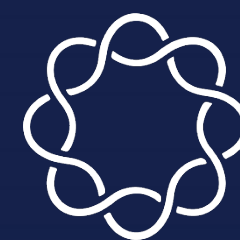
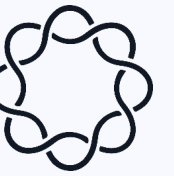


ΣYNTHETIX

New Listings Analysis



DELPHI DIGITAL

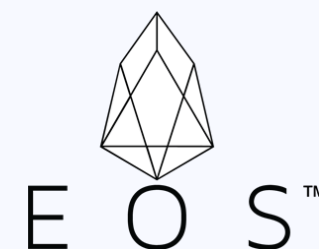


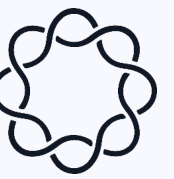
Preface

There were several goals we were trying accomplish as part of this asset listing framework, but the most important one was to ensure that all assets we approve to be listed on the platform are tamper resistant. As we mentioned in Phase I of this analysis, we think of tamper resistance as a spectrum, and built our parameters accordingly.

The various SIP's released over time have limited the main oracle-based attack vector to pure oracle manipulation. In general, oracle manipulation is a function of liquidity. The higher the liquidity, the costlier it would be to manipulate it. To start identifying assets we can feel comfortable adding to the exchange, we looked at nine assets of the top 20 which haven't been listed yet. Similar to our analysis of the existing assets, we tracked orderbook depth over time for each asset on both a cumulative basis (across all exchanges) and an exchange-based breakout. The goal was to get a realistic understanding of the cost of manipulation and ensure that our parameters remove any economic attack vectors. We present our findings throughout this report and have included all the supporting data within the Appendix.

Assets Covered





Final Results

We ranked the proposed assets from most to least expensive to manipulate. We also included the average amount necessary to shift the price by 10% in each direction for the period we tracked. This was the primary metric used to gauge an assets viability for the platform. Out of the nine assets we analyzed, six had enough liquidity to make use comfortable listing them in this phase. Stellar, LEO, and Huobi Token had very poor exchange-based liquidity. Stellar is a widely available asset trading on Binance and Coinbase Pro, but the trading volume, among other things, would indicate that there isn't much demand for it. The risk/reward here doesn't justify the listing. Huobi Token's liquidity isn't even remotely close to being an acceptable listing. LEO is an interesting scenario as its illiquidity is more of a function of where its listed rather than a lack of demand. There was a lot of interest early on that subsequently waned when burns were disappointing. As of late it's had a bit of a resurgence, but I think this is an asset we can think about listing later once we have the ability to incorporate features like open interest caps.

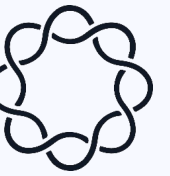
Tamper Resistance	Asset	Exchanges	Average Amount To Drop The Price by 10%	Average Amount To Raise The Price by 10%
	EOS (EOS)	Binance, Bitfinex, Coinbase, Huobi, Kraken, Poloniex	~\$5 million	~\$5 million
	Bitcoin Cash (BCH)	Bitstamp, Bitflyer, Bittrex, Coinbase, Huobi, Kraken, Okex	~\$4 million	~\$4 million
	Ethereum Classic (ETC)	Binance, Binance US, Bitfinex, Bittrex, Coinbase, Huobi, Kraken, Okex, Poloniex	~\$3.3 million	~\$3 million
	DASH (DASH)	Binance, Binance US, Bitfinex, Bittrex, Coinbase, Huobi, Kraken, Okex, Poloniex	~\$2 million	~\$2 million
	Monero (XMR)	Binance, Bitfinex, Bittrex, Huobi, Kraken, Okex, Poloniex	~\$2 million	~\$1.8 million
	Cardano (ADA)	Binance, Binance US, Bittrex, Huobi, Kraken, Okex	~\$2 million	~\$1.5 million
	Stellar (XLM)	Binance, Binance US, Bitfinex, Bittrex, Coinbase, Kraken, Poloniex	~\$2 million	~\$0.9 million
	LEO (LEO)	Bitfinex	~\$2 million	~\$0.5 million
	Huobi Token (HT)	Huobi	~\$0.32 million	~\$0.36 million

1: Period tracked for all data was from 3/15/2020 – 3/23/2020

Appendix



Bitcoin Cash (BCH)



Asset:	Bitcoin Cash
Ticker:	BCH
Exchanges:	7
Trading Pairs:	14

Exchanges: Bitstamp, Bitflyer, Bittrex,
Coinbase, Huobi, Kraken, OkEx

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$70,174	\$213,826	\$353,371	\$471,317	\$579,566	\$659,887	\$732,920	\$807,417	\$908,697	\$1,008,298	\$1,522,417	\$2,039,503	\$2,913,356	\$3,649,900	\$3,986,820	\$4,315,772
Median	\$62,639	\$210,559	\$359,760	\$480,829	\$593,642	\$677,442	\$751,629	\$823,912	\$936,153	\$1,027,349	\$1,548,995	\$2,069,037	\$2,917,209	\$3,575,286	\$3,923,104	\$4,217,633
STDEV	\$30,729	\$53,281	\$69,706	\$81,717	\$93,377	\$99,835	\$108,815	\$123,821	\$149,791	\$176,727	\$276,413	\$320,033	\$381,545	\$569,167	\$596,056	\$699,121
MAD	\$20,161	\$40,279	\$52,781	\$61,253	\$68,867	\$74,470	\$81,695	\$93,140	\$112,739	\$132,755	\$202,476	\$236,999	\$292,295	\$400,826	\$411,493	\$485,350
Min	\$20,819	\$71,018	\$136,488	\$198,313	\$256,350	\$309,606	\$354,457	\$397,813	\$437,210	\$478,417	\$704,662	\$1,003,033	\$1,644,335	\$2,136,526	\$2,430,514	\$2,904,423

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$61,334	\$193,218	\$316,325	\$422,994	\$520,759	\$595,565	\$666,407	\$739,243	\$832,363	\$921,855	\$1,366,548	\$1,780,580	\$2,588,512	\$3,269,737	\$3,593,036	\$3,902,901
Median	\$60,849	\$195,032	\$321,038	\$430,165	\$535,232	\$610,391	\$672,829	\$743,455	\$838,296	\$917,715	\$1,364,322	\$1,801,729	\$2,650,041	\$3,375,353	\$3,671,513	\$4,015,687
STDEV	\$18,093	\$48,049	\$67,362	\$82,800	\$99,409	\$109,617	\$125,950	\$149,739	\$181,919	\$213,935	\$320,154	\$365,952	\$438,602	\$521,233	\$567,670	\$613,874
MAD	\$13,863	\$36,476	\$50,276	\$63,360	\$78,003	\$86,800	\$101,180	\$121,617	\$147,730	\$173,905	\$252,982	\$287,770	\$346,925	\$421,984	\$465,500	\$506,036
Min	\$17,798	\$62,275	\$118,487	\$174,592	\$227,707	\$278,236	\$323,718	\$360,065	\$399,536	\$433,370	\$601,312	\$818,509	\$1,455,643	\$1,929,247	\$2,183,803	\$2,331,353

Asset:	Bitcoin Cash
Ticker:	BCH
Exchange:	Huobi
Trading Pairs:	2

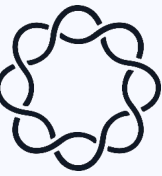
"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$28,515	\$98,822	\$156,933	\$195,984	\$229,417	\$250,784	\$271,875	\$295,491	\$327,095	\$356,814	\$488,780	\$587,835	\$627,708	\$627,753	\$627,753	\$627,753
Median	\$26,845	\$99,731	\$158,742	\$200,395	\$230,717	\$252,309	\$272,724	\$298,358	\$331,706	\$361,130	\$482,667	\$572,862	\$610,668	\$610,668	\$610,668	\$610,668
STDEV	\$12,804	\$26,836	\$34,397	\$39,478	\$44,912	\$48,787	\$53,138	\$60,189	\$68,284	\$77,019	\$103,444	\$104,954	\$96,801	\$96,738	\$96,738	\$96,738
MAD	\$7,820	\$19,513	\$24,979	\$27,733	\$33,136	\$37,003	\$41,379	\$48,406	\$55,753	\$63,437	\$83,925	\$83,891	\$78,539	\$78,499	\$78,499	\$78,499
Min	\$10,810	\$38,664	\$72,140	\$99,652	\$121,170	\$139,311	\$153,760	\$169,772	\$185,631	\$199,227	\$273,335	\$353,416	\$420,873	\$421,105	\$421,105	\$421,105

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$27,883	\$94,802	\$149,844	\$187,692	\$217,393	\$237,791	\$259,339	\$283,808	\$316,204	\$346,617	\$484,855	\$609,149	\$688,581	\$691,013	\$691,046	\$691,046
Median	\$27,021	\$97,739	\$153,762	\$190,852	\$219,541	\$238,491	\$255,619	\$274,063	\$304,250	\$327,313	\$454,231	\$594,293	\$689,815	\$690,344	\$690,344	\$690,344
STDEV	\$9,296	\$25,972	\$34,082	\$38,242	\$44,448	\$47,963	\$54,206	\$63,893	\$76,285	\$88,942	\$132,069	\$150,037	\$138,723	\$136,099	\$136,059	\$136,059
MAD	\$6,932	\$20,163	\$26,074	\$29,749	\$35,618	\$38,957	\$44,998	\$53,954	\$64,278	\$74,389	\$107,202	\$113,386	\$108,010	\$105,908	\$105,874	\$105,874
Min	\$8,980	\$30,488	\$54,782	\$75,428	\$93,698	\$113,122	\$132,251	\$142,342	\$154,795	\$170,878	\$249,381	\$334,882	\$405,257	\$405,748	\$405,748	\$405,748

Asset:	Bitcoin Cash
Ticker:	BCH
Exchange:	Coinbase
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$11,238	\$26,054	\$42,332	\$56,133	\$67,751	\$77,850	\$89,368	\$101,209	\$115,663	\$133,388	\$249,647	\$341,243	\$529,828	\$653,070	\$756,664	\$858,752
Median	\$10,922	\$25,889	\$42,933	\$55,663	\$66,686	\$77,814	\$88,113	\$98,750	\$111,109	\$126,774	\$241,845	\$340,204	\$526,894	\$654,273	\$752,345	\$868,827
STDEV	\$4,156	\$6,899	\$9,623	\$11,642	\$12,968	\$14,520	\$17,454	\$22,101	\$28,937	\$37,207	\$70,879	\$74,083	\$96,895	\$107,800	\$117,378	\$127,371
MAD	\$2,855	\$5,107	\$7,265	\$8,623	\$9,743	\$11,074	\$13,448	\$17,137	\$22,589	\$29,752	\$58,099	\$56,050	\$77,750	\$86,511	\$98,798	\$108,625
Min	\$1,951	\$7,796	\$15,180	\$23,603	\$31,510	\$38,204	\$44,478	\$49,114	\$53,051	\$56,702	\$87,948	\$128,845	\$282,253	\$394,633	\$493,892	\$604,058

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$9,976	\$23,175	\$37,070	\$49,483	\$61,320	\$72,345	\$85,181	\$98,423	\$111,711	\$126,854	\$216,463	\$282,725	\$469,255	\$624,390	\$743,489	\$856,029
Median	\$9,252	\$22,282	\$36,785	\$49,001	\$60,616	\$72,334	\$80,352	\$90,426	\$100,700	\$115,841	\$208,845	\$277,525	\$461,461	\$613,897	\$733,650	\$846,351
STDEV	\$4,646	\$7,593	\$10,602	\$12,653	\$14,726	\$17,169	\$21,522	\$27,196	\$32,920	\$38,239	\$56,376	\$64,096	\$118,612	\$154,779	\$186,305	\$224,978
MAD	\$3,006	\$5,324	\$7,653	\$9,530	\$11,274	\$12,881	\$16,297	\$20,774	\$25,480	\$30,014	\$44,466	\$51,974	\$92,764	\$123,029	\$147,882	\$178,562
Min	\$2,533	\$8,222	\$15,606	\$23,214	\$30,456	\$36,994	\$42,156	\$45,920	\$49,870	\$53,195	\$73,292	\$109,319	\$223,105	\$307,352	\$379,888	\$426,975



