

File 1 of the supplemental file

The following file contains results that are not displayed in the main document to save space but are available for readers. Table S1 presents the correlation matrix of the variables used in the study.

Table S2 and Table S3 expose the results of the Unit root tests (ADF +PP) for the same variables used in the study.

Table S4 shows the results of GJR-GARCH(1,1) with constant and AR(1) of the TUNINDEX stock market volatility.

Table S1 Pairwise correlation matrix (02/01/2020-30/12/2022)

[illegible]

DS2	0.085401	0.098285	0.088481	0.622050	0.055570	1.000000												
	0.0290	0.0119	0.0236	0.0000	0.1558	-----												
DS3	0.085401	0.098285	0.088481	0.622050	0.055570	1.000000	1.000000											
	0.0290	0.0119	0.0236	0.0000	0.1558	0.0000	-----											
DS4	0.322770	0.262660	0.493970	0.749258	0.053961	0.653357	0.653357	1.000000										
	0.0000	0.0000	0.0000	0.0000	0.1681	0.0000	0.0000	-----										
DS5	0.138473	0.109170	0.257526	0.376878	0.068059	0.204124	0.204124	0.400098	1.000000									
	0.0004	0.0052	0.0000	0.0000	0.0820	0.0000	0.0000	0.0000	-----									
DS6	0.254143	0.142544	0.324790	0.569724	0.215221	0.129099	0.129099	0.379566	0.237171	1.000000								
	0.0000	0.0003	0.0000	0.0000	0.0000	0.0009	0.0009	0.0000	0.0000	-----								
DS7	0.112594	0.145647	0.340032	0.605458	0.188761	0.169842	0.169842	0.221934	0.208013	0.263117	1.000000							
	0.0039	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-----							
DS8	0.001727	-0.015988	0.005142	0.103252	0.001021	0.083418	0.083418	0.001000	0.000000	0.000000	0.113343	1.000000						
	0.9648	0.6832	0.8956	0.0082	0.9792	0.0329	0.0329	0.9796	1.0000	1.0000	0.0037	-----						
DS9	0.018344	0.015166	0.010140	0.102838	0.000884	1.25E-19	1.25E-19	0.000866	0.000000	0.000000	1.70E-19	0.287422	1.000000					

	0.6396	0.6987	0.7958	0.0085	0.98 20	1.00 00	1.00 00	0.98 24	1.00 00	1.00 00	1.00 00	0.00 00	-----				
DCONTAINMENTH EALTHINDEX	0.247155	0.23950 3	0.48035 2	0.966442	0.28 4465	0.56 1828	0.56 1828	0.75 6711	0.43 0487	0.56 2210	0.54 7830	0.12 7180	0.08 6460	1.000000			
	0.0000	0.0000	0.0000	0.0000	0.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.00 11	0.02 70	-----			
DECONOMICSUPP ORTINDEX	0.314156	0.23008 2	0.55671 9	0.363384	- 0.04	- 8.28	- 8.28	- 0.43	- 0.18	- 0.23	- 0.30	- 0.00	- 0.00	0.358285	1.000000		
	0.0000	0.0000	0.0000	0.0000	0.21 04	1.00 00	1.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.97 21	0.97 59	0.0000	-----		
DGOVERNMENTR ESPONSEINDEX	0.288383	0.26440 4	0.54960 8	0.952510	0.24 8843	0.51 0873	0.51 0873	0.77 6793	0.42 8548	0.55 8133	0.55 9835	0.11 5908	0.07 8869	0.981980	0.528264	1.000000	
	0.0000	0.0000	0.0000	0.0000	0.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.00 00	0.00 30	0.04 38	0.0000	0.0000	-----	
CONDVAR_WTI	0.504872	0.46103 8	0.37319 7	0.115029	0.00 3756	0.00 1056	0.00 1056	0.12 9824	0.08 2393	0.09 8683	0.08 9358	0.00 7011	0.00 9324	0.122565	0.174915	0.146867	1.00000 0
	0.0000	0.0000	0.0000	0.0032	0.92 36	0.97 85	0.97 85	0.00 09	0.03 52	0.01 16	0.02 23	0.85 80	0.81 19	0.0017	0.0000	0.0002	-----

