

# Two Pillars of Asset Pricing

Lecture for the Sveriges Riksbank Prize in Economic  
Sciences in Memory of Alfred Nobel

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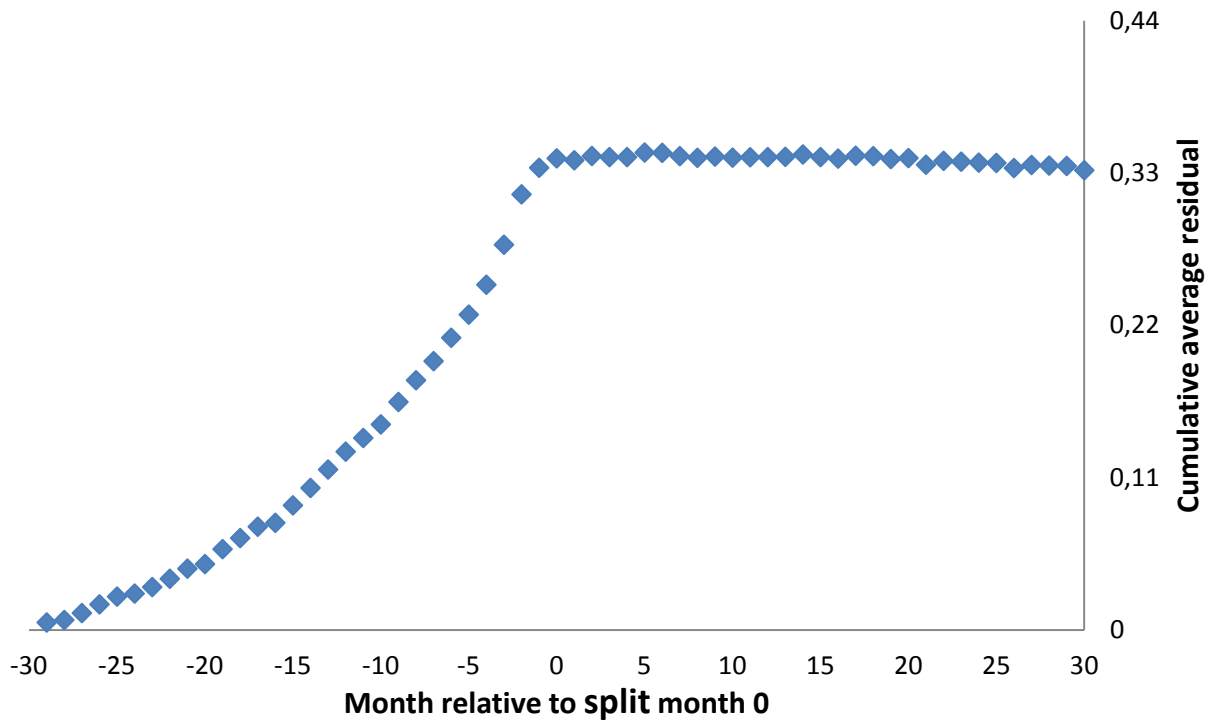
# Efficient Capital Markets

A. Early Work

B. Event Studies

$$R_{it} = a_i + b_i R_{Mt} + e_{it}$$

**Figure 1 - Cumulative average residuals in the months surrounding a split**



## C. Predictive Regressions

$$i_{t+1} = E_t(r_{t+1}) + E_t(\pi_{t+1})$$

$$\pi_{t+1} = a + bi_{t+1} + \varepsilon_t$$

## D. Time-Varying Expected Stock Returns

$$R_t = a + bD/P_{t-1} + e_{it}$$

## E. “Bubbles”

# Asset Pricing Models

## A. Fama and MacBeth (1973)

$$R_{it} = a_t + a_{1t}b_i + a_{2t}MC_{i,t-1} + a_{3t}B/M_{i,t-1} + e_{it}$$

## B. The Fatal Problems of the CAPM

## The Three-Factor Model

$$E(R_{it}) - R_{Ft} = b_i[E(R_{Mt}) - R_{Ft}] + s_i E(SMB_t) + h_i E(HML_t)$$

The regression used to test the model is,

$$R_{it} - R_{Ft} = a_i + b_i(R_{Mt} - R_{Ft}) + s_i SMB_t + h_i HML_t + e_{it}$$

# Conclusions