Table C.64: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Wheat\ 1}$	1.067	0.3021	1.3769	0.241
$OI \not\Rightarrow \rho_{S\&P500\text{-}Wheat\ 2}$	0.1813	0.6704	1.3471	0.2461
$OI \not\Rightarrow \rho_{S\&P500\text{-}Wheat\ 3}$	0.2855	0.5933	1.5214	0.2178
$OI \not\Rightarrow \rho_{S\&P500\text{-}Wheat\ 4}$	0.3183	0.5728	1.2672	0.2606
$\rho_{S\&P500\text{-}Wheat\ 1} \not\Rightarrow OI$	1.398	0.2376	2.09	0.1486
$\rho_{S\&P500\text{-}Wheat\ 2} \not\Rightarrow OI$	0.1731	0.6776	1.5451	0.2142
$\rho_{S\&P500\text{-}Wheat\ 3} \not\Rightarrow OI$	0.0592	0.8079	1.5883	0.2079
$\rho_{S\&P500\text{-}Wheat\ 4} \not\Rightarrow OI$	8e-04	0.9778	1.4669	0.2262

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.65: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}KC\ Wheat\ 1}$	0.0297	0.8633	4.2992	0.0384**
$OI \not\Rightarrow \rho_{S\&P500\text{-}KC\ Wheat\ 2}$	0.0601	0.8064	4.7762	0.0291**
$OI \not\Rightarrow \rho_{S\&P500\text{-}KC\ Wheat\ 3}$	0.047	0.8284	4.7379	0.0298**
$OI \not\Rightarrow \rho_{S\&P500\text{-}KC\ Wheat\ 4}$	0.1128	0.7372	4.8439	0.028**
$\rho_{S\&P500\text{-}KC\ Wheat\ 1} \not\Rightarrow OI$	0.2425	0.6226	2.6537	0.1037
$\rho_{S\&P500\text{-}KC\ Wheat\ 2} \not\Rightarrow OI$	0.0048	0.9448	2.4794	0.1157
$\rho_{S\&P500\text{-}KC\ Wheat\ 3} \not\Rightarrow OI$	0.0321	0.8579	2.4758	0.116
$\rho_{S\&P500\text{-}KC\ Wheat\ 4} \not\Rightarrow OI$	0.165	0.6848	2.6007	0.1072

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.66: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Corn\ 1}$	0.1858	0.6666	0.0737	0.7861
$OI \not\Rightarrow \rho_{S\&P500\text{-}Corn\ 2}$	0.0517	0.8203	0.0166	0.8975
$OI \not\Rightarrow \rho_{S\&P500\text{-}Corn\ 3}$	5e-04	0.9817	0.0039	0.9499
$OI \not\Rightarrow \rho_{S\&P500\text{-}Corn\ 4}$	0.0433	0.8353	2e-04	0.9888
$\rho_{S\&P500\text{-}Corn\ 1} \not\Rightarrow OI$	1.8065	0.1795	0.6084	0.4356
$\rho_{S\&P500\text{-}Corn\ 2} \not\Rightarrow OI$	0.2363	0.6271	0.3705	0.5429
$\rho_{S\&P500\text{-}Corn\ 3} \not\Rightarrow OI$	0.0158	0.9	0.9658	0.326
$\rho_{S\&P500\text{-}Corn\ 4} \not\Rightarrow OI$	1.0638	0.3028	2.0513	0.1525

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.67: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ 1}$	0.0867	0.7686	0.9671	0.3257
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ 2}$	0.1992	0.6555	0.9404	0.3325
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ 3}$	0.0502	0.8228	1.1231	0.2896
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ 4}$	0.187	0.6656	1.056	0.3044
$\rho_{S\&P500\text{-}Soybean\ 1} \not\Rightarrow OI$	0.0889	0.7657	3.5545	0.0597*
$\rho_{S\&P500\text{-}Soybean\ 2} \not\Rightarrow OI$	0.2265	0.6343	3.8595	0.0498**
$\rho_{S\&P500\text{-}Soybean\ 3} \not\Rightarrow OI$	0.3745	0.5408	2.9117	0.0883*
$\rho_{S\&P500\text{-}Soybean\ 4} \not\Rightarrow OI$	0.281	0.5963	2.5674	0.1095