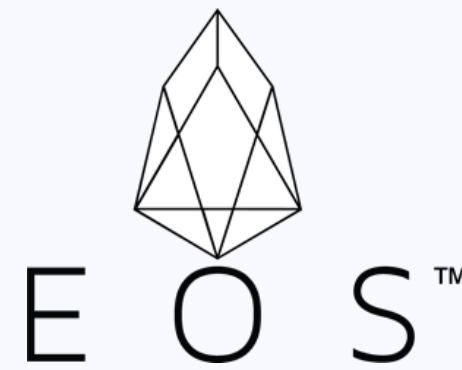
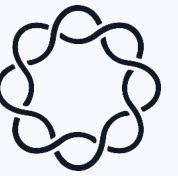
Bitcoin Cash (BCH)

Asset:	Bitcoin Cash
Ticker:	BCH
Exchange:	Kraken
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$8,996	\$20,139	\$36,198	\$55,887	\$75,322	\$88,012	\$96,488	\$104,922	\$115,065	\$126,172	\$206,461	\$338,028	\$586,925	\$912,394	\$965,276	\$1,044,401
Median	\$3,787	\$14,493	\$31,098	\$51,648	\$75,318	\$88,953	\$95,600	\$102,752	\$112,879	\$123,601	\$209,505	\$351,633	\$602,142	\$878,989	\$911,412	\$958,443
STDEV	\$21,498	\$23,366	\$25,690	\$27,012	\$28,540	\$28,481	\$28,318	\$28,701	\$30,674	\$33,113	\$49,459	\$70,598	\$109,533	\$275,085	\$301,996	\$356,943
MAD	\$9,258	\$11,037	\$14,427	\$17,594	\$20,119	\$20,201	\$19,616	\$19,705	\$21,647	\$24,069	\$34,785	\$51,876	\$75,076	\$148,057	\$161,641	\$222,799
Min	\$633	\$2,342	\$4,758	\$8,377	\$13,748	\$19,989	\$24,834	\$29,117	\$32,700	\$35,997	\$61,778	\$108,689	\$215,477	\$320,578	\$383,052	\$411,460

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,700	\$12,430	\$24,868	\$40,198	\$54,753	\$65,552	\$74,771	\$83,861	\$91,759	\$101,003	\$171,039	\$256,877	\$432,686	\$700,546	\$741,718	\$778,659
Median	\$3,076	\$11,607	\$25,320	\$42,877	\$58,598	\$71,356	\$82,253	\$90,927	\$98,965	\$107,962	\$192,974	\$269,803	\$465,162	\$768,124	\$812,095	\$846,864
STDEV	\$1,997	\$6,051	\$11,435	\$17,199	\$22,453	\$25,670	\$28,516	\$31,781	\$34,593	\$38,800	\$65,864	\$100,385	\$132,022	\$161,551	\$173,196	\$182,589
MAD	\$1,621	\$4,908	\$9,252	\$14,281	\$18,421	\$20,731	\$22,832	\$25,111	\$27,198	\$30,722	\$55,491	\$83,853	\$112,687	\$136,522	\$146,270	\$155,383
Min	\$757	\$2,760	\$5,612	\$7,165	\$8,746	\$9,802	\$10,919	\$11,831	\$12,816	\$14,491	\$25,515	\$40,652	\$152,472	\$284,989	\$302,701	\$317,149

EOS (EOS)



Asset:	EOS
Ticker:	EOS
Exchanges:	6
Trading Pairs:	24

Exchanges: Binance, Bitfinex, Coinbase, Huobi, Kraken, Poloniex

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$61,505	\$250,651	\$462,477	\$650,000	\$813,813	\$945,479	\$1,100,780	\$1,231,688	\$1,380,502	\$1,546,528	\$2,310,399	\$2,861,277	\$3,879,041	\$4,311,571	\$4,643,781	\$5,033,342
Median	\$58,118	\$255,290	\$467,397	\$656,724	\$812,493	\$936,329	\$1,092,481	\$1,198,414	\$1,369,565	\$1,540,063	\$2,380,985	\$2,971,283	\$3,981,609	\$4,386,859	\$4,731,632	\$5,192,883
STDEV	\$19,437	\$67,837	\$110,560	\$134,457	\$165,858	\$190,609	\$234,391	\$276,531	\$321,345	\$367,804	\$478,704	\$471,433	\$566,630	\$555,819	\$564,196	\$623,745
MAD	\$15,640	\$53,374	\$86,030	\$104,647	\$128,374	\$150,448	\$188,739	\$226,556	\$265,848	\$307,320	\$401,990	\$400,575	\$493,353	\$478,867	\$489,293	\$553,290
Min	\$23,169	\$85,239	\$176,078	\$268,015	\$359,479	\$449,133	\$525,058	\$592,213	\$649,981	\$720,336	\$1,133,028	\$1,617,176	\$2,446,982	\$2,916,607	\$3,236,226	\$3,545,744

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$66,339	\$257,805	\$468,509	\$652,555	\$804,882	\$923,245	\$1,063,968	\$1,183,566	\$1,324,371	\$1,472,824	\$2,171,030	\$2,701,888	\$3,683,388	\$4,231,026	\$4,749,018	\$5,180,876
Median	\$63,311	\$256,712	\$463,505	\$643,826	\$798,020	\$908,894	\$1,044,601	\$1,163,798	\$1,298,077	\$1,443,284	\$2,144,076	\$2,768,100	\$3,764,441	\$4,338,216	\$4,886,180	\$5,321,404
STDEV	\$21,180	\$71,870	\$116,326	\$141,649	\$173,139	\$193,773	\$232,509	\$270,548	\$315,768	\$357,358	\$433,310	\$439,386	\$516,871	\$619,587	\$733,186	\$813,413
MAD	\$17,484	\$55,589	\$88,878	\$110,370	\$138,012	\$157,089	\$191,689	\$224,023	\$262,847	\$299,352	\$360,867	\$369,098	\$442,652	\$539,540	\$630,942	\$700,866
Min	\$24,853	\$96,938	\$195,976	\$300,795	\$391,587	\$465,310	\$531,684	\$594,133	\$656,270	\$728,137	\$1,119,553	\$1,600,848	\$2,510,442	\$2,847,041	\$3,262,930	\$3,490,655

Asset:	EOS
Ticker:	EOS
Exchanges:	Binance
Trading Pairs:	8

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$18,941	\$69,609	\$139,374	\$190,741	\$224,568	\$254,228	\$287,291	\$324,310	\$361,600	\$396,140	\$569,554	\$701,133	\$1,036,465	\$1,224,590	\$1,373,633	\$1,560,882
Median	\$18,893	\$70,433	\$139,039	\$192,056	\$224,433	\$252,053	\$285,998	\$329,360	\$370,699	\$406,961	\$588,547	\$712,429	\$1,029,939	\$1,235,224	\$1,372,681	\$1,548,565
STDEV	\$6,048	\$19,625	\$37,664	\$43,655	\$45,533	\$49,781	\$58,471	\$70,390	\$81,213	\$88,374	\$112,909	\$113,639	\$153,010	\$139,071	\$152,481	\$189,617
MAD	\$4,768	\$14,831	\$27,966	\$33,228	\$34,602	\$38,545	\$46,034	\$57,238	\$67,210	\$73,181	\$93,542	\$92,886	\$127,048	\$113,521	\$125,288	\$151,569
Min	\$5,760	\$25,371	\$53,000	\$84,274	\$111,926	\$135,155	\$151,616	\$167,445	\$183,451	\$200,577	\$303,066	\$423,562	\$687,519	\$881,918	\$1,019,123	\$1,131,956

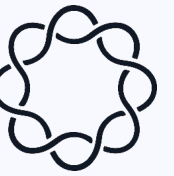
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$20,669	\$72,520	\$139,491	\$182,942	\$208,866	\$227,705	\$245,484	\$265,173	\$287,186	\$310,038	\$435,955	\$531,040	\$745,438	\$922,466	\$1,094,449	\$1,271,914
Median	\$20,374	\$71,711	\$137,966	\$184,339	\$211,962	\$234,444	\$251,714	\$269,226	\$286,931	\$310,759	\$436,772	\$528,852	\$741,447	\$912,118	\$1,076,689	\$1,265,193
STDEV	\$6,755	\$22,060	\$41,517	\$49,115	\$52,769	\$55,319	\$59,291	\$64,984	\$72,115	\$77,439	\$92,801	\$94,292	\$122,233	\$150,997	\$179,721	\$200,074
MAD	\$5,118	\$17,182	\$32,006	\$39,582	\$42,875	\$45,357	\$48,398	\$52,708	\$58,135	\$62,357	\$74,648	\$73,773	\$95,286	\$117,591	\$139,180	\$152,541
Min	\$6,427	\$23,031	\$46,344	\$68,704	\$85,965	\$99,147	\$108,433	\$116,001	\$124,893	\$133,184	\$206,383	\$306,378	\$469,392	\$579,790	\$682,910	\$773,905

Asset:	EOS
Ticker:	EOS
Exchanges:	Bitfinex
Trading Pairs:	4

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$9,786	\$37,728	\$74,978	\$117,518	\$161,153	\$206,483	\$245,156	\$288,346	\$343,473	\$401,949	\$751,868	\$1,047,632	\$1,603,843	\$1,776,490	\$1,929,998	\$2,104,974
Median	\$8,943	\$37,392	\$73,775	\$119,774	\$160,247	\$201,017	\$242,815	\$277,456	\$333,187	\$380,561	\$785,835	\$1,084,565	\$1,623,741	\$1,804,536	\$1,952,173	\$2,088,002
STDEV	\$4,623	\$11,852	\$21,222	\$31,310	\$40,337	\$49,683	\$58,857	\$74,368	\$96,115	\$121,316	\$201,316	\$214,425	\$292,620	\$318,259	\$342,623	\$382,361
MAD	\$3,431	\$9,466	\$17,027	\$25,122	\$32,097	\$39,906	\$47,392	\$60,210	\$78,946	\$101,774	\$177,607	\$192,096	\$261,788	\$287,977	\$311,619	\$351,533
Min	\$3,101	\$12,893	\$28,313	\$44,678	\$64,749	\$90,591	\$117,028	\$141,521	\$162,209	\$184,079	\$336,119	\$556,229	\$977,461	\$1,144,722	\$1,293,858	\$1,468,028

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$11,051	\$41,610	\$84,058	\$135,903	\$187,280	\$237,292	\$283,557	\$332,038	\$392,185	\$452,538	\$796,586	\$1,109,611	\$1,787,353	\$2,110,185	\$2,414,530	\$2,629,918
Median	\$9,182	\$37,250	\$78,109	\$132,624	\$185,149	\$230,415	\$273,918	\$315,175	\$381,946	\$443,605	\$795,365	\$1,131,458	\$1,818,701	\$2,166,530	\$2,456,970	\$2,714,523
STDEV	\$6,822	\$17,569	\$29,437	\$38,401	\$47,158	\$58,442	\$69,728	\$83,635	\$102,123	\$121,739	\$174,410	\$196,504	\$280,532	\$398,668	\$491,197	\$540,943
MAD	\$4,544	\$11,734	\$20,750	\$28,453	\$34,473	\$43,590	\$54,163	\$67,159	\$84,873	\$102,959	\$148,741	\$167,329	\$232,621	\$339,659	\$426,462	\$481,138
Min	\$3,205	\$17,313	\$35,615	\$59,834	\$92,701	\$128,568	\$162,747	\$186,686	\$214,396	\$238,224	\$405,325	\$660,646	\$1,266,716	\$1,424,360	\$1,494,660	\$1,625,628

