

Ekonomski fakultet u Podgorici

# Portfolio menadžment

P4: Kombinacija dvije rizicne aktive

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## Kombinacija dvije HOV

Najjednostavniji portfolio - kombinacija dvije HOV: akcija A i akcija B

Prinos na ovakav portfolio  $\bar{R}_P = X_A \bar{R}_A + X_B \bar{R}_B$

$$X_A + X_B = 1$$

$$\bar{R}_P = X_A \bar{R}_A + (1 - X_A) \bar{R}_B$$

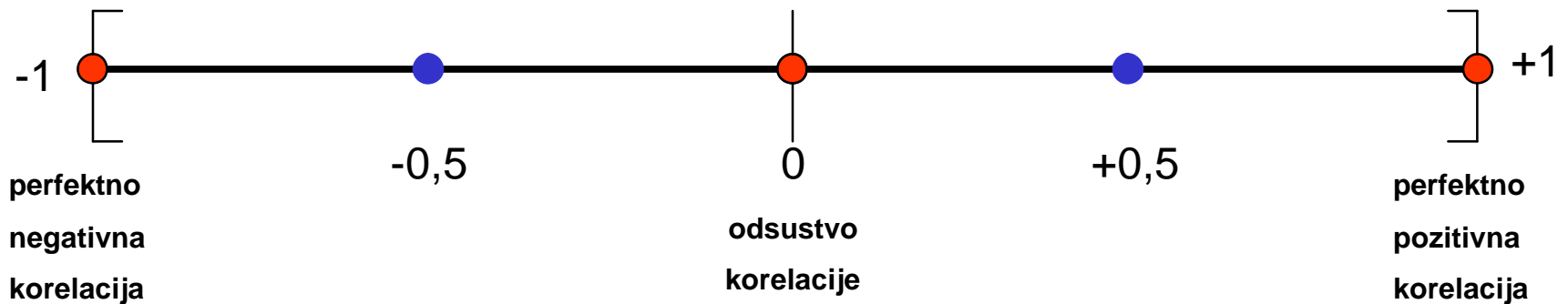
Rizik (standardna devijacija) ovakvog portfolija

$$s_P = \left[ X_A^2 s_A^2 + (1 - X_A)^2 s_B^2 + 2X_A (1 - X_A) r_{AB} s_A s_B \right]^{\frac{1}{2}}$$

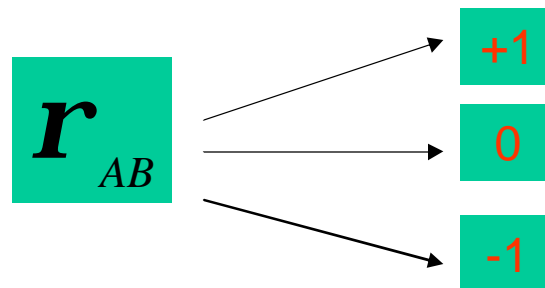
# Koeficijent korelacije

Koeficijent korelacije - ~~MUDNYDQWVWYQRJ~~ ~~VOUDQNDLP~~ H<sub>y</sub>X ~~VHUMSRGDWVND~~

Domen koeficijenta korelacije:



