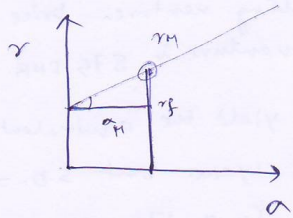
Capital Asset price Model (CAPM)



Capital Market Line

$y = ax + b$

$$\left[\bar{r} = r_f = \frac{r_M - r_f}{\sigma_M} \cdot \sigma \right]$$

Smith is an investor. He notices that $r_f = 6\%$ and market portfolio has ~~two assets with~~ return = 12% and 15% = SD.

1000 $ to 1 million $ will take around 60 years. He wants 1 " $ in only 10 years.

Effectively he needs 100% return per annum.

$$1000 \times 2^{10} = 1048\,000$$

$$1.0 = 0.06 + \frac{r_m - r_f}{\sigma_m} \times \sigma$$

or $\sigma = 1000\%$ (highly risky venture