

Sustainable growth rate

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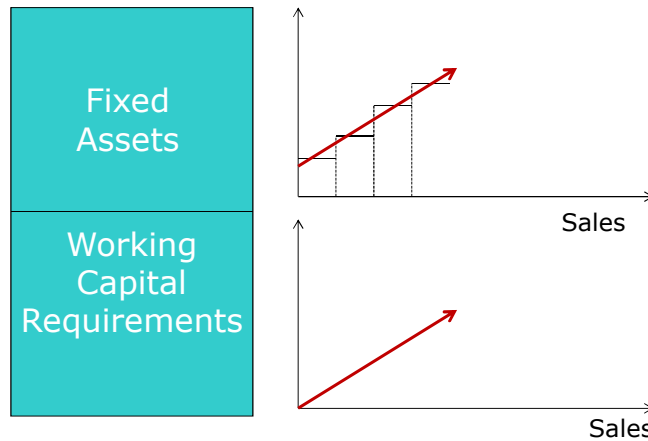
This the original model of sustainable growth rate by Robert Higgins

$$\text{sustainable growth rate} = \Delta s/s = \frac{p(1-d)(1+L)}{t - p(1-d)(1+L)}$$

p = the profit margin on new and existing sales after taxes,
d = the target dividend payout ratio [(1 - d) therefore is the target retention ratio],
L = the target total debt to equity ratio,
t = the ratio of total assets to net sales on new and existing sales,
s = sales at the beginning of the year, and
 Δs = increase in sales during the year.

Fonte: Robert C. Higgins (1977) How Much Growth Can a Firm Afford?, *Financial Management*, Fall 1977

Assumptions of the sustainable growth rate on invested capital



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Assumptions of the sustainable growth rate on financing side



$$\Delta E = \Delta E + \Delta D$$

1) Capital structure remains stable

$$\frac{D_1}{E_1} = \frac{D_0}{E_0}$$

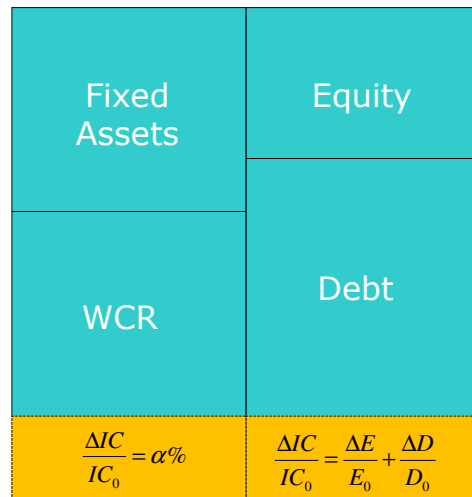
$$\frac{\Delta IC}{IC_0} = \frac{\Delta E}{E_0} + \frac{\Delta D}{D_0}$$

2) Internal source generation is the basis to finance growth

$$g^* = \frac{NE_1 \times (1 - d_1)}{E_0} = \frac{NE_1}{E_0} \times (1 - d_1)$$

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Assumptions of the sustainable growth rate on financing side



Increase on Invested Capital and Financing

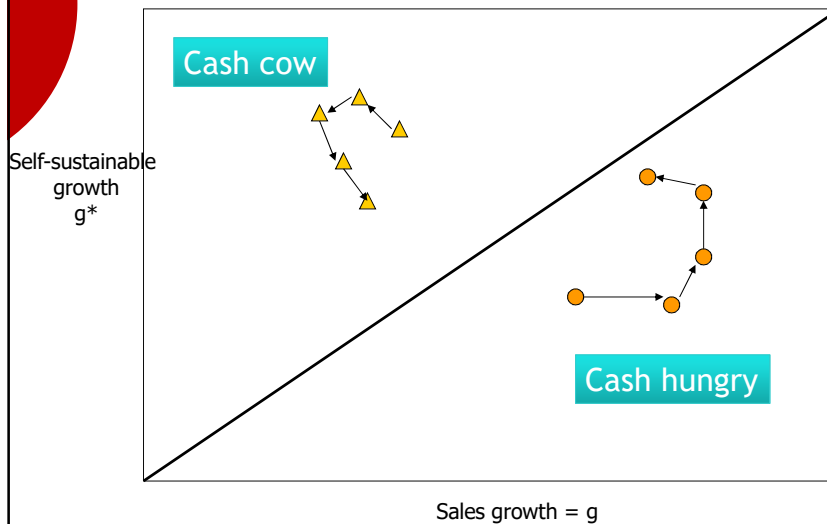
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Sustainable growth rate should be compared to

- Revenues growth
- Fixed asset growth
 - Fixed asset turnover efficiency was a source of funds?
- WCR growth
 - Cash conversion cycle efficiency was a source of funds?
- Equity growth
 - Was there any other source of funds than retained earnings?

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Matrix of growth and expected liquidity



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Growth rate within the additive model

$$g^* = \left[ROIC + (ROIC - k_D) \times \frac{D}{E} \right] \times \frac{EBT}{\text{Recurring Earnings}} \times (1 - t) \times (1 - d)$$

Where Invested Capital on the denominator of ROIC is at the beginning of the year:

$$ROIC = \frac{NE_i}{IC_{i-1}}$$

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Questions

- What is the growth of the company in comparison to major competitors
- The growth is sustainable based on the market expectations?
- What are the implications of actual and future growth to the financial strategy of the company?