Table C.1: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.1377	0.7107	0.0465	0.8293
$SP \nRightarrow h_{Wheat\ 1}$	11.1196	9e-04***	38.0902	0***
$SP \nRightarrow h_{Wheat\ 2}$	10.5923	0.0012***	38.1092	0***
$SP \nRightarrow h_{Wheat\ 3}$	18.7426	0***	33.4092	0***
$SP \nRightarrow h_{Wheat\ 4}$	4.3195	0.0381**	25.4415	0***
$h_{S\&P500} \nRightarrow SP$	0.0038	0.951	0.8849	0.3472
$h_{Wheat\ 1} \nRightarrow SP$	0.2514	0.6163	0.036	0.8495
$h_{Wheat\ 2} \nRightarrow SP$	0.0334	0.8551	0.4265	0.5139
$h_{Wheat\ 3} \nRightarrow SP$	0.0137	0.9068	0.0069	0.934
$h_{Wheat\ 4} \nRightarrow SP$	0.0305	0.8615	1.1292	0.2883

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.2: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.0236	0.8779	0.4133	0.5205
$SP \nRightarrow h_{KC\ Wheat\ 1}$	2.8871	0.0898*	21.2032	0***
$SP \nRightarrow h_{KC\ Wheat\ 2}$	0.3732	0.5415	20.2163	0***
$SP \nRightarrow h_{KC\ Wheat\ 3}$	0.2903	0.5902	22.0564	0***
$SP \nRightarrow h_{KC\ Wheat\ 4}$	0.5543	0.4569	19.308	0***
$h_{S\&P500} \nRightarrow SP$	0.0058	0.9392	0.3013	0.5832
$h_{KC\ Wheat\ 1} \nRightarrow SP$	1.057	0.3043	0.8142	0.3671
$h_{KC\ Wheat\ 2} \nRightarrow SP$	2.2812	0.1315	1.0864	0.2976
$h_{KC\ Wheat\ 3} \nRightarrow SP$	1.4204	0.2338	0.5892	0.4429
$h_{KC\ Wheat\ 4} \nRightarrow SP$	1.2621	0.2617	0.1277	0.7209

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

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Table C.3: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.6368	0.4252	0.9053	0.3417
$SP \nRightarrow h_{Corn\ 1}$	4.6575	0.0313**	1.134	0.2872
$SP \nRightarrow h_{Corn\ 2}$	10.986	0.001***	0.4475	0.5037
$SP \nRightarrow h_{Corn\ 3}$	15.8495	1e-04***	4.2136	0.0404**
$SP \nRightarrow h_{Corn\ 4}$	18.8345	0***	1.5171	0.2184
$h_{S\&P500} \nRightarrow SP$	0.3117	0.5769	0.8954	0.3443
$h_{Corn\ 1} \nRightarrow SP$	0.1027	0.7487	0.0479	0.8268
$h_{Corn\ 2} \nRightarrow SP$	0.0418	0.838	0.1494	0.6992
$h_{Corn\ 3} \nRightarrow SP$	0.131	0.7175	2e-04	0.9888
$h_{Corn\ 4} \nRightarrow SP$	0.3658	0.5455	0.5582	0.4552

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

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Table C.4: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.135	0.7134	0.9945	0.3189
$SP \nRightarrow h_{Soybean\ 1}$	1.0297	0.3107	1.377	0.2409
$SP \nRightarrow h_{Soybean\ 2}$	0.0537	0.8169	0.4516	0.5018
$SP \nRightarrow h_{Soybean\ 3}$	0.2876	0.5919	0.004	0.9494
$SP \nRightarrow h_{Soybean\ 4}$	0.6196	0.4315	0.5959	0.4404
$h_{S\&P500} \nRightarrow SP$	0.0971	0.7555	0.1764	0.6746
$h_{Soybean\ 1} \nRightarrow SP$	0.086	0.7695	0.0871	0.768
$h_{Soybean\ 2} \nRightarrow SP$	0.0729	0.7872	0.0614	0.8043
$h_{Soybean\ 3} \nRightarrow SP$	0.423	0.5157	0.0026	0.9597
$h_{Soybean\ 4} \nRightarrow SP$	0.5157	0.473	0.0169	0.8966

