# Commencement of Electronic Trading: Impact on Liquidity, Price Discovery and Market Efficiency - Australian Evidence from Sydney Futures Exchange

**J. Wickramanayake***

**Mark Burgess**

## ABSTRACT

Using mixture of distributions hypothesis, we evaluate the liquidity of the Sydney Futures Exchange with an analysis of 'at the money' share price index (SPI) call options and SPI futures contracts after the introduction of electronic trading on 15 November 1999. The results show that during the proximate period up to beginning August 2000 'at the money' SPI options were more liquid in times of high volatility after the SFE became automated. But the SPI futures are less liquid in times of medium to low market volatility after the automation.

An examination of the price discovery process before and after automation was also incorporated into this study in testing market efficiency. Under this assumption the trading prices in the Australian Stock Exchange (ASX) and Sydney Futures Exchange (SFE) should have a long-run cointegrating relationship. The results confirm a cointegrating relationship between the two markets before and after the introduction of electronic trading supporting the semi-strong market efficiency.

Our findings also indicate presence of a bi-directional lead–lag relationship between the SPI futures price and the All Ordinaries Index price before and after the introduction of electronic trading. This suggests that the electronic trading structure does not seem to greatly enhance the price discovery price of the SFE.

**Key words:** Futures and options trading, derivatives, electronic trading, cointegration

**JEL Classification:** G14**,** G19, C51

---

* Department of Accounting and Finance, Monash University, Caulfield Campus, PO Box 197, Caulfield East, Australia 3145. E-mail: j.wickramanayake@buseco.monash.edu.au and fax number: 61 3 9903 2422.