# SYNTHETIX Asset Liquidity Analysis

DEC 2020



### Preface

This analysis is very similar to the previous one we did. Our goal was to ensure that existing and potential new assets on the platform are tamper resistant. Although we think of tamper resistance as a spectrum, we wanted to be sure that there wasn't a viable economic attack vector. Particularly one where the cost of oracle manipulation was cheaper than the amount of money that could be made by manipulating it. In general, oracle manipulation is a function of liquidity. The higher the liquidity, the costlier it would be to manipulate it. It's also not that black and white because oracles have built in redundancies that help reduce their susceptibility to one poor price feed.

We analyzed the liquidity of potentially listable assets to access their viability. Tracking orderbook depth over time for each asset across individual pairs and exchanges helped us gauge the \$ amount of buying or selling it would take to move the price a certain percent. We present our findings throughout this report along with the supporting data.

The results of our analysis show that all the assets below can be safely added as Synths.

### **Assets Covered**















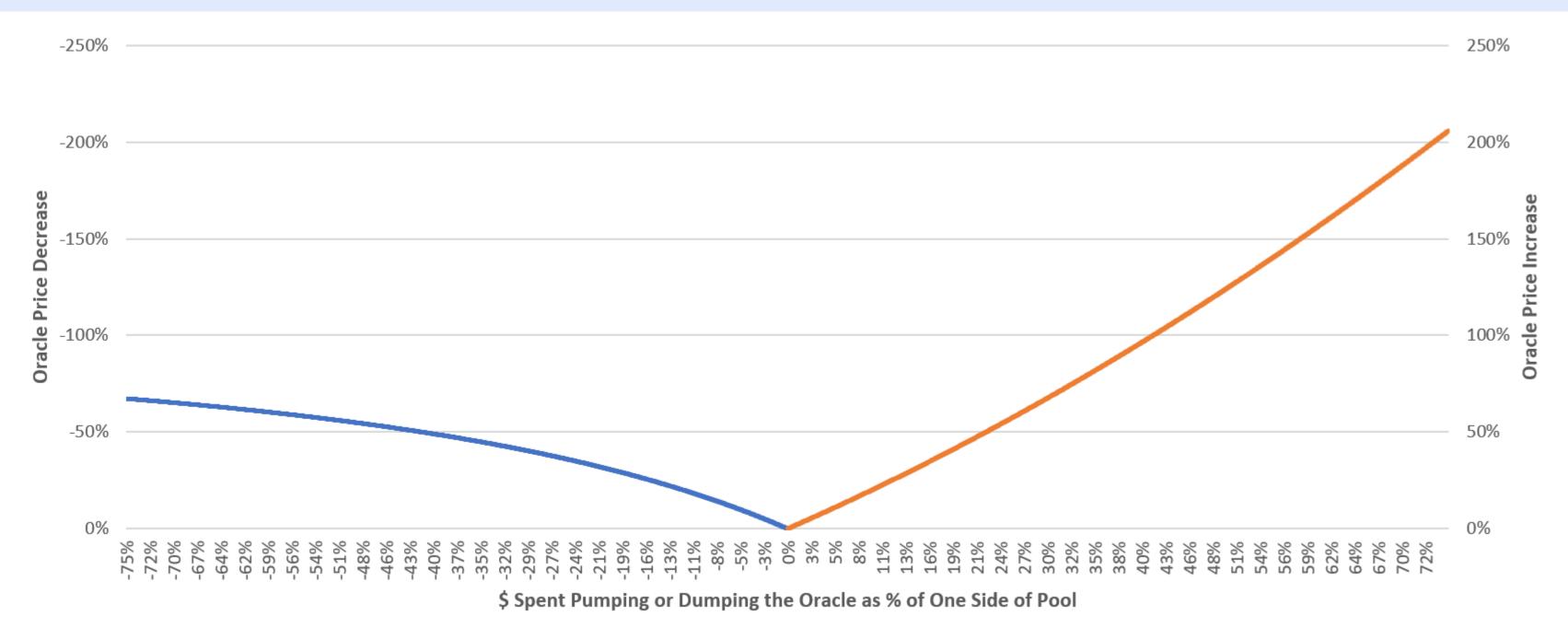


How We Analyzed Uniswap



The logic behind providing exchange-based breakouts, rather than a specific trading pair, is because of how quickly arbitrage opportunities are closed between trading pairs on an exchange. When a token is trading against both USDT and BTC on an exchange, the dollar prices of both trading pairs usually move in lockstep. When they deviate, arbitrage traders (usually bots) can immediately capture the price difference and bring them back to parity.

Certain assets don't have liquid exchange pairs, but rather liquid pairs on Uniswap. As we've seen already, that oracle can certainly be prone to manipulation in its current state. We analyzed Uniswap to understand the amount of capital that would be needed to manipulate the price oracle up or down, and we measured it as a function of the amount of liquidity in the pool. The relationship below isn't indicating the exchange rate that the trader pays, but rather the new exchange rate that Uniswap would output as an oracle. It's evident that it's a lot cheaper to manipulate the oracle price up rather than down, which is a function of how the AMM mechanism works and because its lower bound is capped at -100% (exchange rate can't drop more than 100%) while the upper bound is effectively infinite. This is certainly important to keep in mind when using this as an oracle.







Aave is a highly liquid asset that can be comfortably listed.

Asset:	Aave
Ticker:	AAVE
Exchange:	Binance
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$862,497	\$700,324	\$553,628	\$407,835	\$261,272	\$191,366	\$113,266	\$98,204	\$85,080	\$74,825	\$65,934	\$55,571	\$41,332	\$25,879	\$13,546	\$3,909
Median	\$880,962	\$720,143	\$568,537	\$419,616	\$269,773	\$184,551	\$109,128	\$97,263	\$85,415	\$76,803	\$67,478	\$57,597	\$41,796	\$26,193	\$14,398	\$4,476
STDEV	\$298,297	\$246,389	\$190,070	\$137,019	\$89,494	\$70,230	\$39,570	\$32,135	\$26,514	\$23,170	\$21,385	\$19,399	\$15,438	\$10,035	\$5,348	\$1,778

							P	umping" Man	ipulation (Ask)							
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$3,931	\$12,795	\$24,371	\$39,274	\$53,671	\$64,702	\$75,357	\$87,559	\$101,299	\$115,380	\$172,223	\$210,382	\$340,152	\$497,918	\$680,435	\$888,388
Median	\$3,679	\$13,526	\$25,276	\$41,410	\$56,488	\$67,689	\$80,015	\$94,579	\$109,408	\$125,849	\$199,415	\$227,773	\$341,315	\$504,950	\$707,030	\$937,046
STDEV	\$2,231	\$5,160	\$9,190	\$14,746	\$19,688	\$23,026	\$27,130	\$33,106	\$40,179	\$46,748	\$66,369	\$77,987	\$148,649	\$237,325	\$330,946	\$433,881

