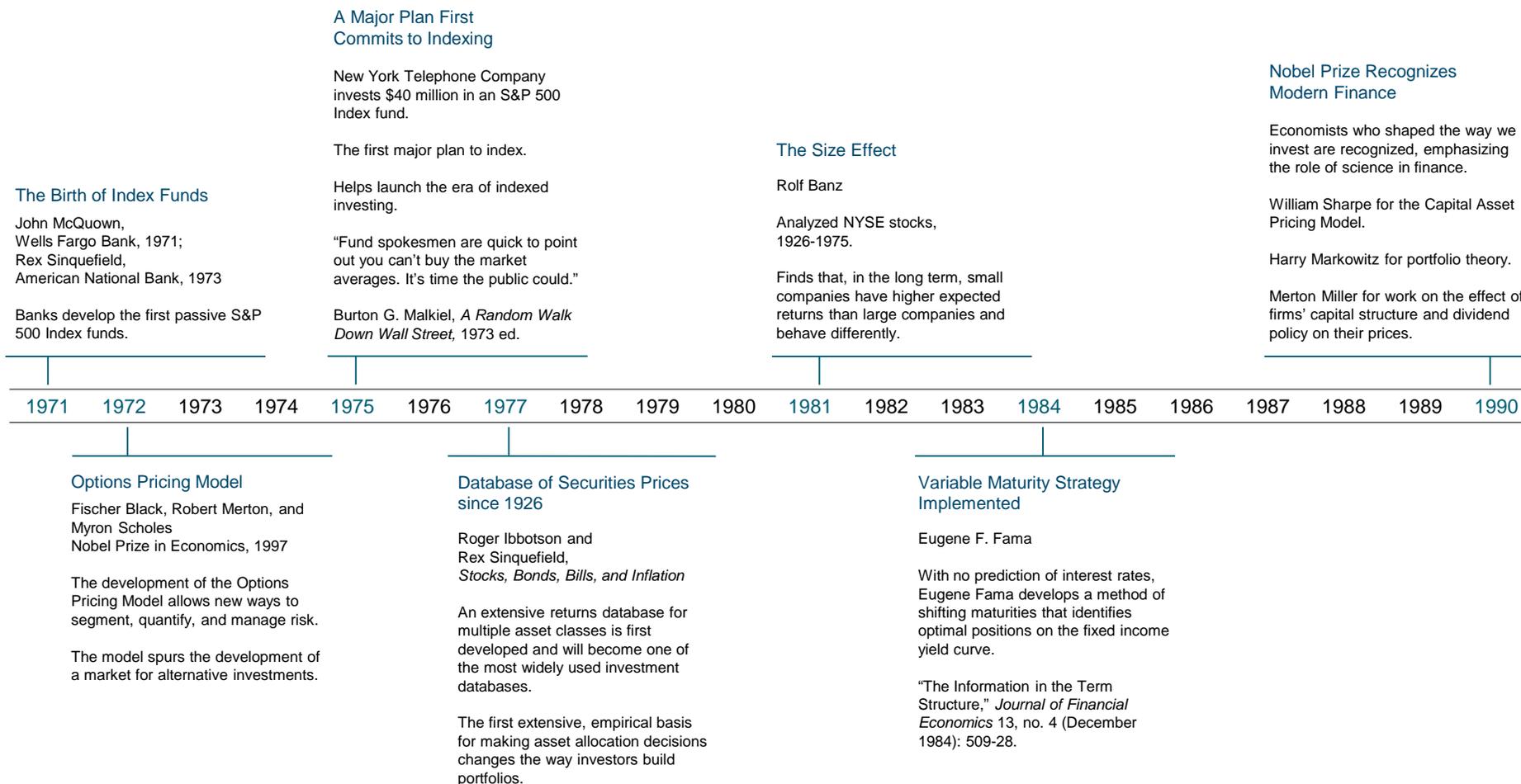


# Innovations in Finance



# Innovations in Finance

## International Size Effect

Steven L. Heston, K. Geert Rouwenhorst, and Roberto E. Wessels

Find evidence of higher average returns to small companies in twelve international markets.