EOS (EOS)



Asset:	EOS
Ticker:	EOS
Exchanges:	Coinbase
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$2,294	\$18,123	\$29,803	\$44,749	\$75,970	\$89,375	\$133,983	\$146,745	\$156,839	\$187,482	\$228,688	\$246,326	\$264,251	\$271,319	\$277,863	\$288,769
Median	\$1,738	\$15,761	\$27,033	\$43,663	\$64,494	\$73,212	\$116,419	\$132,464	\$143,852	\$177,111	\$226,292	\$234,380	\$260,797	\$264,851	\$270,462	\$284,490
STDEV	\$1,782	\$9,287	\$13,979	\$15,673	\$36,547	\$42,227	\$58,647	\$60,966	\$64,315	\$72,743	\$74,266	\$71,550	\$70,448	\$69,920	\$69,715	\$71,128
MAD	\$1,373	\$7,635	\$11,740	\$12,946	\$30,120	\$36,132	\$50,735	\$52,368	\$55,046	\$61,561	\$63,528	\$61,442	\$60,040	\$59,851	\$59,637	\$60,322
Min	\$131	\$3,355	\$6,705	\$15,175	\$20,764	\$28,072	\$38,747	\$46,053	\$50,354	\$63,879	\$99,671	\$115,749	\$132,733	\$138,543	\$142,671	\$149,044

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$2,618	\$18,061	\$29,311	\$41,654	\$70,560	\$82,735	\$121,424	\$131,610	\$139,344	\$159,930	\$191,947	\$205,092	\$220,427	\$230,760	\$241,292	\$250,397
Median	\$2,184	\$16,827	\$27,429	\$40,521	\$58,617	\$69,582	\$106,773	\$117,712	\$124,238	\$144,717	\$181,961	\$191,981	\$205,313	\$210,883	\$219,126	\$227,226
STDEV	\$1,652	\$8,667	\$12,803	\$14,929	\$34,463	\$39,141	\$55,399	\$57,609	\$60,657	\$66,567	\$66,501	\$64,471	\$64,397	\$66,140	\$73,990	\$78,081
MAD	\$1,314	\$6,806	\$10,363	\$12,512	\$28,144	\$32,599	\$46,683	\$48,302	\$50,697	\$55,350	\$55,382	\$54,437	\$54,655	\$56,122	\$60,929	\$63,148
Min	\$125	\$2,726	\$5,834	\$13,611	\$18,249	\$25,059	\$35,384	\$40,566	\$43,938	\$48,437	\$63,736	\$76,753	\$91,074	\$97,470	\$108,275	\$112,988

Asset:	EOS
Ticker:	EOS
Exchanges:	Kraken
Trading Pairs:	3

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$1,667	\$9,413	\$24,650	\$43,393	\$61,311	\$77,061	\$88,380	\$97,743	\$107,642	\$118,177	\$175,613	\$228,532	\$324,058	\$385,387	\$405,644	\$420,017
Median	\$1,514	\$8,150	\$22,337	\$40,488	\$61,216	\$77,495	\$87,761	\$96,078	\$105,679	\$118,401	\$178,861	\$231,912	\$326,710	\$392,559	\$411,882	\$423,003
STDEV	\$1,126	\$5,423	\$10,352	\$12,861	\$14,393	\$16,807	\$19,889	\$23,158	\$27,298	\$31,143	\$38,630	\$39,608	\$54,880	\$55,548	\$50,860	\$51,360
MAD	\$728	\$3,901	\$7,872	\$10,006	\$10,813	\$12,919	\$15,175	\$17,915	\$21,415	\$24,536	\$30,903	\$31,797	\$45,712	\$44,696	\$38,590	\$40,019
Min	\$273	\$2,574	\$7,328	\$14,402	\$24,123	\$32,311	\$38,025	\$42,983	\$45,871	\$48,015	\$68,467	\$115,165	\$195,039	\$251,820	\$268,753	\$282,270

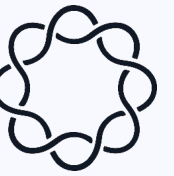
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$2,434	\$13,907	\$33,118	\$49,445	\$61,124	\$70,798	\$79,969	\$89,283	\$98,613	\$106,828	\$151,592	\$194,679	\$239,876	\$269,660	\$292,673	\$315,350
Median	\$1,758	\$12,139	\$32,190	\$49,214	\$60,590	\$71,362	\$80,852	\$88,789	\$99,942	\$108,853	\$156,240	\$196,594	\$239,726	\$268,645	\$289,271	\$310,322
STDEV	\$3,028	\$8,580	\$10,148	\$10,134	\$10,310	\$11,850	\$14,086	\$16,902	\$19,920	\$21,981	\$24,174	\$26,555	\$25,397	\$24,359	\$28,418	\$33,465
MAD	\$1,501	\$5,534	\$8,014	\$8,036	\$7,811	\$8,675	\$10,331	\$12,709	\$15,647	\$17,938	\$19,789	\$21,171	\$20,392	\$19,222	\$22,282	\$25,337
Min	\$313	\$5,546	\$16,682	\$25,903	\$32,584	\$39,063	\$44,087	\$49,197	\$53,977	\$57,712	\$83,688	\$117,387	\$173,863	\$208,876	\$222,442	\$238,605

Asset:	EOS
Ticker:	EOS
Exchanges:	Huobi
Trading Pairs:	3

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$28,284	\$109,748	\$184,188	\$241,961	\$277,063	\$302,670	\$328,240	\$354,349	\$388,063	\$417,049	\$546,586	\$590,600	\$596,140	\$596,141	\$596,141	\$596,141
Median	\$26,422	\$110,109	\$184,073	\$248,215	\$281,353	\$303,368	\$325,171	\$343,935	\$380,387	\$416,124	\$558,461	\$604,323	\$610,104	\$610,104	\$610,104	\$610,104
STDEV	\$9,473	\$28,647	\$40,642	\$47,696	\$50,742	\$56,372	\$65,725	\$75,676	\$83,518	\$88,837	\$100,436	\$94,995	\$91,106	\$91,103	\$91,103	\$91,103
MAD	\$7,456	\$22,366	\$31,643	\$37,604	\$39,943	\$44,343	\$51,890	\$61,230	\$68,066	\$72,247	\$79,702	\$76,769	\$74,242	\$74,241	\$74,241	\$74,241
Min	\$12,342	\$39,991	\$74,375	\$103,638	\$129,332	\$151,884	\$165,481	\$178,765	\$192,214	\$207,256	\$288,227	\$351,746	\$372,899	\$372,899	\$372,899	\$372,899

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$28,996	\$104,409	\$170,616	\$226,977	\$256,567	\$278,141	\$300,501	\$325,916	\$361,555	\$392,475	\$525,005	\$579,461	\$594,439	\$594,509	\$594,510	\$594,510
Median	\$27,330	\$103,337	\$168,187	\$230,413	\$261,866	\$281,601	\$302,376	\$318,921	\$353,178	\$382,615	\$528,756	\$580,577	\$595,237	\$595,237	\$595,237	\$595,237
STDEV	\$11,008	\$31,902	\$44,030	\$52,548	\$55,330	\$60,321	\$68,856	\$80,600	\$93,359	\$103,680	\$129,234	\$131,671	\$125,088	\$124,981	\$124,980	\$124,980
MAD	\$8,574	\$24,755	\$34,097	\$40,815	\$43,200	\$47,123	\$54,334	\$64,410	\$74,442	\$82,622	\$99,775	\$102,406	\$97,311	\$97,240	\$97,239	\$97,239
Min	\$11,171	\$35,603	\$66,023	\$96,768	\$120,578	\$137,994	\$151,119	\$166,957	\$177,928	\$189,613	\$255,685	\$298,134	\$333,755	\$335,539	\$335,622	\$335,622

LEO (LEO)

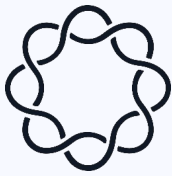


Asset:	LEO
Ticker:	LEO
Exchanges:	1
Trading Pairs:	4

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$10,006	\$14,651	\$19,884	\$21,949	\$24,890	\$29,102	\$34,950	\$38,994	\$49,842	\$68,359	\$114,844	\$190,557	\$699,755	\$1,185,224	\$1,533,401	\$1,965,913
Median	\$0	\$76	\$484	\$2,435	\$4,826	\$9,739	\$16,918	\$26,335	\$35,367	\$47,385	\$100,313	\$171,798	\$673,646	\$1,156,859	\$1,497,921	\$2,000,064
STDEV	\$21,409	\$28,636	\$32,697	\$33,759	\$36,547	\$40,321	\$41,308	\$42,958	\$51,806	\$71,299	\$90,864	\$117,533	\$221,578	\$194,843	\$236,745	\$397,531
MAD	\$14,855	\$20,831	\$25,602	\$26,460	\$29,194	\$31,473	\$32,107	\$32,216	\$37,997	\$51,430	\$67,179	\$96,296	\$164,462	\$139,648	\$184,512	\$355,342
Min	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27	\$27	\$54	\$1,550	\$208,530	\$593,477	\$1,181,657	\$1,349,602

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$8,609	\$9,789	\$13,002	\$14,744	\$17,534	\$19,311	\$21,312	\$24,264	\$32,595	\$36,009	\$65,963	\$97,810	\$245,953	\$358,920	\$446,177	\$495,214
Median	\$0	\$10	\$2,648	\$4,448	\$5,179	\$6,936	\$9,047	\$11,283	\$23,419	\$30,121	\$52,873	\$96,467	\$223,128	\$348,501	\$414,697	\$454,671
STDEV	\$19,908	\$21,719	\$22,001	\$22,083	\$23,942	\$24,607	\$25,151	\$26,740	\$29,985	\$29,993	\$47,507	\$55,044	\$79,033	\$84,653	\$89,562	\$85,074
MAD	\$13,912	\$15,280	\$16,431	\$16,644	\$18,763	\$19,608	\$20,465	\$22,432	\$26,628	\$26,309	\$42,613	\$49,332	\$69,322	\$69,948	\$75,621	\$74,825
Min	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28	\$418	\$4,872	\$8,652	\$87,788	\$219,065	\$288,521	\$378,337

Stellar (XLM)



Asset:	Stellar
Ticker:	XLM
Exchanges:	7
Trading Pairs:	19

Exchanges: [Binance](#), [Binance US](#), [Bitfinex](#), [Bittrex](#), [Coinbase](#), [Kraken](#), [Poloniex](#)

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$9,634	\$26,953	\$65,188	\$111,904	\$148,019	\$184,690	\$214,793	\$246,061	\$273,329	\$300,968	\$442,145	\$540,978	\$755,098	\$911,247	\$1,021,401	\$1,097,085
Median	\$9,561	\$27,705	\$66,688	\$113,242	\$148,576	\$185,900	\$213,613	\$246,839	\$278,134	\$305,818	\$462,878	\$564,116	\$767,701	\$908,812	\$1,004,538	\$1,083,554
STDEV	\$2,951	\$7,659	\$16,602	\$28,312	\$33,317	\$42,668	\$51,481	\$61,325	\$72,001	\$76,598	\$90,199	\$88,420	\$108,416	\$121,784	\$121,157	\$129,513
MAD	\$2,290	\$5,875	\$12,837	\$22,284	\$26,090	\$34,209	\$41,145	\$49,303	\$59,583	\$63,408	\$75,795	\$73,683	\$88,309	\$97,198	\$94,326	\$103,240
Min	\$3,227	\$9,463	\$26,908	\$47,393	\$70,880	\$84,433	\$99,391	\$115,532	\$125,856	\$138,456	\$232,070	\$309,923	\$483,706	\$608,481	\$710,478	\$793,654