Asset:	Aave
Ticker:	AAVE
Exchange:	Gemini
Pairs:	1

								Dumping" Mar	ipulation (Bid)							
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$43,365	\$41,885	\$39,140	\$35,662	\$27,091	\$20,793	\$14,367	\$12,817	\$10,589	\$7,801	\$5,137	\$3,255	\$2,040	\$947	\$215	\$76
Median	\$32,126	\$30,261	\$26,245	\$22,333	\$18,176	\$13,846	\$11,666	\$10,436	\$9,232	\$6,986	\$4,936	\$2,969	\$1,772	\$862	\$122	\$5
STDEV	\$28,317	\$27,223	\$24,677	\$21,945	\$16,318	\$11,612	\$6,796	\$5,922	\$4,744	\$3,334	\$2,036	\$1,297	\$905	\$580	\$248	\$166

							Р	umping" Man	ipulation (Ask)							
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$101	\$213	\$829	\$1,914	\$3,214	\$4,904	\$6,859	\$8,575	\$9,949	\$11,008	\$16,385	\$19,858	\$25,099	\$29,843	\$33,640	\$36,988
Median	\$3	\$78	\$778	\$1,831	\$3,037	\$5,127	\$7,200	\$8,784	\$9,787	\$10,488	\$13,400	\$15,524	\$17,409	\$18,497	\$19,581	\$20,771
STDEV	\$281	\$437	\$665	\$848	\$1,122	\$1,516	\$2,013	\$2,532	\$3,233	\$4,017	\$8,333	\$10,975	\$15,734	\$21,936	\$25,496	\$29,248

Asset:	Aave
Ticker:	AAVE
Exchange:	Huobi
Pairs:	2

	Dumping" Manipulation (Bid)															
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$183,701	\$163,465	\$144,805	\$121,777	\$88,615	\$68,590	\$38,306	\$32,962	\$28,438	\$24,330	\$20,346	\$15,555	\$9,994	\$5,404	\$2,327	\$377
Median	\$192,647	\$165,545	\$141,887	\$114,910	\$87,233	\$62,646	\$34,338	\$31,091	\$28,957	\$25,068	\$21,413	\$17,030	\$10,952	\$5,556	\$2,145	\$301
STDEV	\$74,438	\$65,291	\$55,561	\$43,963	\$33,936	\$30,582	\$15,736	\$12,449	\$10,016	\$8,443	\$7,362	\$5,860	\$3,634	\$1,946	\$1,213	\$416

							Р	umping" Man	ipulation (Ask)					Pumping" Manipulation (Ask)													
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%											
Mean	\$342	\$2,401	\$5,741	\$10,275	\$15,084	\$19,045	\$22,668	\$26,457	\$30,959	\$36,123	\$64,843	\$81,904	\$111,298	\$134,030	\$157,585	\$182,577											
Median	\$287	\$2,517	\$6,066	\$10,594	\$16,292	\$20,723	\$23,729	\$26,314	\$29,676	\$33,777	\$61,176	\$84,547	\$115,323	\$137,525	\$156,829	\$171,844											
STDEV	\$192	\$874	\$1,836	\$3,537	\$5,266	\$6,538	\$7,948	\$9,827	\$12,379	\$15,394	\$28,306	\$30,824	\$40,066	\$52,558	\$67,451	\$82,765											

Asset:	Aave
Ticker:	AAVE
Exchange:	OKEx
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$164,149	\$161,052	\$156,418	\$143,849	\$73,606	\$41,362	\$17,345	\$13,720	\$10,305	\$7,298	\$5,125	\$3,556	\$2,036	\$990	\$381	\$155
Median	\$158,275	\$155,602	\$153,131	\$140,333	\$62,923	\$39,634	\$15,384	\$11,785	\$8,283	\$5,504	\$3,603	\$2,325	\$1,315	\$497	\$195	\$52
STDEV	\$53,368	\$53,153	\$52,907	\$52,121	\$39,129	\$23,325	\$11,178	\$9,120	\$7,269	\$5,698	\$4,570	\$3,643	\$2,416	\$1,627	\$646	\$280

	Pumping" Manipulation (Ask)															
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$257	\$554	\$1,335	\$2,760	\$5,554	\$9,068	\$13,960	\$19,242	\$24,353	\$29,244	\$53,840	\$77,391	\$121,007	\$131,165	\$135,049	\$138,009
Median	\$85	\$257	\$882	\$1,582	\$3,606	\$5,890	\$8,356	\$11,764	\$15,434	\$19,495	\$39,380	\$67,513	\$125,115	\$133,418	\$135,976	\$138,431
STDEV	\$400	\$672	\$1,391	\$2,699	\$5,372	\$8,724	\$13,248	\$17,942	\$21,721	\$25,142	\$37,260	\$48,979	\$68,484	\$71,237	\$71,467	\$71,857

## Polkadot.



Polkadot is a highly liquid asset that can be comfortably listed.

Asset:	Polkadot
Ticker:	DOT
Exchange:	Binance
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$1,850,270	\$1,664,164	\$1,287,285	\$919,402	\$576,383	\$499,252	\$395,128	\$375,804	\$354,049	\$323,646	\$286,590	\$246,086	\$206,436	\$158,733	\$92,436	\$27,126
Median	\$1,716,989	\$1,575,356	\$1,257,227	\$922,764	\$580,030	\$495,465	\$394,824	\$372,814	\$355,916	\$323,581	\$286,739	\$247,299	\$209,386	\$161,261	\$92,451	\$26,596
STDEV	\$374,728	\$285,689	\$203,167	\$130,646	\$72,748	\$57,813	\$44,476	\$41,827	\$39,960	\$38,052	\$34,025	\$27,939	\$23,063	\$18,565	\$13,694	\$6,080

							P	umping" Man	ipulation (Ask)							
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$28,214	\$95,725	\$161,213	\$200,498	\$234,237	\$274,351	\$311,432	\$337,617	\$354,660	\$367,625	\$424,604	\$489,916	\$813,771	\$1,162,520	\$1,479,306	\$1,637,264
Median	\$27,755	\$94,908	\$156,912	\$200,430	\$233,882	\$271,097	\$307,705	\$337,482	\$349,757	\$358,299	\$408,839	\$473,585	\$772,630	\$1,071,560	\$1,323,782	\$1,421,342
STDEV	\$5,571	\$14,045	\$21,040	\$26,756	\$33,950	\$43,625	\$49,400	\$52,694	\$55,703	\$59,035	\$72,769	\$89,629	\$198,705	\$354,923	\$507,977	\$635,266