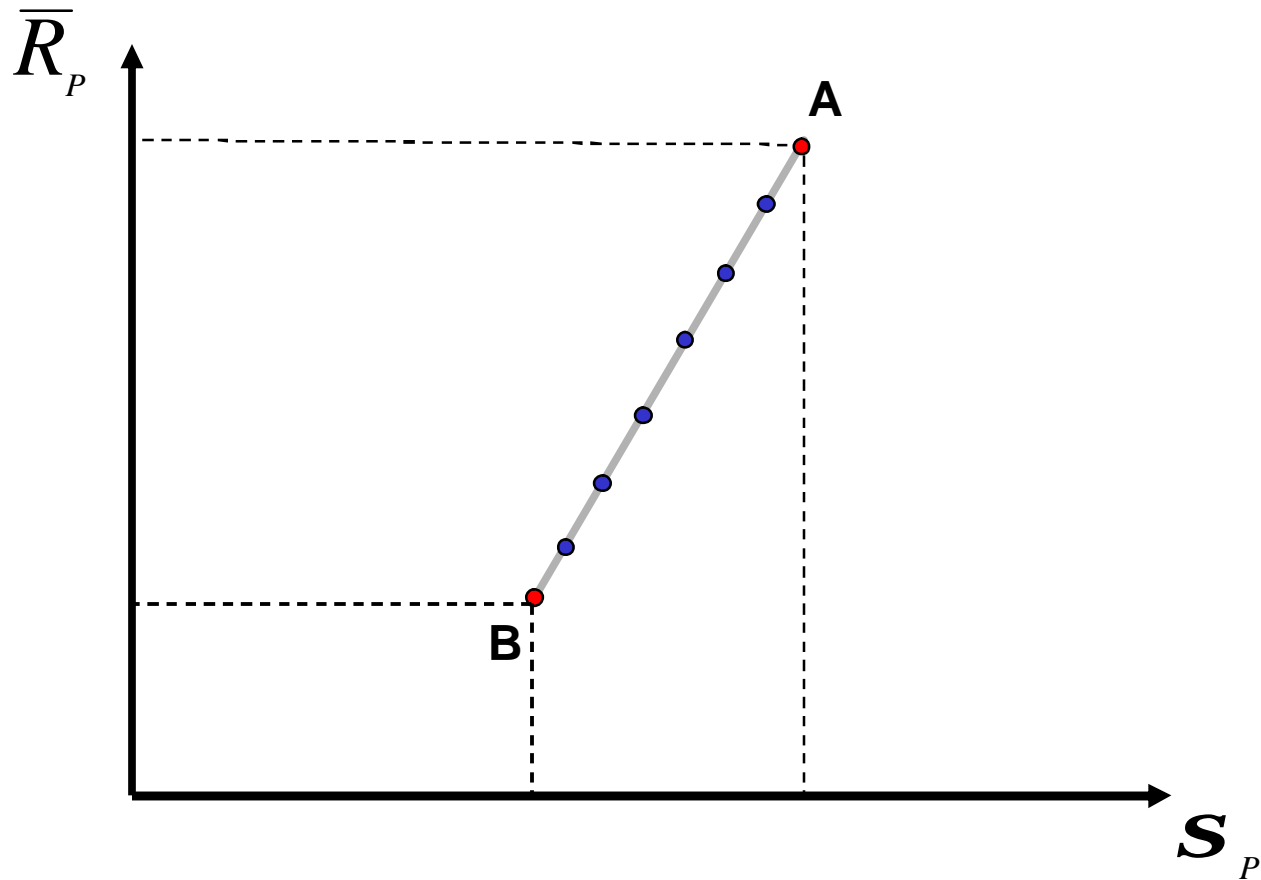
tri bitna scenarija:



