

Chapter 2: The goal of the firm and economic fundamentals

2.0 Learning objectives

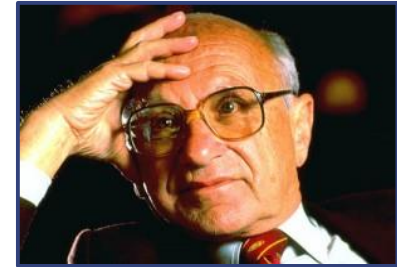
- What should be the goal of a firm?
- Is stock price maximization and shareholder value maximization the same?
- How can overall firm goals be broken down into mission statements and sub-goals?
- What are economies of scale and economies of scope?
- What is the learning curve and how does it differ from economies of scale?

2.1 Company goals

➤ What should be company goals?

“... there is one and only one social responsibility of business [. . .] to use its resources and engage in activities designed to increase profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception and fraud.”

Milton Friedman, 1962



* 07/31/1912, † 11/16/2006

“200 years’ worth of work in economics and finance indicate that social welfare is maximized when all firms in an economy attempt to maximize their own total firm value.”

Michael C. Jensen, 2001



* 11/30/1939

“It’s become fashionable to blame the pursuit of shareholder value for the ills besetting corporate America [...] The reality is that the shareholder value principle has not failed management; rather, it is management that has betrayed the principle.”

Alfred Rappaport, 2006



* 1932

2.1 Company goals

The New York Times

August 10, 2012

Down With Shareholder Value

By JOE NOCERA

I've been known to say that I was present at the creation of "shareholder value."

[...] "Shareholder value has long since become the mantra of the business culture. [...] Over time, "maximizing shareholder value" became viewed as the primary task of the corporation.

And, well, you can see the results all around you. They're not pretty. Too many chief executives succumb to the pressure to boost short-term earnings at the expense of long-term value creation. After all, their compensation depends on it. [...]

"A number of chief executives, such as Howard Schultz of Starbucks, have said that companies need to have a larger purpose than merely raising the stock price." [...]

2.1 Company goals

The
Economist

World politics

Business

"I do not work for the shareholder, to be honest; I work for the consumer, the customer...I'm not driven and I don't drive this business model by driving shareholder value."

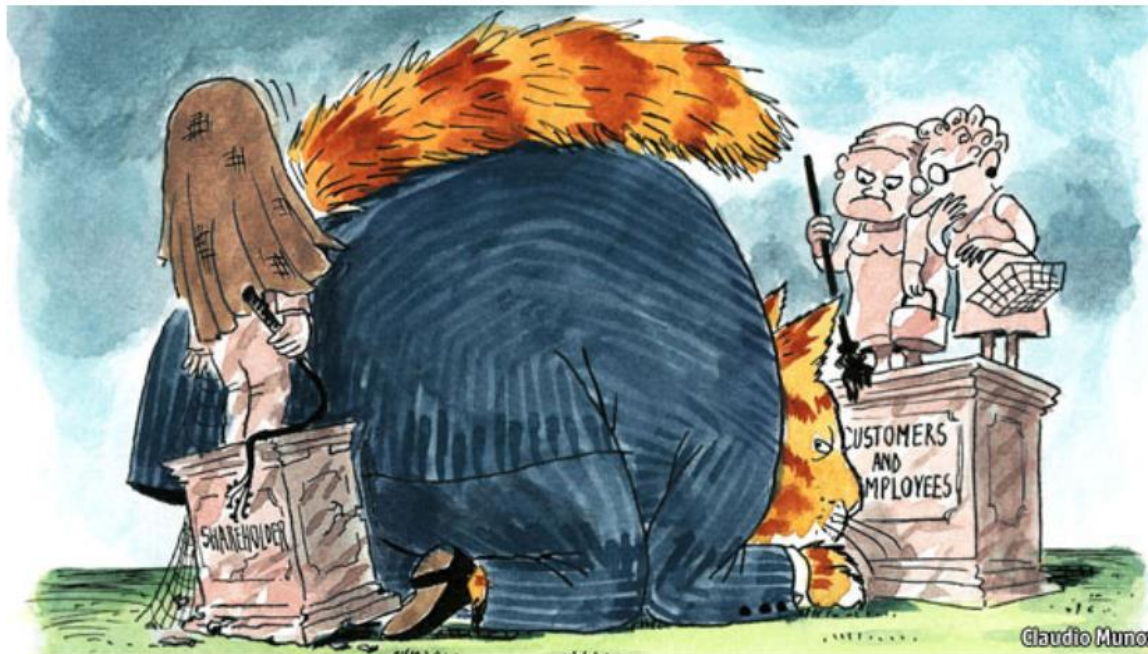
Paul Polman, CEO Unilever, Interview with Financial Times