Asset:	Polkadot
Ticker:	DOT
Exchange:	Kraken
Pairs:	1

								Dumping" Mar	ipulation (Bid)							
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$564,319	\$467,617	\$384,680	\$310,717	\$236,250	\$217,323	\$175,717	\$166,941	\$154,396	\$135,581	\$113,951	\$97,853	\$87,067	\$75,311	\$48,886	\$14,836
Median	\$574,704	\$463,550	\$381,042	\$305,233	\$233,084	\$220,774	\$182,390	\$174,529	\$162,721	\$138,153	\$113,003	\$99,728	\$89,997	\$78,909	\$52,132	\$16,197
STDEV	\$132,172	\$115,543	\$100,327	\$82,024	\$56,116	\$47,353	\$36,193	\$34,957	\$33,396	\$31,369	\$27,497	\$22,348	\$18,710	\$16,466	\$11,837	\$4,401

		Pumping" Manipulation (Ask)														
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$17,341	\$53,398	\$76,663	\$88,771	\$104,228	\$121,856	\$138,996	\$152,405	\$161,433	\$166,730	\$178,877	\$192,594	\$256,616	\$332,350	\$410,036	\$485,467
Median	\$18,255	\$55,962	\$81,686	\$91,678	\$101,019	\$120,758	\$142,397	\$156,226	\$166,570	\$170,860	\$175,689	\$190,789	\$233,869	\$283,720	\$348,330	\$380,528
STDEV	\$5,741	\$15,264	\$19,412	\$22,848	\$30,002	\$35,702	\$36,567	\$35,542	\$35,871	\$37,083	\$44,300	\$52,117	\$99,481	\$194,517	\$264,957	\$345,987

Asset:	Polkadot
Ticker:	DOT
Exchange:	Huobi
Pairs:	1

							C	umping" Man	ipulation (Bid)							
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$330,643	\$330,643	\$330,642	\$329,312	\$277,036	\$239,422	\$176,595	\$163,389	\$146,880	\$125,499	\$101,672	\$82,625	\$68,917	\$55,129	\$40,451	\$16,732
Median	\$325,191	\$325,191	\$325,191	\$325,191	\$272,631	\$233,148	\$174,701	\$161,050	\$144,273	\$121,721	\$96,594	\$78,364	\$65,747	\$52,627	\$37,853	\$15,357
STDEV	\$99,764	\$99,764	\$99,763	\$99,054	\$77,318	\$71,484	\$58,051	\$54,596	\$49,627	\$43,538	\$35,942	\$30,079	\$25,149	\$20,562	\$18,196	\$11,996

		Pumping" Manipulation (Ask)														
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$16,881	\$43,205	\$60,468	\$74,942	\$92,761	\$114,602	\$135,185	\$151,318	\$163,149	\$172,702	\$215,164	\$252,710	\$306,134	\$308,340	\$308,429	\$308,429
Median	\$17,200	\$45,261	\$62,561	\$78,523	\$94,253	\$118,825	\$141,136	\$159,475	\$169,861	\$177,519	\$218,397	\$257,336	\$297,382	\$297,382	\$297,382	\$297,382
STDEV	\$6,311	\$12,570	\$15,639	\$19,434	\$24,781	\$30,379	\$34,806	\$38,531	\$41,572	\$44,472	\$59,785	\$75,145	\$105,912	\$106,308	\$106,287	\$106,287

Asset:	Polkadot
Ticker:	DOT
Exchange:	Bitfinex
Pairs:	1

							D	umping" Man	ipulation (Bid)							
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$553,461	\$509,369	\$468,563	\$432,193	\$252,230	\$192,053	\$132,902	\$120,769	\$108,868	\$92,321	\$75,501	\$59,015	\$40,910	\$25,415	\$13,872	\$3,426
Median	\$515,609	\$465,561	\$406,848	\$351,442	\$213,959	\$168,572	\$122,016	\$115,414	\$106,061	\$94,082	\$79,533	\$65,279	\$42,987	\$24,817	\$13,886	\$3,350
STDEV	\$161,416	\$155,187	\$147,655	\$141,869	\$84,308	\$59,804	\$36,688	\$32,015	\$28,376	\$23,736	\$19,769	\$16,993	\$13,227	\$8,361	\$4,499	\$1,488

		Pumping" Manipulation (Ask)														
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$2,618	\$12,033	\$22,884	\$41,051	\$60,252	\$77,228	\$93,641	\$108,858	\$119,152	\$130,129	\$186,416	\$246,523	\$425,869	\$456,974	\$491,523	\$525,850
Median	\$2,379	\$12,536	\$23,653	\$43,501	\$64,921	\$81,273	\$96,879	\$108,625	\$111,275	\$116,004	\$155,853	\$200,481	\$349,901	\$385,094	\$430,130	\$474,962
STDEV	\$1,109	\$3,005	\$5,598	\$10,927	\$17,067	\$20,469	\$24,954	\$30,388	\$35,214	\$40,519	\$64,253	\$89,920	\$145,747	\$149,942	\$153,782	\$157,254





Filecoin is a highly liquid asset that can be comfortably listed.

Asset:	Filecoin
Ticker:	FIL
Exchange:	Binance
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$921,618	\$857,376	\$752,141	\$632,571	\$464,145	\$296,721	\$210,827	\$184,564	\$168,607	\$155,186	\$139,501	\$121,935	\$98,336	\$74,667	\$49,013	\$19,150
Median	\$819,264	\$752,311	\$671,317	\$584,171	\$462,093	\$284,070	\$201,158	\$174,677	\$164,641	\$153,728	\$141,962	\$123,708	\$94,009	\$71,163	\$47,514	\$17,608
STDEV	\$303,377	\$303,938	\$241,720	\$157,855	\$80,429	\$54,548	\$54,429	\$43,304	\$37,335	\$34,971	\$31,885	\$29,642	\$27,335	\$24,765	\$20,177	\$11,788

		Pumping" Manipulation (Ask)														
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$16,068	\$46,131	\$69,079	\$84,790	\$95,548	\$105,756	\$117,419	\$129,187	\$149,269	\$173,389	\$230,433	\$363,661	\$492,878	\$603,000	\$717,506	\$812,494
Median	\$17,493	\$49,854	\$73,925	\$87,820	\$96,538	\$104,962	\$117,393	\$130,863	\$156,726	\$178,248	\$225,935	\$376,037	\$453,766	\$560,855	\$693,061	\$767,995
STDEV	\$4,694	\$12,032	\$13,928	\$13,208	\$13,231	\$13,746	\$15,482	\$18,054	\$27,198	\$35,159	\$41,622	\$77,848	\$146,493	\$172,600	\$193,475	\$205,975