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$9,156	\$28,661	\$68,493	\$110,295	\$138,437	\$164,871	\$186,282	\$208,852	\$229,295	\$250,815	\$348,020	\$413,519	\$583,040	\$706,672	\$797,599	\$883,317
Median	\$8,851	\$28,650	\$68,949	\$110,310	\$137,851	\$162,920	\$183,929	\$204,798	\$224,959	\$244,248	\$354,630	\$420,649	\$592,419	\$696,614	\$783,439	\$872,142
STDEV	\$2,879	\$8,059	\$16,174	\$24,890	\$28,217	\$33,919	\$40,033	\$47,548	\$55,835	\$59,855	\$59,528	\$53,442	\$56,854	\$68,073	\$80,412	\$96,991
MAD	\$2,327	\$6,436	\$13,162	\$20,288	\$22,741	\$27,358	\$32,159	\$38,585	\$46,274	\$49,598	\$48,422	\$43,556	\$46,796	\$56,998	\$68,869	\$84,058
Min	\$3,359	\$10,273	\$27,792	\$46,522	\$72,470	\$87,945	\$104,237	\$118,640	\$127,281	\$135,722	\$196,817	\$264,191	\$443,362	\$576,222	\$670,105	\$728,603

Asset:	Stellar
Ticker:	XLM
Exchanges:	Binance
Trading Pairs:	7

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,986	\$9,508	\$25,040	\$42,533	\$52,471	\$66,148	\$78,990	\$93,504	\$106,506	\$119,891	\$179,340	\$213,341	\$309,091	\$375,422	\$420,210	\$456,216
Median	\$3,928	\$9,188	\$25,514	\$41,989	\$52,352	\$64,717	\$77,731	\$90,661	\$103,712	\$118,770	\$188,743	\$221,989	\$314,480	\$375,558	\$424,901	\$446,274
STDEV	\$1,377	\$2,717	\$6,650	\$10,803	\$12,866	\$17,928	\$22,305	\$27,524	\$32,615	\$33,985	\$37,339	\$36,094	\$51,222	\$64,244	\$69,722	\$78,481
MAD	\$1,091	\$2,196	\$5,416	\$8,837	\$10,490	\$14,996	\$18,105	\$22,532	\$27,196	\$28,200	\$30,965	\$29,232	\$40,903	\$50,757	\$57,271	\$65,580
Min	\$1,269	\$3,762	\$10,266	\$18,021	\$25,458	\$30,800	\$37,767	\$42,713	\$45,426	\$50,411	\$94,837	\$124,797	\$207,287	\$250,924	\$282,498	\$298,406

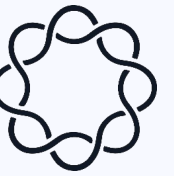
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,566	\$8,657	\$22,231	\$37,131	\$45,747	\$56,470	\$66,790	\$77,625	\$87,070	\$96,970	\$132,935	\$150,872	\$219,531	\$278,156	\$326,080	\$374,463
Median	\$3,503	\$8,465	\$22,422	\$37,688	\$46,257	\$54,571	\$65,161	\$74,809	\$84,877	\$95,672	\$135,996	\$154,616	\$216,637	\$271,243	\$320,547	\$362,881
STDEV	\$1,267	\$2,773	\$6,308	\$9,950	\$11,860	\$15,763	\$19,615	\$23,871	\$27,779	\$28,508	\$23,236	\$19,884	\$24,904	\$31,206	\$41,073	\$49,124
MAD	\$961	\$2,192	\$4,943	\$7,738	\$9,361	\$12,542	\$15,592	\$19,492	\$23,306	\$23,666	\$18,345	\$16,135	\$20,428	\$26,225	\$33,651	\$41,307
Min	\$1,155	\$3,032	\$7,634	\$13,444	\$18,340	\$21,951	\$26,595	\$31,401	\$34,429	\$40,441	\$71,306	\$99,113	\$161,671	\$205,372	\$251,517	\$280,935

Asset:	Stellar
Ticker:	XLM
Exchanges:	Coinbase
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,829	\$8,751	\$17,682	\$25,119	\$29,877	\$35,477	\$41,355	\$48,347	\$56,331	\$64,863	\$100,166	\$113,191	\$153,103	\$181,145	\$193,997	\$205,259
Median	\$3,650	\$8,449	\$17,278	\$25,455	\$29,174	\$34,439	\$39,399	\$44,764	\$54,930	\$64,108	\$106,313	\$117,511	\$155,710	\$180,001	\$193,997	\$199,915
STDEV	\$1,234	\$3,074	\$5,679	\$7,364	\$8,102	\$10,305	\$13,301	\$16,371	\$19,731	\$21,436	\$23,051	\$20,446	\$26,391	\$33,624	\$33,494	\$35,770
MAD	\$1,038	\$2,543	\$4,596	\$5,904	\$6,443	\$8,209	\$10,698	\$13,437	\$16,408	\$17,871	\$19,154	\$17,020	\$20,990	\$26,397	\$26,350	\$28,965
Min	\$1,386	\$2,846	\$5,595	\$8,082	\$10,285	\$12,081	\$13,823	\$15,649	\$16,893	\$19,047	\$37,154	\$60,559	\$87,395	\$97,242	\$104,540	\$110,585

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,483	\$7,316	\$13,989	\$19,670	\$23,164	\$27,150	\$31,255	\$36,402	\$42,582	\$49,493	\$84,773	\$101,345	\$136,382	\$158,164	\$174,553	\$190,814
Median	\$3,214	\$6,981	\$13,064	\$17,753	\$20,841	\$25,322	\$29,257	\$32,434	\$37,092	\$44,029	\$84,761	\$103,328	\$133,501	\$152,208	\$170,921	\$184,650
STDEV	\$1,323	\$2,715	\$5,274	\$7,344	\$8,331	\$9,782	\$11,238	\$13,385	\$16,802	\$19,784	\$23,111	\$20,001	\$24,440	\$27,734	\$30,941	\$36,737
MAD	\$1,058	\$2,217	\$4,287	\$5,869	\$6,693	\$7,842	\$8,891	\$10,742	\$13,898	\$16,722	\$19,247	\$17,234	\$19,225	\$21,185	\$24,290	\$30,435
Min	\$1,277	\$2,911	\$5,000	\$7,312	\$9,633	\$11,210	\$12,802	\$14,491	\$15,494	\$17,195	\$30,899	\$51,599	\$87,722	\$97,870	\$111,683	\$117,167

Stellar (XLM)

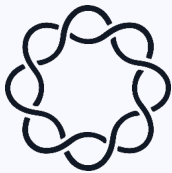


Asset:	Stellar
Ticker:	XLM
Exchanges:	Kraken
Trading Pairs:	2

"Dumping" Manipulation (Bid)																	
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%	
Mean	\$1,606	\$6,746	\$15,230	\$26,991	\$37,238	\$42,920	\$46,898	\$50,139	\$52,029	\$53,633	\$66,966	\$78,847	\$101,799	\$124,356	\$152,758	\$163,363	
Median	\$1,278	\$7,133	\$15,304	\$28,143	\$38,340	\$44,339	\$49,207	\$52,112	\$53,491	\$55,782	\$67,847	\$80,147	\$100,082	\$123,620	\$156,252	\$168,805	
STDEV	\$1,145	\$3,185	\$6,166	\$9,232	\$9,877	\$9,860	\$10,421	\$11,276	\$11,977	\$12,555	\$14,401	\$14,742	\$17,918	\$22,195	\$30,987	\$30,538	
MAD	\$923	\$2,643	\$5,146	\$7,818	\$8,033	\$7,962	\$8,579	\$9,458	\$10,114	\$10,643	\$11,713	\$11,691	\$14,203	\$17,916	\$27,290	\$26,167	
Min	\$52	\$711	\$4,481	\$9,200	\$13,320	\$17,145	\$19,582	\$21,096	\$21,674	\$22,308	\$34,590	\$42,385	\$55,889	\$76,637	\$97,530	\$101,248	

"Pumping" Manipulation (Ask)																	
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%	
Mean	\$1,830	\$10,171	\$23,548	\$37,291	\$45,871	\$49,756	\$52,302	\$54,913	\$56,788	\$58,440	\$65,306	\$73,380	\$95,405	\$106,575	\$114,327	\$120,896	
Median	\$1,633	\$9,643	\$22,514	\$36,569	\$46,839	\$51,884	\$53,712	\$56,238	\$57,761	\$59,030	\$65,933	\$74,750	\$89,671	\$96,474	\$105,123	\$112,900	
STDEV	\$1,162	\$4,598	\$9,045	\$10,757	\$9,995	\$9,780	\$10,362	\$11,065	\$11,395	\$11,576	\$11,387	\$11,687	\$19,097	\$25,206	\$28,007	\$28,389	
MAD	\$808	\$3,489	\$7,150	\$8,878	\$8,430	\$8,367	\$8,981	\$9,563	\$9,790	\$9,914	\$9,627	\$9,922	\$14,188	\$19,692	\$21,985	\$22,766	
Min	\$165	\$1,510	\$6,859	\$12,679	\$19,939	\$23,968	\$26,919	\$29,050	\$30,767	\$31,840	\$39,043	\$49,203	\$59,267	\$67,309	\$77,227	\$80,321	

Cardano (ADA)



Asset:	Cardano
Ticker:	ADA
Exchanges:	6
Trading Pairs:	20

Exchanges: Binance, Binance US, Bittrex, Huobi, Kraken, Okex

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$6,197	\$34,111	\$73,997	\$135,033	\$172,644	\$219,274	\$247,526	\$291,475	\$322,193	\$369,131	\$538,510	\$665,203	\$1,205,698	\$1,547,569	\$1,759,119	\$1,996,260
Median	\$5,186	\$34,058	\$74,899	\$140,395	\$180,462	\$227,182	\$257,030	\$298,893	\$330,526	\$376,797	\$555,249	\$683,517	\$1,211,168	\$1,572,925	\$1,756,666	\$1,985,575
STDEV	\$3,514	\$8,929	\$17,296	\$26,636	\$31,457	\$39,159	\$44,194	\$56,625	\$64,026	\$74,121	\$92,409	\$96,663	\$154,462	\$190,234	\$179,381	\$226,955
MAD	\$2,482	\$6,681	\$13,728	\$21,232	\$24,888	\$31,046	\$35,420	\$45,439	\$51,758	\$59,763	\$74,198	\$78,867	\$119,073	\$155,259	\$143,911	\$183,900
Min	\$1,121	\$12,471	\$29,550	\$58,742	\$80,913	\$108,742	\$126,988	\$148,530	\$162,707	\$183,220	\$269,958	\$359,645	\$625,341	\$846,614	\$1,133,065	\$1,299,174

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$6,189	\$31,003	\$65,541	\$120,036	\$155,702	\$196,266	\$219,926	\$256,584	\$281,020	\$319,533	\$453,226	\$537,766	\$936,422	\$1,203,797	\$1,380,815	\$1,543,153
Median	\$4,709	\$29,889	\$65,643	\$123,526	\$158,073	\$198,857	\$225,099	\$263,422	\$289,420	\$324,440	\$458,986	\$547,222	\$949,786	\$1,214,460	\$1,375,469	\$1,566,591
STDEV	\$5,466	\$12,289	\$21,271	\$27,712	\$33,348	\$37,967	\$42,572	\$52,142	\$59,135	\$67,098	\$77,540	\$79,931	\$149,844	\$202,699	\$218,276	\$231,220
MAD	\$3,015	\$7,735	\$14,642	\$21,943	\$26,499	\$30,825	\$34,246	\$43,318	\$48,941	\$55,666	\$65,818	\$68,010	\$122,154	\$165,593	\$178,681	\$182,937
Min	\$1,212	\$10,578	\$27,008	\$58,163	\$81,774	\$104,871	\$119,715	\$135,112	\$144,985	\$163,806	\$224,357	\$285,241	\$468,535	\$639,183	\$769,261	\$874,977