Source: The Author

Table S2 Unit root test results for the main variables (02/01/2020-30/12/2022)

UNIT ROOT TEST TABLE (PP)									
	<u>At Level</u>								
		RETURN_TU N	WTI_OIL_RE TURN	CASES_RAT E	DEATH_RAT E	STRINGENC Y_INDEX	CONTAINME NT_HEALTH _INDEX	ECONOMIC SUPPORT_I NDEX	GOVERNME NT_RESPO NSE_INDEX
With Constant	t-Statistic	-17.9629	-25.7297	-22.9927	-30.5010	-2.9743	-3.0827	-2.7451	-3.1193
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0379	0.0283	0.0670	0.0256
		***	***	***	***	**	**	*	**
With Constant & Trend	t-Statistic	-17.9605	-25.7187	-23.8726	-31.2349	-2.9910	-2.8231	-3.4774	-2.9014
	Prob.	0.0000	0.0000	0.0000	0.0000	0.1354	0.1894	0.0426	0.1626
		***	***	***	***	n0	n0	**	n0
Without Constant & Trend	t-Statistic	-17.9588	-25.7048	-22.4117	-30.2296	-0.9405	-0.5733	-1.1239	-0.5541
	Prob.	0.0000	0.0000	0.0000	0.0000	0.3091	0.4688	0.2376	0.4770
		***	***	***	***	n0	n0	n0	n0
	<u>At First Difference</u>								
		d(RETURN_ TUN)	d(WTI_OIL_ RETURN)	d(CASES_R ATE)	d(DEATH_R ATE)	d(STRINGEN CY_INDEX)	d(CONTAIN MENT_HEAL TH_INDEX)	d(ECONOMI C_SUPPORT T_INDEX)	d(GOVERNM ENT_RESPO NSE_INDEX)
With Constant	t-Statistic	-169.3500	-236.2181	-162.4985	-136.8774	-26.7290	-26.7904	-26.4779	-26.5074
	Prob.	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***
With Constant & Trend	t-Statistic	-172.0593	-235.9024	-166.8787	-139.2376	-26.7121	-26.7453	-26.4934	-26.5297
	Prob.	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-167.7626	-236.2979	-160.7190	-135.3977	-26.7437	-26.8039	-26.4953	-26.5187
	Prob.	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000

		***	***	***	***	***	***	***	***
UNIT ROOT TEST TABLE (ADF)									
	At Level								
		RETURN_TU N	WTI_OIL_RE TURN	CASES_RAT E	DEATH_RAT E	STRINGENC Y_INDEX	CONTAINME NT_HEALTH _INDEX	ECONOMIC SUPPORT_I NDEX	GOVERNME NT_RESPO NSE_INDEX
With Constant	t-Statistic	-17.9797	-25.7401	-4.1014	-7.7899	-2.5128	-2.8497	-2.7115	-2.9252
	Prob.	0.0000	0.0000	0.0010	0.0000	0.1128	0.0520	0.0725	0.0430
		***	***	***	***	n0	*	*	**
With Constant & Trend	t-Statistic	-18.0276	-25.7294	-5.0681	-8.0845	-2.5667	-2.5136	-3.4564	-2.6956
	Prob.	0.0000	0.0000	0.0002	0.0000	0.2959	0.3214	0.0450	0.2387
		***	***	***	***	n0	n0	**	n0
Without Constant & Trend	t-Statistic	-17.9751	-25.7179	-3.5286	-7.4023	-0.6830	-0.3836	-1.1228	-0.3992
	Prob.	0.0000	0.0000	0.0004	0.0000	0.4211	0.5460	0.2381	0.5399
		***	***	***	***	n0	n0	n0	n0
	At First Difference								
		d(RETURN_ TUN)	d(WTI_OIL_ RETURN)	d(CASES_R ATE)	d(DEATH_R ATE)	d(STRINGEN CY_INDEX)	d(CONTAIN MENT_HEAL TH_INDEX)	d(ECONOMI C_SUPPORT T_INDEX)	d(GOVERNM ENT_RESPO NSE_INDEX)
With Constant	t-Statistic	-14.0490	-16.0559	-14.5446	-9.7378	-16.3350	-16.3293	-26.4779	-16.5312
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***
With Constant & Trend	t-Statistic	-14.0385	-16.0445	-14.8146	-9.8772	-16.3824	-16.4021	-26.4934	-16.6102
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-14.0595	-16.0675	-14.4511	-9.6831	-16.3424	-16.3292	-26.4953	-16.5318
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***