Asset:	Filecoin
Ticker:	FIL
Exchange:	Gemini
Pairs:	1

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$318,522	\$317,153	\$314,545	\$310,728	\$291,040	\$152,432	\$68,156	\$54,945	\$52,148	\$50,042	\$44,765	\$36,214	\$25,478	\$15,421	\$6,128	\$448
Median	\$327,400	\$326,156	\$324,248	\$321,940	\$302,037	\$157,861	\$65,895	\$54,686	\$52,050	\$49,729	\$45,229	\$37,899	\$26,347	\$15,875	\$6,466	\$345
STDEV	\$64,537	\$64,061	\$63,138	\$62,070	\$59,054	\$32,155	\$18,950	\$13,788	\$13,191	\$12,534	\$10,692	\$8,082	\$5,671	\$3,599	\$1,598	\$337

							Р	umping" Man	ipulation (Ask)							
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$961	\$8,817	\$19,277	\$28,215	\$36,382	\$43,323	\$47,562	\$50,013	\$59,752	\$81,327	\$106,853	\$159,334	\$166,897	\$174,412	\$182,629	\$184,869
Median	\$659	\$8,747	\$20,280	\$28,713	\$37,496	\$43,786	\$48,227	\$50,028	\$62,037	\$86,607	\$104,695	\$154,792	\$164,609	\$167,344	\$168,406	\$171,871
STDEV	\$1,000	\$3,090	\$5,060	\$6,747	\$8,343	\$9,603	\$10,270	\$10,947	\$14,608	\$22,773	\$28,838	\$59,668	\$62,769	\$68,433	\$74,810	\$75,948

Asset:	Filecoin
Ticker:	FIL
Exchange:	Kraken
Pairs:	1

							D	umping" Man	ipulation (Bid)	)						
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$152,712	\$146,383	\$140,497	\$134,316	\$112,931	\$108,982	\$88,574	\$83,539	\$78,940	\$74,586	\$69,033	\$61,493	\$53,905	\$41,328	\$22,336	\$4,255
Median	\$161,778	\$155,900	\$149,624	\$142,127	\$117,837	\$114,182	\$92,732	\$86,630	\$82,556	\$77,292	\$74,388	\$68,513	\$60,236	\$45,519	\$24,497	\$4,124
STDEV	\$36,588	\$34,829	\$33,863	\$32,849	\$30,206	\$29,603	\$28,305	\$27,901	\$27,129	\$26,070	\$23,812	\$20,380	\$18,224	\$14,968	\$9,274	\$2,286

							P	umping" Mani	ipulation (Ask)							
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$5,400	\$25,495	\$44,933	\$55,374	\$61,759	\$66,172	\$67,961	\$68,649	\$69,071	\$69,485	\$71,576	\$73,687	\$83,972	\$95,490	\$107,195	\$118,286
Median	\$5,397	\$25,388	\$51,199	\$62,358	\$70,883	\$75,669	\$77,346	\$77,732	\$77,890	\$78,037	\$80,915	\$83,241	\$93,044	\$101,897	\$105,404	\$112,164
STDEV	\$2,331	\$9,387	\$15,380	\$18,393	\$20,658	\$22,390	\$22,938	\$23,048	\$23,060	\$23,087	\$23,601	\$24,327	\$28,039	\$30,930	\$34,471	\$38,562

Asset:	Filecoin
Ticker:	FIL
Exchange:	Huobi
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$715,723	\$698,693	\$678,744	\$658,726	\$604,358	\$538,316	\$383,018	\$342,724	\$302,265	\$261,148	\$220,959	\$179,393	\$138,471	\$97,491	\$61,187	\$27,526
Median	\$655,882	\$648,999	\$628,989	\$612,718	\$575,469	\$516,739	\$334,430	\$297,320	\$262,845	\$228,405	\$182,334	\$146,498	\$111,685	\$76,109	\$49,281	\$21,132
STDEV	\$204,884	\$203,703	\$200,619	\$197,800	\$185,821	\$181,687	\$183,275	\$173,577	\$160,909	\$147,263	\$135,282	\$118,539	\$103,099	\$79,185	\$56,042	\$28,788

	Pumping" Manipulation (Ask)															
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$11,068	\$27,941	\$44,519	\$60,148	\$74,871	\$87,939	\$98,848	\$108,642	\$121,771	\$143,200	\$230,889	\$325,489	\$405,248	\$419,432	\$430,030	\$437,930
Median	\$11,008	\$25,166	\$40,744	\$53,746	\$68,007	\$78,614	\$86,474	\$91,602	\$97,398	\$106,476	\$161,016	\$213,708	\$261,941	\$268,573	\$274,401	\$278,973
STDEV	\$4,085	\$10,756	\$16,701	\$20,419	\$24,980	\$30,288	\$35,800	\$41,440	\$50,746	\$72,256	\$132,845	\$197,622	\$229,734	\$247,517	\$261,589	\$270,118





Compound isn't as liquid as the previously mentioned assets, but its liquidity is substantial enough that it can be comfortably listed.

Asset:	Compound
Ticker:	COMP
Exchange:	Binance
Pairs:	1

	Dumping" Manipulation (Bid)															
	10%	10% 8% 6% 4% 2% 1.5% 1.0% 0.9% 0.8% 0.7% 0.6% 0.5% 0.4% 0.3% 0.2% 0.1%														
Mean	\$311,747	\$259,944	\$214,807	\$163,388	\$115,953	\$101,646	\$71,835	\$63,414	\$52,745	\$41,128	\$30,913	\$23,271	\$16,690	\$10,910	\$6,240	\$1,701
Median	\$295,328	\$256,854	\$215,652	\$160,014	\$119,169	\$106,245	\$75,922	\$63,939	\$54,121	\$41,755	\$31,040	\$24,286	\$17,046	\$10,870	\$6,193	\$1,576
STDEV	\$125,839	\$90,811	\$68,772	\$45,393	\$19,233	\$16,181	\$12,755	\$12,035	\$10,538	\$8,255	\$5,852	\$4,036	\$2,879	\$2,127	\$1,410	\$667

