to be lowest on Tuesdays (Jaffe and Westerfield (1985), Dubois and Louvet (1996), Brooks and Persaud (2001)).

To date, most of the published research on day-of-the-week effects has focused on the developed stock markets. This paper studies the day-of-the-week effect in 21 emerging stock markets and extends the existing literature by including unconditional and conditional risk factors in the analysis. In addition, risk is allowed to vary across the days of the week. This paper also differs from previous research by studying excess market returns in U.S. dollars which is more relevant from an international investor perspective.

## **II. Methodology and Data**

The data for this study consists of daily closing prices on 21 emerging stock markets and the Morgan Stanley Capital International (MSCI) World index. The data are available from Datastream and cover the period December 31, 1992 to October 31, 2003

for a total of 2827 observations. All of the data is in U.S. dollars so that investment decisions are from the perspective of a U.S. investor or an international investor who has a U.S. dollar trading account. The countries included in the study are, Argentina (ARG), Brazil (BRA), Chile (CHL), Colombia (COL), India (IND), Indonesia (IDN), Israel (ISR), Jordan (JOR), Korea (KOR), Malaysia (MYS), Mexico (MEX), Pakistan (PAK), Peru (PER), Philippines (PHL), Poland (POL), Sri Lanka (LKA), Taiwan (TAI), Thailand (THA), Turkey (TUR), Venezuela (VEN), and South Africa (ZAF). Daily excess stock returns are calculated by subtracting the daily yield on a 3 month U.S. T bill from the continuously compounded daily stock returns.

In this paper, five different models are estimated and tested. In Model 1, the excess stock returns ( $R_{it}$ ) for each country are regressed on five daily dummy variables.

$$R_{it} = \sum_{j=1}^5 \delta_{ij} D_{jt} + \varepsilon_{1it} \quad (1)$$

where  $i=1, \dots, 21$  (the number of countries in the sample) and  $D_{1t}, \dots, D_{5t}$  represents the day-of-the-week 0, 1 dummy variables for Monday, ..., Friday. The error term is assumed to be independent and identically distributed with a zero mean and constant variance. Equation (1) is the simplest test for stock market day-of-the-week effects.

Statistically significant estimated coefficients in equation (1) provide evidence of day-of-the-week effects. Model 1 does not, however, include any risk factors, Daily returns can be higher (lower) on different days of the week because risk is higher (lower). Model 2 includes daily dummy variables and a market risk factor (MR) provided by the excess returns on the MSCI World stock market index (Brooks and Persaud (2001)).

$$R_{it} = \sum_{j=1}^5 \delta_{ij} D_{jt} + \beta_i MR_t + \varepsilon_{2it} \quad (2)$$

In Model 2, the risk factor is constant across the week. Model 2 can be improved upon by adding slope interaction dummy variables that allow risk to vary across the days of the week (Model 3).

$$R_{it} = \sum_{j=1}^5 \delta_{ij} D_{jt} + \sum_{j=1}^5 \beta_{ij} (D_{jt} MR_t) + \varepsilon_{3it} \quad (3)$$

Models 1 – 3 are unconditional models where World market risk is assumed to have a symmetric impact on emerging country stock market returns. An alternative approach to testing for day-of-the-week effects is to use a conditional model.

There may be an asymmetric relationship between stock returns and market risk where positive market returns have a different impact on stock returns than do negative market returns (Fletcher (2000), Pettengill, Sundaram and Mathur (1995)). Model 4 is a conditional model that relates stock returns to market risk.

$$R_{it} = \sum_{j=1}^5 \delta_{ij} D_{jt} + \beta_{iu} D_{ut} MR_t + \beta_{id} D_{dt} MR_t + \varepsilon_{4it} \quad (4)$$

where  $D_{ut}$  ( $D_{dt}$ ) is a dummy variable takes on a value of 1 when  $MR_t$  are positive (non-positive) and 0 otherwise.

