1157-91-426 **Sergey Nadtochiy*** (snadtochiy@iit.edu), 10 W. 32nd St, Rettaliata Engineering Center, Dept of Applied Mathematics, Chicago, IL 60616. *A simple microstructural explanation of concave price impact.*

I will present a simple model of market microstructure which explains the concavity of price impact. In the proposed model, the local relationship between the order flow and the fundamental price (i.e. the local price impact) is linear, which makes the model dynamically consistent. Nevertheless, the expected impact on midprice from a large sequence of co-directional trades is nonlinear and asymptotically concave. The main practical conclusion of the model is that, throughout a meta-order, the volumes at the best bid and ask prices change (on average) in favor of the executor. This conclusion, in turn, relies on two more concrete predictions of the model, one of which is tested using publicly available market data without the information about meta-orders. I will present the theoretical results and will confirm them with empirical analysis. (Received February 03, 2020)