*MacKinnon (1996) one-sided p-values. Source: The Author

		S1	S2	S3	S4	S5	S6	S7	S8	S9
With Constant	t-Statistic	-2.9641	-3.0665	-2.9064	-2.7589	-2.3506	-2.3176	-2.7867	-1.8966	-4.0772
	Prob.	0.0389	0.0296	0.0451	0.0648	0.1565	0.1667	0.0607	0.3340	0.0011
		**	**	**	*	n0	n0	*	n0	***
With Constant & Trend	t-Statistic	-4.2441	-2.9834	-3.1896	-2.9904	-2.4532	-2.6662	-3.1341	-3.4214	-3.6335
	Prob.	0.0040	0.1376	0.0873	0.1356	0.3516	0.2512	0.0992	0.0493	0.0277
		***	n0	*	n0	n0	n0	*	**	**
Without Constant & Trend	t-Statistic	-2.0718	-1.7527	-0.7560	-0.6658	-2.0929	-1.7755	-2.2833	-0.9697	-0.5273
	Prob.	0.0368	0.0756	0.3887	0.4286	0.0350	0.0721	0.0217	0.2972	0.4883
		**	*	n0	n0	**	*	**	n0	n0
		d(S1)	d(S2)	d(S3)	d(S4)	d(S5)	d(S6)	d(S7)	d(S8)	d(S9)
With Constant	t-Statistic	-26.4764	-26.4764	-26.4872	-26.4885	-26.4764	-26.4764	-26.4764	-26.4764	-5.8586
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***	***
With Constant & Trend	t-Statistic	-26.4710	-26.4823	-26.4799	-26.4841	-26.4629	-26.4724	-26.4647	-26.5468	-6.2265
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-26.4953	-26.4953	-26.4953	-26.4953	-26.4953	-26.4953	-26.4953	-26.4953	-5.8481
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***	***	***	***

*MacKinnon (1996) one-sided p-values. Source: The Author

Table S4 TGARCH(1,1) for TUNINDEX stock market volatility (02/01/2020-30/12/2022)

Dependent Variable: RETURN_TUN Method: ML - ARCH Date: 12/26/23 Time: 10:14 Sample (adjusted): 1/03/2020 12/30/2022 Included observations: 754 after adjustments Convergence achieved after 23 iterations Coefficient covariance computed using outer product of gradients Presample variance: backcast (parameter = 0.7) GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*RESID(-1)^2*(RESID(-1)<0) + C(6)*GARCH(-1)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.000331	0.000167	1.980416	0.0477
AR(1)	0.238238	0.042029	5.668372	0.0000
Variance Equation				
C	1.95E-06	2.58E-07	7.576788	0.0000
RESID(-1)^2	0.267931	0.062204	4.307297	0.0000
RESID(-1)^2*(RESID(-1)<0)	-0.061734	0.067649	-0.912560	0.3615
GARCH(-1)	0.648287	0.030173	21.48562	0.0000
R-squared	0.116555	Mean dependent var		0.000188
Adjusted R-squared	0.115380	S.D. dependent var		0.004686
S.E. of regression	0.004408	Akaike info criterion		-8.374358
Sum squared resid	0.014609	Schwarz criterion		-8.337551
Log likelihood	3163.133	Hannan-Quinn criter.		-8.360179
Durbin-Watson stat	1.733961			
Inverted AR Roots	.24			

Source: The Author

File 2 of the supplemental file

Table S5 Effect of lagged Covid-19 announcements and government intervention (two days) on conditional volatility