Model 5 is a conditional model relating excess stock returns to market returns that also includes slope interaction terms between the day-of-the-week variables and the up (down) excess market returns. This model allows conditional risk to vary across the days-of-the-week.

$$R_{it} = \sum_{j=1}^5 \delta_{ij} D_{jt} + \sum_{j=1}^5 \beta_{iju} D_{jt} (D_{ut} MR_t) + \sum_{j=1}^5 \beta_{ijd} D_{jt} (D_{dt} MR_t) + \varepsilon_{5it} \quad (5)$$

### III. Results

The results from estimating Model 1 indicate some evidence of day-of-the-week effects (Table 1). Malaysia, Taiwan, Thailand, and Turkey each exhibit Monday effects. Pakistan and the Philippines have Tuesday effects, Turkey has a Thursday effect, and Taiwan and Turkey each have Friday effects. The results from estimating Model 2 show that the significant day-of-the-week effects found in Table 1 remain after adding in a market risk factor (Table 2). Moreover, some additional day-of-the-week effects are picked up (a Monday effect for Argentina and a Tuesday effect for Israel). The market betas are positive, less than unity and statistically significant for 17 of the 21 stock markets studied indicating that these stock markets are less risky than the world market. Estimation results for Model 3 show that the day-of-the-week effects detected in Table 2 remain (Table 3). The interaction terms do vary across the days-of-the-week. In the case of Argentina, for example, the interaction terms vary from a low of 0.229 (Tuesday) to a high of 0.763 (Monday).

Models 4 and 5 are conditional models that allow for asymmetric market effects. Model 4 is similar to Model 2 except that the market factor in Model 2 is replaced by a conditional variable that depends upon whether the market return is up or down (Table 4). The estimation results from Model 4 present a slightly different picture of the day-of-the-week effect as was previously seen in Tables 1 – 3. In particular, the Monday effect for Taiwan and the Tuesday effect for the Philippines both disappear. Monday effects are detected in Malaysia, Thailand, and South Africa, Tuesday effects are detected in Indonesia, Israel, and Pakistan, Wednesday effects are detected in Argentina, Thursday effects are detected in Turkey, and Friday effects are detected in Philippines, Taiwan, and

Turkey. Up market returns are statistically significant in 8 out of the 21 markets studies while down market returns are statistically significant in 15 out of the 21 markets studies. The estimation results from Model 5 show that some of the day-of-the-week effects seen in Table 4 disappear with the addition of slope interaction terms (Table 5). From Table 5, Monday effects are significant in the Philippines and South Africa, Tuesday effects are significant in Pakistan, Thursday effects are significant in Poland, and Friday effects are significant in the Philippines and Taiwan.

Comparing across Tables 1 – 5, day-of-the-week effects are present for the Philippines, Pakistan and Taiwan even after adjusting for market risk. Pakistan has a negative Tuesday effect in all of the models studies while Taiwan has a positive Friday effect in all of the models studies. The Philippines has a Tuesday effect in the three unconditional models but has a Friday effect in the two conditional models. Other countries like Argentina, Malaysia, Thailand, and Turkey exhibit day-of-the-week effects in only some of the models. These results are different from Brooks and Persaud (2001) who found no day-of-the-week effect for the Philippines but their paper did not include conditional market risk analysis or use excess returns.

#### **IV. Summary and Conclusions**

This paper uses both unconditional and conditional risk analysis to investigate the day-of-the-week effect in 21 emerging stock markets. In addition, risk is allowed to vary across the days of the week. Different models produce different results but overall day-of-the-week effects are present for the Philippines, Pakistan and Taiwan even after

adjusting for market risk. Other countries like Argentina, Malaysia, Thailand, and Turkey exhibit day-of-the-week effects in only some of the models. The results in this paper show that while the day-of-the-week effect is not present in the majority of emerging stock markets studied, some emerging stock markets do exhibit strong day-of-the-week effects even after accounting for conditional market risk.

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Table 1. Model 1 No market risk factors

