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**The Role of Information Asymmetry and the Level of Market
Trading Activity in Shaping the Time-to-Maturity Pattern of
Futures Return Volatility**

by

Phan Hoang Long

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Accounting and Finance, Business School, The University of Adelaide.

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SYNOPSIS

I consider two explanations for the mixed empirical results on the Samuelson effect, which postulates that futures return volatility increases closer to maturity when the futures price becomes more sensitive to information flows. First, I empirically investigate Hong's (2000) theoretical suggestion that information asymmetry has an impact on the time-to-maturity pattern of commodity futures return volatility (the "volatility pattern") by testing the relationships information asymmetry has with the time-to-maturity and return volatility of commodity futures. I find that information asymmetry rises as commodity futures near maturity and that this increases return volatility. Thus, this "speculative effect" amplifies return volatility and can potentially be a more significant driver of the volatility pattern than Samuelson's (1965) price elasticity effect.

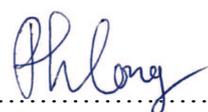
Second, I directly examine the time-to-maturity pattern of the sensitivity of futures return volatility to information flows (the "sensitivity pattern") and find that it has an inverted U-shape. I point out that the results for tests of a linear volatility pattern are more significant when the inverted U-shape of the sensitivity pattern tilts more towards maturity. As an example of the practical implication of my findings, I show that a futures price series constructed based on contracts that are closest to the peak of the sensitivity pattern captures higher volatility (9.98% in-sample and 2.63% out-of-sample) than the often used closest-to-maturity series.

DECLARATION

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Phan Hoang Long

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