

Emmanuel Derman

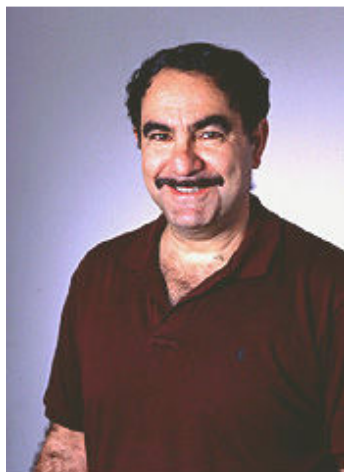


South African-born academic and businessman
Obtained a PhD in Theoretical Physics from Columbia
University in 1973

**Famous for (1) Derman-Kani local volatility model consistent
with volatility smile and
(2) the Black-Derman-Toy interest rate model**

- ❖ Currently a professor at Columbia University and Director of its program in financial engineering.
- ❖ Worked at Goldman Sachs from 1985-1988 in the Fixed Income Division and was re-hired (1990-2000) as Director and he led the Quantitative Strategies group in the Equities division.

Mark Rubinstein



Ph.D., Finance, UCLA, 1971
M.B.A., Finance, Stanford, 1968
A.B., Economics, Harvard University, 1966

He is currently the Paul Stephens Professor of Applied Investment Analysis at the University of California, Berkeley.

Famous for: “Crashophobia” as an explanation for volatility smile and classification of exotic options.

"Recovering Probability Distributions from Option Prices" (with Jens Jackweth), *Journal of Finance*, December 1996

Franco Modigliani

Born: 18 June 1918, Rome, Italy

Died: 25 September 2003, Cambridge, Massachusetts, USA



The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1985

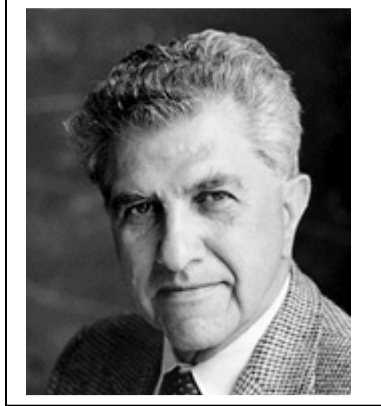
Well-known for his theory of capital structure, which refers to the way a corporation finances its assets through some combination of equity, debt, or hybrid securities. Faculty member at MIT until his death.

- ❖ Along with Merton Miller, he formulated the important Modigliani-Miller theorem in corporate finance. This demonstrated that under certain assumptions, the value of a firm is not affected by whether it is financed by equity (selling shares) or debt (borrowing money).
- ❖ He was also the originator of the life-cycle hypothesis, which attempts to explain the level of saving in the economy. Modigliani proposed that consumers would aim for a stable level of consumption throughout their lifetime, for example by saving during their working years and spending during their retirement.

Merton Miller

Born: 16 May 1923, Boston, Massachusetts, USA

Died: 03 June 2000



The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1990 was awarded to

Merton H. Miller [1/3 of the prize], University of Chicago

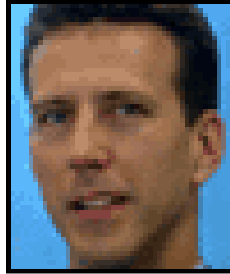
Marry M. Markowitz [1/3 of the prize], City Univ of New York

William F. Sharpe [1/3 of the prize], Stanford University

"for their pioneering work in the theory of financial economics"

- ❖ Miller was the doctoral supervisor of Myron Scholes. He was at the Faculty of the University of Chicago until his retirement.

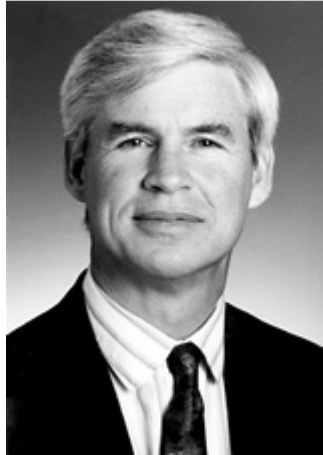
Eric Reiner



Ph.D. in Chemical Engineering, University of California at Berkeley
S.B. degree in Chemical Engineering and Economics, M.I.T.

Managing Director, Group Market Risk, UBS AG
Famous for his work in the classification of exotic derivatives
Together with Mark Rubinstein

Robert F. Engle III



Born: 19 November 1942, Syracuse, New York, USA

PhD in Economics, Cornell, 1969
MS in Physics, 1966

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2003 [1/2 of the prize] was awarded to Robert Engle III (New York University)

" for methods of analysing economic time series with time-varying volatility (ARCH) "

Sir Clive W.J. Granger

Born: 04 September 1934, Swansea, Wales, UK



PhD in Statistics, University of Nottingham, UK, 1959

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2003 [1/2 of the prize] was awarded to Robert Engle III (New York University)

“for methods of analyzing economic time series with common trends (cointegration)”

Robert Alexander Mundell, CC



Born: 1932, Canada

PhD in Economics, MIT, 1956
BSc, University of British Columbia

The Royal Swedish Academy of Sciences awarded **the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel, 1999**, to

Professor **Robert A. Mundell**, Columbia University, New York, USA

for his analysis of monetary and fiscal policy under different exchange rate regimes and his analysis of optimum currency areas.

- ❖ Former Chair of Economics department at the University of Waterloo, 1970's
- ❖ Former professor at McGill University, Stanford and John Hopkins University

He laid the groundwork for the introduction of the euro through his pioneering work in monetary dynamics and optimum currency forms.