

Table C.1: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SP \nRightarrow \rho_{SP500-Wheat\ 1}$	0.104	0.7472	6.1064	0.0137**
$SP \nRightarrow \rho_{SP500-Wheat\ 2}$	0.1959	0.6582	7.0728	0.008***
$SP \nRightarrow \rho_{SP500-Wheat\ 3}$	2.6934	0.1013	6.8467	0.009***
$SP \nRightarrow \rho_{SP500-Wheat\ 4}$	3.0537	0.0811*	5.4412	0.0199**
$\rho_{SP500-Wheat\ 1} \nRightarrow SP$	0.2096	0.6473	0.0022	0.9629
$\rho_{SP500-Wheat\ 2} \nRightarrow SP$	0.3501	0.5543	0.001	0.9746
$\rho_{SP500-Wheat\ 3} \nRightarrow SP$	0.0322	0.8577	0.179	0.6723
$\rho_{SP500-Wheat\ 4} \nRightarrow SP$	0.0547	0.8152	0.0037	0.9517

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.2: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{SP500-KC \text{ Wheat } 1}$	0.1134	0.7364	1e-04	0.9919
$IR \nRightarrow \rho_{SP500-KC \text{ Wheat } 2}$	0.033	0.856	1e-04	0.9934
$IR \nRightarrow \rho_{SP500-KC \text{ Wheat } 3}$	0.0495	0.8239	0.0838	0.7723
$IR \nRightarrow \rho_{SP500-KC \text{ Wheat } 4}$	0.2178	0.6409	0.1072	0.7435
$\rho_{SP500-KC \text{ Wheat } 1} \nRightarrow IR$	0.4402	0.5073	1.7577	0.1853
$\rho_{SP500-KC \text{ Wheat } 2} \nRightarrow IR$	0.8879	0.3465	1.4952	0.2218
$\rho_{SP500-KC \text{ Wheat } 3} \nRightarrow IR$	0.5974	0.4399	1.3564	0.2445
$\rho_{SP500-KC \text{ Wheat } 4} \nRightarrow IR$	0.2261	0.6346	1.2328	0.2672

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{\text{Non-commercial Long Position}}{\text{Total Open Interest}}$  following Robles and Von Braun (2010).

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

Table C.3: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Corn\ 1}$	0.5266	0.4683	0.4897	0.4843
$IR \nRightarrow \rho_{S\&P500-Corn\ 2}$	1.0792	0.2993	0.7733	0.3795
$IR \nRightarrow \rho_{S\&P500-Corn\ 3}$	1.457	0.2279	1.0361	0.309
$IR \nRightarrow \rho_{S\&P500-Corn\ 4}$	0.6475	0.4214	0.9194	0.3379
$\rho_{S\&P500-Corn\ 1} \nRightarrow IR$	0.0497	0.8236	0.0581	0.8096
$\rho_{S\&P500-Corn\ 2} \nRightarrow IR$	0.003	0.9563	0.0956	0.7573
$\rho_{S\&P500-Corn\ 3} \nRightarrow IR$	0.0971	0.7555	0.0205	0.8861
$\rho_{S\&P500-Corn\ 4} \nRightarrow IR$	0.509	0.4758	0.3532	0.5525

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.4: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Soybean\ 1}$	5.7679	0.0166**	0.0464	0.8294
$IR \nRightarrow \rho_{S\&P500-Soybean\ 2}$	8.1173	0.0045***	0.0688	0.7932
$IR \nRightarrow \rho_{S\&P500-Soybean\ 3}$	9.6263	0.002***	0.202	0.6532
$IR \nRightarrow \rho_{S\&P500-Soybean\ 4}$	12.4883	4e-04***	0.138	0.7104
$\rho_{S\&P500-Soybean\ 1} \nRightarrow IR$	0.1655	0.6843	0.2702	0.6033
$\rho_{S\&P500-Soybean\ 2} \nRightarrow IR$	0.54	0.4627	0.0153	0.9015
$\rho_{S\&P500-Soybean\ 3} \nRightarrow IR$	0.2118	0.6456	0.064	0.8004
$\rho_{S\&P500-Soybean\ 4} \nRightarrow IR$	0.2155	0.6426	0.0093	0.923