	ARG	BRA	CHL	COL	IND	IDN	ISR	JOR	KOR	MYS	MEX	PAK	PER	PHL	POL	LKA	TAI	THA	TUR	VEN	ZAF
Monday	-0.25	-0.06	-0.02	-0.01	0.078	-0.24	0.092	0.009	-0.04	-0.27	-0.02	0.127	-0.13	-0.04	0.046	-0.07	-0.22	-0.26	-0.40	-0.16	0.032
	-1.95	-0.33	-0.29	-0.19	1.032	-1.79	1.293	0.163	-0.45	-3.38*	-0.27	1.582	-1.53	-0.46	0.258	-0.92	-2.56*	-3.14*	-2.40*	-1.09	0.433
Tuesday	-0.07	-0.14	-0.03	-0.09	0.033	0.155	-0.12	-0.03	-0.05	0.070	-0.16	-0.24	-0.10	-0.14	0.015	-0.13	-0.01	-0.02	-0.12	0.108	-0.03
	-0.89	-1.08	-0.75	-1.49	0.460	1.318	-1.72	-0.80	-0.62	1.004	-1.58	-2.82*	-1.49	-2.38*	0.158	-1.81	-0.21	-0.28	-0.89	0.839	-0.57
Wednesday	0.149	0.001	0.005	-0.10	0.047	-0.15	-0.08	0.008	-0.00	0.029	0.102	0.028	0.058	-0.11	-0.04	0.057	0.013	-0.00	-0.12	-0.19	-0.08
	1.670	0.011	0.108	-1.75	0.710	-1.24	-1.27	0.248	-0.03	0.308	1.327	0.404	0.952	-1.49	-0.53	0.886	0.217	-0.06	-0.88	-1.11	-1.65
Thursday	0.029	0.065	0.000	0.062	-0.03	-0.03	0.027	0.019	-0.00	0.002	-0.01	0.121	0.100	-0.08	-0.08	0.061	-0.00	-0.03	0.347	0.131	-0.01
	0.299	0.474	0.005	0.889	-0.56	-0.21	0.408	0.673	-0.00	0.028	-0.13	1.290	1.750	-1.53	-0.84	0.813	-0.12	-0.30	2.326*	1.265	-0.31
Friday	0.048	0.243	0.062	0.094	-0.13	0.086	0.066	-0.03	0.103	0.110	0.081	-0.14	0.192	0.153	0.273	0.085	0.245	0.117	0.406	0.149	0.081
	0.440	1.479	0.840	1.101	-1.70	0.602	0.889	-0.81	0.623	0.920	0.838	-1.02	1.807	1.205	1.726	0.794	2.008*	0.683	2.300*	1.102	1.092

Notes. Country identifiers given in section II of the paper. The first cell contains the coefficient estimate and the second cell contains the t statistic. \* denotes a coefficient is statistically significant at the 5% level. Newey and West (1987) robust standard errors used in calculating the t statistics.

Table 2. Model 2 Market risk factor

	ARG	BRA	CHL	COL	IND	IDN	ISR	JOR	KOR	MYS	MEX	PAK	PER	PHL	POL	LKA	TAI	THA	TUR	VEN	ZAF
Monday	-0.25	-0.06	-0.02	-0.01	0.077	-0.25	0.087	0.009	-0.04	-0.27	-0.02	0.127	-0.13	-0.04	0.042	-0.07	-0.22	-0.26	-0.40	-0.16	0.028
	-2.01*	-0.37	-0.35	-0.21	1.027	-1.82	1.289	0.162	-0.49	-3.40*	-0.36	1.585	-1.56	-0.48	0.240	-0.93	-2.61*	-3.21*	-2.44*	-1.11	0.405
Tuesday	-0.08	-0.16	-0.04	-0.10	0.029	0.145	-0.14	-0.03	-0.06	0.067	-0.18	-0.24	-0.11	-0.15	0.002	-0.14	-0.02	-0.03	-0.13	0.102	-0.04
	-1.03	-1.24	-1.02	-1.54	0.409	1.241	-2.03*	-0.81	-0.73	0.954	-1.82	-2.82*	-1.57	-2.44*	0.026	-1.85	-0.28	-0.34	-0.98	0.792	-0.80
Wednesday	0.150	0.003	0.006	-0.10	0.048	-0.15	-0.08	0.008	-0.00	0.030	0.103	0.028	0.059	-0.11	-0.04	0.057	0.014	-0.00	-0.12	-0.19	-0.08
	1.704	0.027	0.133	-1.74	0.714	-1.24	-1.35	0.249	-0.02	0.311	1.423	0.403	0.969	-1.48	-0.53	0.896	0.224	-0.05	-0.87	-1.11	-1.67
Thursday	0.023	0.054	-0.00	0.060	-0.03	-0.03	0.019	0.018	-0.00	0.000	-0.02	0.121	0.097	-0.09	-0.09	0.059	-0.01	-0.03	0.341	0.128	-0.02
	0.238	0.404	-0.09	0.867	-0.59	-0.24	0.310	0.668	-0.06	0.002	-0.27	1.294	1.710	-1.57	-0.92	0.794	-0.17	-0.34	2.310*	1.236	-0.46
Friday	0.040	0.230	0.055	0.092	-0.13	0.080	0.055	-0.03	0.096	0.108	0.068	-0.14	0.188	0.150	0.265	0.083	0.242	0.113	0.398	0.145	0.074
	0.379	1.431	0.764	1.075	-1.74	0.561	0.788	-0.82	0.588	0.906	0.748	-1.01	1.770	1.191	1.681	0.776	1.993*	0.662	2.276*	1.079	1.020
MR	0.489	0.830	0.439	0.145	0.153	0.385	0.683	0.010	0.429	0.151	0.821	-0.03	0.260	0.160	0.542	0.121	0.219	0.267	0.485	0.249	0.496
	5.288*	6.414*	7.198*	2.661*	3.355*	3.642*	12.35*	0.456	6.454*	1.939	11.96*	-0.64	3.412*	2.360*	6.591*	1.881	4.025*	3.252*	3.892*	2.134*	7.650*

