Markets Execution Data

Synthetic limit order book data describing a series of buy and sell orders of financial instruments (stocks) by various market participants at a public stock exchange. Specifically, this data will contain messages and snapshots of orders over time. The data represents N trading days of simulated data for high liquidity stocks in different market regimes (e.g., trending up/down, high/low volatility).

Sample Order Book Data

1E+10	1E+10	99989	200	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E
100024	100	99989	200	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E
100024	100	99989	100	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E
100024	100	100009	100	1E+10	1E+10	99989	100	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E
100024	92	100009	100	1E+10	1E+10	99989	100	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E
100024	92	100009	100	100045	100	99989	100	1E+10	1E+10	-1E+10	-1E+10	1E+10	1E
100024	92	100009	100	100039	100	99989	100	100045	100	-1E+10	-1E+10	1E+10	1E
100024	92	100009	100	100039	100	99989	100	100045	100	99979	100	1E+10	1E
100024	92	100009	200	100039	100	99989	100	100045	100	99979	100	1E+10	1E
100039	92	100009	200	100045	100	99989	100	1E+10	1E+10	99979	100	1E+10	1E
100039	92	100009	100	100045	100	99989	100	1E+10	1E+10	99979	100	1E+10	1E
100039	92	100009	24	100045	100	99989	100	1E+10	1E+10	99979	100	1E+10	1E
100028	200	100009	24	100039	92	99989	100	100045	100	99979	100	1E+10	1E
100028	200	99989	24	100039	92	99979	100	100045	100	-1E+10	-1E+10	1E+10	1E
100028	200	99989	24	100039	92	99987	29	100045	100	99979	100	1E+10	1E

Sample Order Stream Data

34200	1	8	200	99989	1_2	1042
34200	1	2	100	100024	-1	1029
34200	4	3	100	99985	-1	1077
34200	4	9	100	99989	1	1042
34200	1	3	100	99985	-1	1077
34200	1	4	100	100009	1	1010
34200	1	5	8	100042	1	1083
34200	4	5	8	100042	1	1083
34200	4	2	8	100024	-1	1029
34200	1	6	100	100045	-1	1006
34200	1	7	100	100039	-1	1040
34200	1	10	100	99979	1	1016
34200	1	11	100	100009	1	1096
34200	1	12	100	100040	1	1003
34200	4	12	92	100040	1	1003

References

1. Generating Synthetic Data in Finance: Opportunities, challenges and pitfalls. S Assefa, D Dervovic, M Mahfouz, R Tillman, P Reddy, T Balch and M Veloso. Proceedings of the 1st International Conference on AI in Finance (ICAIF), 2020. Also in [NeurIPS 2019 Workshop on AI in Financial Services]

2. Get Real: Realism Metrics for Robust Limit Order Book Market Simulations. S. Vyetrenko et al. Proceedings of the 1st International Conference on AI in Finance (ICAIF), 2020.