

1023-Z1-1017 **Maryam Vulis*** (mlv88@earthlink.net), 67-67 Burns St, Forest Hills, NY 11375-3506. *Put-call parity in the classroom.*

Put-call parity in the classroom

We will discuss the role of put-call parity in the history of financial engineering.

Option contracts were discussed by Thales, 5th century BC, and were widely (mis)used during the 17C Dutch Tulip Bulb Bubble. According to Michael Knoll, put-call parity was used since ancient times to circumvent the prohibition on charging interest in some religions.

However, the exact relationship between the fair price of European-style puts and calls was not widely known until late 19 century, when the result was introduced by New York mathematician and financier Russell Sage. It was used by traders, including Sage himself, to avoid usury restrictions. It was formally published by Hans Stoll in 1969, and helped inspire further work on the mathematics of option pricing.

This seemingly simple concept hides some very important consequences.

In addition to its fascinating history, this theorem is useful in teaching an introductory financial mathematics course. Once the students learn the basic definitions of option theory, this result helps illustrate a number of important concepts in the classroom:

Proof by replication (absence of arbitrage)

Graphical representation of payoff functions

Regulatory arbitrage

Static hedging strategy (Received September 24, 2006)