Notes. See Table 1.

Table 3. Model 3 Day and market risk factor

	ARG	BRA	CHL	COL	IND	IDN	ISR	JOR	KOR	MYS	MEX	PAK	PER	PHL	POL	LKA	TAI	THA	TUR	VEN	ZAF
Monday	-0.25	-0.06	-0.02	-0.01	0.076	-0.25	0.088	0.008	-0.04	-0.27	-0.02	0.128	-0.13	-0.04	0.041	-0.08	-0.22	-0.26	-0.40	-0.16	0.028
	-2.02*	-0.38	-0.37	-0.23	1.009	-1.83	1.292	0.158	-0.51	-3.39*	-0.36	1.585	-1.56	-0.49	0.236	-0.94	-2.62*	-3.22*	-2.44*	-1.11	0.395
Tuesday	-0.07	-0.16	-0.04	-0.09	0.031	0.150	-0.14	-0.03	-0.06	0.067	-0.18	-0.24	-0.11	-0.14	0.003	-0.13	-0.02	-0.03	-0.12	0.102	-0.04
	-0.97	-1.22	-1.00	-1.49	0.445	1.287	-2.04*	-0.79	-0.68	0.963	-1.82	-2.82*	-1.55	-2.39*	0.039	-1.81	-0.28	-0.28	-0.93	0.794	-0.81
Wednesday	0.150	0.003	0.006	-0.10	0.048	-0.15	-0.08	0.009	-0.00	0.029	0.103	0.028	0.059	-0.11	-0.04	0.057	0.013	-0.00	-0.12	-0.19	-0.08
	1.701	0.027	0.129	-1.75	0.711	-1.24	-1.35	0.254	-0.02	0.306	1.420	0.397	0.968	-1.49	-0.53	0.901	0.215	-0.06	-0.87	-1.11	-1.68
Thursday	0.024	0.057	-0.00	0.060	-0.03	-0.03	0.018	0.018	-0.00	0.000	-0.02	0.119	0.097	-0.09	-0.09	0.059	-0.01	-0.03	0.340	0.130	-0.02
	0.254	0.424	-0.08	0.872	-0.57	-0.23	0.294	0.664	-0.04	0.010	-0.28	1.279	1.719	-1.56	-0.92	0.798	-0.16	-0.34	2.309*	1.259	-0.49
Friday	0.038	0.232	0.057	0.092	-0.13	0.082	0.056	-0.03	0.096	0.105	0.067	-0.14	0.190	0.147	0.266	0.085	0.241	0.110	0.398	0.145	0.074
	0.364	1.441	0.790	1.081	-1.74	0.576	0.807	-0.79	0.583	0.885	0.744	-1.01	1.789	1.172	1.693	0.790	1.992*	0.647	2.290*	1.080	1.029
Monday MR	0.763	1.211	0.702	0.333	0.392	0.713	0.646	0.044	0.679	0.248	0.885	-0.05	0.459	0.327	0.642	0.306	0.400	0.417	0.655	0.602	0.557
	2.566*	2.561*	2.983*	1.829	3.381*	2.239*	6.802*	0.583	5.083*	1.051	4.514*	-0.59	1.620	1.581	2.280*	1.371	2.574*	2.025*	1.712	1.494	2.455*
Tuesday MR	0.229	0.684	0.400	0.017	0.052	0.203	0.701	-0.03	0.220	0.119	0.765	-0.00	0.166	0.024	0.492	-0.07	0.212	0.035	0.215	0.231	0.517
	1.998*	4.885*	6.972*	0.264	0.734	1.286	5.900*	-0.70	1.512	1.401	7.019*	-0.08	2.007*	0.336	5.349*	-0.89	1.744	0.360	0.913	2.096*	7.315*
Wednesday MR	0.412	0.819	0.352	0.058	0.063	0.519	0.706	0.097	0.440	-0.11	0.681	-0.23	0.246	-0.07	0.552	0.219	-0.03	0.130	0.522	-0.02	0.332
	2.200*	5.473*	4.659*	0.639	0.595	1.641	7.320*	1.741	3.422*	-0.65	3.682*	-1.60	3.055*	-0.49	3.997*	2.190*	-0.32	0.556	2.201*	-0.08	3.019*
Thursday MR	0.367	0.608	0.366	0.138	0.051	0.224	0.764	0.012	0.280	0.107	0.882	0.149	0.246	0.095	0.514	0.112	0.193	0.261	0.512	0.066	0.578
	3.142*	4.783*	5.769*	1.915	0.658	1.350	8.615*	0.403	2.479*	1.213	11.26*	1.835	3.528*	1.708	5.501*	1.187	2.430*	2.663*	2.678*	0.509	8.906*
Friday MR	0.602	0.753	0.311	0.120	0.146	0.212	0.603	-0.06	0.474	0.344	0.856	-0.04	0.136	0.359	0.490	0.003	0.262	0.434	0.476	0.271	0.457
	4.300*	4.073*	4.413*	1.276	1.478	1.159	6.410*	-2.01*	2.844*	2.587*	7.148*	-0.29	1.437	2.436*	3.271*	0.029	2.457*	2.251*	2.097*	1.904	5.432*