Shareholders v stakeholders

A new idolatry

The economic crisis has revived the old debate about whether firms should focus most on their shareholders, their customers or their workers

Apr 22nd 2010 | From the print edition



<http://www.economist.com/node/15954434>

2.1 Company goals

Forbes / Leadership

To

FEB 5, 2015 @ 09:33 AM 111,090 VIEWS

Salesforce CEO Slams 'The World's Dumbest Idea': Maximizing Shareholder Value

Jack Welch has called it “the dumbest idea in the world.”

Vinci Group Chairman and CEO Xavier Huillard has called it “totally idiotic.”

Alibaba CEO Jack Ma has said that “customers are number one; employees are number two and shareholders are number three.”

Paul Polman, CEO of Unilever [UN], has denounced “the cult of shareholder value.”

John Mackey at Whole Foods [WFM] has condemned businesses that “view their purpose as profit maximization and treat all participants in the system as means to that end.”

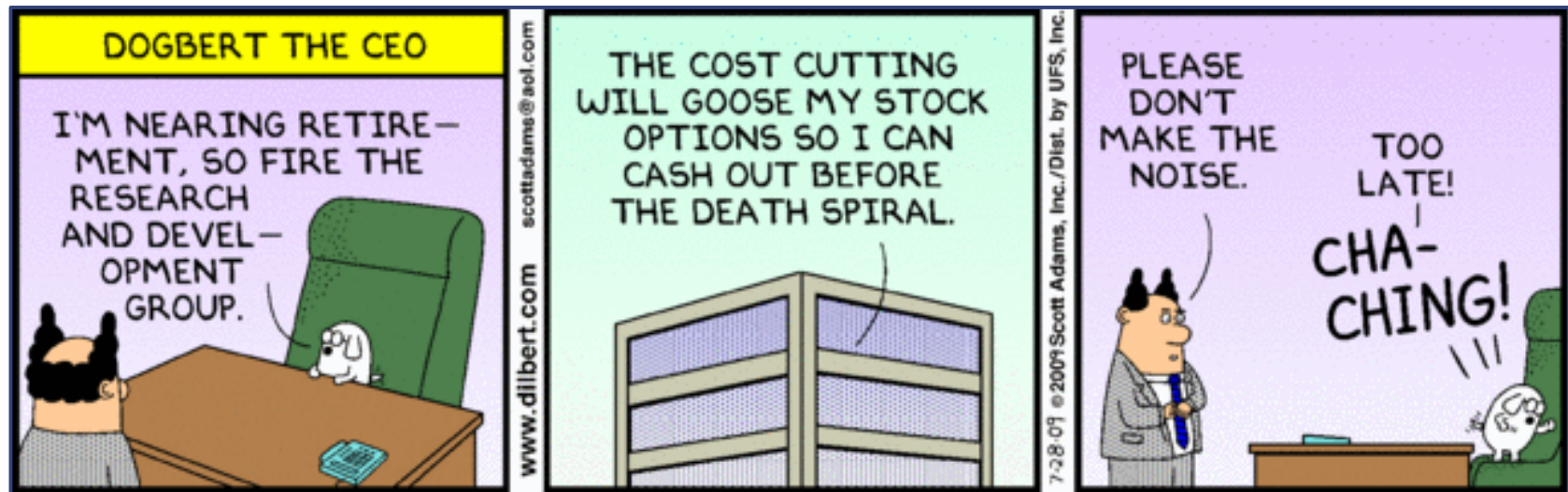
This week, Marc Benioff, Chairman and CEO of Salesforce [CRM] joined these CEOs and declared in an article in the Huffington Post that this still-pervasive business theory is “wrong. The business of business isn’t just about creating profits for shareholders — it’s also about improving the state of the world and driving stakeholder value.”

2.1 Company goals

- Shareholder value and stakeholder value
 - Are shareholder value maximization and stakeholder view conflicting?
 - Why? Why not?
 - What are the conflicts?
 - What do the different perspectives have in common?

2.1 Company goals

- What is shareholder value?
 - Is shareholder value equal to stock price?