		Pumping" Manipulation (Ask)														
	0.1%															
Mean	\$1,493	\$6,042	\$10,744	\$16,074	\$22,282	\$30,214	\$40,817	\$51,925	\$60,772	\$67,047	\$79,314	\$87,330	\$126,515	\$179,767	\$220,446	\$257,332
Median	\$1,466	\$5,939	\$11,149	\$16,530	\$22,858	\$31,475	\$42,344	\$54,755	\$63,591	\$69,007	\$79,982	\$88,499	\$120,231	\$170,520	\$209,997	\$242,188
STDEV	\$495	\$1,222	\$2,066	\$3,281	\$4,932	\$6,972	\$9,654	\$11,536	\$12,266	\$12,618	\$15,047	\$17,972	\$36,525	\$56,975	\$82,170	\$97,451

Asset:	Compound
Ticker:	COMP
Exchange:	Coinbase
Pairs:	1

	Dumping" Manipulation (Bid)															
	10%															
Mean	\$469,304	\$440,604	\$404,740	\$328,819	\$274,198	\$254,250	\$162,677	\$129,693	\$94,703	\$65,261	\$44,848	\$32,386	\$24,011	\$17,851	\$9,596	\$2,301
Median	\$448,897	\$420,780	\$396,536	\$306,740	\$256,782	\$234,037	\$167,249	\$134,921	\$99,155	\$67,501	\$44,821	\$31,248	\$23,637	\$17,051	\$9,455	\$2,299
STDEV	\$103,821	\$97,617	\$87,005	\$73,626	\$58,805	\$56,451	\$40,012	\$34,239	\$27,054	\$18,727	\$11,083	\$6,598	\$4,168	\$3,455	\$2,460	\$784

		Pumping" Manipulation (Ask)														
	0.1%	0.1% 0.2% 0.3% 0.4% 0.5% 0.6% 0.7% 0.8% 0.9% 1.0% 1.5% 2% 4% 6% 8% 10%													10%	
Mean	\$2,120	\$8,952	\$18,688	\$27,022	\$38,416	\$57,376	\$83,533	\$111,086	\$135,172	\$153,114	\$194,298	\$207,576	\$250,345	\$313,311	\$340,904	\$364,529
Median	\$1,981	\$8,983	\$18,478	\$26,042	\$36,146	\$52,674	\$74,785	\$108,520	\$125,964	\$150,279	\$183,926	\$199,017	\$258,150	\$317,483	\$349,464	\$371,584
STDEV	\$955	\$2,771	\$4,967	\$7,240	\$12,246	\$22,429	\$32,627	\$38,615	\$40,325	\$40,234	\$41,258	\$42,159	\$55,684	\$80,253	\$94,744	\$106,518

Compound's liquidity on Uniswap, as seen below, isn't as deep as its CLOB equivalent above. It still provides a substantial buffer against price manipulation.

Asset:	Compound
Ticker:	COMP
Uniswap Pool:	\$4,190,242
COMP in Pool:	\$2,095,121

	Dumping" Manipulation (Bid)																
0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1.00%	1.50%	2.00%	4.00%	6.00%	8.00%	10.00%	25.00%	50.00%
\$471	\$942	\$1,423	\$1,894	\$2,365	\$2,846	\$3,317	\$3,798	\$4,278	\$4,759	\$7,162	\$9,584	\$19,460	\$29,657	\$40,184	\$51,050	\$146,006	\$390,944
																,	

	"Pumping" Manipulation (Ask)																
0.10%	0.10% 0.20% 0.30% 0.40% 0.50% 0.60% 0.70% 0.80% 0.90% 1.00% 1.50% 2.00% 4.00% 6.00% 8.00% 10.00% 25.00% 50.00%													50.00%			
\$471	\$942	\$1,414	\$1,885	\$2,356	\$2,827	\$3,298	\$3,770	\$4,241	\$4,712	\$7,049	\$9,396	\$18,688	\$27,904	\$37,027	\$46,064	\$111,401	\$212,115





Ren has strong liquidity across multiple centralized exchanges and Uniswap, and can be comfortably listed.

Asset:	Ren
Ticker:	REN
Exchange:	Binance
Pairs:	1

	Dumping" Manipulation (Bid)															
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$328,892	\$290,040	\$249,971	\$201,028	\$114,678	\$87,600	\$50,180	\$42,197	\$34,523	\$27,808	\$22,209	\$16,907	\$11,480	\$7,078	\$3,682	\$921
Median	\$340,218	\$303,733	\$265,600	\$209,779	\$120,627	\$92,309	\$51,085	\$43,155	\$35,071	\$28,207	\$22,465	\$16,876	\$11,695	\$7,118	\$3,665	\$877
STDEV	\$83,284	\$72,272	\$62,230	\$48,858	\$28,813	\$24,263	\$16,198	\$13,673	\$11,056	\$8,753	\$6,970	\$5,611	\$4,075	\$2,647	\$1,390	\$413

		Pumping" Manipulation (Ask)														
	0.1%															
Mean	\$1,057	\$3,928	\$7,533	\$12,085	\$16,960	\$20,764	\$23,602	\$26,142	\$28,568	\$30,919	\$42,129	\$53,823	\$105,728	\$159,307	\$217,513	\$276,284
Median	\$1,032	\$4,110	\$8,168	\$13,094	\$18,662	\$22,902	\$26,218	\$28,828	\$31,398	\$33,234	\$42,699	\$52,922	\$103,805	\$146,123	\$196,532	\$268,444
STDEV	\$571	\$1,444	\$2,639	\$4,108	\$5,566	\$6,622	\$7,425	\$8,320	\$9,297	\$10,302	\$15,138	\$19,989	\$42,581	\$74,095	\$106,877	\$133,197

Asset:	Ren
Ticker:	REN
Exchange:	Coinbase
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$397,204	\$374,813	\$351,406	\$316,000	\$239,850	\$182,849	\$77,272	\$58,114	\$42,997	\$31,426	\$22,698	\$16,792	\$12,752	\$9,795	\$6,483	\$2,254
Median	\$402,947	\$383,974	\$361,726	\$321,096	\$244,850	\$181,632	\$82,057	\$59,434	\$43,267	\$30,078	\$21,711	\$15,907	\$12,374	\$9,342	\$6,317	\$2,082
STDEV	\$56,122	\$51,929	\$47,676	\$41,901	\$34,091	\$34,594	\$21,422	\$16,631	\$12,157	\$8,910	\$6,421	\$4,582	\$3,294	\$2,597	\$1,833	\$767