Notes. See Table 1.

Table 4. Mode 4 Conditional market risk factor

	ARG	BRA	CHL	COL	IND	IDN	ISR	JOR	KOR	MYS	MEX	PAK	PER	PHL	POL	LKA	TAI	THA	TUR	VEN	ZAF
Monday	-0.14	-0.00	0.034	0.027	0.143	-0.01	0.061	0.028	0.053	-0.20	0.030	0.120	-0.05	0.096	0.077	-0.08	-0.08	-0.19	-0.30	-0.07	0.127
	-1.30	-0.03	0.729	0.453	1.890	-0.12	0.808	0.496	0.524	-2.72*	0.423	1.318	-0.99	1.130	0.423	-1.18	-0.94	-2.26*	-1.93	-0.55	2.308*
Tuesday	0.016	-0.10	0.008	-0.06	0.089	0.361	-0.16	-0.01	0.024	0.134	-0.13	-0.24	-0.04	-0.02	0.034	-0.14	0.107	0.027	-0.04	0.187	0.044
	0.156	-0.59	0.122	-0.76	1.097	2.403*	-2.20*	-0.26	0.236	1.377	-1.10	-2.56*	-0.40	-0.30	0.274	-1.51	1.171	0.208	-0.25	1.045	0.548
Wednesday	0.249	0.058	0.059	-0.06	0.106	0.051	-0.10	0.026	0.087	0.095	0.155	0.022	0.131	0.007	-0.01	0.055	0.140	0.056	-0.03	-0.11	0.003
	2.311*	0.360	0.837	-0.93	1.415	0.385	-1.55	0.598	0.947	0.858	1.869	0.296	1.423	0.091	-0.15	0.688	1.882	0.601	-0.20	-0.54	0.048
Thursday	0.130	0.115	0.053	0.101	0.024	0.191	-0.00	0.037	0.092	0.071	0.035	0.114	0.176	0.043	-0.05	0.057	0.126	0.033	0.437	0.218	0.073
	1.064	0.604	0.665	1.199	0.321	0.996	-0.08	0.985	0.970	0.765	0.345	1.083	1.907	0.514	-0.45	0.614	1.658	0.268	2.333*	1.449	0.936
Friday	0.145	0.289	0.112	0.132	-0.07	0.302	0.031	-0.01	0.192	0.177	0.123	-0.15	0.265	0.281	0.298	0.081	0.375	0.178	0.492	0.232	0.167
	1.091	1.413	1.171	1.346	-0.89	1.774	0.397	-0.34	1.094	1.312	1.120	-1.01	1.951	2.055*	1.662	0.669	2.664*	1.000	2.398*	1.310	1.723
MR up	0.311	0.730	0.342	0.076	0.048	0.007	0.724	-0.02	0.266	0.033	0.728	-0.02	0.130	-0.06	0.486	0.124	-0.00	0.155	0.325	0.101	0.337
	2.545*	3.007*	4.380*	0.957	0.585	0.053	8.032*	-0.37	2.211*	0.373	7.934*	-0.23	1.282	-0.73	3.451*	1.336	-0.08	1.371	1.746	0.747	4.491*
MR down	0.657	0.924	0.530	0.208	0.252	0.740	0.644	0.040	0.582	0.262	0.909	-0.04	0.382	0.369	0.595	0.118	0.433	0.372	0.635	0.389	0.645
	3.565*	4.137*	3.768*	1.850	3.472*	3.156*	7.975*	0.839	5.902*	1.633	6.010*	-0.51	2.238*	2.657*	3.878*	0.861	3.935*	2.299*	2.499*	1.396	4.367*