2.1 Company goals

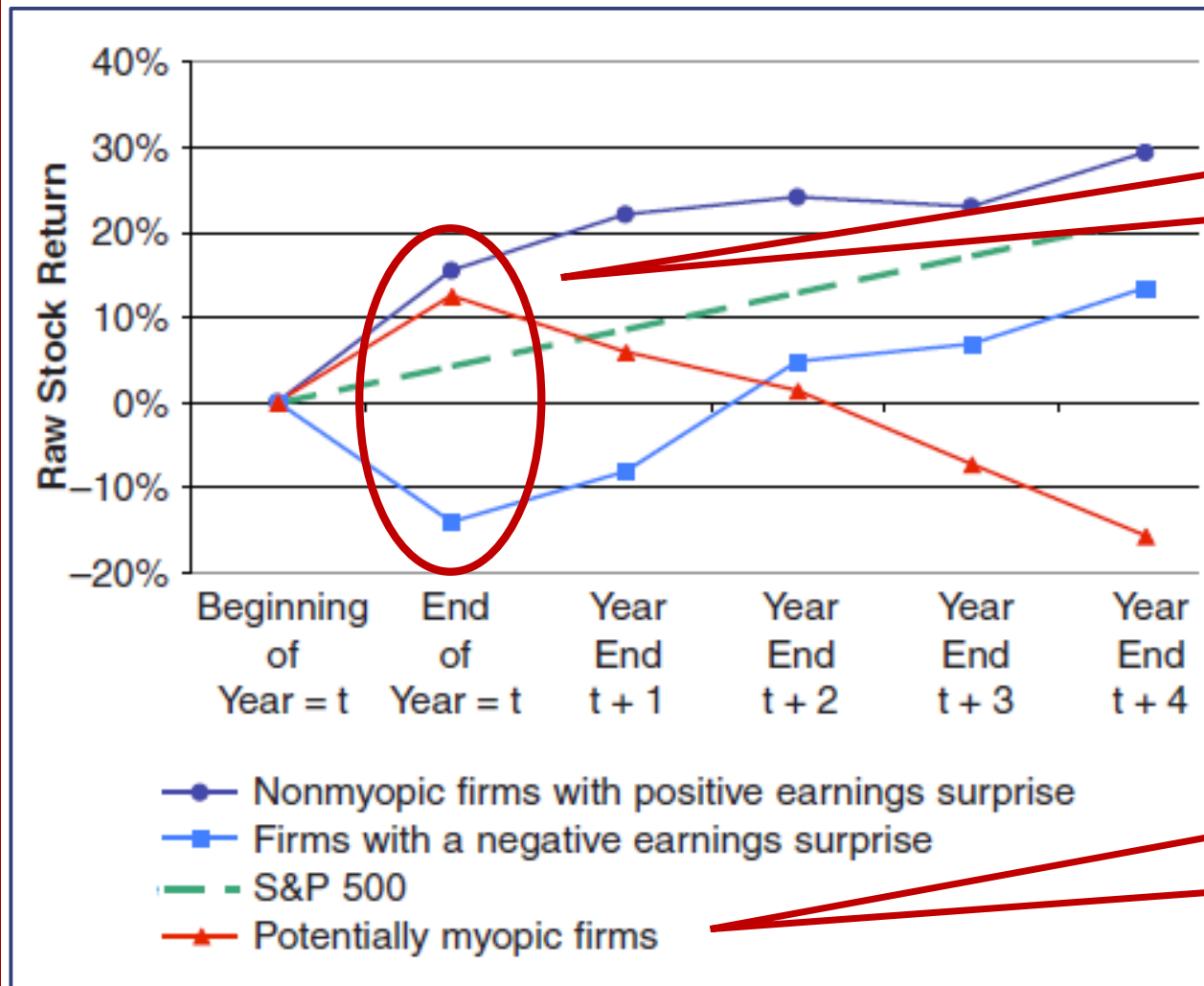
- Is shareholder value equal to stock price?

“In January 1993, the Eastman Kodak Company hired Christopher Steffen as its chief financial officer. Mr Steffen was a key participant in turnarounds at Chrysler and Honeywell, and he was widely viewed as just what Kodak needed to trim its bloated bureaucracy. As a result, within two days of Steffen’s appointment, Kodak’s market value rose by about 17 percent (\$2.2 billion). The headline in the Wall Street Journal was, *“Kodak obtains services of well known change agent: stock value jumps by two billion dollars.”* At the time, Business Week dubbed Steffen as the “\$2 billion man.”