Asset:	Cardano
Ticker:	ADA
Exchanges:	Binance
Trading Pairs:	7

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,391	\$15,297	\$30,224	\$61,735	\$77,686	\$103,550	\$112,991	\$134,647	\$145,917	\$169,307	\$235,462	\$289,256	\$462,818	\$635,503	\$774,326	\$940,403
Median	\$2,980	\$15,390	\$28,909	\$63,511	\$79,919	\$106,050	\$117,381	\$139,084	\$152,168	\$174,008	\$237,807	\$298,728	\$462,443	\$643,876	\$776,525	\$930,464
STDEV	\$2,144	\$3,895	\$7,828	\$12,188	\$14,961	\$18,996	\$20,512	\$24,577	\$26,980	\$31,862	\$39,907	\$43,746	\$69,200	\$91,609	\$99,575	\$142,711
MAD	\$1,263	\$2,895	\$6,076	\$9,593	\$11,838	\$14,981	\$16,434	\$19,899	\$21,875	\$25,543	\$31,875	\$35,909	\$56,716	\$76,845	\$78,979	\$113,668
Min	\$589	\$5,678	\$10,664	\$27,786	\$36,400	\$55,506	\$60,265	\$72,345	\$75,915	\$86,734	\$125,747	\$168,726	\$290,976	\$414,807	\$568,260	\$645,265

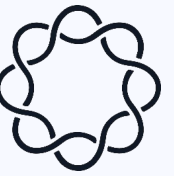
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,751	\$15,020	\$29,659	\$56,335	\$70,595	\$91,418	\$98,152	\$115,626	\$123,375	\$140,626	\$185,579	\$220,390	\$361,208	\$506,472	\$632,615	\$745,656
Median	\$2,834	\$13,605	\$28,198	\$57,026	\$71,570	\$92,786	\$98,493	\$115,782	\$122,720	\$140,776	\$184,845	\$222,722	\$365,333	\$515,729	\$643,139	\$770,375
STDEV	\$4,273	\$9,192	\$14,581	\$16,763	\$20,323	\$21,916	\$24,426	\$26,688	\$28,723	\$31,469	\$35,790	\$41,745	\$70,196	\$96,717	\$111,402	\$130,324
MAD	\$1,948	\$4,295	\$7,682	\$10,959	\$12,971	\$15,819	\$16,245	\$19,449	\$20,384	\$23,298	\$26,868	\$32,084	\$56,177	\$79,997	\$94,581	\$110,578
Min	\$733	\$5,825	\$10,770	\$25,507	\$32,615	\$46,708	\$50,129	\$59,899	\$62,299	\$71,948	\$97,924	\$120,329	\$208,934	\$303,206	\$412,979	\$465,327

Asset:	Cardano
Ticker:	ADA
Exchanges:	Kraken
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$618	\$5,358	\$14,199	\$25,092	\$33,631	\$39,840	\$44,681	\$50,549	\$56,883	\$63,335	\$105,511	\$134,595	\$362,930	\$442,633	\$458,191	\$470,108
Median	\$309	\$4,524	\$14,234	\$26,808	\$34,525	\$40,657	\$45,017	\$50,539	\$57,389	\$64,796	\$111,470	\$143,235	\$379,881	\$455,080	\$469,517	\$481,374
STDEV	\$1,147	\$3,873	\$6,542	\$8,548	\$8,631	\$9,543	\$10,491	\$12,526	\$14,285	\$16,183	\$23,782	\$24,613	\$56,474	\$60,998	\$58,766	\$58,625
MAD	\$567	\$2,873	\$5,396	\$6,973	\$6,459	\$7,300	\$7,947	\$9,670	\$11,220	\$12,784	\$17,767	\$18,441	\$36,104	\$40,726	\$41,115	\$41,444
Min	\$12	\$639	\$2,217	\$5,423	\$10,111	\$12,793	\$14,229	\$16,139	\$19,313	\$20,494	\$25,552	\$33,246	\$71,282	\$110,597	\$135,803	\$145,036

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$452	\$3,904	\$10,052	\$19,842	\$28,445	\$35,099	\$39,911	\$45,674	\$51,155	\$57,793	\$98,791	\$120,811	\$286,775	\$337,262	\$349,686	\$357,889
Median	\$288	\$3,072	\$8,712	\$19,395	\$28,177	\$36,506	\$40,783	\$47,125	\$53,620	\$60,688	\$100,075	\$124,408	\$285,488	\$329,283	\$342,708	\$348,394
STDEV	\$435	\$2,630	\$5,714	\$9,093	\$10,880	\$11,204	\$11,472	\$12,356	\$13,538	\$14,968	\$21,831	\$19,910	\$53,628	\$65,140	\$65,439	\$63,690
MAD	\$341	\$2,012	\$4,761	\$7,588	\$8,937	\$9,076	\$9,073	\$10,013	\$11,176	\$12,503	\$17,839	\$16,194	\$38,963	\$49,395	\$50,698	\$49,351
Min	\$14	\$507	\$1,407	\$2,537	\$4,651	\$7,478	\$12,222	\$17,265	\$21,605	\$25,959	\$37,240	\$45,376	\$69,300	\$92,511	\$99,187	\$114,092

Cardano (ADA)



Asset:	Cardano
Ticker:	ADA
Exchanges:	Bittrex
Trading Pairs:	4

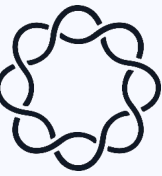
"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$182	\$2,871	\$6,763	\$10,136	\$13,710	\$17,771	\$22,645	\$28,015	\$32,977	\$37,558	\$54,878	\$68,892	\$119,204	\$149,689	\$178,688	\$213,123
Median	\$39	\$2,077	\$6,164	\$9,616	\$12,849	\$16,855	\$21,794	\$26,652	\$32,022	\$37,429	\$54,264	\$68,551	\$119,562	\$151,304	\$178,798	\$212,829
STDEV	\$322	\$3,628	\$4,094	\$4,854	\$5,410	\$6,268	\$7,378	\$9,202	\$9,845	\$10,521	\$11,702	\$11,911	\$18,580	\$23,252	\$20,979	\$20,404
MAD	\$220	\$1,613	\$2,129	\$2,633	\$3,314	\$4,099	\$5,454	\$6,985	\$7,521	\$7,816	\$9,076	\$9,528	\$15,428	\$19,717	\$17,474	\$14,681
Min	\$0	\$135	\$626	\$1,512	\$2,681	\$5,612	\$9,124	\$12,756	\$14,603	\$16,316	\$28,099	\$39,768	\$83,165	\$108,619	\$131,538	\$165,120

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$191	\$2,087	\$4,909	\$7,429	\$10,029	\$13,199	\$16,731	\$20,643	\$24,495	\$28,231	\$41,258	\$48,530	\$73,038	\$88,238	\$100,354	\$117,441
Median	\$40	\$1,732	\$4,791	\$7,246	\$9,857	\$13,151	\$16,105	\$19,268	\$22,298	\$26,717	\$43,222	\$50,508	\$77,018	\$92,526	\$102,998	\$119,574
STDEV	\$399	\$1,624	\$2,685	\$3,575	\$4,507	\$5,652	\$7,561	\$9,809	\$11,886	\$13,190	\$13,566	\$11,518	\$18,400	\$19,783	\$20,898	\$23,611
MAD	\$233	\$1,133	\$2,038	\$2,777	\$3,504	\$4,522	\$6,016	\$8,171	\$9,987	\$11,194	\$11,095	\$9,510	\$15,659	\$15,428	\$17,145	\$20,051
Min	\$0	\$13	\$52	\$102	\$170	\$741	\$2,193	\$3,488	\$4,505	\$5,368	\$12,627	\$25,523	\$36,130	\$43,614	\$54,794	\$72,310

Asset:	Cardano
Ticker:	ADA
Exchanges:	Huobi
Trading Pairs:	3

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$1,847	\$8,077	\$17,464	\$30,181	\$37,047	\$44,285	\$50,726	\$59,409	\$64,509	\$72,013	\$97,654	\$112,974	\$148,677	\$171,523	\$190,065	\$205,179
Median	\$1,644	\$8,122	\$17,420	\$31,127	\$38,257	\$44,358	\$50,555	\$56,580	\$62,291	\$71,177	\$95,841	\$109,658	\$138,383	\$161,940	\$183,030	\$195,484
STDEV	\$969	\$2,013	\$4,338	\$5,639	\$6,261	\$8,600	\$10,967	\$16,153	\$18,335	\$20,260	\$22,207	\$21,134	\$30,031	\$33,670	\$35,112	\$42,595
MAD	\$722	\$1,577	\$3,355	\$4,345	\$4,829	\$6,518	\$8,595	\$13,209	\$15,141	\$16,629	\$18,217	\$18,139	\$26,921	\$29,436	\$30,411	\$35,204
Min	\$242	\$3,532	\$6,970	\$13,147	\$17,726	\$22,495	\$25,762	\$29,404	\$31,638	\$36,336	\$54,567	\$70,703	\$97,248	\$109,790	\$119,470	\$126,962

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$1,605	\$6,932	\$14,556	\$26,724	\$33,723	\$39,302	\$44,767	\$51,494	\$55,299	\$61,516	\$82,161	\$93,158	\$122,654	\$144,415	\$160,749	\$177,688
Median	\$1,372	\$6,951	\$13,838	\$26,547	\$33,854	\$39,906	\$45,215	\$50,122	\$53,812	\$60,612	\$82,986	\$93,156	\$119,169	\$136,931	\$154,513	\$180,035
STDEV	\$962	\$1,724	\$3,761	\$5,649	\$6,325	\$7,209	\$8,473	\$12,658	\$14,616	\$16,629	\$16,813	\$16,037	\$25,067	\$31,020	\$34,054	\$35,087
MAD	\$705	\$1,342	\$3,035	\$4,516	\$4,972	\$5,741	\$6,819	\$10,586	\$12,272	\$14,022	\$13,587	\$12,815	\$18,110	\$23,504	\$27,637	\$27,621
Min	\$216	\$2,310	\$5,917	\$12,871	\$17,143	\$21,380	\$23,101	\$26,351	\$27,130	\$29,843	\$37,978	\$50,378	\$76,800	\$91,614	\$95,698	\$96,943



Ethereum Classic (ETC)



Asset:	Ethereum Classic
Ticker:	ETC
Exchanges:	9
Trading Pairs:	24

Exchanges: Binance, Binance US, Bitfinex, Bittrex, Coinbase, Huobi, Kraken, Okex, Poloniex

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$27,787	\$106,616	\$193,094	\$275,111	\$345,036	\$410,160	\$482,835	\$564,966	\$659,697	\$750,764	\$1,207,440	\$1,585,028	\$2,392,343	\$2,823,623	\$3,067,693	\$3,305,669
Median	\$26,334	\$108,565	\$198,979	\$283,785	\$361,579	\$426,147	\$492,513	\$566,814	\$679,844	\$776,488	\$1,274,375	\$1,617,798	\$2,376,012	\$2,795,065	\$3,038,502	\$3,281,637
STDEV	\$8,742	\$27,999	\$41,950	\$55,181	\$66,483	\$78,349	\$101,138	\$131,942	\$164,953	\$191,419	\$243,951	\$232,163	\$250,049	\$246,328	\$246,028	\$245,649
MAD	\$7,232	\$21,851	\$32,506	\$43,097	\$52,343	\$62,226	\$81,473	\$107,176	\$135,822	\$157,768	\$195,626	\$177,039	\$181,766	\$184,491	\$187,815	\$195,001
Min	\$7,996	\$38,621	\$81,032	\$120,535	\$158,932	\$195,228	\$230,805	\$262,779	\$295,903	\$328,583	\$536,882	\$856,042	\$1,642,357	\$2,122,562	\$2,411,160	\$2,629,186