Table 12

Eq Name:	EQ01	EQ02	EQ03	EQ04
L2.cases_rate	0.000189**	0.000188**	0.000193**	0.000199**
	[2.128]	[2.112]	[2.165]	[2.233]
L2.death_rate	0.000115*	0.000118**	0.000109*	0.000105
	[1.950]	[1.979]	[1.674]	[1.567]
L2.condvar_oil	0.001098***	0.001095***	0.001094***	0.001075***
	[2.843]	[2.830]	[2.825]	[2.774]
L2.dtintn	-0.000037	-0.000037	-0.000037	-0.000037
	[-0.866]	[-0.865]	[-0.867]	[-0.865]
L2.dstringencyindex	0.000000			
	[0.897]			
L2.dcontainmenthealthindex		0.000000		
		[0.799]		
L2.dgovernmentresponseindex			0.000001	
			[0.885]	
L2.deconomicsupportindex				0.000000
				[0.958]
_cons	0.000012***	0.000012***	0.000012***	0.000012***
	[15.666]	[15.680]	[15.770]	[15.955]
N°obseconvar_tunations	652	652	652	652

t statistics in brackets. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table S6 Effect of lagged stringency index sub-indicators (two days) on TUNINDEX conditional volatility

Eq Name:	EQ01	EQ02	EQ03	EQ04	EQ05	EQ06	EQ07	EQ08	EQ09
L2.cases_rate	0.000181**	0.000187**	0.000176**	0.000197**	0.000185**	0.000188**	0.000170*	0.000181**	0.000181**
	[2.005]	[2.119]	[1.995]	[2.342]	[2.063]	[2.113]	[1.840]	[2.004]	[2.006]
L2.death_rate	0.000135***	0.000118**	0.000133***	0.000090	0.000128**	0.000122**	0.000154***	0.000135***	0.000135***
	[2.742]	[2.294]	[2.645]	[1.490]	[2.392]	[2.372]	[2.648]	[2.741]	[2.740]
L2.condvar_oil	0.001086***	0.001109***	0.001107***	0.001112***	0.001085***	0.001085***	0.001083***	0.001086***	0.001086***
	[2.808]	[2.889]	[2.894]	[2.882]	[2.805]	[2.797]	[2.811]	[2.808]	[2.808]
L2.dtintn	-0.000036	-0.000037	-0.000036	-0.000038	-0.000036	-0.000036	-0.000036	-0.000036	-0.000036
	[-0.859]	[-0.865]	[-0.862]	[-0.872]	[-0.860]	[-0.862]	[-0.855]	[-0.859]	[-0.859]
L2.ds1	-0.000001								
	[-0.338]								
L2.ds2		0.000007							
		[1.539]							
L2.ds3			0.000010						
			[1.222]						
L2.ds4				0.000009					
				[1.631]					
L2.ds5					0.000006				
					[0.591]				
L2.ds6						0.000006			
						[1.188]			
L2.ds7							-0.000007		
							[-1.281]		
L2.ds8								0.000001	
								[0.701]	
L2.ds9									0.000005***
									[7.927]
_cons	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***
	[15.581]	[15.841]	[15.504]	[16.233]	[15.687]	[15.836]	[15.561]	[15.573]	[15.589]
N°observations	652	652	652	652	652	652	652	652	652

Note: t statistics in brackets. * p < 0.1, ** p < 0.05, *** p < 0.01. Source: The Author.

Table S7 Effect of lagged Covid-19 announcements and government intervention (two days) on TUNINDEX conditional volatility, excluding cases_rate

Eq Name:	EQ01	EQ02	EQ03	EQ04
L2.death_rate	0.000203*** [4.367]	0.000206*** [4.339]	0.000204*** [3.954]	0.000208*** [3.762]
L2.condvar_oil	0.001386*** [3.005]	0.001381*** [2.995]	0.001383*** [2.988]	0.001375*** [2.978]
L2.dtintn	-0.000040 [-0.896]	-0.000039 [-0.895]	-0.000040 [-0.896]	-0.000039 [-0.894]
L2.dstringencyindex	0.000000 [0.586]			
L2.dcontainmenthealthindex		0.000000 [0.454]		
L2.dgovernmentresponseindex			0.000000 [0.462]	
L2.deconomicsupportindex				0.000000 [0.250]
_cons	0.000012*** [17.054]	0.000012*** [17.194]	0.000012*** [17.237]	0.000012*** [17.842]
N°observations	652	652	652	652

Note: t statistics in brackets. * p < 0.1, ** p < 0.05, *** p < 0.01. Source: The Author.