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.5: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Soybean\ Oil\ 1}$	0.4367	0.509	9e-04	0.9766
$IR \nRightarrow \rho_{S\&P500-Soybean\ Oil\ 2}$	0.8248	0.3642	0.0099	0.9207
$IR \nRightarrow \rho_{S\&P500-Soybean\ Oil\ 3}$	0.568	0.4514	0.0066	0.9353
$IR \nRightarrow \rho_{S\&P500-Soybean\ Oil\ 4}$	1.0844	0.2982	0.0158	0.9
$\rho_{S\&P500-Soybean\ Oil\ 1} \nRightarrow IR$	2.2414	0.1349	0.1693	0.6809
$\rho_{S\&P500-Soybean\ Oil\ 2} \nRightarrow IR$	1.6212	0.2034	0.2064	0.6498
$\rho_{S\&P500-Soybean\ Oil\ 3} \nRightarrow IR$	1.3015	0.2544	0.2623	0.6087
$\rho_{S\&P500-Soybean\ Oil\ 4} \nRightarrow IR$	1.8081	0.1793	0.327	0.5676

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.6: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Oats\ 1}$	4.2428	0.0399**	2.6453	0.1042
$IR \nRightarrow \rho_{S\&P500-Oats\ 2}$	6.105	0.0138**	3.8755	0.0493**
$IR \nRightarrow \rho_{S\&P500-Oats\ 3}$	4.8441	0.0281**	2.6092	0.1066
$\rho_{S\&P500-Oats\ 1} \nRightarrow IR$	0.0174	0.8952	1.1415	0.2856
$\rho_{S\&P500-Oats\ 2} \nRightarrow IR$	0.1233	0.7256	0.2366	0.6268
$\rho_{S\&P500-Oats\ 3} \nRightarrow IR$	0.0438	0.8343	0.0145	0.9043

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.7: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SI \nRightarrow \rho_{S\&P500-MPLS \text{ Wheat } 1}$	0.0538	0.8166	0.0175	0.8948
$SI \nRightarrow \rho_{S\&P500-MPLS \text{ Wheat } 2}$	0.0182	0.8927	0.0071	0.9331
$SI \nRightarrow \rho_{S\&P500-MPLS \text{ Wheat } 3}$	0.0474	0.8277	0.0336	0.8545
$SI \nRightarrow \rho_{S\&P500-MPLS \text{ Wheat } 4}$	0.1669	0.6831	0.142	0.7064
$\rho_{S\&P500-MPLS \text{ Wheat } 1} \nRightarrow SI$	2.1231	0.1458	0.359	0.5492
$\rho_{S\&P500-MPLS \text{ Wheat } 2} \nRightarrow SI$	0.9298	0.3354	0.1467	0.7018
$\rho_{S\&P500-MPLS \text{ Wheat } 3} \nRightarrow SI$	1.1871	0.2765	0.1992	0.6555
$\rho_{S\&P500-MPLS \text{ Wheat } 4} \nRightarrow SI$	0.2696	0.6038	0.0441	0.8337

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{\text{Non-commercial Long Position}}{\text{Total Open Interest}}$  following Robles and Von Braun (2010).

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

Table C.8: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Soybean \text{ Meal } 1}$	5.1186	0.024**	0.6205	0.4311
$IR \nRightarrow \rho_{S\&P500-Soybean \text{ Meal } 2}$	4.2049	0.0408**	0.8775	0.3492
$IR \nRightarrow \rho_{S\&P500-Soybean \text{ Meal } 3}$	4.9306	0.0268**	1.3841	0.2397
$IR \nRightarrow \rho_{S\&P500-Soybean \text{ Meal } 4}$	4.9716	0.0262**	1.04	0.3081
$IR \nRightarrow \rho_{S\&P500-Soybean \text{ Oil } 1}$	1.5296	0.2167	0.029	0.8648
$\rho_{S\&P500-Soybean \text{ Meal } 1} \nRightarrow IR$	3.3507	0.0677*	0.0111	0.9161
$\rho_{S\&P500-Soybean \text{ Meal } 2} \nRightarrow IR$	1.6042	0.2058	0.4421	0.5063
$\rho_{S\&P500-Soybean \text{ Meal } 3} \nRightarrow IR$	1.1185	0.2907	0.6287	0.4281
$\rho_{S\&P500-Soybean \text{ Meal } 4} \nRightarrow IR$	0.7457	0.3882	0.3015	0.5831
$\rho_{S\&P500-Soybean \text{ Oil } 1} \nRightarrow IR$	0.0074	0.9316	0.1084	0.7421

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{\text{Non-commercial Long Position}}{\text{Total Open Interest}}$  following Robles and Von Braun (2010).