		Pumping" Manipulation (Ask)														
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$2,624	\$6,874	\$10,234	\$13,200	\$16,580	\$20,385	\$24,552	\$28,429	\$31,871	\$34,941	\$47,165	\$57,832	\$96,773	\$122,480	\$145,387	\$169,258
Median	\$2,173	\$6,517	\$10,313	\$13,215	\$16,078	\$19,296	\$22,935	\$27,051	\$30,788	\$34,111	\$44,949	\$54,618	\$91,116	\$112,144	\$133,726	\$158,710
STDEV	\$1,115	\$2,180	\$2,871	\$3,582	\$4,698	\$6,083	\$7,416	\$8,615	\$9,783	\$10,765	\$13,660	\$15,720	\$25,895	\$34,332	\$41,834	\$47,336

Asset:	Ren
Ticker:	REN
Exchange:	Huobi
Pairs:	1

		Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.5%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%	0.1%
Mean	\$229,184	\$204,961	\$178,822	\$150,405	\$114,137	\$94,542	\$53,482	\$42,245	\$30,807	\$21,825	\$15,484	\$10,512	\$6,265	\$3,738	\$2,145	\$570
Median	\$242,409	\$212,917	\$184,271	\$154,367	\$114,965	\$98,300	\$55,452	\$43,171	\$29,972	\$21,422	\$15,473	\$10,526	\$6,155	\$3,643	\$2,015	\$499
STDEV	\$52,761	\$43,818	\$30,089	\$18,129	\$11,814	\$13,475	\$12,448	\$10,544	\$7,468	\$4,690	\$3,056	\$2,361	\$1,617	\$1,028	\$617	\$274

		Pumping" Manipulation (Ask)														
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$630	\$2,372	\$4,296	\$7,093	\$10,689	\$13,700	\$15,716	\$17,032	\$18,017	\$18,793	\$22,070	\$25,456	\$44,254	\$71,356	\$102,818	\$130,919
Median	\$575	\$2,206	\$4,094	\$7,071	\$10,773	\$13,535	\$14,946	\$15,661	\$16,197	\$16,745	\$19,427	\$22,495	\$40,578	\$64,952	\$101,008	\$131,212
STDEV	\$309	\$641	\$1,185	\$1,952	\$2,725	\$3,520	\$4,205	\$4,687	\$5,126	\$5,458	\$6,980	\$8,568	\$17,874	\$32,232	\$49,807	\$58,775

Asset:	Ren
Ticker:	REN
<b>Uniswap Pool:</b>	\$7,599,948
<b>REN in Pool:</b>	\$3,799,974

	Dumping" Manipulation (Bid)																
0.10% 0.20% 0.30% 0.40% 0.50% 0.60% 0.70% 0.80% 0.90% 1.00% 1.50% 2.00% 4.00% 6.00% 8.00% 10.00% 25.00% 50.00%														50.00%			
\$950	\$1,900	\$2,869	\$3,819	\$4,769	\$5,738	\$6,688	\$7,657	\$8,626	\$9,595	\$14,440	\$19,323	\$39,235	\$59,793	\$81,015	\$102,922	\$294,365	\$788,191

	"Pumping" Manipulation (Ask)																
0.10%	0.10% 0.20% 0.30% 0.40% 0.50% 0.60% 0.70% 0.80% 0.90% 1.00% 1.50% 2.00% 4.00% 6.00% 8.00% 10.00% 25.00% 50.00%															50.00%	
\$950	\$1,900	\$2,850	\$3,800	\$4,750	\$5,700	\$6,650	\$7,600	\$8,550	\$9,500	\$14,212	\$18,943	\$37,677	\$56,259	\$74,651	\$92,871	\$224,598	\$427,649





Bancor's CEX liquidity isn't that strong, but it typically holds about \$20 million in its own Bancor ETH/BNT pool. That's in addition to the other \$75 million in total liquidity (half of which is the BNT token).

Asset:	Bancor
Ticker:	BNT
Exchange:	Binance
Pairs:	2

	Dumping" Manipulation (Bid)															
	10%	10% 8% 6% 4% 2% 1.5% 1.0% 0.9% 0.8% 0.7% 0.6% 0.5% 0.4% 0.3% 0.2% 0.1%														
Mean	\$115,191	\$86,488	\$62,087	\$40,395	\$25,697	\$18,502	\$9,483	\$8,122	\$6,833	\$5,701	\$4,691	\$3,723	\$2,896	\$2,007	\$1,035	\$258
Median	\$107,446	\$78,127	\$53,631	\$35,036	\$23,457	\$18,063	\$9,374	\$7,883	\$6,632	\$5,225	\$4,101	\$3,117	\$2,414	\$1,636	\$789	\$213
STDEV	\$39,926	\$32,542	\$24,095	\$17,421	\$10,560	\$8,206	\$4,755	\$4,120	\$3,534	\$3,051	\$2,505	\$1,989	\$1,578	\$1,167	\$654	\$181

	Pumping" Manipulation (Ask)															
	0.1%															
Mean	\$313	\$844	\$1,531	\$2,122	\$2,702	\$3,343	\$3,988	\$4,561	\$5,123	\$5,665	\$8,017	\$10,162	\$19,985	\$34,998	\$53,416	\$72,345
Median	\$202	\$638	\$1,240	\$1,875	\$2,410	\$3,058	\$3,619	\$4,177	\$4,780	\$5,305	\$7,128	\$9,007	\$18,369	\$30,674	\$45,654	\$57,999
STDEV	\$344	\$634	\$950	\$1,160	\$1,370	\$1,612	\$1,872	\$2,104	\$2,351	\$2,593	\$3,892	\$5,338	\$12,096	\$20,769	\$32,540	\$43,515

Asset:	Bancor
Ticker:	BNT
Exchange:	HitBTC
Pairs:	2

		Dumping" Manipulation (Bid)														
	10%															
Mean	\$88,659	\$87,590	\$86,134	\$83,703	\$44,716	\$24,603	\$11,389	\$9,747	\$8,427	\$7,423	\$6,294	\$4,841	\$3,313	\$1,620	\$370	\$62
Median	\$89,420	\$87,943	\$86,606	\$83,995	\$44,144	\$23,228	\$9,983	\$9,187	\$8,295	\$6,861	\$5,440	\$4,285	\$3,109	\$1,505	\$328	\$43
STDEV	\$21,513	\$21,305	\$21,140	\$21,305	\$13,108	\$8,011	\$4,531	\$3,617	\$2,876	\$2,770	\$2,721	\$2,012	\$1,216	\$627	\$204	\$69

		Pumping" Manipulation (Ask)														
	0.1%															
Mean	\$19	\$58	\$142	\$232	\$375	\$597	\$921	\$1,289	\$1,648	\$1,986	\$3,572	\$5,205	\$12,549	\$20,275	\$27,808	\$33,994
Median	\$11	\$48	\$137	\$243	\$383	\$599	\$890	\$1,253	\$1,677	\$1,912	\$3,342	\$4,661	\$11,476	\$19,909	\$26,170	\$35,524
STDEV	\$18	\$42	\$72	\$105	\$177	\$274	\$401	\$529	\$647	\$772	\$1,560	\$2,534	\$7,090	\$11,508	\$14,847	\$16,539





Yearn has very deep liquidity on centralized exchanges and Uniswap. It can be safely added.

