

Hai Duong

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Education

University of Glasgow

Phd., Economics, 2020-2024 (expected).

University of Glasgow

Mres., Economics (Distinction), 2020.

National Economics University - Hanoi Vietnam

BSc., Accounting and auditing (Distinction), 2015.

Teaching

Economics, University of Glasgow

Teaching assistant, Financial Market Structure ECON5074 2021-2024

Teaching assistant, Portfolio Analysis and Investment ECON5027 2020

Accounting and Finance, University of Glasgow

Teaching assistant, Financial analysis and Equity Valuation 2019

Other relevant Positions

Academic visitor June-July, 2024

Capital Fund Management (CFM)

Defi market microstructure consultant 2019-2020
Hanoi, Vietnam

Bond analyst, Vietnam Russia joint venture bank 2015-2016
Hanoi, Vietnam

Thesis title

“How limit order book events and order flow affect price formation.”

The goal of my dissertation is to undertake a study to shed some light on price impact mechanisms and reconcile different views from existing literature. First, an important aspect of this study is the emphasis on understanding the price impact function form and its components. Second, the study examines different factors that may affect the price impact of trades.

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Awards and Fellowships	The Adam Smith Business School Phd scholarship University of Glasgow	2020-2023
	Innovation audit grant for teaching innovation University of Glasgow	2024
	The Adam Smith Business School Mres scholarship University of Glasgow	2018-2020
	Institute of international education (IIE) scholarship National Economics University, Hanoi, Vietnam	2014
	Deloitte Vietnam scholarship National Economics University, Hanoi, Vietnam	2014
	Sumitomo Mitsui Banking Corporation Foundation scholarship National Economics University, Hanoi, Vietnam	2013
	First prize in analysis, Mathematical Olympiad for undergraduates Vietnam mathematical society	2012
	Third prize in analysis, Mathematical Olympiad for undergraduates Vietnam mathematical society	2011
	Third Prize, Vietnam Mathematical Olympiad for High School Students 2010 Third Prize, Vietnam Mathematical Olympiad for High School Students 2009	
Conferences and Seminars	12th Bachelier World Congress of the Bachelier Finance Society (July 2024), Quantitative Methods in Finance 2024 (upcoming, co-author presentation).	
Languages and Skills	Vietnamese (native), English (advanced) Stata, L ^A T _E X, Mathematica, Python, Javascript, Julia, SQL, Solidity	

Papers

Does spoofing erode market confidence? with Bart Taub.

We present a model of strategic interactions between a spoofer and an anticipatory trader who can observe the signal of the fundamental informed investor's order in the second period. Learning the anticipatory trading strategy, the spoofer submits a spoofing order to mislead the anticipatory trader about the incoming order. The order anticipation HFT protects itself by reducing its market participation. A pure strategy spoofing equilibrium exists and both traders make positive profits.

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While spoofing delays price discovery in a short horizon, price divergence will be so brief as to have little economic efficiency implications. Moreover, spoofing improves market liquidity and fosters uninformed traders' welfare.

The value of information flows in the stock market with Bart Taub.

Stock market traders who trade because of information they possess reveal that information to the rest of the market in the process of bidding: if the information is positive they bid up the price, and if it is negative they lower it. New information constantly develops and is brought to the market in this way, and because it influences prices, it ultimately influences the allocation of investments by firms.

Using a new approach, we estimate the flow of this information and the price of that information (different from the stock price), and thus the total value of that information, for each stock, and then sum up this value across all stocks, obtaining the total value of the dynamic flow of information in the stock market as a whole. This requires digesting the records of tens of thousands of stock orders (including cancelled orders, not just executed trades) to construct the dynamic limit order book and estimate the information flow and value from its structure.

Arbitraging Nonlinear Price Impact: Testing Huberman and Stanzl.

This paper investigates the relationship between the cumulative size of liquidity and the price impact of order book events by using trades and quotes data from 83 Nasdaq-listed stocks. We propose the slope of the limit order book as a new measure of price impact. By analyzing both bid and ask sides of high-frequency limit order book snapshot data, our study shows that there is a linear relationship between the cumulative size of liquidity and price impact in the limit order book. In addition, we find that if price impact admits a nonlinear functional form, under certain circumstances, a profitable round-trip arbitrage exists. We empirically show the minimum required trading volume for a profitable self-financing arbitrage and conditions that limit arbitrage.