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

Table C.9: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$SI \nRightarrow \rho_{S\&P500-Rough\ Rice\ 1}$	7.6548	0.0059***	0.0605	0.8057
$SI \nRightarrow \rho_{S\&P500-Rough\ Rice\ 2}$	8.5577	0.0036***	0.4528	0.5012
$SI \nRightarrow \rho_{S\&P500-Rough\ Rice\ 3}$	4.8054	0.0289**	0.1417	0.7067
$\rho_{S\&P500-Rough\ Rice\ 1} \nRightarrow SI$	1.4044	0.2366	0.9743	0.3239
$\rho_{S\&P500-Rough\ Rice\ 2} \nRightarrow SI$	0.5924	0.4419	1.1452	0.2849
$\rho_{S\&P500-Rough\ Rice\ 3} \nRightarrow SI$	1.0788	0.2995	1.5761	0.2097

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.10: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Coffee\ 1}$	8.6902	0.0033***	2.8031	0.0945*
$IR \nRightarrow \rho_{S\&P500-Coffee\ 2}$	9.5601	0.0021***	3.4557	0.0634*
$IR \nRightarrow \rho_{S\&P500-Coffee\ 3}$	8.4574	0.0038***	4.1817	0.0412**
$IR \nRightarrow \rho_{S\&P500-Coffee\ 4}$	7.7583	0.0055***	4.101	0.0432**
$\rho_{S\&P500-Coffee\ 1} \nRightarrow IR$	0.3203	0.5717	3.5388	0.0603*
$\rho_{S\&P500-Coffee\ 2} \nRightarrow IR$	0.5138	0.4738	3.9939	0.046**
$\rho_{S\&P500-Coffee\ 3} \nRightarrow IR$	0.28	0.5969	4.2292	0.04**
$\rho_{S\&P500-Coffee\ 4} \nRightarrow IR$	0.1555	0.6935	4.0542	0.0444**

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.11: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Sugar\ 1}$	0.2618	0.6091	0.8486	0.3572
$IR \nRightarrow \rho_{S\&P500-Sugar\ 3}$	0.2142	0.6437	1.0882	0.2972
$IR \nRightarrow \rho_{S\&P500-Sugar\ 4}$	0.3782	0.5388	1.1902	0.2756
$\rho_{S\&P500-Sugar\ 1} \nRightarrow IR$	0.237	0.6266	0.2673	0.6053
$\rho_{S\&P500-Sugar\ 3} \nRightarrow IR$	0.2745	0.6005	0.126	0.7227
$\rho_{S\&P500-Sugar\ 4} \nRightarrow IR$	0.6692	0.4137	0.0116	0.9142

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.12: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Cocoa\ 1}$	0.3167	0.5738	2.7505	0.0976*
$IR \nRightarrow \rho_{S\&P500-Cocoa\ 2}$	0.4525	0.5014	1.6256	0.2027
$IR \nRightarrow \rho_{S\&P500-Cocoa\ 3}$	0.4285	0.513	1.767	0.1841
$IR \nRightarrow \rho_{S\&P500-Cocoa\ 4}$	0.8091	0.3688	2.1109	0.1466
$\rho_{S\&P500-Cocoa\ 1} \nRightarrow IR$	0.0201	0.8872	0.0971	0.7554
$\rho_{S\&P500-Cocoa\ 2} \nRightarrow IR$	7e-04	0.9788	0.11	0.7402
$\rho_{S\&P500-Cocoa\ 3} \nRightarrow IR$	0.0106	0.9182	0.1445	0.7039
$\rho_{S\&P500-Cocoa\ 4} \nRightarrow IR$	0.021	0.8849	0.1782	0.6731

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.13: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Cotton\ 1}$	0.0319	0.8584	0.3905	0.5322
$IR \nRightarrow \rho_{S\&P500-Cotton\ 2}$	0.2683	0.6047	1.272	0.2597
$IR \nRightarrow \rho_{S\&P500-Cotton\ 3}$	0.0682	0.7941	0.2751	0.6
$IR \nRightarrow \rho_{S\&P500-Cotton\ 4}$	0.0561	0.8128	0.0079	0.929
$\rho_{S\&P500-Cotton\ 1} \nRightarrow IR$	0.93	0.3353	1.1966	0.2743
$\rho_{S\&P500-Cotton\ 2} \nRightarrow IR$	0.5774	0.4477	0.38	0.5378
$\rho_{S\&P500-Cotton\ 3} \nRightarrow IR$	1.2039	0.273	1.4974	0.2214
$\rho_{S\&P500-Cotton\ 4} \nRightarrow IR$	1.7132	0.1911	2.9289	0.0874*

