IMPLIED RISK PREMIUM TESTS

THE MECHANICS OF (IMPLIED) EQUITY RISK PREMIUMS

Implied Equity Risk Premium: Generic Version

Analyst estimates of growth in earnings for the near term, scaling down to a growth rate = riskfree rate, in perpetuity.

Growth rate in perpetuity = Riskfree Rate

Base year Cash flows from owning Equities = Dividends + Buybacks

Cash payout as a percent of earnings, adjusted for changing growth over time.

CFs continue in perpetuity

$E(CF)_1$ $E(CF)_2$ $E(CF)_3$ $E(CF)_4$ $E(CF)_5$

Stock (Index) level today

$$Index\ Price = \frac{E(CF_1)}{(1+r)} + \frac{E(CF_2)}{(1+r)^2} + \frac{E(CF_3)}{(1+r)^3} + \frac{E(CF_4)}{(1+r)^4} + \frac{E(CF_5)}{(1+r)^5} + \frac{E(CF_6)}{(r-g)(1+r)^5}$$

Solve for r

E(Return on Stocks)= Discount rate that makes the present value of the expected cash flows equal to stock (index) price today
ERP = E(Return on Stocks) - Riskfree Rate

The implied equity risk premium is a number backed out from what investors are paying for stocks and their expected cash flows from holding stocks. It is an internal rate of return for equity investors, analogous to a yield to maturity for a bondholder.

EQUITY RISK PREMIUMS AND STOCK PRICES

- If the equity risk premium is determined by what investors pay for stocks, and the expected cash flows from those stocks, what should happen to the equity risk premium when stocks (the index) go up by 20%
    a. Equity risk premium should go up
    b. Equity risk premium should go down
    c. Equity risk premium should be unchanged

EQUITY RISK PREMIUMS AND CRISES

- Now assume that an unexpected crisis (economic, political, pandemic) hits the economy. As an investor, would you pay less or more for the same investment (that I offered you)?

- What does that imply for risk premiums?