Table S8 Effect of lagged stringency index sub-indicators (two days) on TUNINDEX conditional volatility, excluding cases_rate

Eq Name:	EQ01	EQ02	EQ03	EQ04	EQ05	EQ06	EQ07	EQ08	EQ09
L2.death_rate	0.000213***	0.000201***	0.000208***	0.000181***	0.000213***	0.000207***	0.000231***	0.000212***	0.000212***
	[5.306]	[4.746]	[5.429]	[3.785]	[4.690]	[4.726]	[4.855]	[5.305]	[5.304]
L2.condvar_oil	0.001371***	0.001398***	0.001387***	0.001414***	0.001371***	0.001378***	0.001347***	0.001371***	0.001371***
	[2.996]	[3.047]	[3.041]	[3.041]	[2.987]	[2.995]	[2.957]	[2.997]	[2.997]
L2.dtintn	-0.000039	-0.000040	-0.000039	-0.000041	-0.000039	-0.000039	-0.000038	-0.000039	-0.000039
	[-0.889]	[-0.895]	[-0.892]	[-0.903]	[-0.891]	[-0.893]	[-0.883]	[-0.890]	[-0.890]
L2.ds1	-0.000001								
	[-0.477]								
L2.ds2		0.000006							
		[1.394]							
L2.ds3			0.000012						
			[1.273]						
L2.ds4				0.000008					
				[1.425]					
L2.ds5					-0.000001				
					[-0.146]				
L2.ds6						0.000004			
						[0.800]			
L2.ds7							-0.000009*		
							[-1.750]		
L2.ds8								0.000002	
								[0.908]	
L2.ds9									0.000006***
									[10.439]
_cons	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***	0.000012***
	[17.387]	[17.428]	[17.344]	[17.327]	[17.514]	[17.563]	[17.745]	[17.385]	[17.389]
N°observations	652	652	652	652	652	652	652	652	652

Note: t statistics in brackets. * p < 0.1, ** p < 0.05, *** p < 0.01. Source: The Author.

File 3 of the supplemental file

Table S9 Effect of lagged Covid-19 announcements and government intervention (two days) on realized volatility

Eq Name:	EQ01	EQ02	EQ03	EQ04
L2.cases_rate	-0.011604 [-0.151]	-0.011799 [-0.155]	-0.022213 [-0.290]	-0.008416 [-0.121]
L2.death_rate	0.074045 [1.451]	0.072817 [1.391]	0.090261 [1.483]	0.048477 [0.998]
L2.condvar_oil	5.425231*** [10.455]	5.432877*** [10.445]	5.438665*** [10.392]	5.476033*** [10.559]
L2.dtintn	-0.001888 [-0.213]	-0.001972 [-0.222]	-0.001560 [-0.168]	-0.002984 [-0.364]
L2.dstringencyindex	-0.001138* [-1.775]			
L2.dcontainmenthealthindex		-0.001415* [-1.666]		
L2.dgovernmentresponseindex			-0.001635* [-1.756]	
L2.deconomicsupportindex				-0.000427 [-1.496]
_cons	0.052844*** [40.143]	0.052884*** [40.097]	0.052837*** [39.727]	0.053053*** [39.517]
N°observations	652	652	652	652

Note: t statistics in brackets. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Source: The Author.

Table S10 Effect of lagged stringency index sub-indicators (two days) on TUNINDEX realized volatility