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.14: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Orange\ Juice\ 2}$	0.1337	0.7148	4.2058	0.0406**
$IR \nRightarrow \rho_{S\&P500-Orange\ Juice\ 3}$	0.0691	0.7927	4.1835	0.0411**
$IR \nRightarrow \rho_{S\&P500-Orange\ Juice\ 4}$	0.1869	0.6656	2.7713	0.0963*
$IR \nRightarrow \rho_{S\&P500-Orange\ Juice\ 5}$	0.0121	0.9125	2.1554	0.1424
$\rho_{S\&P500-Orange\ Juice\ 2} \nRightarrow IR$	0.1628	0.6868	0.1597	0.6895
$\rho_{S\&P500-Orange\ Juice\ 3} \nRightarrow IR$	0.0457	0.8308	0.0077	0.9301
$\rho_{S\&P500-Orange\ Juice\ 4} \nRightarrow IR$	0.2672	0.6054	0.0513	0.8208
$\rho_{S\&P500-Orange\ Juice\ 5} \nRightarrow IR$	0.2304	0.6314	0.0058	0.9393

Note:

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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



Table C.15: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{SP500-Lumber\ 1}$	0.3052	0.5808	0.154	0.6949
$IR \nRightarrow \rho_{SP500-Lumber\ 2}$	0.569	0.451	0.0153	0.9016
$\rho_{SP500-Lumber\ 1} \nRightarrow IR$	0.7462	0.3881	1.9592	0.162
$\rho_{SP500-Lumber\ 2} \nRightarrow IR$	0.4725	0.4921	2.7916	0.0951*

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.16: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{SP500-Live\ Cattle\ 1}$	4.8657	0.0278**	3.5503	0.0599*
$IR \nRightarrow \rho_{SP500-Live\ Cattle\ 2}$	2.5428	0.1114	1.7712	0.1836
$IR \nRightarrow \rho_{SP500-Live\ Cattle\ 3}$	1.1979	0.2742	3.5311	0.0606*
$IR \nRightarrow \rho_{SP500-Live\ Cattle\ 4}$	6.165	0.0133**	0.7283	0.3937
$\rho_{SP500-Live\ Cattle\ 1} \nRightarrow IR$	0.0389	0.8437	0.8395	0.3598
$\rho_{SP500-Live\ Cattle\ 2} \nRightarrow IR$	3.27	0.0711*	0.1881	0.6646
$\rho_{SP500-Live\ Cattle\ 3} \nRightarrow IR$	4.1106	0.0431**	0.0489	0.8251
$\rho_{SP500-Live\ Cattle\ 4} \nRightarrow IR$	0.7689	0.3809	0.3368	0.5618

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.17: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Feeder\ Cattle\ 1}$	0.7312	0.3929	0.3618	0.5476
$IR \nRightarrow \rho_{S\&P500-Feeder\ Cattle\ 2}$	0.3419	0.559	0.0529	0.8181
$IR \nRightarrow \rho_{S\&P500-Feeder\ Cattle\ 3}$	0.4271	0.5137	0.0976	0.7548
$IR \nRightarrow \rho_{S\&P500-Feeder\ Cattle\ 4}$	1.91	0.1675	0.3468	0.5561
$\rho_{S\&P500-Feeder\ Cattle\ 1} \nRightarrow IR$	1.0365	0.3091	0.1573	0.6917
$\rho_{S\&P500-Feeder\ Cattle\ 2} \nRightarrow IR$	0.802	0.3709	1.7962	0.1805
$\rho_{S\&P500-Feeder\ Cattle\ 3} \nRightarrow IR$	0.1244	0.7244	0.4884	0.4849
$\rho_{S\&P500-Feeder\ Cattle\ 4} \nRightarrow IR$	2.3592	0.1251	0.5969	0.44

