

1. Occurrences of actual trades on COW Protocol on Gnosis Chain classified under trade_volume_Usd (01.01.2022 – 26.07.2022)																										
FROM	TO	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	15000	20000	25000	30000	35000	40000	50000	60000	70000	80000	90000	100000	150000	200000	250000
0 WXDAI	GNO	2594	23	14	6	1	1	1	1	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1 WXDAI	WETH	3125	35	15	4	1	2	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2 WXDAI	USDC	2989	99	48	23	34	24	9	5	7	4	8	6	0	0	1	0	0	1	0	0	0	0	0	0	0
3 GNO	WXDAI	120	19	3	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 GNO	WETH	475	26	6	1	0	1	2	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0
5 GNO	USDC	150	8	5	1	3	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6 WETH	WXDAI	494	15	2	1	0	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 WETH	GNO	2219	20	2	3	3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8 WETH	USDC	224	4	1	3	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
9 USDC	WXDAI	757	6	11	4	4	0	3	2	0	0	0	1	0	0	2	0	0	0	0	0	0	0	1	0	0
10 USDC	GNO	353	14	6	0	1	3	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 USDC	WETH	1544	12	0	1	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2. Arbitrage difference in % from calling 1Inch API for different trade volumes

gnosis_from	gnosis_to	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	15000	20000	25000	30000	35000	40000	50000	60000	70000	80000	90000	100000	150000	200000	250000
0 WXDAI_gnosi	GNO_gnosis	0.11	0.08	0.30	0.44	0.65	1.06	1.25	1.46	1.62	1.82	2.89	3.91	4.94	5.97	6.96	8.01	10.09	12.18	14.26	16.52	18.59	20.66	30.94	42.62	55.78
1 WXDAI_gnosi	WETH_gnosis	0.76	2.33	2.60	3.14	3.11	3.74	4.33	5.25	5.81	6.43	9.52	12.43	15.35	18.07	20.82	23.77	29.65	36.77	46.39	56.59	66.98	77.34	133.94	196.36	252.84
2 WXDAI_gnosi	USDC_gnosis	0.02	0.02	0.02	0.35	0.34	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.07	0.06	0.06	0.09	0.08	0.03	0.04	0.05	0.05	0.06
3 GNO_gnosis	WXDAI_gnosis	0.39	0.53	0.67	0.82	0.96	1.11	1.25	1.40	1.54	1.68	2.40	3.02	3.60	4.34	5.01	5.68	7.02	8.36	9.70	11.04	12.38	13.72	20.39	26.89	33.41
4 GNO_gnosis	WETH_gnosis	0.41	0.49	0.54	0.58	0.62	0.65	0.69	0.73	0.76	0.80	0.97	1.14	1.30	1.47	1.64	1.81	2.15	2.48	2.82	3.15	3.49	3.83	5.50	7.18	8.85
5 GNO_gnosis	USDC_gnosis	0.38	0.53	0.67	0.79	0.97	1.11	1.26	1.40	1.55	1.70	2.42	3.08	3.70	4.37	5.04	5.71	7.05	8.40	9.74	11.08	12.42	13.76	20.44	26.97	33.50
6 WETH_gnosis	WXDAI_gnosis	0.83	1.34	1.83	2.32	2.80	3.29	3.96	3.70	4.53	5.27	7.71	9.33	10.71	13.62	17.42	17.25	21.33	29.30	33.22	34.11	39.48	47.26	97.83	138.38	187.59
7 WETH_gnosis	GNO_gnosis	-0.47	-0.41	-0.35	-0.30	-0.24	-0.19	-0.14	-0.08	-0.03	0.02	0.29	0.55	0.82	1.08	1.34	1.60	2.13	2.65	3.18	3.70	4.22	4.75	7.36	9.96	12.56
8 WETH_gnosis	USDC_gnosis	2.95	3.37	1.91	2.41	2.78	3.11	3.52	3.84	4.52	4.92	7.94	8.87	12.90	12.89	17.77	19.16	25.00	29.63	33.58	38.57	39.86	54.28	93.61	152.04	194.17
9 USDC_gnosis	WXDAI_gnosis	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	0.08	0.08	0.06	0.05	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.13	0.13	0.13	0.00	0.00	0.00
10 USDC_gnosis	GNO_gnosis	0.25	0.65	0.86	1.11	1.09	1.52	1.65	1.85	1.87	2.08	3.13	4.44	5.47	6.47	7.50	8.47	10.53	12.58	14.61	16.81	18.88	20.95	31.76	43.63	56.97
11 USDC_gnosis	WETH_gnosis	1.03	1.73	2.40	3.06	3.73	4.40	5.06	5.94	6.58	7.24	10.51	13.74	17.07	20.40	23.97	27.28	34.39	44.17	55.72	66.77	79.58	92.09	158.36	225.40	295.82

3. Quantifying Actual opportunities if the arb was traded (in USD)

FROM	TO	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	15000	20000	25000	30000	35000	40000	50000	60000	70000	80000	90000	100000	150000	200000	250000	
0 WXDAI	GNO		34.73	125.82	106.43	32.51	63.57	87.82	117.16	0.00	181.71	577.71	1563.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1 WXDAI	WETH		1628.39	1169.41	502.19	0.02	449.35	303.36	839.46	523.33	0.00	0.00	2485.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2 WXDAI	USDC		42.72	31.22	319.47	0.36	38.06	16.71	10.65	16.83	10.73	21.84	33.34	0.00	0.00	10.24	0.00	0.00	35.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3 GNO	WXDAI		201.50	60.74	294.93	0.00	66.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4 GNO	WETH		253.91	96.84	23.17	0.00	39.28	96.60	0.00	0.00	0.00	0.00	227.26	0.00	441.92	0.00	0.00	0.00	0.00	1972.79	0.00	0.00	0.00	0.00	0.00	0.00	
5 GNO	USDC		84.38	101.09	31.51	0.02	66.70	0.00	0.00	0.00	0.00	242.46	615.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6 WETH	WXDAI		401.44	109.63	92.65	0.00	789.16	277.13	0.00	407.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7 WETH	GNO		-164.26	-21.20	-35.74	-0.02	0.00	-9.62	0.00	0.00	0.00	0.00	0.00	0.00	323.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8 WETH	USDC		269.70	57.33	289.74	0.00	186.31	0.00	307.29	0.00	0.00	0.00	0.00	0.00	3865.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9 USDC	WXDAI		-3.74	-10.25	-4.08	0.00	0.00	-5.29	-4.01	0.00	0.00	0.00	9.20	0.00	0.00	-6.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-5.80	0.00	0.00	
10 USDC	GNO		183.26	153.95	0.00	0.00	274.34	0.00	0.00	168.40	416.17	938.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11 USDC	WETH		414.48	0.00	122.51	0.00	527.68	354.53	0.00	0.00	723.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11 USDC	WETH	TOTAL	3346.52	1874.56	1742.77	32.89	2500.89	1121.25	1270.54	1116.01	1332.40	1780.75	4934.98	0.00	4631.37	3.43	0.00	0.00	35.45	1972.79	0.00	0.00	0.00	-5.80	0.00	0.00	27690.8