Interpretation of alpha (α)

The index (market) model in excess return form:

$R_{it} = \alpha_i + \beta_i R_{Mt} + e_{it}$ (1)

where $R_{it} = r_{it} - r_{ft}$ and $R_{Mt} = r_{Mt} - r_{ft}$ (2)

From (1) and (2),

$r_{it} - r_{ft} = \alpha_i + \beta_i (r_{Mt} - r_{ft}) + e_{it}$, where $e_{it} \approx 0$

$\rightarrow \alpha_i = r_{it} - r_{ft} - \beta_i (r_{Mt} - r_{ft})$

$\rightarrow \alpha_i = r_{it} - [r_{ft} + \beta_i (r_{Mt} - r_{ft})]$