Asset:	Yearn Finance
Ticker:	YFI
Exchange:	Binance
Pairs:	2

		"Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.50%	1.0%	0.90%	0.80%	0.70%	0.60%	0.50%	0.40%	0.30%	0.20%	0.10%
Mean	\$723,456	\$596,554	\$471,667	\$348,411	\$221,770	\$178,945	\$117,756	\$104,860	\$92,604	\$81,569	\$72,156	\$61,524	\$46,335	\$29,976	\$15,225	\$4,115
Median	\$661,893	\$585,983	\$452,142	\$353,628	\$235,364	\$193,721	\$122,661	\$107,697	\$94,936	\$85,150	\$75,557	\$64,802	\$49,255	\$30,654	\$16,082	\$3,991
STDEV	\$274,586	\$190,319	\$133,948	\$82,671	\$52,742	\$45,565	\$30,657	\$26,970	\$23,810	\$21,195	\$19,249	\$17,368	\$14,017	\$9,453	\$5,226	\$2,428

							"Pumpi	ng" Manipu	lation (Ask	)						
	0.1%															
Mean	\$4,567	\$14,658	\$28,405	\$44,779	\$60,599	\$71,304	\$79,102	\$86,629	\$94,202	\$101,541	\$131,815	\$157,939	\$262,977	\$384,039	\$515,656	\$634,427
Median	\$4,821	\$15,250	\$29,263	\$45,888	\$62,627	\$71,610	\$77,885	\$83,289	\$89,934	\$96,177	\$119,878	\$146,210	\$267,249	\$404,120	\$545,730	\$636,957
STDEV	\$2,541	\$5,070	\$9,257	\$14,766	\$19,561	\$23,073	\$26,527	\$30,546	\$35,044	\$39,373	\$55,547	\$68,318	\$113,462	\$173,677	\$260,718	\$340,507

Asset:	Yearn Finance
Ticker:	YFI
Exchange:	Coinbase
Pairs:	1

		"Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.50%	1.0%	0.90%	0.80%	0.70%	0.60%	0.50%	0.40%	0.30%	0.20%	0.10%
Mean	\$933,918	\$809,608	\$684,543	\$547,282	\$376,264	\$304,762	\$183,868	\$161,506	\$142,553	\$127,054	\$113,695	\$100,049	\$86,970	\$74,478	\$55,437	\$14,859
Median	\$995,451	\$827,591	\$692,593	\$536,986	\$375,732	\$299,394	\$180,820	\$157,296	\$142,086	\$130,436	\$117,072	\$103,149	\$89,061	\$76,544	\$56,514	\$14,074
STDEV	\$284,640	\$255,809	\$220,554	\$171,599	\$111,982	\$94,318	\$55,708	\$46,442	\$38,126	\$32,222	\$28,287	\$24,505	\$21,633	\$20,534	\$18,789	\$6,999

		"Pumping" Manipulation (Ask)														
	0.1%															
Mean	\$16,878	\$57,904	\$76,479	\$89,041	\$100,195	\$110,057	\$118,277	\$125,596	\$132,353	\$139,092	\$175,666	\$212,810	\$366,034	\$530,734	\$713,869	\$888,964
Median	\$15,767	\$58,903	\$78,560	\$90,765	\$103,401	\$115,212	\$123,778	\$130,600	\$137,194	\$143,337	\$176,808	\$212,206	\$369,163	\$542,222	\$667,908	\$880,572
STDEV	\$8,882	\$20,157	\$21,472	\$23,135	\$25,420	\$27,680	\$29,899	\$32,136	\$34,410	\$36,742	\$50,115	\$64,968	\$137,106	\$226,283	\$313,523	\$390,016

Asset:	Yearn Finance
Ticker:	YFI
Uniswap Pool:	\$28,034,936
YFI in Pool:	\$14,017,468

								Dumping" Manipulation (Bid)														
0.10% 0.20% 0.30% 0.40% 0.50% 0.60% 0.70% 0.80% 0.90% 1.00% 1.50% 2.00% 4.00% 6.00% 8.00% 10.00% 25.00% 50.00														50.00%								
\$3,504	\$7,009	\$10,583	\$14,088	\$17,592	\$21,166	\$24,671	\$28,245	\$31,820	\$35,394	\$53,266	\$71,279	\$144,730	\$220,565	\$298,852	\$379,663	\$1,085,863	\$2,907,503					

									"Pumping"	Manipulation (	(Ask)						
0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1.00%	1.50%	2.00%	4.00%	6.00%	8.00%	10.00%	25.00%	50.00%
\$3,504	\$7,009	\$10,513	\$14,017	\$17,522	\$21,026	\$24,531	\$28,035	\$31,539	\$35,044	\$52,425	\$69,877	\$138,983	\$207,529	\$275,373	\$342,587	\$828,503	\$1,577,526



## **Uniswap**

Uniswap has very deep liquidity on centralized exchanges and on...Uniswap. It can be safely added.

Asset:	Uniswap
Ticker:	UNI
<b>Uniswap Pool</b>	\$102,061,694
UNI in Pool:	\$51,030,847

0.10% 0.20% 0.30% 0.40% 0.50% 0.60% 0.70% 0.80% 0.90% 1.00% 1.50% 2.00% 4.00% 6.00% 8.00% 10.00% 2.00%		Dumping" Manipulation (Bid)																
	% 50.00%	25.00%	10.00%	8.00%	6.00%	4.00%	2.00%	1.50%	1.00%	0.90%	0.80%	0.70%	0.60%	0.50%	0.40%	0.30%	0.20%	0.10%
\$12,758   \$25,515   \$38,528   \$51,286   \$64,044   \$77,057   \$89,814   \$102,827   \$115,840   \$128,853   \$193,917   \$259,492   \$526,894   \$802,970   \$1,087,978   \$1,382,171   \$3,53   \$1,087,978   \$1,382,171   \$3,53   \$1,087,978	105 \$10,584,818	\$3,953,105	\$1,382,171	\$1,087,978	\$802,970	\$526,894	\$259,492	\$193,917	\$128,853	\$115,840	\$102,827	\$89,814	\$77,057	\$64,044	\$51,286	\$38,528	\$25,515	\$12,758

