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How Acute are Today's Stock Market Investors? Tracking Conventional Wisdom through Implied Volatility

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Oral Presentation 1.4

HOW ACUTE ARE TODAY'S STOCK MARKET INVESTORS? TRACKING CONVENTIONAL WISDOM THROUGH IMPLIED VOLATILITY.

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In 1973, Fischer Black and Myron Scholes[1], and Robert Merton[2] developed a novel, deterministic algorithm, which could, given a realistic set of assumptions about the volatility of the market, compute the rational price of European call options. This pioneering work placed options-pricing on a rational footing, and was recently (1997) honored by awarding the Nobel prize in Economics. We have inverted this algorithm to impute, by iteration, the implied volatility _ of the underlying stock[3] and infer market opinion of future price movements.

We have tracked options on stocks under heavy speculation to discern the investor sentiment surrounding these stocks, by extracting the implied volatility of the stock price. Issues surrounding the accuracy of investor sentiment on these stocks will be addressed.

[1]F. Black and M. Scholes, "The pricing of options and corporate liabilities", Journal of Political Economy, vol 81 (1973) 637-654
[2]R. Merton, "Theory of rational option pricing", Bell Journal of Economics and Management Science, vol. 4 (1973) 141-183
[3] P. Wilmott, S. Howison and J. Dewynne, " The Mathematics of Financial Derivatives", Cambridge University Press (1995).
This is a comprehensive introduction to the underlying mathematics.