

$$T^* = 1 - \frac{(1-E(T_c))(1-T_e)}{(1-T_i)}$$

what left of  $b_1$  of pre-tax income paid to S/H.

what left of  $b_2$  of pre-tax income paid to B/H.

- 1)  $E(T_c) \uparrow$  (if tax rate  $\uparrow$  or profit of deduction  $\downarrow$ )  
 $\Rightarrow$  debt has become relatively more attractive  
 $\Rightarrow$  less that makes it to S/H  
 $\Rightarrow T^* \uparrow$   
 Math  $\Rightarrow E(T_c) \uparrow \Rightarrow (1-E(T_c)) \downarrow \Rightarrow 1 - \frac{(1-E(T_c))(1-T_e)}{1-T_i} \uparrow \Rightarrow T^* \uparrow$
- 2)  $T_e \uparrow$   $\Rightarrow$  personal taxes on equity income  $\uparrow$   
 $\Rightarrow$  debt has become relatively more attractive  
 $\Rightarrow$  less that makes it to S/H  
 $\Rightarrow T^* \uparrow$   
 Math  $\Rightarrow T_e \uparrow \Rightarrow (1-T_e) \downarrow \Rightarrow 1 - \frac{(1-E(T_c))(1-T_e)}{(1-T_i)} \uparrow \Rightarrow T^* \uparrow$
- 3)  $T_i \uparrow$   $\Rightarrow$  personal taxes on debt  $\uparrow$   
 $\Rightarrow$  debt has become relatively less attractive  
 $\Rightarrow$  less that makes it to B/H  
 $\Rightarrow T^* \downarrow$   
 Math  $\Rightarrow T_i \uparrow \Rightarrow (1-T_i) \downarrow \Rightarrow 1 - \frac{(1-E(T_c))(1-T_e)}{(1-T_i)} \downarrow \Rightarrow T^* \downarrow$