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ASSESSING VALUE CREATION WITH EVA

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OBJECTIVES

- Meaning of managing for value creation
- How to measure value creation at the firm level using the concept of market value added (MVA)
- Why maximizing MVA is consistent with maximizing shareholder value
- When and why growth may not lead to value creation
- How to measure a firm's capacity to create value using the concept of economic value added (EVA)

MEASURING VALUE CREATION IS MVA

Market Value Added measures whether the management has created or destroyed value until a particular point in time:

MVA = Market value of capital – Capital employed

To measure the value created or destroyed during a period of time, the change in MVA during the period should be computed

ESTIMATING MARKET VALUE ADDED

MARKET VALUE = Market value of equity + Market value of debt

Market value of equity: $Number\ of\ shares\ \times share\ price$

If the firm is not publicly traded, its market value is unobservable and its MVA cannot be calculated

Market value of debt: *Payments to debtholders due in the future, discounted to present at the interest market rate*

MARKET VALUE ADDED = MARKET VALUE - INVESTED CAPITAL

The amount of Invested capital (or capital employed) by the firm can be extracted from the firm's balance sheet

INTERPRETING MARKET VALUE ADDED

- MVA is sensitive to variables that cannot be attributed to the performance of managers
- Maximizing the market value of the firm's capital does not necessarily imply value creation
- MVA increases when the firm undertakes positive net present value projects

IDENTIFYING THE DRIVERS OF VALUE CREATION

A firm's capacity to create value is driven by a combination of three key factors:

The firm's operating profitability, measured by ROIC	The firm's cost of capital	The firm's ability to grow

$$ROIC = \frac{NOPAT}{INVESTED\ CAPITAL}$$

$$WACC = k_E \times w_E + k_D \times w_D \times (1 - t)$$

LINKING VALUE CREATION TO OPERATING PROFITABILITY, THE COST OF CAPITAL, AND GROWTH OPPORTUNITIES

The MVA of a firm that is expected to grow forever at a constant rate is given by the following valuation formula:

$$MVA = \frac{(ROIC - WACC) \times IC}{WACC - g}$$

To create value, expected ROIC must exceed the firm's WACC.

A general implication of the valuation formula shown above is that growth alone does not necessarily create value

Only value-creating growth matters

THERE ARE HIGH-GROWTH FIRMS THAT ARE VALUE DESTROYERS AND LOW-GROWTH FIRMS THAT ARE VALUE CREATORS

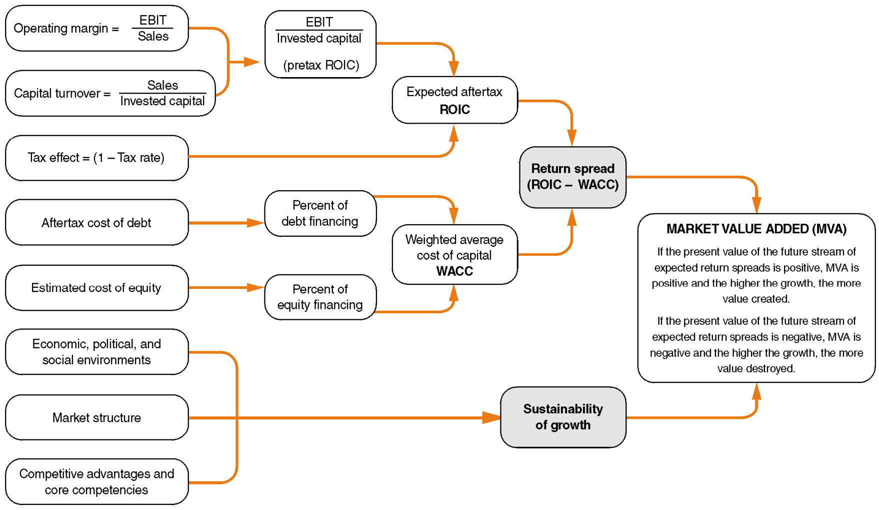
Firm	Expected Growth Rate	Expected ROIC	Estimated WACC	Expected Spread	Invested Capital	Market Value Added
A	8%	10%	12%	-2%	1 000	(500)
B	4%	13%	10%	3%	1 000	500

$$MVA = \frac{(ROIC - WACC) \times IC}{WACC - g}$$

$$MVA_A = \frac{(10\% - 12\%) \times 1000}{12\% - 8\%} = (500)$$

$$MVA_B = \frac{(13\% - 10\%) \times 1000}{10\% - 4\%} = 500$$

THE DRIVERS OF VALUE CREATION.



EBIT = Earnings before interest and taxes (operating profit before tax);
Invested capital = Cash + Working capital requirement + Net fixed assets;
WACC = [% Debt][Aftertax cost of debt] + [% Equity][Cost of equity].

Hawawini and Viallet, p. 615

FUZZY FINANCE

Source: Unknown

FOCUSED FINANCE

Source: Unknown

WHAT IS REQUIRED TO HAVE A FOCUSED FINANCE?

- One measure that integrates all – Value creation
- Linking periodic performance analysis to capital budgeting techniques and shareholder value analysis:
  - Economic value added (EVA) Linked to NPV
  - Market value added (MVA)
- A measure that gauge management's performance
  - Focus on decisions that create value in the future.