Eq Name:	EQ01	EQ02	EQ03	EQ04	EQ05	EQ06	EQ07	EQ08	EQ09
L2.cases_rate	0.011550	-0.000285	0.020355	-0.005060	-0.009822	-0.002293	0.005996	0.012829	0.012232
	[0.162]	[-0.004]	[0.276]	[-0.063]	[-0.133]	[-0.032]	[0.085]	[0.180]	[0.172]
L2.death_rate	0.015286	0.049864	0.015614	0.064338	0.051009	0.040900	0.025744	0.013300	0.013336
	[0.384]	[1.248]	[0.383]	[1.064]	[1.072]	[1.014]	[0.625]	[0.343]	[0.344]
L2.condvar_oil	5.460824***	5.410698***	5.433000***	5.433493***	5.468281***	5.465538***	5.461379***	5.463208***	5.462366***
	[10.672]	[10.513]	[10.585]	[10.441]	[10.573]	[10.637]	[10.647]	[10.674]	[10.674]
L2.dtintn	-0.003749	-0.002599	-0.003418	-0.002150	-0.002953	-0.003084	-0.003481	-0.003805	-0.003848
	[-0.501]	[-0.312]	[-0.443]	[-0.243]	[-0.360]	[-0.388]	[-0.451]	[-0.510]	[-0.515]
L2.ds1	-0.004382								
	[-1.388]								
L2.ds2		-0.015809*							
		[-1.844]							
L2.ds3			-0.014225						
			[-0.765]						
L2.ds4				-0.010744					
				[-1.042]					
L2.ds5					-0.034119				
					[-1.163]				
L2.ds6						-0.012731			
						[-1.298]			
L2.ds7							-0.004747		
							[-1.015]		
L2.ds8								-0.000027	
								[-0.004]	
L2.ds9									0.025663***
									[18.642]
_cons	0.053123***	0.052991***	0.053077***	0.052957***	0.053111***	0.053031***	0.053099***	0.053145***	0.053191***
	[40.070]	[40.402]	[40.538]	[39.948]	[40.305]	[40.355]	[39.982]	[39.961]	[40.065]
N°observations	652	652	652	652	652	652	652	652	652

Note: t statistics in brackets. * p < 0.1, ** p < 0.05, *** p < 0.01. Source: The Author.

Table S11 Effect of lagged Covid-19 announcements and government intervention (two days) on TUNINDEX realized volatility, excluding cases_rate

Eq Name:	EQ01	EQ02	EQ03	EQ04
L2.death_rate	0.068650	0.067295	0.079345	0.044119
	[1.183]	[1.131]	[1.168]	[0.781]
L2.condvar_oil	5.407529***	5.414884***	5.405352***	5.463334***
	[11.889]	[11.851]	[11.802]	[12.011]
L2.dtintn	-0.001716	-0.001798	-0.001257	-0.002879
	[-0.198]	[-0.207]	[-0.137]	[-0.360]
L2.dstringencyindex	-0.001129*			
	[-1.772]			
L2.dcontainmenthealthindex		-0.001402*		
		[-1.653]		
L2.dgovernmentresponseindex			-0.001599*	
			[-1.710]	
L2.deconomicsupportindex				-0.000415
				[-1.348]
_cons	0.052810***	0.052849***	0.052775***	0.053030***
	[41.898]	[41.895]	[41.337]	[40.818]
N°observations	652	652	652	652

Note: t statistics in brackets. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Source: The Author.

Table S12 Effect of lagged stringency index sub-indicators (two days) on TUNINDEX realized volatility, excluding cases_rate

Eq Name:	EQ01	EQ02	EQ03	EQ04	EQ05	EQ06	EQ07	EQ08	EQ09
L2.death_rate	0.020258	0.049737	0.024290	0.061994	0.046499	0.039867	0.028462	0.018813	0.018593
	[0.470]	[1.033]	[0.538]	[0.999]	[0.922]	[0.878]	[0.616]	[0.442]	[0.438]
L2.condvar_oil	5.479040***	5.410258***	5.465384***	5.425730***	5.453087***	5.461965***	5.470660***	5.483456***	5.481679***
	[12.075]	[11.905]	[12.034]	[11.893]	[11.979]	[12.070]	[12.043]	[12.079]	[12.077]
L2.dtintn	-0.003939	-0.002595	-0.003756	-0.002074	-0.002804	-0.003049	-0.003573	-0.004016	-0.004049
	[-0.556]	[-0.324]	[-0.520]	[-0.241]	[-0.350]	[-0.397]	[-0.485]	[-0.570]	[-0.573]
L2.ds1	-0.004406								
	[-1.397]								
L2.ds2		-0.015807*							
		[-1.846]							
L2.ds3			-0.014039						
			[-0.752]						
L2.ds4				-0.010702					
				[-1.056]					
L2.ds5					-0.033767				
					[-1.173]				
L2.ds6						-0.012703			
						[-1.313]			
L2.ds7							-0.004818		
							[-1.011]		
L2.ds8								0.000004	
								[0.001]	
L2.ds9									0.025716***
									[20.286]
_cons	0.053160***	0.052990***	0.053143***	0.052941***	0.053080***	0.053024***	0.053117***	0.053187***	0.053231***
	[41.709]	[42.345]	[42.119]	[41.441]	[42.148]	[42.204]	[41.608]	[41.615]	[41.713]
N°observations	652	652	652	652	652	652	652	652	652

Note: t statistics in brackets. * p < 0.1, ** p < 0.05, *** p < 0.01. Source: The Author.