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.5: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	2.0297	0.1548	0.2904	0.5901
$SP \nRightarrow h_{Soybean\ oil\ 1}$	1.0759	0.3001	0.0225	0.8809
$SP \nRightarrow h_{Soybean\ oil\ 2}$	0.3699	0.5433	0.182	0.6697
$SP \nRightarrow h_{Soybean\ oil\ 3}$	2e-04	0.9901	0.5772	0.4476
$SP \nRightarrow h_{Soybean\ oil\ 4}$	0.0506	0.8222	0.1312	0.7173
$h_{S\&P500} \nRightarrow SP$	0.1995	0.6553	2.5197	0.1128
$h_{Soybean\ oil\ 1} \nRightarrow SP$	0.055	0.8147	1.186	0.2765
$h_{Soybean\ oil\ 2} \nRightarrow SP$	0.0107	0.9177	1.6002	0.2062
$h_{Soybean\ oil\ 3} \nRightarrow SP$	0.0306	0.8613	2.1216	0.1456
$h_{Soybean\ oil\ 4} \nRightarrow SP$	0.0635	0.8011	2.3569	0.1251

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.6: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.913	0.3397	0.8344	0.3613
$SP \nRightarrow h_{Oats\ 1}$	1.074	0.3005	2.907	0.0886*
$SP \nRightarrow h_{Oats\ 2}$	2.422	0.1202	3.4414	0.0639*
$SP \nRightarrow h_{Oats\ 3}$	2.9355	0.0872*	3.5564	0.0597*
$h_{S\&P500} \nRightarrow SP$	3.892	0.049**	0.4132	0.5205
$h_{Oats\ 1} \nRightarrow SP$	0.1997	0.6551	0.4062	0.5241
$h_{Oats\ 2} \nRightarrow SP$	0.0329	0.8562	0.277	0.5988
$h_{Oats\ 3} \nRightarrow SP$	0.0478	0.827	0.053	0.8179

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.7: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{SP500}$	1.7153	0.191	0.0783	0.7797
$SP \nRightarrow h_{MPLS\ Wheat\ 1}$	8.646	0.0034***	0.8022	0.3707
$SP \nRightarrow h_{MPLS\ Wheat\ 2}$	11.959	6e-04***	1.7196	0.1901
$SP \nRightarrow h_{MPLS\ Wheat\ 3}$	9.3373	0.0024***	1.8918	0.1694
$SP \nRightarrow h_{MPLS\ Wheat\ 4}$	7.7079	0.0057***	2.5942	0.1077
$h_{SP500} \nRightarrow SP$	0.4694	0.4936	0.0456	0.8309
$h_{MPLS\ Wheat\ 1} \nRightarrow SP$	1.7875	0.1819	0.198	0.6565
$h_{MPLS\ Wheat\ 2} \nRightarrow SP$	1.0302	0.3107	0.2192	0.6398
$h_{MPLS\ Wheat\ 3} \nRightarrow SP$	0.5351	0.4649	0.8289	0.3629
$h_{MPLS\ Wheat\ 4} \nRightarrow SP$	0.4105	0.522	0.8821	0.3479

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.8: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.5028	0.4786	0.1491	0.6995
$SP \nRightarrow h_{Soybean\ meal\ 1}$	0.5431	0.4615	2.7198	0.0995*
$SP \nRightarrow h_{Soybean\ meal\ 2}$	0.8142	0.3673	4.6146	0.032**
$SP \nRightarrow h_{Soybean\ meal\ 3}$	1.2711	0.26	6.2546	0.0126**
$SP \nRightarrow h_{Soybean\ meal\ 4}$	1.9837	0.1595	3.8742	0.0494**
$h_{S\&P500} \nRightarrow SP$	0.3236	0.5697	1.8906	0.1695
$h_{Soybean\ meal\ 1} \nRightarrow SP$	0.4624	0.4968	0.1196	0.7295
$h_{Soybean\ meal\ 2} \nRightarrow SP$	0.4755	0.4907	0.6961	0.4043
$h_{Soybean\ meal\ 3} \nRightarrow SP$	1.3356	0.2483	0.2953	0.587
$h_{Soybean\ meal\ 4} \nRightarrow SP$	1.2501	0.264	0.5448	0.4607

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.9: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{SP500}$	1.6715	0.1967	0.817	0.3663
$SP \nRightarrow h_{Rough\ rice\ 1}$	0.1707	0.6796	0.2747	0.6003
$SP \nRightarrow h_{Rough\ rice\ 2}$	2.3859	0.1231	0.3633	0.5468
$SP \nRightarrow h_{Rough\ rice\ 3}$	2.3046	0.1297	1e-04	0.9912
$h_{SP500} \nRightarrow SP$	0.2147	0.6434	2.7582	0.0971*
$h_{Rough\ rice\ 1} \nRightarrow SP$	0.1699	0.6803	0.0928	0.7607
$h_{Rough\ rice\ 2} \nRightarrow SP$	0.0413	0.8391	0.2654	0.6066
$h_{Rough\ rice\ 3} \nRightarrow SP$	0.7707	0.3804	1.2802	0.2582