"The Structure of International Stock Returns and the Integration of Capital Markets," *Journal of Empirical Finance* 2, no. 3 (September 1995): 173-97.

## Improved Bond Market Transparency

National Association of Securities Dealers (NASD) introduces Trade Reporting and Compliance Engine (TRACE), which requires the reporting of US corporate bond trades. This data greatly improved transparency in the corporate bond market and allows researchers to study trading costs in the US corporate bond market.

## Nobel Prize Recognizes Asset Pricing Research

Three US academics jointly receive the award for their individual contributions to the empirical analysis of asset prices.

Eugene F. Fama, Lars Peter Hansen, and Robert J. Shiller,

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

## Multifactor Asset Pricing Model and Value Effect

Eugene Fama and Kenneth French

Improves on the single-factor asset pricing model (CAPM).

Identifies market, size, and "value" factors in returns.

Develops the three-factor asset pricing model, an invaluable asset allocation and portfolio analysis tool.

"Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33, no. 1 (February 1993): 3-56.

## Inflation-Protected Bonds

The Treasury conducts the first auction of Treasury Inflation-Protected Securities (TIPS), thus allowing US investors to invest for long periods with minimal default risk and inflation risk.

## Profitability

Eugene F. Fama, Kenneth R. French, and Robert Novy-Marx

Motivated by valuation theory, academic research identifies profitability as a new dimension of expected returns.

# Innovations in Finance

## Conventional Wisdom circa 1950

"Once you attain competency, diversification is undesirable. One or two, or at most three or four, securities should be bought. Competent investors will never be satisfied beating the averages by a few small percentage points."

Gerald M. Loeb, *The Battle for Investment Survival*, 1935

Analyze securities one by one. Focus on picking winners. Concentrate holdings to maximize returns.

Broad diversification is considered undesirable.

## The Role of Stocks

James Tobin  
Nobel Prize in Economics, 1981

Separation Theorem:  
1. Form portfolio of risky assets.  
2. Temper risk by lending and borrowing.

Shifts focus from security selection to portfolio structure.

"Liquidity Preference as Behavior Toward Risk," *Review of Economic Studies*, February 1958.

## Single-Factor Asset Pricing Risk/Return Model

William Sharpe  
Nobel Prize in Economics, 1990

Capital Asset Pricing Model:  
Theoretical model defines risk as market beta, or the covariance of a security with the overall market.

A stock's expected return is proportional to the stock's market beta.

Theoretical model for evaluating the risk and expected return of securities and portfolios.

## Efficient Markets Hypothesis

Eugene F. Fama

Extensive research on stock price patterns.

Extensive research on stock price patterns.

Develops Efficient Markets Hypothesis, which asserts that prices reflect values and information accurately and quickly. It is difficult if not impossible to capture returns in excess of market returns without taking greater than market levels of risk.

1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970

## Diversification and Portfolio Risk

Harry Markowitz  
Nobel Prize in Economics, 1990

Diversification reduces risk.

Assets evaluated not by individual characteristics but by their effect on a portfolio. An optimal portfolio can be constructed to maximize return for a given standard deviation.

## Investments and Capital Structure

Merton Miller and Franco Modigliani  
Nobel Prizes in Economics, 1990 and 1985

Theorem relating corporate finance to returns.

A firm's value is unrelated to its dividend policy.

Dividend policy is an unreliable guide for stock selection.

## Behavior of Securities Prices

Paul Samuelson, MIT  
Nobel Prize in Economics, 1970

Market prices are the best estimates of value.

Price changes follow random patterns. Future share prices are unpredictable.

"Proof That Properly Anticipated Prices Fluctuate Randomly," *Industrial Management Review*, Spring 1965.

## First Major Study of Manager Performance

Michael Jensen, 1965  
A.G. Becker Corporation, 1968

First studies of mutual funds (Jensen) and of institutional plans (A.G. Becker Corp.) indicate active managers underperform indices.

Becker Corp. gives rise to consulting industry with creation of "Green Book" performance tables comparing results to benchmarks.