

One Nobel dies, Two are born

Dear All:

Franco Modigliani, Emeritus Professor at MIT, died last week on September 25, 2003. He won the Nobel prize for his work in life cycle saving and the very known M-M Theorem. The M-M original paper is one of the papers I still find to be a truly well-written paper. Simple, precise, and with dramatic conclusions. The last time I saw Franco Modigliani was at Rudi Dornbusch's memorial. Over cocktails, he complained to Paul Krugman and I that privatizing social security was entirely wrong and defeated the purpose of risk transfer. He will be missed.

On another note, this morning the Nobel prize for economics 2003 was given to Dr. Clive Granger and Dr. Robert Engle. Both of these men contributed greatly to the field of time series econometrics.

Granger showed that with certain types of time series data, interpretations of the data could be very misleading using techniques of the time. He developed a methodology to deal with these so-called non-stationary data. One of the major applications of his work is the "Granger Causality" test. Suppose you have two variables, X and Y. We know that correlation isn't causation, but this test helps you determine, does X Granger-Cause Y or vice versa. It helps determine "is it the chicken or the egg". This can be useful when trying to understand relationships between events or when testing strategies. In fact, as recently as this summer, I worked with colleagues of mine to build a tool to generally test for Granger Causality.

Engle developed what is now known as ARCH (autoregressive conditional heteroskedasticity) models. Essentially, this says that volatility is not constant, in fact it may vary in predetermined ways. After his initial ARCH, his student, Tim Bollerslev, developed GARCH. After that, VECH, I-VECH and a lot of other volatility models were developed. The most practical application of these models is in finance. In particular, by modeling risk correctly, one can get a better handle on things such as daily VaR (value-at-risk) or it can be used for asset allocation. In fact, I wrote a paper in 1996 entitled "Forecasting Volatility and Asset Allocation: Are GARCH-type Models Useful?". Unfortunately, for longer-term forecasting, the new models just didn't help.

Sincerely
Ludwig Chincarini

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