Note:
The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.10: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.1213	0.7277	11.2426	8e-04***
$SP \nRightarrow h_{Coffee\ 1}$	4.7663	0.0294**	7.1995	0.0074***
$SP \nRightarrow h_{Coffee\ 2}$	2.9067	0.0888*	7.8304	0.0053***
$SP \nRightarrow h_{Coffee\ 3}$	3.5477	0.0601*	8.7666	0.0032***
$SP \nRightarrow h_{Coffee\ 4}$	2.7191	0.0997*	8.2308	0.0042***
$h_{S\&P500} \nRightarrow SP$	6.4542	0.0113**	0.2367	0.6267
$h_{Coffee\ 1} \nRightarrow SP$	0.0254	0.8735	0.8119	0.3678
$h_{Coffee\ 2} \nRightarrow SP$	4e-04	0.9831	0.3564	0.5507
$h_{Coffee\ 3} \nRightarrow SP$	0.2836	0.5945	0.6499	0.4204
$h_{Coffee\ 4} \nRightarrow SP$	0.3598	0.5488	0.5593	0.4548

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.11: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.167	0.6829	1.6448	0.2
$SP \nRightarrow h_{Sugar\ 1}$	0.8092	0.3687	0.7591	0.3839
$SP \nRightarrow h_{Sugar\ 3}$	0.3045	0.5813	1.4063	0.236
$SP \nRightarrow h_{Sugar\ 4}$	0.1446	0.7039	0.6528	0.4194
$h_{S\&P500} \nRightarrow SP$	0.6614	0.4164	0.0146	0.9039
$h_{Sugar\ 1} \nRightarrow SP$	0.0832	0.7731	3.9932	0.046**
$h_{Sugar\ 3} \nRightarrow SP$	0.126	0.7228	2.2092	0.1376
$h_{Sugar\ 4} \nRightarrow SP$	0.273	0.6015	4.0054	0.0457**

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.12: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.0183	0.8923	0.0082	0.9277
$SP \nRightarrow h_{Cocoa\ 1}$	2.4583	0.1175	39.3379	0***
$SP \nRightarrow h_{Cocoa\ 2}$	3.031	0.0822*	39.5397	0***
$SP \nRightarrow h_{Cocoa\ 3}$	3.8053	0.0516*	42.2556	0***
$SP \nRightarrow h_{Cocoa\ 4}$	3.5557	0.0599*	44.2814	0***
$h_{S\&P500} \nRightarrow SP$	0.0035	0.953	0.2451	0.6207
$h_{Cocoa\ 1} \nRightarrow SP$	0.2647	0.6071	4.1673	0.0415**
$h_{Cocoa\ 2} \nRightarrow SP$	0.3167	0.5738	5.7872	0.0164**
$h_{Cocoa\ 3} \nRightarrow SP$	0.1404	0.708	6.2156	0.0129**
$h_{Cocoa\ 4} \nRightarrow SP$	0.0625	0.8027	5.2859	0.0217**

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.13: Granger causality test between conditional volatility and speculative pressure (robustness)

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.7437	0.3888	0.5735	0.4491
$SP \nRightarrow h_{Cotton\ 1}$	11.1898	9e-04***	2.1999	0.1384
$SP \nRightarrow h_{Cotton\ 2}$	0.7201	0.3965	2.7502	0.0976*
$SP \nRightarrow h_{Cotton\ 3}$	0.6048	0.4371	3.5613	0.0595*
$SP \nRightarrow h_{Cotton\ 4}$	0.7278	0.394	2.9349	0.0871*
$h_{S\&P500} \nRightarrow SP$	0.0088	0.9254	0.0439	0.8341
$h_{Cotton\ 1} \nRightarrow SP$	1.5273	0.217	0.184	0.6681
$h_{Cotton\ 2} \nRightarrow SP$	1.4715	0.2256	0	0.9978
$h_{Cotton\ 3} \nRightarrow SP$	0.9641	0.3266	0.0267	0.8701
$h_{Cotton\ 4} \nRightarrow SP$	0.564	0.453	0.2334	0.6292

