
**اندازه‌گیری کارایی نسبی شرکت‌های حاضر در بورس
اوراق بهادار با رویکرد تحلیل پوششی داده‌ها
(شاخص‌های تکنولوژی اطلاعات)**

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(PIp)	(DIp)
$\min \theta_0$ θ_0, λ بطوریکه : $Y\lambda \leq Y_0$ $\theta X_0 - X\lambda \geq 0$ نامفید $\theta, \lambda \geq 0$ CCR :PI0 λ $e^t \lambda \leq 1$ (CCR-BCC):PI1 $e^t \lambda \geq 1$ (BCC-CCR):PI2 $e^t \lambda = 1$ (BCC):PI3	$MaxZ = \mu^t Y_0 + u_o$ μ, V بطوریکه : $V^t X_0 = 1$ $u_o e - \mu^t Y + V^t x \leq 0$ $\mu^t \geq 0$ $V^t \geq 0$ (CCR) $U_o = 0$:DI0 (CCR - BCC) $U_o \leq 0$:DI1 (BCC-CCR) $U_o \geq 0$:DI2 (BCC) $U_o = 0$:DI3

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(POp)	(DOp)
$Max \Phi_0$ ϕ_0, λ بطوریکه : $X\lambda \leq X_0$ $\phi Y_0 - Y\lambda \leq 0$ آزاد $\theta, \lambda \geq 0$ λ :PO0 $e^t \lambda \leq 1$:PO1 $e^t \lambda \geq 1$:PO2 $e^t \lambda = 1$:PO3	$\min q = v^t x_0 + V_o$ بطوریکه : $\mu^t Y_0 = 1$ $V_o e^t - \mu^t Y + V^t x \geq 0$ $\mu^t \geq 0$ $V^t \geq 0$ (CCR) $V_o = 0$:DO0 (CCR - BCC) $V_o \geq 0$:DO1 (BCC-CCR) $V_o \leq 0$:DO2 (BCC) V_o :DO3

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$$\theta^* = \text{Min} \theta - \varepsilon \sum_{i=1}^m s_i^- - \varepsilon \sum_{r=1}^s s_r^+$$

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$$\sum_{i=1}^m \lambda_j x_{ij} + s_i^- = \theta_{x_{io}}$$

i = (1 2 ... m)

$$\sum_{r=1}^s \lambda_j y_{rj} + s_r^+ = y_{ro}$$

r = (1 2 ... s)

$$\lambda_j, s_r^+, s_i^- \geq 0$$

j = (1 2 ... n)

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