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.68: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Oil\ 1}$	0.1668	0.6831	0.9051	0.3417
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Oil\ 2}$	0.1395	0.709	1.0668	0.302
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Oil\ 3}$	0.021	0.8849	0.9171	0.3385
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Oil\ 4}$	0.0521	0.8195	0.8569	0.3549
$\rho_{S\&P500\text{-}Soybean\ Oil\ 1} \not\Rightarrow OI$	3.7608	0.053*	0.7463	0.3879
$\rho_{S\&P500\text{-}Soybean\ Oil\ 2} \not\Rightarrow OI$	2.694	0.1013	0.752	0.3861
$\rho_{S\&P500\text{-}Soybean\ Oil\ 3} \not\Rightarrow OI$	2.6041	0.1071	0.8091	0.3686
$\rho_{S\&P500\text{-}Soybean\ Oil\ 4} \not\Rightarrow OI$	2.7058	0.1005	1.0327	0.3098

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.69: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Oats\ 1}$	0.048	0.8266	1.7209	0.1899
$OI \not\Rightarrow \rho_{S\&P500\text{-}Oats\ 2}$	0.1939	0.6598	2.0612	0.1515
$OI \not\Rightarrow \rho_{S\&P500\text{-}Oats\ 3}$	0.2073	0.6491	3.902	0.0486**
$\rho_{S\&P500\text{-}Oats\ 1} \not\Rightarrow OI$	1.4538	0.2284	0.3984	0.5281
$\rho_{S\&P500\text{-}Oats\ 2} \not\Rightarrow OI$	0.5392	0.4631	0.0568	0.8117
$\rho_{S\&P500\text{-}Oats\ 3} \not\Rightarrow OI$	0.0916	0.7622	0.0535	0.8171

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.70: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}MPLS\ Wheat\ 1}$	0.0605	0.8058	1.7201	0.1901
$OI \not\Rightarrow \rho_{S\&P500\text{-}MPLS\ Wheat\ 2}$	0.1239	0.725	0.66	0.4168
$OI \not\Rightarrow \rho_{S\&P500\text{-}MPLS\ Wheat\ 3}$	0.0373	0.847	0.7445	0.3885
$OI \not\Rightarrow \rho_{S\&P500\text{-}MPLS\ Wheat\ 4}$	0.0641	0.8003	1.0906	0.2967
$\rho_{S\&P500\text{-}MPLS\ Wheat\ 1} \not\Rightarrow OI$	0.1496	0.6991	0.1926	0.6609
$\rho_{S\&P500\text{-}MPLS\ Wheat\ 2} \not\Rightarrow OI$	0.2153	0.6429	0.0235	0.8781
$\rho_{S\&P500\text{-}MPLS\ Wheat\ 3} \not\Rightarrow OI$	0.3366	0.5621	0.0227	0.8803
$\rho_{S\&P500\text{-}MPLS\ Wheat\ 4} \not\Rightarrow OI$	0.0662	0.7971	4e-04	0.9846

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.71: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Meal\ 1}$	0.0096	0.9218	0.4215	0.5164
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Meal\ 2}$	0.0789	0.7789	0.6034	0.4375
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Meal\ 3}$	0.3623	0.5475	0.5745	0.4487
$OI \not\Rightarrow \rho_{S\&P500\text{-}Soybean\ Meal\ 4}$	0.587	0.4439	0.7458	0.3881
$\rho_{S\&P500\text{-}Soybean\ Meal\ 1} \not\Rightarrow OI$	1.7317	0.1887	2e-04	0.989
$\rho_{S\&P500\text{-}Soybean\ Meal\ 2} \not\Rightarrow OI$	2.2628	0.1331	0.0541	0.8161
$\rho_{S\&P500\text{-}Soybean\ Meal\ 3} \not\Rightarrow OI$	2.0756	0.1502	0.0026	0.9594
$\rho_{S\&P500\text{-}Soybean\ Meal\ 4} \not\Rightarrow OI$	1.9345	0.1648	0.0142	0.9052

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.72: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \nRightarrow \rho_{S\&P500\text{-}Rough\ Rice\ 1}$	0.0643	0.8	0.6956	0.4045
$OI \nRightarrow \rho_{S\&P500\text{-}Rough\ Rice\ 2}$	0.259	0.611	0.6394	0.4241
$OI \nRightarrow \rho_{S\&P500\text{-}Rough\ Rice\ 3}$	0.5809	0.4464	0.1939	0.6598
$\rho_{S\&P500\text{-}Rough\ Rice\ 1} \nRightarrow OI$	4.1076	0.0432**	2e-04	0.9878
$\rho_{S\&P500\text{-}Rough\ Rice\ 2} \nRightarrow OI$	2.6647	0.1033	0.0111	0.9161
$\rho_{S\&P500\text{-}Rough\ Rice\ 3} \nRightarrow OI$	2.6804	0.1023	0.051	0.8214

