Sovereign CDS Trading and Manipulation

Yi Li*

January 11, 2024

DRAFT

CDS Manipulation Overview

Duffie(2010) illustrated several ways in manipulation "naked" CDS. The first way is through demand-based price pressure. This type manipulation requires the manipulators to take large positions relative to the underlying debt amount outstanding. Therefore, if manipulation comes from the price, then: first, manipulators' CDS position would be comparably large compared to underlying debt amount. Second, once the banning regulation is implemented, the CDS price should fall sharply.

The second source of manipulation is from the misleading price information, which requires the manipulator to first short a large amount of the underlying bond, then overpay for a small amount of CDS protection. We now test whether the Greek speculation is raising from the second source of manipulation. We use the Granger causality test to show the direction of information flow between the sovereign bond market and CDS market. Our hypothesis is that if the Greek manipulation is from the misleading price information, then before banning the "naked" sovereign CDS trading, Greek CDS spread changes should granger cause the Greek bond yield changes. After banning "naked" sovereign CDS trading, the changes of Greek bond

*Please send correspondence to Yi Li. Telephone: (+86) 134 7289 1956. E-mail: liyifinhub@outlook.com. Personal website: https://yilifinhub.com/

Table 1: Results of the Granger Causality Test

	CDS does not lead bond			Bond does not lead CDS		
First Period: January 2008 - May 2012						
Country	P-Statistic	Optional Lags	Accept /Reject	P-Statistic	Optional Lags	Accept /Reject
Austria	0.0	2	R	95.6	2	A
Netherlands	0.0	1	R	97.5	1	A
Portugal	44.3	1	A	0.0	1	R
Spain	0.3	3	R	6.4	3	A
Greece	0.0	1	R	0.0	1	R
Ireland	0.0	1	R	0.9	1	R
Second Period: May 2010 - October 2012						
Country	P-Statistic	Optional Lags	Accept /Reject	P-Statistic	Optional Lags	Accept /Reject
Austria	0.2	6	R	59.2	6	A
Italy	16.0	2	A	0.4	2	R
Greece	0.0	2	R	2.7	2	A
Third Period: November 2012 - July 2015						
Country	P-Statistic	Optional Lags	Accept /Reject	P-Statistic	Optional Lags	Accept /Reject
Greece	9.4	1	A	0.3	1	R

yields should granger cause the changes of Greek CDS spreads. We use the first difference of the CDS data as input to get rid of the co-integration problem. We set the rejection of hypothesis as 99%.

Table 1 shows the results of Granger causality test of 10 sovereigns for three sub-periods. We only report the results significant at 1%. We can see that for the second period (European Debt Crisis), the changes of Greek CDS spreads granger cause the changes of Greek bond yields. After banning the "naked" SCDS trading (third period), the changes of Greek bond yields granger cause the changes of Greek CDS spreads. Therefore, we conclude that the Greek manipulation is raising from the mis-leading price information. However, the results for other sovereigns are mixing. The changes of Italian CDS spreads granger caused by the changes of

DRAFT

Table 2: Market Sovereign CDS Trading Reaction Towards Events (DTCC)

Market Reaction Towards Events										
EU Announcemetn of Banning Naked CDS: March 23, 2012										
	FR	DE	AT	NL	BE	IT	PT	ES	GR	IE
Gross	124.84	96.92	-23.41	147.91	373.76	47.08	131.53	94.41	-98.16	182.47
Contract	76.06	120.00	17.14	262.50	136.84	90.84	204.16	52.75	-97.51	169.04
Turnover	126.81	97.47	-21.26	156.24	386.32	51.27	140.35	96.22	58.28	192.99
EU Announcement of Banning Naked CDS Trading: March 30, 2012										
Gross	-56.33	-25.91	-28.06	50.44	-67.60	-14.34	-40.58	-50.73	N/A	-53.40
Contract	-50.97	-59.28	-39.02	27.58	-72.22	-43.15	-50.68	-44.32	N/A	-60.17
Turnover	-55.63	-27.44	-27.87	46.71	-67.43	-8.7	-41.57	-50.85	N/A	-51.85
Before Banning Announcement: November 18, 2011-March 02, 2012(Average)										
Gross	22.13	44.36	5.66	27.75	75.56	35.16	62.42	11.93	134.62	65.78
Contract	10.61	44.22	10.51	82.14	28.74	11.57	32.09	77.98	74.82	40.14
Turnover	22.33	44.48	6.35	26.73	77.04	34.54	63.08	13.77	82.16	65.19
Market Reaction Towards Events										
Official Banning Naked CDS Trading: October 26, 2012										
	FR	DE	AT	NL	BE	IT	PT	ES	GR	IE
Gross	77.30	8.46	-48.74	-1.01	-22.46	0.48	-26.41	-23.41	N/A	-8.88
Contract	58.20	-20.43	-52.77	0.00	-63.09	-13.00	-43.66	-52.66	N/A	-10.34
Turnover	88.25	10.10	-48.20	-6.16	-22.25	3.03	-26.90	-22.67	N/A	-8.01
Official Banning Naked CDS Trading: November 02, 2012										
Gross	-27.51	49.91	167.66	-0.37	-10.88	-20.61	17.51	-11.15	N/A	75.00
Contract	-37.73	137.16	261.76	146.66	-9.67	-12.88	60.00	-5.91	N/A	15.38
Turnover	-25.16	55.91	168.52	3.56	-11.00	-20.70	18.11	-9.59	N/A	68.52
Before EU Banning Naked CDS:March 30, 2012-October 26, 2012(Average)										
Gross	14.91	23.52	110.83	22.98	22.59	19.79	49.82	20.40	N/A	46.13
Contract	16.56	14.11	47.98	52.07	20.96	11.09	17.73	13.56	N/A	35.26
Turnover	16.13	24.18	109.92	22.92	23.47	19.83	49.92	21.22	N/A	47.05

DRAFT

bond spreads during the European debt crisis period. For the Post U.S. financial crisis period, for most sovereign, the changes of sovereign CDS spreads granger caused the changes of bond spreads except for Portugal.

Sovereign CDS Trading Activities

As shown in Table 2, there is a positive market reaction of the weekly traded gross notional amount and number of traded contracts the day before the announcement and a decline market activity afterwards. This holds for almost all sovereigns except Austria. In terms of the regulation implementation, there is no signifiant market reaction toward this event as expected. Since for the announcement date, market knows in advance that EU would provide a speech regarding to the ban on "naked" sovereign CDS on March 24, 2012[1].

Due to investor concerns that regulation may be implemented shortly after the announcement is made, an active trading might be observed right before the announcement date. As shown in Table 2, market reacted positively before the announcement and negatively after the announcement. On the implementation date, the market did not have a significant response to this event as expected.

DRAFT

[1] What remained uncertain was when this regulation will be implemented.

References

Duffie Darrell, 2010, “Is There a Case for Banning Short Speculation in Sovereign BondMarkets?,” Banque de France, Financial Stability Review, pp. 55-59.

DRAFT