Du Pont Analysis:

1. for non-banks:
   ROE = NI/Equity = (NI/Asset) × (Asset/Equity)
   = (NI/TOI) × (TOI/Assets) × (Assets/Equity)
   = operating efficiency × asset use efficiency × financial leverage

2. for banks:
   ROE = NI/Equity = (NI/Asset) × (Asset/Equity)
   = (NI/TOI) × (TOI/Assets) × (Assets/Equity)
   ① NI/TOI = (TOI – IE – LLP – NIE – Tax)/TOI
   ② (TOI/Assets) = (IR + NIR)/Assets

3. Does increased financial leverage lift up ROE for certain?

   \[ ROE = \frac{(EBIT - D \times i)(1 - t)}{E} \]
   \[ = (1 - t)\left(\frac{EBIT}{E} - \frac{D}{E}i\right) = (1 - t)\left(\frac{EBIT}{A} \frac{A}{E} - \frac{D}{E}i\right) = (1 - t)\left(\frac{EBIT}{A} \frac{D + E}{E} - \frac{D}{E}i\right) \]
   \[ = (1 - t)[ROA(1 + \frac{D}{E}) - \frac{D}{E}i] = (1 - t)[ROA + \frac{D}{E}(ROA - i)] \]

   This equation has the following implications. First, if a firm’s ROA exceeds the interest rate that it pays to its creditors, then its ROE will exceed \((1 - t)ROA\) by an amount, \((1 - t)\frac{D}{E}(ROA - i)\), which will be greater the higher the debt/equity ratio.

   Second, increased financial leverage magnifies the variability that firms experience in their ROE over the business cycle and increases the likelihood of bankruptcy.

   Third, from the perspective of a creditor, an increase in the firm’s debt ratio is generally a negative sign. Bond-rating agencies, such as Mood’s and Standard and Poor’s Corporation, will often downgrade a firm’s securities if its debt ratio goes up. But from the shareholder’s perspective, it might be positive for the firm to increase its debt ratio.