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.73: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Coffee\ 1}$	0.2982	0.5852	0.472	0.4923
$OI \not\Rightarrow \rho_{S\&P500\text{-}Coffee\ 2}$	0.4124	0.521	0.4016	0.5264
$OI \not\Rightarrow \rho_{S\&P500\text{-}Coffee\ 3}$	0.1896	0.6634	0.5249	0.469
$OI \not\Rightarrow \rho_{S\&P500\text{-}Coffee\ 4}$	0.3719	0.5422	0.4389	0.5078
$\rho_{S\&P500\text{-}Coffee\ 1} \not\Rightarrow OI$	0.0304	0.8617	0.0051	0.9434
$\rho_{S\&P500\text{-}Coffee\ 2} \not\Rightarrow OI$	0.2018	0.6535	4e-04	0.984
$\rho_{S\&P500\text{-}Coffee\ 3} \not\Rightarrow OI$	0.1869	0.6657	0.0012	0.9725
$\rho_{S\&P500\text{-}Coffee\ 4} \not\Rightarrow OI$	0.1281	0.7205	0	0.9965

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.74: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Sugar\ 1}$	0.0058	0.9392	0.0783	0.7797
$OI \not\Rightarrow \rho_{S\&P500\text{-}Sugar\ 3}$	0.3825	0.5365	0.5488	0.459
$OI \not\Rightarrow \rho_{S\&P500\text{-}Sugar\ 4}$	0.58	0.4466	0.6242	0.4297
$\rho_{S\&P500\text{-}Sugar\ 1} \not\Rightarrow OI$	0.019	0.8905	6e-04	0.981
$\rho_{S\&P500\text{-}Sugar\ 3} \not\Rightarrow OI$	0.1187	0.7306	0.2742	0.6007
$\rho_{S\&P500\text{-}Sugar\ 4} \not\Rightarrow OI$	0.4235	0.5155	0.134	0.7145

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.75: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cocoa\ 1}$	0.3578	0.55	0.4066	0.5239
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cocoa\ 2}$	0.0019	0.9653	0.9105	0.3403
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cocoa\ 3}$	0.0228	0.8801	0.9316	0.3347
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cocoa\ 4}$	0.0015	0.9692	0.8962	0.3441
$\rho_{S\&P500\text{-}Cocoa\ 1} \not\Rightarrow OI$	0.2507	0.6167	1.4386	0.2307
$\rho_{S\&P500\text{-}Cocoa\ 2} \not\Rightarrow OI$	0.194	0.6598	0.893	0.3449
$\rho_{S\&P500\text{-}Cocoa\ 3} \not\Rightarrow OI$	0.1799	0.6716	0.8888	0.3461
$\rho_{S\&P500\text{-}Cocoa\ 4} \not\Rightarrow OI$	0.2898	0.5906	0.8589	0.3543

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.76: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cotton\ 1}$	2.6991	0.101	0.1497	0.6989
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cotton\ 2}$	2.4836	0.1156	0.6331	0.4264
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cotton\ 3}$	3.1604	0.076*	2.0356	0.154
$OI \not\Rightarrow \rho_{S\&P500\text{-}Cotton\ 4}$	5.5532	0.0188**	2.2117	0.1373
$\rho_{S\&P500\text{-}Cotton\ 1} \not\Rightarrow OI$	0.3101	0.5778	0.1696	0.6806
$\rho_{S\&P500\text{-}Cotton\ 2} \not\Rightarrow OI$	1.9022	0.1684	0.3801	0.5377
$\rho_{S\&P500\text{-}Cotton\ 3} \not\Rightarrow OI$	2.1291	0.1451	0.203	0.6524
$\rho_{S\&P500\text{-}Cotton\ 4} \not\Rightarrow OI$	3.4179	0.065*	0.0186	0.8917