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$28,660	\$105,423	\$187,292	\$263,979	\$327,854	\$384,935	\$449,230	\$518,764	\$601,073	\$678,588	\$1,051,032	\$1,337,546	\$2,049,435	\$2,487,076	\$2,812,063	\$3,089,773
Median	\$28,148	\$108,678	\$192,590	\$272,270	\$336,766	\$393,552	\$459,929	\$527,673	\$613,927	\$697,498	\$1,108,980	\$1,376,802	\$2,080,127	\$2,496,991	\$2,798,405	\$3,058,007
STDEV	\$9,474	\$27,516	\$39,567	\$52,306	\$62,599	\$73,694	\$95,886	\$123,533	\$152,269	\$174,813	\$216,431	\$208,762	\$246,965	\$273,011	\$286,209	\$296,152
MAD	\$7,390	\$21,457	\$30,727	\$41,255	\$49,327	\$58,275	\$77,462	\$101,790	\$128,046	\$145,939	\$174,428	\$166,603	\$196,303	\$221,740	\$232,635	\$240,957
Min	\$8,582	\$37,533	\$81,926	\$123,586	\$157,364	\$185,888	\$214,992	\$242,806	\$274,610	\$304,277	\$489,263	\$739,120	\$1,389,274	\$1,811,741	\$2,070,292	\$2,296,091

Asset:	Ethereum Classic
Ticker:	ETC
Exchanges:	Binance
Trading Pairs:	5

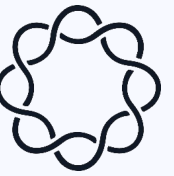
"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$8,254	\$32,016	\$59,720	\$78,467	\$90,538	\$100,342	\$111,930	\$126,959	\$143,753	\$160,451	\$236,535	\$294,955	\$466,570	\$607,565	\$672,334	\$741,661
Median	\$8,010	\$32,869	\$62,105	\$81,125	\$92,223	\$103,329	\$114,238	\$129,682	\$145,366	\$162,558	\$248,311	\$306,126	\$462,835	\$599,487	\$662,696	\$739,954
STDEV	\$2,618	\$8,055	\$13,259	\$15,865	\$17,052	\$18,610	\$21,894	\$27,572	\$33,327	\$37,602	\$45,245	\$43,981	\$54,373	\$62,395	\$58,786	\$68,280
MAD	\$2,114	\$6,531	\$10,534	\$12,463	\$13,157	\$14,525	\$17,390	\$22,360	\$27,477	\$30,863	\$34,994	\$33,280	\$42,469	\$51,760	\$48,952	\$56,562
Min	\$2,482	\$12,991	\$26,327	\$37,286	\$45,452	\$51,705	\$56,291	\$61,334	\$66,818	\$73,066	\$103,793	\$152,172	\$310,559	\$426,851	\$507,876	\$552,816

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$8,220	\$30,977	\$57,688	\$76,060	\$87,777	\$96,162	\$104,949	\$115,249	\$126,977	\$139,051	\$192,840	\$229,413	\$355,969	\$494,608	\$594,470	\$686,877
Median	\$7,811	\$30,974	\$58,764	\$78,985	\$90,195	\$98,996	\$106,655	\$116,655	\$129,460	\$144,308	\$201,583	\$234,869	\$360,943	\$506,756	\$596,864	\$675,697
STDEV	\$2,714	\$8,041	\$12,274	\$14,456	\$15,173	\$16,078	\$18,875	\$23,273	\$27,970	\$31,285	\$33,316	\$32,656	\$44,974	\$60,510	\$72,131	\$79,644
MAD	\$2,166	\$6,475	\$9,874	\$11,423	\$11,571	\$12,108	\$14,376	\$18,418	\$22,915	\$25,964	\$26,610	\$26,531	\$35,647	\$48,079	\$56,806	\$62,724
Min	\$2,621	\$11,549	\$25,485	\$36,630	\$45,965	\$52,443	\$56,727	\$60,632	\$64,199	\$67,918	\$93,952	\$127,635	\$231,404	\$324,255	\$412,347	\$467,660

Asset:	Ethereum Classic
Ticker:	ETC
Exchanges:	Coinbase
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$1,220	\$3,928	\$7,298	\$11,374	\$15,618	\$20,155	\$25,538	\$32,363	\$40,850	\$50,799	\$112,185	\$154,769	\$209,380	\$233,621	\$248,940	\$266,090
Median	\$1,109	\$3,799	\$7,076	\$11,143	\$15,766	\$19,661	\$23,869	\$29,079	\$36,823	\$45,528	\$119,364	\$160,542	\$210,823	\$231,474	\$244,543	\$264,271
STDEV	\$675	\$1,680	\$2,818	\$3,798	\$4,987	\$6,974	\$10,005	\$14,644	\$19,121	\$23,330	\$31,569	\$30,195	\$22,423	\$25,551	\$29,115	\$32,048
MAD	\$472	\$1,231	\$2,155	\$3,047	\$3,879	\$5,004	\$7,017	\$10,468	\$14,419	\$18,351	\$25,070	\$20,389	\$17,213	\$20,642	\$23,811	\$26,760
Min	\$262	\$965	\$1,926	\$3,058	\$4,174	\$5,047	\$6,131	\$7,296	\$8,214	\$8,980	\$14,964	\$24,965	\$154,115	\$180,592	\$191,684	\$204,731

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$1,374	\$4,096	\$7,393	\$11,498	\$15,931	\$20,803	\$26,798	\$33,278	\$40,948	\$48,872	\$82,124	\$99,616	\$136,235	\$160,340	\$195,150	\$226,892
Median	\$1,203	\$3,705	\$6,895	\$10,558	\$14,789	\$19,428	\$25,060	\$30,586	\$37,372	\$48,288	\$86,156	\$100,376	\$131,903	\$147,525	\$175,572	\$205,790
STDEV	\$796	\$1,911	\$2,953	\$4,816	\$7,114	\$9,925	\$13,644	\$17,263	\$20,300	\$23,167	\$30,511	\$31,872	\$42,796	\$51,182	\$61,547	\$70,474
MAD	\$580	\$1,375	\$2,199	\$3,665	\$5,269	\$7,270	\$10,026	\$13,276	\$16,358	\$18,938	\$24,602	\$24,862	\$34,865	\$42,859	\$51,623	\$60,291
Min	\$290	\$1,286	\$2,105	\$3,109	\$4,282	\$4,927	\$6,198	\$7,355	\$8,232	\$8,980	\$13,803	\$18,775	\$29,453	\$61,326	\$75,876	\$100,265



Ethereum Classic (ETC)

Asset:	Ethereum Classic
Ticker:	ETC
Exchanges:	Poloniex
Trading Pairs:	3

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$168	\$1,732	\$3,689	\$5,426	\$7,323	\$9,285	\$11,464	\$14,066	\$17,325	\$21,155	\$42,930	\$67,629	\$99,224	\$111,064	\$119,033	\$126,925
Median	\$135	\$1,751	\$3,802	\$5,427	\$7,129	\$8,806	\$10,852	\$13,455	\$16,974	\$21,472	\$45,275	\$70,078	\$99,074	\$111,429	\$119,025	\$124,735
STDEV	\$155	\$1,060	\$1,425	\$1,525	\$2,057	\$2,718	\$3,786	\$5,137	\$6,472	\$7,632	\$10,978	\$10,988	\$8,110	\$8,097	\$7,898	\$12,965
MAD	\$121	\$854	\$1,151	\$1,161	\$1,499	\$1,994	\$2,768	\$3,817	\$4,991	\$6,096	\$8,435	\$8,294	\$6,257	\$6,379	\$6,167	\$8,396
Min	\$0	\$52	\$567	\$1,745	\$2,750	\$3,670	\$4,677	\$5,737	\$6,506	\$7,157	\$13,188	\$34,760	\$72,280	\$86,346	\$95,414	\$105,075

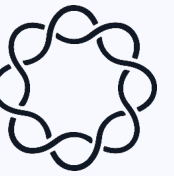
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$197	\$1,655	\$3,215	\$4,310	\$5,305	\$6,397	\$7,452	\$8,671	\$10,269	\$12,363	\$28,970	\$47,388	\$59,687	\$67,044	\$74,979	\$82,184
Median	\$186	\$1,799	\$3,478	\$4,531	\$5,435	\$6,500	\$7,576	\$8,858	\$10,361	\$12,201	\$30,533	\$49,029	\$57,592	\$65,415	\$72,164	\$77,889
STDEV	\$170	\$954	\$1,171	\$1,042	\$1,257	\$1,610	\$1,925	\$2,387	\$3,169	\$4,239	\$9,411	\$8,570	\$7,772	\$9,551	\$10,461	\$12,016
MAD	\$130	\$780	\$966	\$835	\$1,004	\$1,303	\$1,566	\$1,962	\$2,606	\$3,412	\$7,680	\$6,228	\$6,056	\$7,626	\$7,962	\$10,296
Min	\$0	\$54	\$561	\$1,560	\$2,350	\$3,051	\$3,388	\$3,833	\$4,306	\$5,015	\$9,285	\$18,244	\$38,876	\$42,933	\$50,680	\$54,200

Asset:	Ethereum Classic
Ticker:	ETC
Exchanges:	Huobi
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$9,870	\$35,168	\$59,513	\$81,003	\$95,210	\$106,915	\$118,945	\$131,377	\$145,371	\$159,784	\$233,773	\$289,520	\$378,083	\$393,731	\$401,463	\$405,129
Median	\$9,620	\$35,357	\$59,432	\$82,733	\$97,159	\$109,036	\$120,094	\$129,288	\$144,254	\$159,373	\$229,790	\$277,776	\$353,777	\$374,747	\$383,531	\$386,125
STDEV	\$3,429	\$9,311	\$12,118	\$15,002	\$17,815	\$20,139	\$23,744	\$28,901	\$33,917	\$38,795	\$53,539	\$65,496	\$93,315	\$94,193	\$94,789	\$95,256
MAD	\$2,687	\$7,359	\$9,336	\$11,657	\$13,944	\$15,575	\$18,628	\$22,479	\$26,532	\$30,546	\$40,235	\$43,719	\$56,435	\$57,613	\$59,898	\$61,458
Min	\$2,843	\$13,344	\$27,708	\$39,725	\$49,560	\$55,478	\$62,476	\$69,016	\$74,509	\$79,221	\$114,466	\$150,087	\$252,473	\$281,635	\$288,221	\$294,863

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$10,095	\$35,694	\$59,946	\$80,822	\$94,678	\$105,554	\$117,130	\$128,688	\$142,588	\$157,208	\$217,063	\$256,073	\$376,694	\$434,061	\$458,371	\$469,830
Median	\$10,053	\$35,540	\$59,699	\$81,418	\$95,452	\$106,159	\$114,939	\$126,375	\$141,628	\$156,017	\$215,918	\$249,200	\$364,053	\$418,408	\$439,871	\$459,751
STDEV	\$3,825	\$11,228	\$15,303	\$17,521	\$19,406	\$21,412	\$25,501	\$29,736	\$33,291	\$37,119	\$45,624	\$54,449	\$89,483	\$109,163	\$110,720	\$111,987
MAD	\$3,010	\$8,620	\$11,488	\$13,403	\$15,241	\$16,818	\$20,280	\$23,960	\$26,945	\$30,039	\$35,479	\$42,929	\$73,536	\$84,264	\$86,255	\$86,700
Min	\$2,799	\$11,679	\$25,510	\$37,747	\$45,356	\$51,332	\$57,348	\$62,822	\$70,173	\$76,775	\$117,886	\$151,287	\$225,726	\$248,830	\$284,676	\$298,012

DASH (DASH)



Asset:	DASH
Ticker:	DASH
Exchanges:	9
Trading Pairs:	21

Exchanges: Binance, Binance US, Bitfinex, Bittrex, Coinbase, Huobi, Kraken, Okex, Poloniex