Notes. See Table 1.

Table 5. Model 5 Day and conditional market risk factor

	ARG	BRA	CHL	COL	IND	IDN	ISR	JOR	KOR	MYS	MEX	PAK	PER	PHL	POL	LKA	TAI	THA	TUR	VEN	ZAF
Monday	0.066	-0.03	0.141	-0.02	0.194	0.200	0.023	0.088	0.190	0.084	0.182	0.202	0.030	0.331	0.325	0.119	0.122	0.052	0.246	0.123	0.381
	0.312	-0.10	0.849	-0.16	1.685	0.799	0.250	0.901	1.434	0.488	1.210	1.886	0.150	2.024*	1.139	0.750	0.993	0.339	0.826	0.413	2.440*
Tuesday	0.078	0.033	0.068	0.012	0.029	0.306	-0.11	-0.09	-0.18	-0.01	-0.20	-0.33	-0.03	-0.07	0.027	-0.17	-0.14	-0.01	-0.34	0.318	0.002
	0.740	0.175	1.044	0.132	0.294	1.820	-1.02	-1.82	-1.33	-0.13	-1.34	-2.77*	-0.39	-0.81	0.193	-1.73	-1.11	-0.08	-1.50	1.466	0.030
Wednesday	0.091	-0.07	0.006	0.040	-0.03	0.129	-0.04	0.087	0.103	-0.08	0.073	-0.09	0.100	-0.21	-0.02	-0.03	0.070	-0.19	0.132	-0.54	-0.06
	0.653	-0.49	0.094	0.461	-0.28	0.505	-0.50	1.626	0.845	-0.51	0.483	-0.81	1.209	-1.83	-0.26	-0.47	0.788	-1.05	0.650	-1.69	-0.87
Thursday	-0.01	-0.04	-0.03	-0.01	0.061	0.088	-0.06	-0.00	0.084	0.056	-0.03	0.162	0.104	-0.07	-0.32	0.028	0.084	-0.01	-0.01	0.256	-0.04
	-0.11	-0.21	-0.45	-0.22	0.585	0.497	-0.70	-0.11	0.721	0.643	-0.31	1.192	1.414	-0.85	-2.26*	0.292	1.014	-0.13	-0.05	1.781	-0.60
Friday	0.077	0.447	0.037	0.122	-0.01	0.099	0.033	-0.02	0.191	0.131	0.151	-0.10	0.242	0.339	0.277	-0.03	0.459	0.165	0.389	0.184	0.071
	0.520	1.808	0.346	1.009	-0.15	0.496	0.359	-0.28	0.873	0.844	1.191	-0.55	1.335	2.080*	1.196	-0.23	2.290*	0.781	1.891	1.010	0.699
Monday up	0.213	1.154	0.418	0.344	0.193	-0.05	0.755	-0.08	0.275	-0.35	0.530	-0.18	0.172	-0.30	0.164	-0.02	-0.18	-0.12	-0.45	0.113	-0.03
	0.687	1.245	1.680	1.465	0.826	-0.18	5.042*	-0.45	1.061	-1.40	2.804*	-1.14	0.544	-1.52	0.381	-0.11	-1.09	-0.55	-1.02	0.362	-0.23
Tuesday up	-0.03	0.362	0.209	-0.16	0.056	-0.05	0.646	0.082	0.415	0.255	0.808	0.156	0.044	-0.09	0.452	-0.00	0.424	0.005	0.574	-0.12	0.435
	-0.16	1.445	2.234*	-1.51	0.465	-0.18	2.966*	1.281	1.851	1.650	3.606*	1.265	0.360	-0.72	2.975*	-0.04	2.022*	0.036	1.522	-0.56	3.398*
Wednesday up	0.516	0.963	0.351	-0.19	0.201	0.012	0.637	-0.04	0.254	0.087	0.734	-0.01	0.174	0.107	0.516	0.386	-0.13	0.464	0.074	0.596	0.297