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.77: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Orange\ Juice\ 2}$	0.0056	0.9403	4.1178	0.0428**
$OI \not\Rightarrow \rho_{S\&P500\text{-}Orange\ Juice\ 3}$	0.136	0.7124	4.0408	0.0447**
$OI \not\Rightarrow \rho_{S\&P500\text{-}Orange\ Juice\ 4}$	0.0096	0.9219	3.1609	0.0758*
$OI \not\Rightarrow \rho_{S\&P500\text{-}Orange\ Juice\ 5}$	0.0541	0.8161	2.3635	0.1246
$\rho_{S\&P500\text{-}Orange\ Juice\ 2} \not\Rightarrow OI$	0.03	0.8626	0.764	0.3823
$\rho_{S\&P500\text{-}Orange\ Juice\ 3} \not\Rightarrow OI$	0.1925	0.661	0.9397	0.3326
$\rho_{S\&P500\text{-}Orange\ Juice\ 4} \not\Rightarrow OI$	2e-04	0.9886	1.0507	0.3056
$\rho_{S\&P500\text{-}Orange\ Juice\ 5} \not\Rightarrow OI$	0.046	0.8302	0.8158	0.3667

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.78: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Lumber\ 1}$	1.0198	0.313	0.1315	0.717
$OI \not\Rightarrow \rho_{S\&P500\text{-}Lumber\ 2}$	0.7467	0.3879	0.0165	0.8977
$\rho_{S\&P500\text{-}Lumber\ 1} \not\Rightarrow OI$	0.003	0.956	0.1811	0.6706
$\rho_{S\&P500\text{-}Lumber\ 2} \not\Rightarrow OI$	0.2808	0.5964	0.0599	0.8067

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.79: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Live\ Cattle\ 1}$	0.0517	0.8203	5.6755	0.0174**
$OI \not\Rightarrow \rho_{S\&P500\text{-}Live\ Cattle\ 2}$	0.0125	0.9109	3.8094	0.0513*
$OI \not\Rightarrow \rho_{S\&P500\text{-}Live\ Cattle\ 3}$	0.2585	0.6114	5.3822	0.0206**
$OI \not\Rightarrow \rho_{S\&P500\text{-}Live\ Cattle\ 4}$	0.2074	0.649	4.3561	0.0372**
$\rho_{S\&P500\text{-}Live\ Cattle\ 1} \not\Rightarrow OI$	0.6276	0.4286	0.3562	0.5508
$\rho_{S\&P500\text{-}Live\ Cattle\ 2} \not\Rightarrow OI$	0.0058	0.9394	0.08	0.7773
$\rho_{S\&P500\text{-}Live\ Cattle\ 3} \not\Rightarrow OI$	0.0446	0.8328	0.506	0.4771
$\rho_{S\&P500\text{-}Live\ Cattle\ 4} \not\Rightarrow OI$	0.8467	0.3579	0.0214	0.8838

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.80: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Feeder\ Cattle\ 1}$	0.1954	0.6586	1.0558	0.3045
$OI \not\Rightarrow \rho_{S\&P500\text{-}Feeder\ Cattle\ 2}$	0.3057	0.5805	0.2818	0.5957
$OI \not\Rightarrow \rho_{S\&P500\text{-}Feeder\ Cattle\ 3}$	3.0121	0.0832*	0.1384	0.7099
$OI \not\Rightarrow \rho_{S\&P500\text{-}Feeder\ Cattle\ 4}$	1.111	0.2923	0.2555	0.6134
$\rho_{S\&P500\text{-}Feeder\ Cattle\ 1} \not\Rightarrow OI$	3.604	0.0581*	1.0458	0.3068
$\rho_{S\&P500\text{-}Feeder\ Cattle\ 2} \not\Rightarrow OI$	4.2512	0.0397**	0.5182	0.4718
$\rho_{S\&P500\text{-}Feeder\ Cattle\ 3} \not\Rightarrow OI$	4.1481	0.0421**	0.3747	0.5406
$\rho_{S\&P500\text{-}Feeder\ Cattle\ 4} \not\Rightarrow OI$	5.4171	0.0203**	0.2424	0.6226

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.81: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Heating\ Oil\ 1}$	2.8564	0.0916*	1.1805	0.2776
$OI \not\Rightarrow \rho_{S\&P500\text{-}Heating\ Oil\ 2}$	2.5132	0.1135	1.6194	0.2035
$OI \not\Rightarrow \rho_{S\&P500\text{-}Heating\ Oil\ 3}$	2.4903	0.1151	1.941	0.1639
$OI \not\Rightarrow \rho_{S\&P500\text{-}Heating\ Oil\ 4}$	2.5676	0.1096	2.5436	0.1111
$\rho_{S\&P500\text{-}Heating\ Oil\ 1} \not\Rightarrow OI$	0.4325	0.5111	0.0079	0.9291
$\rho_{S\&P500\text{-}Heating\ Oil\ 2} \not\Rightarrow OI$	0.3704	0.543	0.0156	0.9006
$\rho_{S\&P500\text{-}Heating\ Oil\ 3} \not\Rightarrow OI$	0.1786	0.6727	0.0169	0.8965
$\rho_{S\&P500\text{-}Heating\ Oil\ 4} \not\Rightarrow OI$	0.061	0.8049	0.0479	0.8268