## Scenario 1: perfektna pozitivna korelacija

Izraz za prinos:  $\bar{R}_P = X_A \bar{R}_A + (1 - X_A) \bar{R}_B$

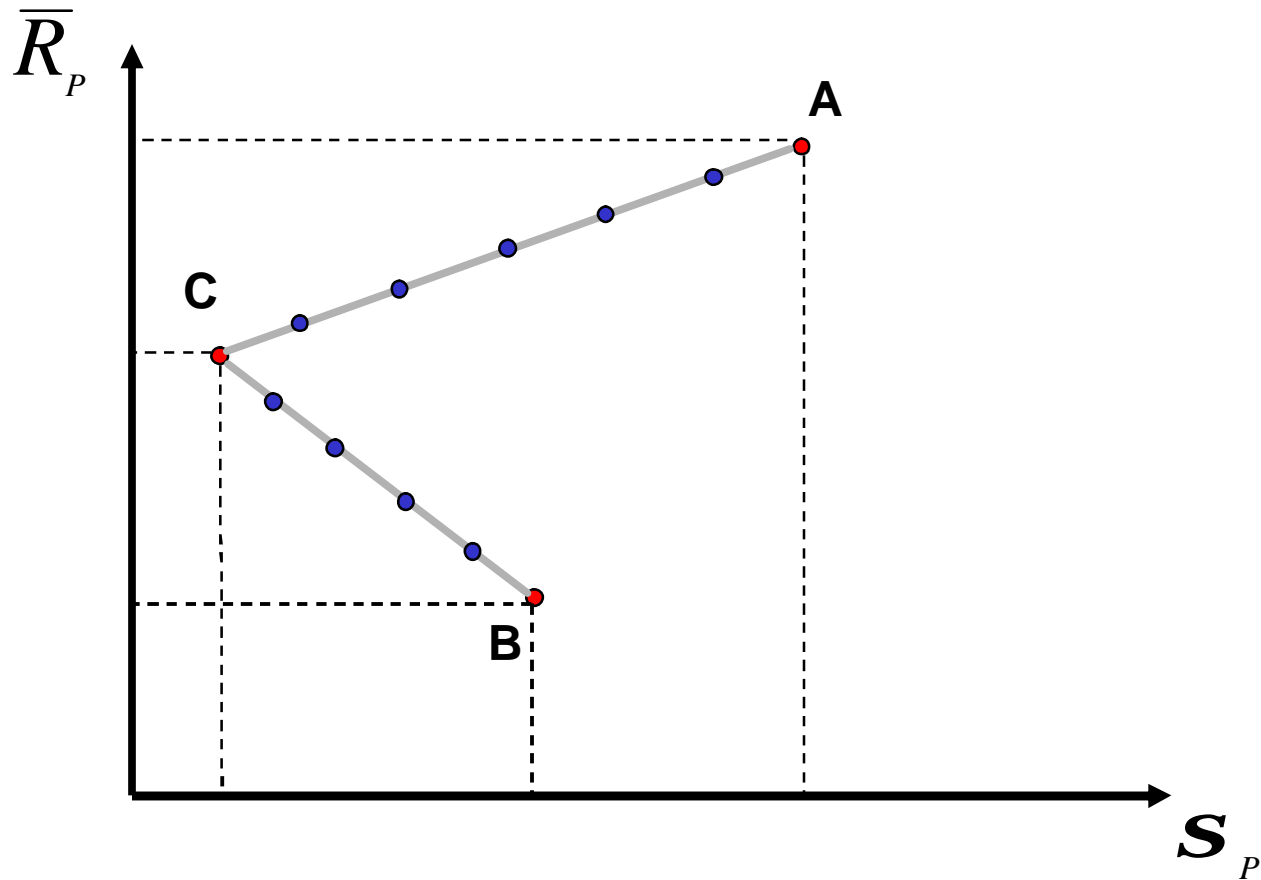
Izraz za rizik:  $s_P = X_A s_A + (1 - X_A) s_B$