	2.034*	3.982*	3.617*	-1.55	1.115	0.034	3.452*	-0.48	0.986	0.430	4.229*	-0.06	1.502	0.551	1.866	2.018*	-0.79	1.711	0.215	1.917	1.682
Thursday up	0.432	0.778	0.410	0.268	-0.11	0.020	0.903	0.050	0.133	0.015	0.910	0.078	0.235	0.067	0.902	0.164	0.036	0.238	1.093	-0.14	0.611
	1.974*	2.887*	3.419*	2.062*	-0.65	0.072	6.032*	1.142	0.631	0.091	5.690*	0.491	1.878	0.599	4.897*	0.873	0.216	1.098	2.983*	-0.49	5.203*
Friday up	0.535	0.378	0.347	0.068	-0.06	0.183	0.644	-0.09	0.308	0.299	0.710	-0.11	0.045	0.026	0.470	0.208	-0.11	0.340	0.492	0.204	0.463
	1.812	1.021	2.466*	0.379	-0.34	0.719	3.506*	-1.29	1.013	1.334	3.149*	-0.34	0.193	0.097	1.492	1.097	-0.47	0.932	1.274	0.740	2.885*
Monday do	1.230	1.260	0.944	0.325	0.562	1.365	0.554	0.157	1.023	0.761	1.187	0.048	0.702	0.864	1.049	0.592	0.899	0.877	1.596	1.019	1.063
	1.967*	1.572	1.826	0.867	3.177*	1.963*	3.200*	1.146	5.087*	1.513	2.722*	0.295	1.145	1.982*	1.995*	1.270	3.009*	2.034*	2.028*	1.124	2.128*
Tuesday do	0.502	1.020	0.598	0.211	0.048	0.475	0.759	-0.14	0.016	-0.02	0.721	-0.17	0.292	0.149	0.533	-0.13	-0.00	0.066	-0.16	0.606	0.602
	2.771*	4.589*	6.292*	1.780	0.391	2.004*	4.269*	-1.94	0.061	-0.14	3.946*	-1.27	2.032*	1.161	3.111*	-1.15	-0.03	0.365	-0.33	2.281*	4.896*
Wednesday do	0.309	0.676	0.353	0.305	-0.07	1.019	0.774	0.233	0.623	-0.31	0.629	-0.44	0.317	-0.24	0.588	0.053	0.061	-0.19	0.965	-0.63	0.366
	0.798	2.750*	2.288*	1.569	-0.36	1.371	5.027*	2.090*	3.306*	-0.75	1.420	-1.43	2.318*	-0.84	4.015*	0.414	0.276	-0.36	2.037*	-0.92	1.911
Thursday do	0.305	0.447	0.324	0.015	0.206	0.417	0.632	-0.02	0.419	0.193	0.855	0.217	0.257	0.121	0.145	0.063	0.343	0.283	-0.03	0.263	0.548
	1.715	1.887	3.702*	0.181	1.957	1.843	4.104*	-0.43	2.474*	1.947	6.048*	1.568	2.735*	1.320	1.251	0.490	2.757*	1.854	-0.14	1.671	4.791*
Friday do	0.663	1.091	0.278	0.166	0.335	0.238	0.567	-0.04	0.624	0.385	0.987	0.015	0.218	0.659	0.508	-0.18	0.603	0.519	0.462	0.333	0.453
	3.760*	3.991*	2.437*	1.106	2.102*	0.682	4.132*	-0.71	2.676*	1.808	5.755*	0.090	1.312	3.121*	2.181*	-1.09	3.209*	2.335*	1.394	1.562	3.415*

Notes. See Table 1.