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$11,243	\$42,632	\$82,203	\$127,676	\$171,890	\$214,097	\$256,563	\$301,319	\$348,825	\$398,493	\$681,281	\$940,956	\$1,451,849	\$1,702,739	\$1,877,539	\$2,024,467
Median	\$10,455	\$41,823	\$82,653	\$128,088	\$171,114	\$213,046	\$256,689	\$302,376	\$349,208	\$402,265	\$663,108	\$867,396	\$1,452,687	\$1,695,851	\$1,893,460	\$2,013,151
STDEV	\$5,670	\$16,181	\$27,611	\$39,753	\$49,851	\$59,066	\$72,220	\$88,337	\$107,215	\$127,131	\$190,991	\$217,721	\$338,891	\$392,972	\$427,298	\$428,849
MAD	\$4,596	\$13,215	\$22,664	\$32,395	\$40,880	\$48,620	\$59,290	\$71,126	\$85,065	\$99,996	\$154,664	\$192,787	\$302,219	\$346,038	\$375,599	\$376,140
Min	\$1,701	\$11,121	\$24,875	\$39,940	\$60,870	\$84,135	\$106,502	\$126,657	\$146,679	\$166,826	\$301,914	\$477,721	\$796,618	\$1,037,522	\$1,167,953	\$1,291,186

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$11,577	\$44,455	\$83,459	\$127,540	\$169,783	\$210,739	\$250,861	\$294,204	\$340,576	\$387,362	\$617,126	\$816,365	\$1,286,681	\$1,541,997	\$1,737,404	\$1,909,749
Median	\$11,173	\$45,067	\$84,736	\$128,346	\$166,471	\$210,146	\$244,080	\$291,489	\$345,878	\$387,251	\$584,180	\$783,980	\$1,349,626	\$1,547,986	\$1,744,403	\$1,900,823
STDEV	\$5,394	\$16,556	\$28,161	\$40,637	\$50,476	\$59,305	\$71,719	\$89,627	\$109,056	\$126,236	\$166,941	\$189,272	\$313,806	\$381,244	\$450,478	\$500,207
MAD	\$4,245	\$13,260	\$22,747	\$32,778	\$41,855	\$49,842	\$60,463	\$73,215	\$87,583	\$99,941	\$143,329	\$172,953	\$281,078	\$330,602	\$395,840	\$439,015
Min	\$1,703	\$9,721	\$23,889	\$39,676	\$60,501	\$82,001	\$103,711	\$122,740	\$142,911	\$163,101	\$280,353	\$422,102	\$704,756	\$887,031	\$992,181	\$1,113,537

Asset:	DASH
Ticker:	DASH
Exchanges:	Binance
Trading Pairs:	5

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,482	\$11,455	\$21,809	\$33,360	\$45,110	\$56,833	\$68,133	\$79,491	\$92,369	\$105,900	\$165,472	\$204,897	\$291,878	\$360,856	\$428,616	\$501,295
Median	\$3,314	\$10,875	\$21,248	\$33,145	\$44,602	\$55,425	\$64,399	\$77,112	\$88,617	\$102,195	\$155,480	\$198,496	\$296,210	\$359,118	\$408,491	\$461,587
STDEV	\$1,984	\$5,233	\$8,789	\$12,492	\$16,354	\$19,853	\$23,536	\$28,216	\$34,084	\$39,827	\$51,755	\$58,986	\$94,120	\$122,832	\$149,490	\$152,236
MAD	\$1,483	\$4,005	\$6,914	\$9,842	\$12,880	\$15,851	\$19,083	\$22,593	\$26,612	\$30,636	\$42,208	\$51,006	\$79,040	\$103,250	\$123,980	\$122,095
Min	\$363	\$2,544	\$6,310	\$10,202	\$14,489	\$18,572	\$22,819	\$26,940	\$30,842	\$34,238	\$66,185	\$90,583	\$148,427	\$183,886	\$222,357	\$292,547

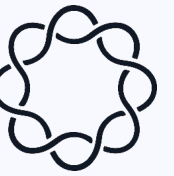
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,658	\$11,502	\$20,535	\$30,246	\$40,119	\$50,375	\$60,634	\$70,567	\$80,398	\$90,239	\$132,397	\$156,802	\$221,752	\$284,829	\$351,933	\$426,483
Median	\$3,359	\$10,930	\$19,374	\$30,316	\$39,420	\$50,118	\$59,387	\$70,080	\$77,805	\$85,864	\$129,990	\$165,809	\$228,019	\$299,806	\$362,338	\$430,764
STDEV	\$1,937	\$4,955	\$7,947	\$10,682	\$13,290	\$16,078	\$19,715	\$24,568	\$29,584	\$33,703	\$37,292	\$42,178	\$64,148	\$89,746	\$118,141	\$147,594
MAD	\$1,413	\$3,764	\$6,234	\$8,552	\$10,812	\$13,281	\$16,380	\$20,176	\$23,904	\$27,179	\$33,140	\$38,277	\$56,995	\$79,666	\$103,569	\$126,849
Min	\$427	\$2,046	\$5,083	\$8,528	\$13,302	\$17,678	\$21,762	\$25,474	\$28,355	\$30,494	\$52,445	\$77,977	\$115,400	\$143,106	\$171,528	\$211,739

Asset:	DASH
Ticker:	DASH
Exchanges:	Coinbase
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$745	\$2,967	\$6,036	\$8,518	\$10,884	\$13,343	\$15,829	\$18,495	\$21,915	\$26,177	\$65,789	\$111,421	\$145,849	\$153,455	\$157,192	\$161,459
Median	\$634	\$2,581	\$5,475	\$7,699	\$10,056	\$11,977	\$14,173	\$17,434	\$20,454	\$23,720	\$56,946	\$104,706	\$151,474	\$161,433	\$166,110	\$172,739
STDEV	\$595	\$1,734	\$2,981	\$3,581	\$4,420	\$5,479	\$6,638	\$8,024	\$10,209	\$13,207	\$32,796	\$38,370	\$46,108	\$48,783	\$50,410	\$52,378
MAD	\$458	\$1,352	\$2,387	\$2,872	\$3,524	\$4,448	\$5,563	\$6,794	\$8,527	\$10,873	\$27,294	\$33,271	\$42,304	\$45,094	\$46,794	\$48,743
Min	\$37	\$317	\$978	\$1,820	\$2,731	\$3,406	\$4,267	\$4,980	\$5,873	\$6,681	\$19,652	\$46,116	\$71,906	\$75,070	\$76,391	\$77,777

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$1,002	\$3,821	\$7,558	\$10,504	\$13,381	\$16,678	\$20,189	\$24,282	\$29,218	\$34,732	\$67,262	\$91,639	\$123,188	\$145,235	\$163,308	\$179,603
Median	\$745	\$3,278	\$6,439	\$9,089	\$11,368	\$14,239	\$15,681	\$18,130	\$22,591	\$27,184	\$51,702	\$77,974	\$118,777	\$144,376	\$176,432	\$193,368
STDEV	\$1,153	\$2,598	\$4,434	\$5,912	\$7,568	\$9,714	\$12,444	\$15,743	\$19,520	\$23,681	\$39,092	\$48,122	\$58,469	\$60,088	\$62,516	\$64,648
MAD	\$659	\$1,941	\$3,663	\$4,916	\$6,297	\$8,068	\$10,088	\$12,546	\$15,462	\$18,808	\$33,376	\$43,736	\$54,527	\$54,822	\$55,528	\$56,054
Min	\$18	\$380	\$977	\$1,359	\$1,756	\$2,263	\$2,802	\$3,412	\$4,019	\$4,730	\$8,362	\$15,288	\$36,537	\$40,656	\$48,563	\$58,023

DASH (DASH)

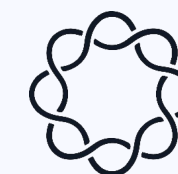


Asset:	DASH
Ticker:	DASH
Exchanges:	Kraken
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$299	\$1,479	\$3,956	\$7,553	\$11,415	\$14,652	\$17,514	\$20,462	\$23,473	\$26,657	\$52,384	\$72,909	\$103,583	\$122,327	\$138,870	\$147,741
Median	\$161	\$1,149	\$3,438	\$7,234	\$11,011	\$14,161	\$16,159	\$18,703	\$22,023	\$24,262	\$51,883	\$70,010	\$102,059	\$122,058	\$140,861	\$150,349
STDEV	\$488	\$1,639	\$2,768	\$4,262	\$6,456	\$7,879	\$9,068	\$10,658	\$13,250	\$15,608	\$21,152	\$23,110	\$24,663	\$26,386	\$30,315	\$31,905
MAD	\$251	\$738	\$1,458	\$2,554	\$3,632	\$4,460	\$5,393	\$6,600	\$8,108	\$9,859	\$15,246	\$17,514	\$18,141	\$19,607	\$24,065	\$25,694
Min	\$16	\$340	\$1,147	\$2,143	\$3,486	\$5,098	\$6,570	\$7,487	\$8,139	\$8,530	\$14,928	\$28,418	\$56,867	\$75,036	\$78,891	\$81,391

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$270	\$1,342	\$3,728	\$7,023	\$10,177	\$12,845	\$15,278	\$17,900	\$20,946	\$24,158	\$43,738	\$63,893	\$78,962	\$84,442	\$89,451	\$94,819
Median	\$216	\$1,271	\$3,358	\$6,269	\$9,164	\$11,787	\$13,810	\$16,011	\$18,098	\$21,200	\$39,416	\$62,239	\$75,984	\$79,733	\$85,027	\$89,880
STDEV	\$200	\$553	\$1,497	\$3,108	\$4,057	\$4,831	\$5,819	\$7,338	\$9,227	\$11,173	\$15,056	\$16,203	\$18,512	\$19,994	\$22,287	\$25,974
MAD	\$154	\$454	\$1,142	\$2,284	\$3,058	\$3,681	\$4,368	\$5,449	\$6,780	\$8,207	\$12,129	\$12,855	\$14,470	\$16,200	\$18,253	\$21,492
Min	\$21	\$447	\$1,515	\$3,057	\$4,262	\$4,873	\$5,414	\$6,149	\$7,137	\$8,114	\$19,540	\$36,168	\$43,709	\$47,491	\$48,447	\$49,383

Huobi Token (HT)

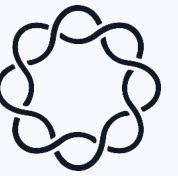


Asset:	Huobi Token
Ticker:	HT
Exchanges:	Huobi
Trading Pairs:	3

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$16,789	\$52,871	\$76,851	\$92,894	\$107,817	\$122,164	\$136,608	\$152,707	\$169,227	\$185,556	\$266,815	\$310,402	\$337,475	\$338,571	\$338,571	\$338,571
Median	\$15,560	\$52,919	\$76,829	\$92,063	\$106,251	\$117,815	\$129,580	\$141,993	\$157,308	\$174,450	\$251,605	\$294,168	\$317,533	\$319,116	\$319,116	\$319,116
STDEV	\$6,217	\$12,753	\$16,532	\$20,898	\$26,181	\$32,291	\$38,862	\$46,587	\$54,277	\$61,527	\$86,337	\$98,928	\$102,231	\$102,199	\$102,199	\$102,199
MAD	\$4,987	\$10,078	\$13,007	\$16,073	\$19,922	\$24,773	\$29,733	\$35,733	\$41,575	\$47,479	\$67,832	\$76,438	\$76,158	\$76,062	\$76,062	\$76,062
Min	\$6,951	\$25,691	\$44,154	\$52,022	\$60,204	\$66,840	\$72,990	\$79,647	\$85,289	\$91,732	\$132,486	\$170,376	\$183,508	\$183,508	\$183,508	\$183,508