	"Pumping" Manipulation (Ask)																
0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1.00%	1.50%	2.00%	4.00%	6.00%	8.00%	10.00%	25.00%	50.00%
\$12,758	\$25,515	\$38,273	\$51,031	\$63,789	\$76,546	\$89,304	\$102,062	\$114,819	\$127,577	\$190,855	\$254,389	\$505,971	\$755,512	\$1,002,501	\$1,247,194	\$3,016,178	\$5,743,012

Asset:	Uniswap
Ticker:	UNI
Exchange:	Binance
Pairs:	2

							"Du	mping" Ma	nipulation	(Bid)						
	10%	8%	6%	4%	2%	1.50%	1.0%	0.90%	0.80%	0.70%	0.60%	0.50%	0.40%	0.30%	0.20%	0.10%
Mean	\$909,660	\$741,761	\$585,472	\$431,981	\$278,148	\$220,159	\$153,019	\$137,307	\$122,767	\$109,283	\$96,877	\$83,804	\$67,906	\$48,527	\$30,615	\$11,627
Median	\$942,973	\$760,002	\$591,177	\$447,128	\$291,190	\$221,106	\$152,894	\$134,229	\$119,235	\$107,133	\$95,449	\$81,757	\$65,116	\$45,852	\$28,594	\$10,275
STDEV	\$349,586	\$280,614	\$216,392	\$158,094	\$99,661	\$79,681	\$57,306	\$51,717	\$46,493	\$41,690	\$37,220	\$32,794	\$26,962	\$19,755	\$13,927	\$7,212

							"Pu	mping" Ma	nipulation (	Ask)						
	0.1%	0.1% 0.2% 0.3% 0.4% 0.5% 0.6% 0.7% 0.8% 0.9% 1.0% 1.5% 2% 4% 6% 8% 10%														10%
Mean	\$10,002	\$28,526	\$45,292	\$60,895	\$73,218	\$85,727	\$99,679	\$114,891	\$130,287	\$146,185	\$207,350	\$256,944	\$428,396	\$646,132	\$862,698	\$1,076,200
Median	\$10,044	\$29,065	\$45,707	\$61,769	\$75,608	\$88,631	\$105,550	\$117,701	\$134,286	\$150,269	\$202,733	\$247,701	\$402,253	\$673,486	\$924,176	\$1,039,649
STDEV	\$4,324	\$10,508	\$15,805	\$20,834	\$25,062	\$29,744	\$35,241	\$41,245	\$47,186	\$52,884	\$77,416	\$99,580	\$195,352	\$313,639	\$438,523	\$571,900

Asset:	Uniswap
Ticker:	UNI
Exchange:	Coinbase
Pairs:	1

		"Dumping" Manipulation (Bid)														
	10%	8%	6%	4%	2%	1.50%	1.0%	0.90%	0.80%	0.70%	0.60%	0.50%	0.40%	0.30%	0.20%	0.10%
Mean	\$525,143	\$475,275	\$415,519	\$334,564	\$267,770	\$241,237	\$164,453	\$138,984	\$112,425	\$88,020	\$70,089	\$58,008	\$49,018	\$39,856	\$25,157	\$7,066
Median	\$571,787	\$514,888	\$464,325	\$342,621	\$247,206	\$220,134	\$154,869	\$130,054	\$105,913	\$86,296	\$71,902	\$59,615	\$50,963	\$41,274	\$26,927	\$7,017
STDEV	\$194,792	\$173,030	\$152,973	\$122,969	\$100,806	\$93,488	\$67,844	\$58,536	\$47,176	\$35,176	\$25,562	\$19,848	\$16,531	\$13,842	\$10,024	\$3,411

								"Pumping" l	Manipulation	(Ask)						
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.5%	2%	4%	6%	8%	10%
Mean	\$7,854	\$25,805	\$40,179	\$49,432	\$58,273	\$70,955	\$89,824	\$112,711	\$135,112	\$154,154	\$204,810	\$229,956	\$299,524	\$389,755	\$467,292	\$526,758
Median	\$6,994	\$28,703	\$43,206	\$52,255	\$59,944	\$70,925	\$92,243	\$113,176	\$131,084	\$151,030	\$207,463	\$236,258	\$311,103	\$398,764	\$428,631	\$515,516
STDEV	\$4,093	\$10,480	\$13,954	\$16,554	\$19,855	\$25,397	\$33,962	\$44,280	\$53,623	\$61,068	\$77,199	\$85,078	\$115,938	\$162,362	\$193,230	\$228,595

## Disclosures



This report was done by <u>Delphi Digital</u>, a research and consulting firm focused on the digital asset market. Out of the assets covered, Delphi Ventures holds YFI and UNI. Our Consulting division currently has an ongoing engagement with AAVE and is currently holding AAVE.

Delphi Digital is not a FINRA registered broker-dealer or investment adviser and does not provide investment banking services. This report is not investment advice, it is strictly informational. Do not trade or invest in any tokens, companies or entities based solely upon this information. Any investment involves substantial risks, including, but not limited to, pricing volatility, inadequate liquidity, and the potential complete loss of principal. Investors should conduct independent due diligence, with assistance from professional financial, legal and tax experts, on topics discussed in this document and develop a stand-alone judgment of the relevant markets prior to making any investment decision.

Delphi Digital receives no compensation from the companies, entities, or protocols they cover for their subscription-based research products. This report was prepared for members of the Synthetix team as a paid consultation and does not represent an endorsement nor a recommendation by Delphi Digital and is not to be construed as investment advice of any kind; this report is strictly informational. Do not trade or invest in any tokens, companies or entities based solely upon this information. Any investment involves substantial risks, including, but not limited to, pricing volatility, inadequate liquidity, and the potential complete loss of principal. Investors should conduct independent due diligence, with assistance from professional financial, legal and tax experts, on topics discussed in this document and develop a stand-alone judgment of the relevant markets prior to making any investment decision.

The information contained in this document may include, or incorporate by reference, forward-looking statements, which would include any statements that are not statements of historical fact. No representations or warranties are made as to the accuracy of such forward-looking statements. Any projections, forecasts and estimates contained in this document are necessarily speculative in nature and are based upon certain assumptions. These forward-looking statements may turn out to be wrong and can be affected by inaccurate assumptions or by known or unknown risks, uncertainties and other factors, most of which are beyond control. It can be expected that some, if not all, such forward-looking assumptions will not materialize or will vary significantly from actual results.





85 Broad Street
New York, NY 10004
www.delphidigital.io