## Scenario 2: perfektna negativna korelacija

Izraz za prinos:  $\bar{R}_P = X_A \bar{R}_A + (1 - X_A) \bar{R}_B$

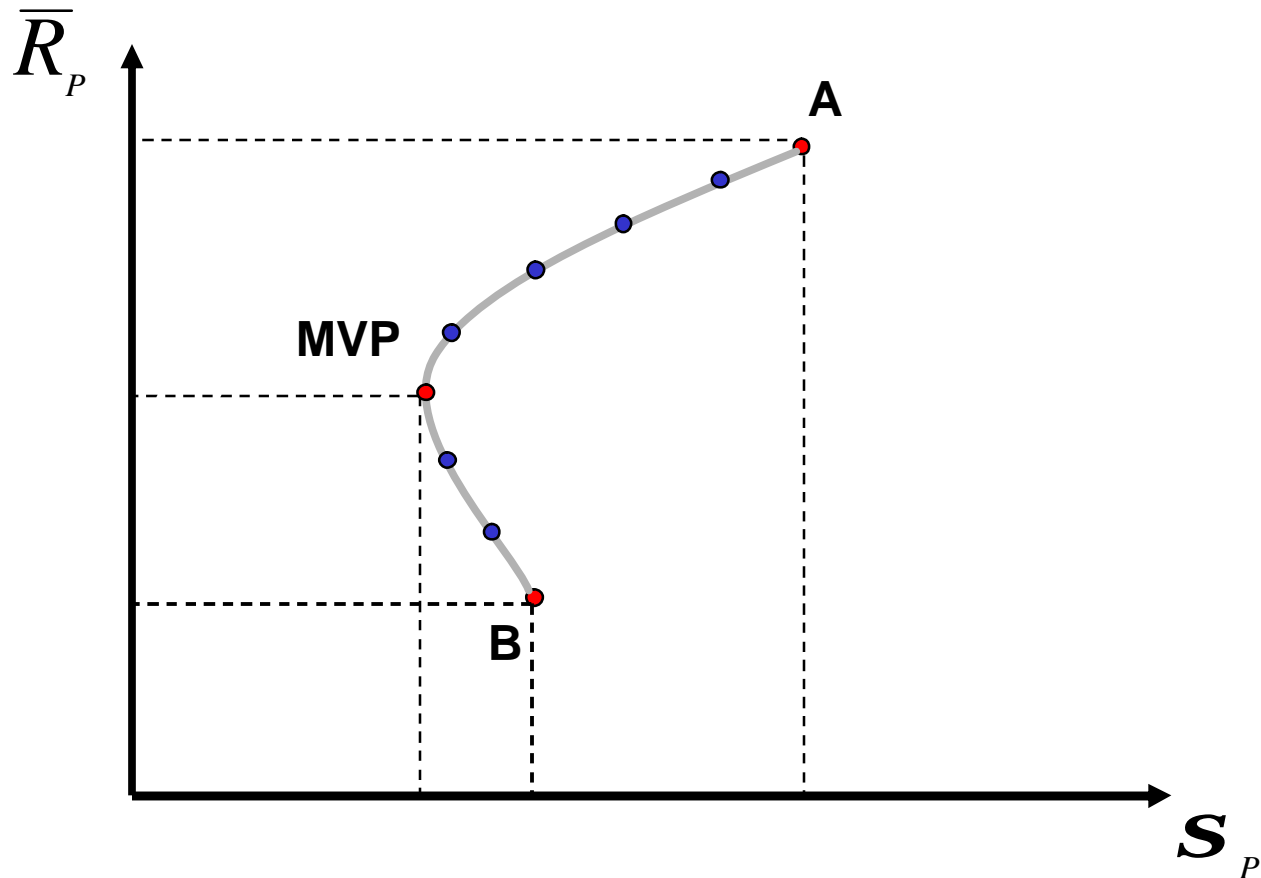
Izraz za rizik:  $s_P = X_A s_A - (1 - X_A) s_B$   
 $s_P = -X_A s_A + (1 - X_A) s_B$