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$16,168	\$49,649	\$76,262	\$95,103	\$111,881	\$128,438	\$145,632	\$163,392	\$180,584	\$199,132	\$290,282	\$334,765	\$364,833	\$369,466	\$369,531	\$369,531
Median	\$14,426	\$50,325	\$77,260	\$94,257	\$108,302	\$123,722	\$139,053	\$152,152	\$169,701	\$186,179	\$279,159	\$326,600	\$362,437	\$365,698	\$365,698	\$365,698
STDEV	\$7,167	\$14,286	\$20,192	\$25,396	\$30,587	\$35,786	\$41,503	\$47,777	\$53,543	\$60,114	\$89,179	\$101,353	\$102,395	\$103,306	\$103,339	\$103,339
MAD	\$5,484	\$11,213	\$15,233	\$18,792	\$22,590	\$27,019	\$32,046	\$37,958	\$43,088	\$48,955	\$71,036	\$77,583	\$78,667	\$79,716	\$79,752	\$79,752
Min	\$3,436	\$16,682	\$30,771	\$40,562	\$49,346	\$55,539	\$62,147	\$70,420	\$78,874	\$85,919	\$120,792	\$145,764	\$186,235	\$188,024	\$188,024	\$188,024

Monero (XMR)



Asset:	Monero
Ticker:	XMR
Exchanges:	7
Trading Pairs:	18

Exchanges: Binance, Bitfinex, Bittrex, Huobi, Kraken, Okex, Poloniex,

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$10,608	\$39,928	\$86,622	\$141,723	\$189,267	\$228,080	\$270,018	\$315,074	\$360,763	\$404,328	\$599,245	\$765,593	\$1,175,776	\$1,612,655	\$1,772,134	\$1,908,009
Median	\$9,232	\$38,670	\$85,373	\$142,599	\$191,459	\$229,758	\$270,002	\$314,053	\$356,455	\$402,401	\$609,879	\$769,820	\$1,218,883	\$1,683,671	\$1,810,997	\$1,945,612
STDEV	\$7,330	\$14,759	\$23,282	\$33,244	\$41,647	\$48,141	\$57,504	\$67,615	\$77,683	\$87,109	\$118,015	\$138,240	\$178,165	\$235,095	\$222,578	\$201,088
MAD	\$3,938	\$9,566	\$16,800	\$24,668	\$30,926	\$35,803	\$43,037	\$51,251	\$58,640	\$65,780	\$95,476	\$111,795	\$146,738	\$195,655	\$174,992	\$145,375
Min	\$2,983	\$15,188	\$34,088	\$54,602	\$78,811	\$98,290	\$114,921	\$133,529	\$153,428	\$176,710	\$297,523	\$387,487	\$683,018	\$891,791	\$1,017,126	\$1,110,820

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$9,116	\$35,616	\$76,858	\$125,778	\$168,464	\$200,642	\$231,821	\$267,724	\$307,506	\$344,980	\$518,627	\$662,668	\$1,076,538	\$1,493,861	\$1,645,917	\$1,772,353
Median	\$8,644	\$34,987	\$77,558	\$125,321	\$170,717	\$205,324	\$235,823	\$272,661	\$313,006	\$347,492	\$509,578	\$679,636	\$1,106,407	\$1,544,249	\$1,687,676	\$1,815,143
STDEV	\$3,576	\$11,700	\$23,531	\$34,192	\$39,954	\$42,325	\$46,794	\$55,719	\$65,467	\$72,371	\$85,355	\$95,926	\$180,852	\$266,274	\$264,636	\$286,968
MAD	\$2,844	\$9,196	\$19,290	\$28,385	\$32,831	\$34,465	\$37,841	\$45,756	\$54,210	\$59,625	\$69,598	\$77,758	\$146,977	\$222,720	\$221,204	\$237,378
Min	\$2,464	\$12,517	\$28,259	\$51,029	\$76,201	\$94,035	\$113,353	\$127,748	\$146,806	\$169,740	\$295,113	\$403,053	\$578,228	\$722,497	\$849,563	\$928,460

Asset:	Monero
Ticker:	XMR
Exchanges:	Binance
Trading Pairs:	4

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,614	\$12,945	\$25,732	\$38,015	\$47,760	\$56,177	\$65,173	\$74,634	\$84,156	\$92,011	\$122,757	\$141,627	\$193,752	\$249,036	\$313,400	\$395,066
Median	\$3,416	\$12,893	\$25,875	\$37,696	\$48,013	\$56,560	\$66,197	\$75,949	\$85,352	\$92,972	\$121,830	\$138,673	\$184,884	\$241,951	\$303,344	\$386,911
STDEV	\$1,719	\$4,780	\$8,500	\$11,390	\$13,308	\$14,838	\$16,471	\$18,281	\$20,027	\$21,012	\$23,986	\$26,691	\$40,969	\$47,813	\$60,555	\$58,837
MAD	\$1,245	\$3,402	\$5,997	\$8,280	\$9,751	\$11,044	\$12,444	\$14,115	\$15,591	\$16,347	\$18,476	\$20,936	\$32,706	\$39,990	\$49,933	\$47,405
Min	\$1,091	\$4,852	\$9,904	\$14,032	\$18,226	\$22,487	\$26,724	\$30,784	\$34,940	\$38,638	\$64,438	\$86,557	\$122,582	\$169,562	\$195,975	\$284,206

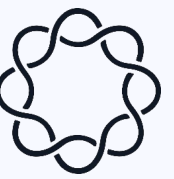
"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$3,167	\$11,361	\$22,700	\$34,355	\$43,826	\$51,173	\$58,602	\$65,509	\$71,632	\$76,924	\$94,575	\$107,646	\$152,052	\$204,434	\$262,072	\$334,904
Median	\$2,966	\$10,588	\$21,436	\$33,386	\$42,298	\$49,410	\$57,868	\$64,978	\$70,940	\$75,595	\$93,248	\$106,749	\$148,787	\$199,719	\$256,795	\$341,342
STDEV	\$1,402	\$4,448	\$7,643	\$10,001	\$11,389	\$12,177	\$13,143	\$14,077	\$14,824	\$15,212	\$15,988	\$16,768	\$24,892	\$40,387	\$48,105	\$62,165
MAD	\$1,023	\$3,096	\$5,435	\$7,597	\$8,818	\$9,405	\$10,042	\$10,793	\$11,439	\$11,784	\$12,519	\$13,552	\$18,450	\$30,140	\$35,854	\$50,274
Min	\$662	\$4,206	\$8,839	\$14,434	\$19,126	\$24,628	\$28,526	\$31,701	\$34,844	\$37,701	\$54,172	\$66,457	\$89,147	\$117,800	\$148,544	\$182,707

Asset:	Monero
Ticker:	XMR
Exchanges:	Kraken
Trading Pairs:	2

"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$2,887	\$9,921	\$24,574	\$44,494	\$60,246	\$69,491	\$77,987	\$86,904	\$94,644	\$103,306	\$151,774	\$211,965	\$368,119	\$541,370	\$578,251	\$601,941
Median	\$1,500	\$7,047	\$21,390	\$42,279	\$59,587	\$66,987	\$74,419	\$84,795	\$92,107	\$98,609	\$150,838	\$214,366	\$368,885	\$548,337	\$585,082	\$618,344
STDEV	\$6,408	\$11,486	\$15,718	\$18,910	\$21,690	\$23,978	\$26,650	\$29,240	\$32,095	\$35,982	\$46,661	\$57,748	\$63,284	\$95,677	\$97,758	\$88,925
MAD	\$2,322	\$5,692	\$9,214	\$11,373	\$13,394	\$15,060	\$16,956	\$19,280	\$21,589	\$24,476	\$33,685	\$40,628	\$44,478	\$69,546	\$75,035	\$67,310
Min	\$534	\$1,960	\$3,664	\$5,479	\$8,740	\$9,860	\$10,363	\$11,164	\$12,046	\$13,829	\$31,281	\$40,218	\$105,499	\$127,793	\$197,139	\$271,350

"Pumping" Manipulation (Ask)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$2,102	\$9,143	\$22,752	\$39,619	\$53,908	\$63,080	\$69,969	\$77,150	\$85,003	\$92,569	\$136,237	\$187,055	\$328,288	\$450,953	\$481,642	\$504,130
Median	\$1,770	\$7,358	\$18,325	\$35,759	\$50,725	\$62,071	\$70,092	\$79,321	\$87,881	\$93,074	\$136,520	\$188,489	\$314,559	\$416,611	\$447,295	\$473,231
STDEV	\$1,844	\$6,084	\$13,049	\$18,715	\$20,826	\$20,783	\$21,125	\$22,960	\$24,964	\$26,541	\$29,792	\$36,228	\$68,277	\$97,973	\$108,738	\$113,200
MAD	\$1,085	\$4,596	\$11,127	\$16,703	\$18,394	\$17,827	\$17,565	\$19,029	\$20,501	\$21,922	\$25,721	\$30,148	\$48,386	\$78,274	\$87,708	\$91,699
Min	\$447	\$2,403	\$5,244	\$8,734	\$14,370	\$17,710	\$20,259	\$22,647	\$25,359	\$30,605	\$56,919	\$77,502	\$119,294	\$155,754	\$168,372	\$181,308

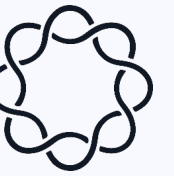
Monero (XMR)



Asset:	Monero
Ticker:	XMR
Exchanges:	Poloniex
Trading Pairs:	3

	"Dumping" Manipulation (Bid)																
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%	
Mean	\$842	\$2,172	\$4,040	\$6,095	\$8,303	\$10,762	\$13,324	\$16,145	\$19,319	\$22,792	\$40,395	\$56,209	\$76,808	\$97,469	\$112,818	\$114,734	
Median	\$553	\$1,754	\$3,589	\$5,297	\$7,262	\$9,597	\$11,625	\$14,122	\$17,467	\$21,690	\$39,243	\$55,359	\$75,539	\$95,336	\$116,737	\$118,820	
STDEV	\$895	\$1,665	\$2,340	\$2,832	\$3,437	\$4,077	\$4,930	\$5,856	\$6,715	\$7,221	\$9,057	\$10,289	\$13,484	\$20,356	\$26,356	\$27,826	
MAD	\$581	\$1,123	\$1,561	\$1,960	\$2,443	\$2,969	\$3,776	\$4,701	\$5,436	\$5,845	\$6,875	\$7,628	\$10,607	\$17,397	\$22,819	\$23,947	
Min	\$0	\$122	\$675	\$1,589	\$2,857	\$4,336	\$6,512	\$8,843	\$10,007	\$11,219	\$22,940	\$35,285	\$48,168	\$58,987	\$69,490	\$70,304	

	"Pumping" Manipulation (Ask)															
	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1%	1.50%	2%	4%	6%	8%	10%
Mean	\$882	\$2,339	\$4,556	\$6,783	\$9,012	\$11,369	\$13,806	\$16,573	\$19,708	\$22,933	\$36,920	\$46,017	\$66,013	\$84,197	\$91,610	\$92,920
Median	\$670	\$2,078	\$4,041	\$5,877	\$7,371	\$9,161	\$11,405	\$13,910	\$17,249	\$20,428	\$33,272	\$39,875	\$59,733	\$81,596	\$90,177	\$90,334
STDEV	\$805	\$1,602	\$2,627	\$3,821	\$4,916	\$5,942	\$6,917	\$8,218	\$9,185	\$9,983	\$14,020	\$17,511	\$24,765	\$33,126	\$33,362	\$33,127
MAD	\$586	\$1,108	\$1,712	\$2,420	\$3,291	\$4,212	\$5,089	\$6,153	\$6,940	\$7,678	\$10,061	\$12,570	\$21,515	\$29,389	\$29,766	\$29,664
Min	\$2	\$114	\$798	\$1,468	\$2,795	\$4,207	\$5,378	\$6,798	\$8,519	\$9,386	\$16,109	\$24,406	\$32,216	\$34,446	\$41,279	\$41,619



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