File 4 of the supplemental file

Table S13 Unit root test results

UNIT ROOT TEST TABLE (PP)							
	<u>At Level</u>						
		CONDVAR_TUN	RV	EPU	EMU	IMEDV	VIX
With Constant	t-Statistic	-5.8808	-13.6968	-9.8964	-17.7479	-16.6186	-3.8710
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0024
		***	***	***	***	***	***
With Constant & Trend	t-Statistic	-6.0767	-17.0898	-12.8499	-18.5192	-17.9923	-4.0507
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0077
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-4.9668	-2.7289	-2.8246	-8.6418	-6.0759	-1.0504
	Prob.	0.0000	0.0063	0.0047	0.0000	0.0000	0.2651
		***	***	***	***	***	n0
	<u>At First Difference</u>						
		d(CONDVAR_TUN)	d(RV)	d(EPU)	d(EMU)	d(IMEDV)	d(VIX)
With Constant	t-Statistic	-23.5796	-47.8639	-72.4580	-315.9201	-104.5298	-34.3848
	Prob.	0.0000	0.0001	0.0001	0.0001	0.0001	0.0000
		***	***	***	***	***	***
With Constant & Trend	t-Statistic	-23.5489	-47.8294	-72.5811	-310.8855	-105.4604	-34.3686
	Prob.	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-23.6133	-47.8999	-72.5163	-322.7739	-104.7445	-34.4084
	Prob.	0.0000	0.0001	0.0001	0.0001	0.0001	0.0000
		***	***	***	***	***	***
UNIT ROOT TEST TABLE (ADF)							
	<u>At Level</u>						
		CONDVAR_TUN	RV	EPU	EMU	IMEDV	VIX
With Constant	t-Statistic	-6.6410	-1.7010	-2.9736	-3.9963	-4.5434	-3.5654
	Prob.	0.0000	0.4304	0.0379	0.0015	0.0002	0.0067
		***	n0	**	***	***	***
With Constant & Trend	t-Statistic	-6.9341	-2.7375	-3.8756	-5.2780	-5.3619	-3.7563
	Prob.	0.0000	0.2217	0.0135	0.0001	0.0000	0.0194
		***	n0	**	***	***	**
Without Constant & Trend	t-Statistic	-5.5128	-0.7595	-1.4560	-2.1739	-2.0996	-0.9914
	Prob.	0.0000	0.3872	0.1359	0.0287	0.0345	0.2884
		***	n0	n0	**	**	n0
	<u>At First Difference</u>						
		d(CONDVAR_TUN)	d(RV)	d(EPU)	d(EMU)	d(IMEDV)	d(VIX)

With Constant	t-Statistic	-12.8745	-18.9490	-20.7775	-17.2671	-21.2337	-13.9711
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***
With Constant & Trend	t-Statistic	-12.8656	-18.9466	-20.7664	-17.2562	-21.2227	-13.9701
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-12.8839	-18.9627	-20.7926	-17.2796	-21.2478	-13.9802
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		***	***	***	***	***	***

Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant
*MacKinnon (1996) one-sided p-values.

Source: The Author.

Table S14 Johansen cointegration test between conditional volatility and uncertainty indices

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.159673	287.2357	69.81889	0.0001
At most 1 *	0.087501	166.6788	47.85613	0.0000
At most 2 *	0.074215	103.2221	29.79707	0.0000
At most 3 *	0.048996	49.78261	15.49471	0.0000
At most 4 *	0.021368	14.96863	3.841466	0.0001

Note: Trace test indicates 5 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: The Author.

Table S15 Johansen cointegration test between realized volatility and uncertainty indices

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.138867	254.7878	69.81889	0.0000
At most 1 *	0.080535	151.0301	47.85613	0.0000
At most 2 *	0.070516	92.75947	29.79707	0.0000
At most 3 *	0.049645	42.01030	15.49471	0.0000
At most 4 *	0.009567	6.671797	3.841466	0.0098

Note: Trace test indicates 5 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: The Author.