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International Review of Economics and Finance 17 (2008) 179–196

International  
Review of  
Economics  
& Finance

www.elsevier.com/locate/iref

## Commonality under market stress: Evidence from an order-driven market

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Available online 29 June 2007

### Abstract

Recent evidence shows that commonality in liquidity *decreases* at the aggregate level in a quote-driven specialist market during periods of market stress. Specialists and dealers in quote-driven markets have an affirmative obligation to provide liquidity, even if prices are falling precipitously. The purpose of our study is to investigate commonality in liquidity in a market structure without any affirmative obligation to provide liquidity (i.e., in an order-driven market). We collect intra-day data from one of the world's largest and most active order-driven markets, the Stock Exchange of Hong Kong (SEHK), and find that commonality *increases* during periods of market stress. We also show that larger firms tend to be more susceptible to changes in commonality than smaller firms. We hypothesize that order-driven markets behave differently from quote-driven markets under stress because order-driven market makers have a free exit option.

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*JEL classification:* G15 (International Financial Markets)

*Keywords:* Liquidity; Commonality; Bid–ask spreads; Depths

### 1. Introduction

The purpose of our study is to investigate commonality in liquidity in an order-driven market structure during periods of market stress. Commonality refers to the phenomenon whereby the individual firm's liquidity is at least partly determined by market-wide factors. Previous studies have documented the existence of commonality in specialist and dealer markets (Chordia, Roll, & Subrahmanyam, 2000; Hasbrouck & Seppi, 2001; and Huberman & Halka, 2001), as well as in order-driven markets (Brockman & Chung, 2002). Chordia, Sarkar and Subrahmanyam (2005) also examined liquidity co-movements across asset classes including the US equity and Treasury bond markets. More recently, Coughenour and Saad (2004) find evidence of commonality for the stock portfolios traded by specialist firms on the NYSE. They show that under market stress the specialist's portfolio experiences an increase in

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