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.18: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Heating\ Oil\ 1}$	0.3903	0.5324	0.5773	0.4476
$IR \nRightarrow \rho_{S\&P500-Heating\ Oil\ 2}$	0.2937	0.5881	0.6308	0.4273
$IR \nRightarrow \rho_{S\&P500-Heating\ Oil\ 3}$	0.1637	0.6859	1.4282	0.2324
$IR \nRightarrow \rho_{S\&P500-Heating\ Oil\ 4}$	0.08	0.7774	1.5362	0.2155
$\rho_{S\&P500-Heating\ Oil\ 1} \nRightarrow IR$	0.4866	0.4858	0.1445	0.704
$\rho_{S\&P500-Heating\ Oil\ 2} \nRightarrow IR$	0.4476	0.5037	0.1138	0.736
$\rho_{S\&P500-Heating\ Oil\ 3} \nRightarrow IR$	0.3938	0.5306	0.0355	0.8507
$\rho_{S\&P500-Heating\ Oil\ 4} \nRightarrow IR$	0.3769	0.5395	0.0108	0.9171

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.19: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Natural\ Gas\ 1}$	3.5088	0.0616*	0.0223	0.8814
$IR \nRightarrow \rho_{S\&P500-Natural\ Gas\ 2}$	3.9791	0.0465**	0.0867	0.7685
$IR \nRightarrow \rho_{S\&P500-Natural\ Gas\ 3}$	5.0651	0.0248**	0.0647	0.7992
$IR \nRightarrow \rho_{S\&P500-Natural\ Gas\ 4}$	6.298	0.0124**	0.0072	0.9322
$\rho_{S\&P500-Natural\ Gas\ 1} \nRightarrow IR$	0.5414	0.4622	0.0964	0.7562
$\rho_{S\&P500-Natural\ Gas\ 2} \nRightarrow IR$	0.3772	0.5393	0.0341	0.8535
$\rho_{S\&P500-Natural\ Gas\ 3} \nRightarrow IR$	0.169	0.6812	0.0997	0.7522
$\rho_{S\&P500-Natural\ Gas\ 4} \nRightarrow IR$	0.0029	0.9574	0.2926	0.5887

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.20: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Gold\ 1}$	0.2605	0.61	5.7832	0.0164**
$IR \nRightarrow \rho_{S\&P500-Gold\ 2}$	0.1695	0.6807	6.0191	0.0144**
$IR \nRightarrow \rho_{S\&P500-Gold\ 3}$	0.1609	0.6885	6.7587	0.0095***
$IR \nRightarrow \rho_{S\&P500-Gold\ 4}$	0.2828	0.5951	5.3106	0.0214**
$\rho_{S\&P500-Gold\ 1} \nRightarrow IR$	0	0.9989	0.0016	0.9679
$\rho_{S\&P500-Gold\ 2} \nRightarrow IR$	0.0044	0.9474	0.2153	0.6427
$\rho_{S\&P500-Gold\ 3} \nRightarrow IR$	9e-04	0.9766	0.1811	0.6706
$\rho_{S\&P500-Gold\ 4} \nRightarrow IR$	0.0016	0.9678	0.0395	0.8426

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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

Table C.21: Granger causality test between conditional correlation and speculation index (robustness)

Null Hypothesis	Pre-financialisation		Financialisation	
	F Statistic	p-value	F Statistic	p-value
$IR \nRightarrow \rho_{S\&P500-Copper\ 1}$	0.0794	0.7782	1.6345	0.2014
$IR \nRightarrow \rho_{S\&P500-Copper\ 2}$	0.0095	0.9223	1.81	0.1789
$IR \nRightarrow \rho_{S\&P500-Copper\ 3}$	0.0044	0.9469	1.4247	0.233
$IR \nRightarrow \rho_{S\&P500-Copper\ 4}$	0.0248	0.8749	1.6051	0.2055
$\rho_{S\&P500-Copper\ 1} \nRightarrow IR$	2.4181	0.1205	2.2298	0.1358
$\rho_{S\&P500-Copper\ 2} \nRightarrow IR$	1.9765	0.1603	1.4109	0.2353
$\rho_{S\&P500-Copper\ 3} \nRightarrow IR$	2.0165	0.1561	1.4168	0.2343
$\rho_{S\&P500-Copper\ 4} \nRightarrow IR$	1.7953	0.1808	2.328	0.1275

*Note:*

The table reports the results of the Granger causality test between the first differences of conditional correlation and the first differences of speculation index during pre-financialisation period and financialisation period.  $\rho$  and  $SI$  represent conditional correlation and speculation index respectively. Speculation index is measured by  $\frac{Non-commercial\ Long\ Position}{Total\ Open\ Interest}$  following Robles and Von Braun (2010).

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