STRATEGIES TO CREATE VALUE

$$EVA = \left[\frac{NOPAT}{Capital} - \text{Cost of capital}\right] * Capital$$

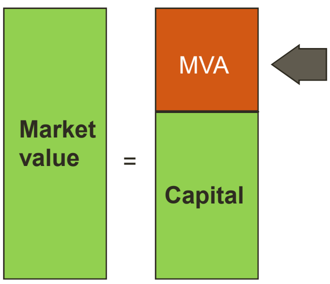
Operate: Improve the return on existing operating capital

Decrease: WACC

Build: Invest as long as returns exceed the cost of capital

Harvest: Re-deploy capital when returns fail to achieve the cost of capital.

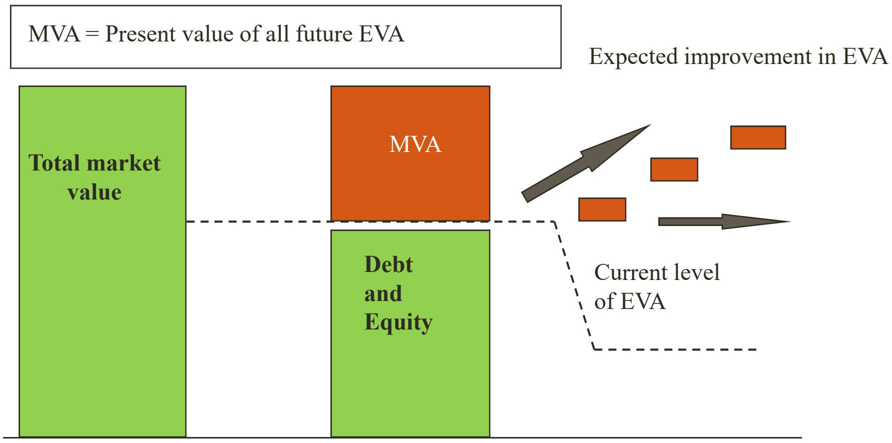
EVA IS THE SOURCE OF MVA



Year 1 Year 2 Year 3 .... Year n

$$\frac{EVA}{1+k} + \frac{EVA}{(1+k)^2} + \frac{EVA}{(1+k)^3} + \dots + \frac{EVA}{(1+k)^n}$$

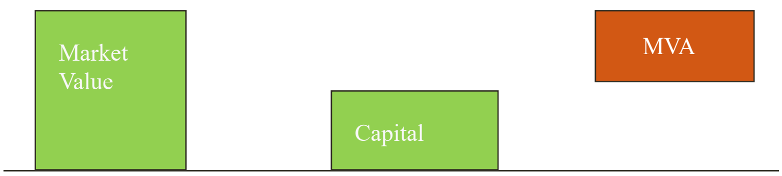
EVA IS THE SOURCE OF MARKET VALUE ADDED



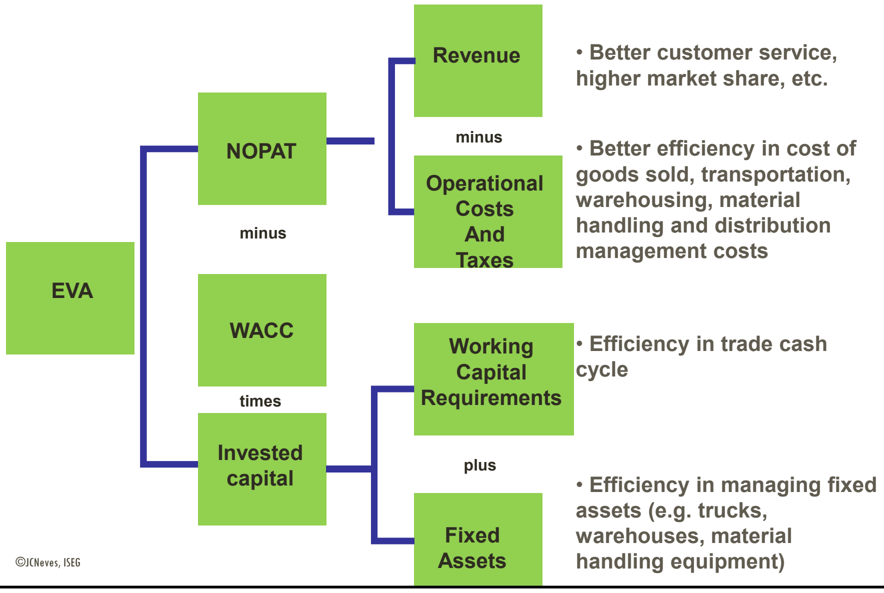
EVA IS THE SOURCE OF MVA III

Companies that consistently earn profits in excess of their required return …

… are typically valued at premiums to book value.



SIMPLE TO CALCULATE



SIMPLE EXAMPLE OF EVA

- Suppose a certain project costs \$1,000,000 up front, but after that it will generate net cash inflows each year (in perpetuity) of \$120,000. If the firm's cost of capital is 10%, then the project's EVA is:

- EVA = \$120,000 – \$100,000 = \$20,000