



Research Seminar Series (2017/18)

On the Closed-Form Solutions of Asian Options



Date : **29 January 2018 (Mon)**
Time : 11:00 – 12:00
Venue : W503
Language : English
Speaker : **Prof. Raymond Tse**
Head and Professor
Department of Finance

Abstract:

Asian option pricing is one of the most intriguing problems in finance. Aside from its practical use in currency and energy derivatives trading, its academic investigation has been ongoing for more than half a century. To this date, there are satisfactory methods in pricing the options. However, they are based on numerical techniques. Whilst analytic approximation formulas are available, they are no substitute for an exact closed-form solution. One reason is the difficulty of identifying the exact distribution of the sum of lognormal random variables. In this talk, we explore the possibility of developing an exact closed-form pricing formula for the fixed-strike arithmetic Asian options. Our intuition is built upon the Hull and White (1993) binomial tree pricing algorithm but now is re-written in an analytic formulation to unravel the underlying distribution of the arithmetic average random variable.

Bibliography

The speaker is Head of the Department of Finance of the Chu Hai College of Higher Education. He received his PhD from the University of Southern California and had worked for investment banks and various academic institutions. His recent research interest is in derivatives and asset pricing. He has worked out a closed-form solution for pricing American options and submitted the paper to Social Science Research Network (SSRN). The submitted paper was in the top 10% of the most-viewed articles of SSRN in 2017.

All are welcome !

Enquiry: 2972 7249