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.82: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Natural\ Gas\ 1}$	0.4538	0.5008	0.1653	0.6845
$OI \not\Rightarrow \rho_{S\&P500\text{-}Natural\ Gas\ 2}$	0.4949	0.4821	0.2062	0.6499
$OI \not\Rightarrow \rho_{S\&P500\text{-}Natural\ Gas\ 3}$	0.3189	0.5725	0.3632	0.5469
$OI \not\Rightarrow \rho_{S\&P500\text{-}Natural\ Gas\ 4}$	0.2507	0.6167	0.2999	0.5841
$\rho_{S\&P500\text{-}Natural\ Gas\ 1} \not\Rightarrow OI$	0.0897	0.7646	0.0086	0.9263
$\rho_{S\&P500\text{-}Natural\ Gas\ 2} \not\Rightarrow OI$	0.4882	0.485	0.0011	0.9739
$\rho_{S\&P500\text{-}Natural\ Gas\ 3} \not\Rightarrow OI$	0.004	0.9497	0.7083	0.4003
$\rho_{S\&P500\text{-}Natural\ Gas\ 4} \not\Rightarrow OI$	0.1449	0.7036	1.8475	0.1744

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.

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

Table C.83: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Gold\ 1}$	0.9468	0.3309	3.349	0.0676*
$OI \not\Rightarrow \rho_{S\&P500\text{-}Gold\ 2}$	0.9947	0.319	3.8824	0.0491**
$OI \not\Rightarrow \rho_{S\&P500\text{-}Gold\ 3}$	0.8333	0.3617	3.3518	0.0675*
$OI \not\Rightarrow \rho_{S\&P500\text{-}Gold\ 4}$	1.0049	0.3165	2.893	0.0893*
$\rho_{S\&P500\text{-}Gold\ 1} \not\Rightarrow OI$	0.2833	0.5948	0.6543	0.4188
$\rho_{S\&P500\text{-}Gold\ 2} \not\Rightarrow OI$	0.531	0.4665	0.6796	0.41
$\rho_{S\&P500\text{-}Gold\ 3} \not\Rightarrow OI$	0.5056	0.4773	0.6738	0.412
$\rho_{S\&P500\text{-}Gold\ 4} \not\Rightarrow OI$	0.4733	0.4917	0.6307	0.4273

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.

Table C.84: Granger causality test between conditional correlation and open interest

	Pre-financialisation		Financialisation	
Null Hypothesis	F Statistic	p-value	F Statistic	p-value
$OI \not\Rightarrow \rho_{S\&P500\text{-}Copper\ 1}$	5.7601	0.0167**	0.7263	0.3943
$OI \not\Rightarrow \rho_{S\&P500\text{-}Copper\ 2}$	4.5612	0.0331**	0.8425	0.3589
$OI \not\Rightarrow \rho_{S\&P500\text{-}Copper\ 3}$	5.3418	0.0212**	0.7223	0.3956
$OI \not\Rightarrow \rho_{S\&P500\text{-}Copper\ 4}$	5.0649	0.0248**	0.4077	0.5233
$\rho_{S\&P500\text{-}Copper\ 1} \not\Rightarrow OI$	0.7762	0.3787	0.4118	0.5212
$\rho_{S\&P500\text{-}Copper\ 2} \not\Rightarrow OI$	0.7517	0.3863	0.4119	0.5212
$\rho_{S\&P500\text{-}Copper\ 3} \not\Rightarrow OI$	0.7839	0.3763	0.2996	0.5843
$\rho_{S\&P500\text{-}Copper\ 4} \not\Rightarrow OI$	0.7651	0.3821	0.4621	0.4968

Note:
The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of open interest during pre-financialisation period and financialisation period. ρ and OI represent conditional correlation and open interest respectively.
* $\not\Rightarrow$ means "does not Granger-cause". ***, **, and * denote statistical significance at 1%, 5%, and 10% level.