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.14: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.2572	0.6123	3.4256	0.0645*
$SP \nRightarrow h_{Orange\ juice\ 2}$	0.3448	0.5573	0.0259	0.8722
$SP \nRightarrow h_{Orange\ juice\ 3}$	0.5872	0.4438	0.1839	0.6682
$SP \nRightarrow h_{Orange\ juice\ 4}$	0.0224	0.8812	0.0138	0.9067
$SP \nRightarrow h_{Orange\ juice\ 5}$	0.4573	0.4992	0.0072	0.9325
$h_{S\&P500} \nRightarrow SP$	0.0832	0.7731	0.0381	0.8454
$h_{Orange\ juice\ 2} \nRightarrow SP$	0.0128	0.9099	0.1477	0.7009
$h_{Orange\ juice\ 3} \nRightarrow SP$	0.0157	0.9004	0.2327	0.6297
$h_{Orange\ juice\ 4} \nRightarrow SP$	0.0126	0.9107	0.159	0.6901
$h_{Orange\ juice\ 5} \nRightarrow SP$	0.005	0.9435	0.1254	0.7234

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.15: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \not\Rightarrow h_{S\&P500}$	0.0759	0.783	3.5173	0.0611*
$SP \not\Rightarrow h_{Lumber\ 1}$	0.6892	0.4068	3.7847	0.0521*
$SP \not\Rightarrow h_{Lumber\ 2}$	0.9178	0.3385	4.9338	0.0266**
$h_{S\&P500} \not\Rightarrow SP$	1.1916	0.2755	0.0104	0.9186
$h_{Lumber\ 1} \not\Rightarrow SP$	5.0347	0.0252**	0.0093	0.9231
$h_{Lumber\ 2} \not\Rightarrow SP$	2.8179	0.0938*	0.2028	0.6526

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\not\Rightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.16: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \not\Rightarrow h_{S\&P500}$	0.1544	0.6946	0.5321	0.4659
$SP \not\Rightarrow h_{Live\ cattle\ 1}$	1.0748	0.3003	1.8828	0.1704
$SP \not\Rightarrow h_{Live\ cattle\ 2}$	0.2015	0.6537	0.8726	0.3505
$SP \not\Rightarrow h_{Live\ cattle\ 3}$	0.0549	0.8148	2.5245	0.1125
$SP \not\Rightarrow h_{Live\ cattle\ 4}$	0.0791	0.7787	9.4211	0.0022***
$h_{S\&P500} \not\Rightarrow SP$	0.2689	0.6043	1.3903	0.2387
$h_{Live\ cattle\ 1} \not\Rightarrow SP$	4e-04	0.9836	0.0213	0.884
$h_{Live\ cattle\ 2} \not\Rightarrow SP$	0.2128	0.6447	0.1781	0.6731
$h_{Live\ cattle\ 3} \not\Rightarrow SP$	0.0125	0.9109	0.4276	0.5134
$h_{Live\ cattle\ 4} \not\Rightarrow SP$	0.8074	0.3693	0.1632	0.6863

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\not\Rightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.17: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	1.3863	0.2395	0.3239	0.5694
$SP \nRightarrow h_{Feeder\ cattle\ 1}$	0.2286	0.6328	0.0155	0.9011
$SP \nRightarrow h_{Feeder\ cattle\ 2}$	0.0283	0.8665	1.501	0.2209
$SP \nRightarrow h_{Feeder\ cattle\ 3}$	0.6574	0.4178	2.3772	0.1235
$SP \nRightarrow h_{Feeder\ cattle\ 4}$	0.5796	0.4468	4.0396	0.0448**
$h_{S\&P500} \nRightarrow SP$	0.0668	0.7961	0.4785	0.4893
$h_{Feeder\ cattle\ 1} \nRightarrow SP$	0.026	0.8721	0	0.9989
$h_{Feeder\ cattle\ 2} \nRightarrow SP$	1.0394	0.3084	0.0053	0.942
$h_{Feeder\ cattle\ 3} \nRightarrow SP$	0.1758	0.6752	0.0024	0.9612
$h_{Feeder\ cattle\ 4} \nRightarrow SP$	0.0089	0.925	0.4934	0.4826

