2600 YEARS OF OPTIONS

Will they ever reach their tipping point?

BY JOHN H. ILKIW

Options have become ubiquitous financial instruments to manage risk across a host of different investment situations. Options are now so commonplace they have become the focus of late-night infomercials promising lucrative profits through easy-to-learn trading strategies, for just three payments of $79.95 (plus postage and handling).

Usually regarded as a modern risk management tool developed by financial engineers in the early 1970s, options and their uses can be traced back to at least 600 BC. Aristotle is most often credited with recording the first use of call options in *Politics* written in 350 BC. To illustrate the art of accumulating wealth, Aristotle recounts the story of Thales of Miletus (620-546 BC). Tired of people pointing to his poverty as evidence of the uselessness of his academic pursuits (philosophy, astronomy and mathematics), Thales decided to apply his knowledge to the accumulation of material.

Using his astronomic skills, Thales foresaw a bumper crop of olives the coming year. With very little money, he placed deposits on all the olive presses in and around his region for their future use. Because no one was bidding against him, each deposit was small. When the bumper crop materialized, olive presses were in high demand all at once and Thales "…let them out at any rate which he pleased, and made a quantity of money." With characteristic foresight, Aristotle underscored that the financial device used by Thales had "universal application."

Despite their use in early history, options remained on the financial sidelines for centuries. Well into the 1960s and early 1970s options were considered "specialized and relatively unimportant financial securities," this characterization made by Robert Merton in the opening paragraphs of his 1973 article, "The Theory of Rational Option Pricing."

With hindsight, the publication of Merton's article and the equally important "The Pricing of Options and Corporate Liabilities" by Fischer Black and Myron Scholes proved to be the tipping point for options. The elusive formula for valuing stock options had been found and it paved the way for the design, valuation and use of a host of new financial instruments that facilitated more efficient risk management in society. The 1973 co-discoveries earned the 1997 Nobel Prize in Economic Sciences.

Like Thales centuries before them, Merton and Scholes decided to use their academic expertise to make money and introduced the first option-based mutual fund in the United States. The strategy invested 10% of fund assets in a diversified portfolio of call options with the balance invested in short-term money market instruments. The open-ended mutual fund went live in February 1976. The fund performed in line with pre-launch simulations but was commercially unsuccessful. Readers will recognize the Merton-Scholes product as the precursor to the very profitable principal protection strategies that emerged over the subsequent two decades. They had a winning strategy, but the market was not ready for it.

Their second commercial venture, Long-Term Capital Management (LTCM), was co-founded in 1992 with a team of gifted financial engineers. It became wildly successful, earning billions for early investors by finding and leveraging mispriced securities. In early 1998, LTCM had US$130 billion under management and controlled a derivatives portfolio with a notional value of US$1.25 trillion. The credit crisis of August and September 1998 undermined LTCM's liquidity-sensitive strategies and, by the end of September, it had lost 90% of its value and had to be rescued to the tune of US$3.6 billion. Like Thales before them, Merton and Scholes returned to academia but unlike Thales they returned with their wealth very much reduced. ∎

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