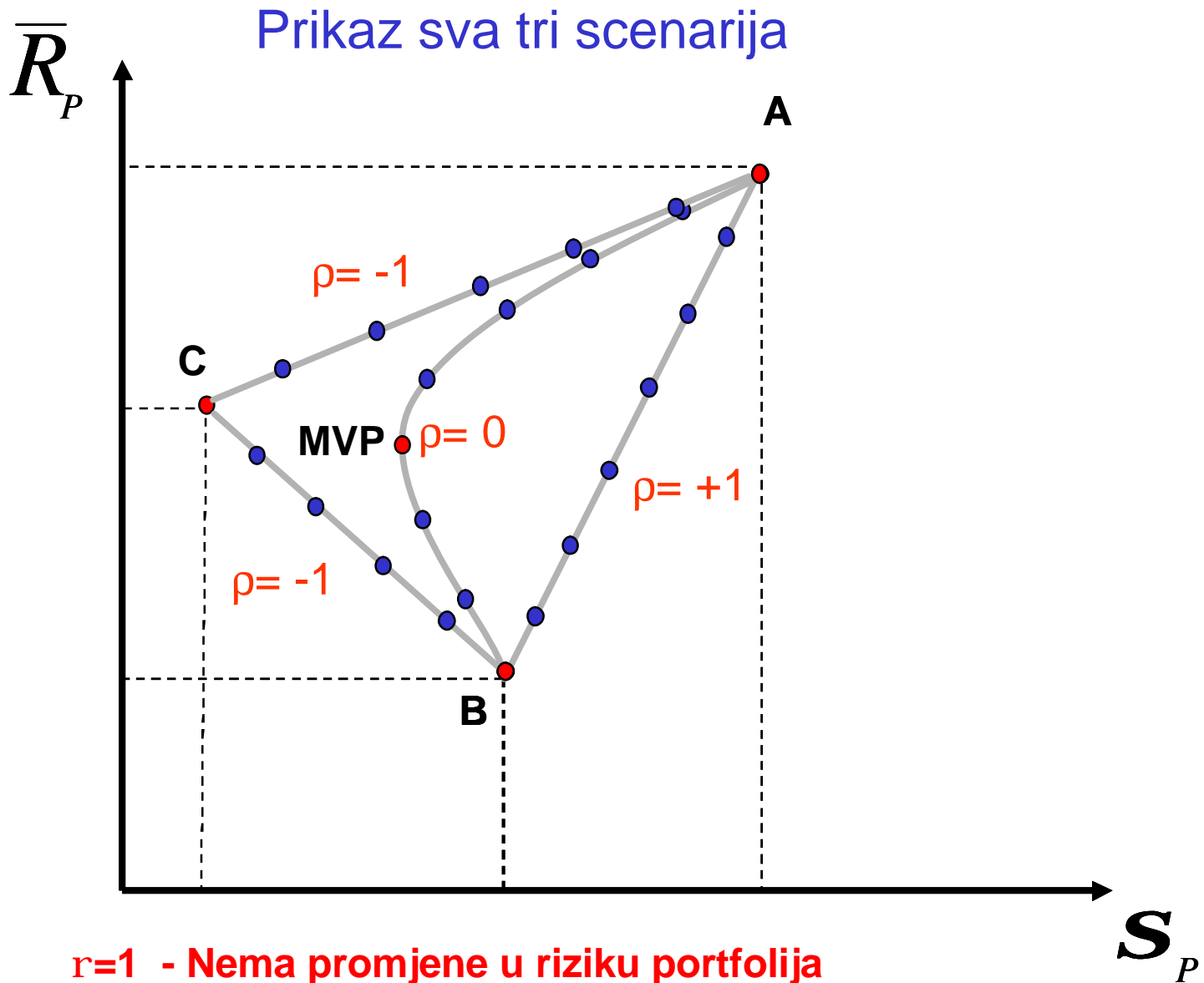


## Scenario 3: odsustvo linearne korelacije

Izraz za prinos:  $\bar{R}_P = X_A \bar{R}_A + (1 - X_A) \bar{R}_B$

Izraz za rizik:  $s_P = [X_A^2 s_A^2 + (1 - X_A)^2 s_B^2]^{\frac{1}{2}}$





- $\rho = +1$  - Nema promjene u riziku portfolija
- $\rho = -1$  - Postoji portfolio sa nultim rizikom
- $\rho = 0$  - Postoji portfolio sa minimalnim rizikom: MVP