Table 1: The descriptive statistics of the log number of Tweets, log RV, log volume and log returns.

	Mean	Std. Dev	Max	Min	Skewness	Kurtosis
Log-Tweet	10.3250	0.4701	11.9550	8.8956	0.7748	0.2389
Log-RV	0.0423	0.0271	0.3367	0.0000	3.0163	16.9581
Log-Volume	9.0512	0.7687	11.7296	3.0466	-0.3702	2.2181
Log-Ret	0.0023	0.0391	0.2384	-0.2809	-0.2837	6.2374

*Table 2: This table reports the VAR estimation results for the full sample period where each model examines the relationship between the number of tweet and RV, volume and returns respectively. The lag length is selected by the Schwarz Information Criterion. In Panels B and C, we report the linear Granger causality results, as well as the nonlinear Granger causality test of Diks and Panchenko (2006). ***, **, * indicate significance at the 1%, 5% and 10% levels respectively.*

	Model (1)		Model (2)		Model (3)	
	RV_t	$Tweet_t$	$Volume_t$	$Tweet_t$	Ret_t	$Tweet_t$
Constant	-0.0275**	0.2016**	0.3744	0.2000**	-0.0401*	0.2257**
$Tweet_{t-1}$	0.0100**	0.4692***	0.1315	0.4589***	-0.0123*	0.4836***
$Tweet_{t-2}$	0.0005	0.0325	-0.0440	0.0538*	-0.0040	0.0342
$Tweet_{t-3}$	-0.0062*	0.0177	-0.3126***	0.0194	0.0115*	0.0086
$Tweet_{t-4}$	0.0046	0.0322	-0.0306	0.0595**	0.0004	0.0358
$Tweet_{t-5}$	0.0000	0.0713**	-0.0454	0.0900***	-0.0081	0.0724***
$Tweet_{t-6}$	0.0025	0.1041***	0.2340**	0.0821***	0.0075	0.1027***
$Tweet_{t-7}$	-0.0080**	0.2542***	0.1413*	0.2123***	0.0089	0.2409***
RV_{t-1}	0.5596***	0.5525**				
RV_{t-2}	0.0507*	-0.1633				
RV_{t-3}	0.0172	-0.3187				
RV_{t-4}	-0.0403	0.3640				
RV_{t-5}	0.0156	-0.2772				
RV_{t-6}	0.0694**	0.0163				
RV_{t-7}	0.0365	-0.2830				
$Volume_{t-1}$			0.4904***	0.0226***		
$Volume_{t-2}$			0.0124	-0.0212**		
$Volume_{t-3}$			0.0985**	-0.0010		
$Volume_{t-4}$			0.0529*	-0.0092		
$Volume_{t-5}$			-0.0118	-0.0247***		
$Volume_{t-6}$			0.0762**	0.0260***		
$Volume_{t-7}$			0.1547***	0.0129		
Ret_{t-1}					-0.0088	-0.0465
Ret_{t-2}					-0.0280	-0.0456
Ret_{t-3}					0.0378	0.1320
Ret_{t-4}					-0.0368	0.1301
Ret_{t-5}					0.0066	0.0110
Ret_{t-6}					0.0493*	0.0196
Ret_{t-7}					0.0090	0.1118
Panel B: Linear Granger Causality						
rv does not Granger-cause tweets_per_day	1.801*		tweets_per_day does not Granger-cause rv		3.793***	
volume does not Granger-cause tweets_per_day	4.271***		tweets_per_day does not Granger-cause volume		5.058***	
rt does not Granger-cause tweets_per_day	0.734		tweets_per_day does not Granger-cause rt		2.031**	

Table 3 & **Table 4** in `**var.ipynb**` (Section `**Subsamples 1**` & `**Subsamples 2**`)