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.18: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.0358	0.8499	2.8589	0.0912*
$SP \nRightarrow h_{Heating\ oil\ 1}$	0.7586	0.3841	2.031	0.1545
$SP \nRightarrow h_{Heating\ oil\ 2}$	2.702	0.1008	3.2058	0.0737*
$SP \nRightarrow h_{Heating\ oil\ 3}$	3.6687	0.0559*	4.0243	0.0452**
$SP \nRightarrow h_{Heating\ oil\ 4}$	3.9101	0.0485**	5.7667	0.0166**
$h_{S\&P500} \nRightarrow SP$	0.0237	0.8778	0.4768	0.4901
$h_{Heating\ oil\ 1} \nRightarrow SP$	0.0021	0.9635	1.285	0.2573
$h_{Heating\ oil\ 2} \nRightarrow SP$	0.72	0.3965	0.6499	0.4204
$h_{Heating\ oil\ 3} \nRightarrow SP$	1.3723	0.2419	0.1698	0.6804
$h_{Heating\ oil\ 4} \nRightarrow SP$	1.7156	0.1908	0.0015	0.9696

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.19: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	1.4733	0.2253	0.9319	0.3346
$SP \nRightarrow h_{Natural\ gas\ 1}$	1e-04	0.9938	1.6581	0.1982
$SP \nRightarrow h_{Natural\ gas\ 2}$	0.1576	0.6915	1.3271	0.2496
$SP \nRightarrow h_{Natural\ gas\ 3}$	0.0629	0.8021	0.1096	0.7407
$SP \nRightarrow h_{Natural\ gas\ 4}$	0.0074	0.9313	0.0056	0.9403
$h_{S\&P500} \nRightarrow SP$	2.339	0.1267	0.0778	0.7803
$h_{Natural\ gas\ 1} \nRightarrow SP$	0.1188	0.7305	0.0191	0.8901
$h_{Natural\ gas\ 2} \nRightarrow SP$	0.1552	0.6937	0.0092	0.9237
$h_{Natural\ gas\ 3} \nRightarrow SP$	0.6057	0.4367	0.0067	0.9345
$h_{Natural\ gas\ 4} \nRightarrow SP$	0.9313	0.3349	0.0145	0.9041

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.20: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	0.0077	0.9299	1.2485	0.2642
$SP \nRightarrow h_{Gold\ 1}$	5.6038	0.0183**	0.0466	0.8291
$SP \nRightarrow h_{Gold\ 2}$	5.8768	0.0157**	0.9643	0.3264
$SP \nRightarrow h_{Gold\ 3}$	5.4992	0.0194**	0.2898	0.5905
$SP \nRightarrow h_{Gold\ 4}$	6.5815	0.0106**	0.1245	0.7243
$h_{S\&P500} \nRightarrow SP$	0.0359	0.8497	0.9343	0.334
$h_{Gold\ 1} \nRightarrow SP$	0.0441	0.8337	0.0011	0.9734
$h_{Gold\ 2} \nRightarrow SP$	0.0617	0.8039	0.3794	0.5381
$h_{Gold\ 3} \nRightarrow SP$	0.0656	0.798	0.2934	0.5882
$h_{Gold\ 4} \nRightarrow SP$	0.0232	0.879	2e-04	0.9896

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

* $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.21: Granger causality test between conditional volatility and speculative pressure (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow h_{S\&P500}$	2.0345	0.1543	4.0511	0.0445**
$SP \nRightarrow h_{Copper\ 1}$	0.0409	0.8397	0.5221	0.4702
$SP \nRightarrow h_{Copper\ 2}$	0.0894	0.765	0.7155	0.3979
$SP \nRightarrow h_{Copper\ 3}$	0.2891	0.591	1.3965	0.2376
$SP \nRightarrow h_{Copper\ 4}$	0.3617	0.5478	1.103	0.2939
$h_{S\&P500} \nRightarrow SP$	1.7295	0.189	0.042	0.8377
$h_{Copper\ 1} \nRightarrow SP$	1.279	0.2586	0.0325	0.8569
$h_{Copper\ 2} \nRightarrow SP$	1.7374	0.188	0.0188	0.891
$h_{Copper\ 3} \nRightarrow SP$	1.4194	0.234	0.0605	0.8057
$h_{Copper\ 4} \nRightarrow SP$	1.7055	0.1921	0.001	0.9753

Note:

The table reports the results of the Granger causality test between the first differences of conditional volatility and the first differences of speculative pressure during pre-financialisation period and financialisation period. h and SP represent conditional volatility and speculative pressure respectively. Speculative pressure is measured by $\frac{NCL-NCS}{NCL+NCS}$ following De Roon, Nijman, and Veld (2000) and Sanders, Boris, and Manfredo (2004) where NCL represents non-commercial long position and NCS represents non-commercial short position.

[*] $\nRightarrow$ means "does not Granger-cause ". ***,**, and * denote statistical significance at 1%, 5%, and 10% level.