Unfortunately for Kodak, Steffen resigned just 11 weeks later, claiming that company management had found his ideas “too revolutionary.” Kodak’s market value quickly dropped by about \$2 billion.”

Merchant [2010]

2.1 Company goals



What does the stock market perceive here?

Firms with cuts in marketing expenses and increases in earnings simultaneously

Mizik [2010]

2.1 Company goals

➤ Bringing perspectives together

“The reality is that the shareholder value principle has not failed management; rather it is management that has betrayed the principle”

Alfred Rappaport, 2006, Harvard Business Review

“The real business of business: Shareholder-oriented capitalism is still the best path to broad economic prosperity, as long as companies focus on the long term.”

Marc Goedhart, Tim Koller, and David Wessels, 2015, McKinsey&Company

2.1 Company goals

	Short-term shareholder view	Long-term shareholder view	Stakeholder view
For whom does the organization exist?	The present owners	The present and future owners	All stakeholders
Time horizon	Short	Long	Long
Main goal	Short-term profitability	Long-term profitability	Survival
Performance measures	Mainly financial	Financial and non-financial	Financial and non-financial
Importance of shareholders	Very high (present)	High (all)	High (all)
Importance of other stakeholders	Rather low	Rather high	High

Source: Anthony et al. [2014]

2.2 Shareholder value and sub-goals

- Shareholders' "true" market value of equity and total capital
 - A firm's market value: equity model (Discounted Dividend Model – DDM):

$$MVE_0^{\text{cum}} = \sum_{t=0}^T D_t \cdot (1 + r_E)^{-t}$$

- Market value ex dividende

$$MVE_0^{\text{ex}} = \sum_{t=1}^T D_t \cdot (1 + r_E)^{-t}$$

- Entity model

$$MVE_t = MVTC_t - MVDebt_t$$

$$MVTC_0 = \sum_{t=0}^T FCF_t \cdot (1 + wacc)^{-t}$$

2.2 Shareholder value and sub-goals



Our strategy to deliver shareholder value

Our strategy

Our vision

Our vision

Our strategy



Our Group vision is to lead the global tobacco industry. **We don't just measure that in volume and value, we also aim to be the world's best at meeting consumer needs.**

2.2 Shareholder value and sub-goals

- Translating shareholder value into sub-targets
 - Develop a vision.
 - Formulate a mission statement.
 - Derive concrete goals related to the products and services and abstract (financial) goals.

2.2 Shareholder value and sub-goals

- The problem: Bad mission statements

“We make real what matters.”

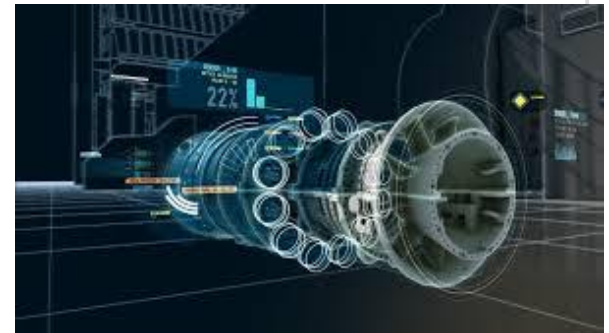
“We believe in what people make possible. Our mission is to empower every person and every organization on the planet to achieve more.”

“XX’s purpose is to build trust in society and solve important problems. It defines the difference we seek to make in the world—it’s why we do what we do.”

2.2 Shareholder value and sub-goals

➤ Better mission statements

“General Electrics Vision is to become the world’s premier digital industrial company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive.”



“Our mission is to inspire healthier communities by connecting people to real food.”



2.2 Shareholder value and sub-goals

➤ Better mission statements

“Ameren's mission is to generate electricity, deliver electricity and distribute natural gas in a safe, reliable, efficient and environmentally sound manner. Our vision is to be the recognized performance leader of the U.S. electric and gas utility industry. Being a performance leader means we will achieve operational excellence, industry-leading customer satisfaction and superior financial performance. “



The adidas Group strives to be the global leader in the sporting goods industry with brands built on a passion for sports and a sporting lifestyle. We are committed to continuously strengthening our brands and products to improve our competitive position.

We are innovation and design leaders who seek to help athletes of all skill levels achieve peak performance with every product we bring to market. We are consumer focused and therefore we continuously improve the quality, look, feel, and image of our products and our organizational structures to match and exceed consumer expectations and to provide them with the highest value. We are a global organization that is socially and environmentally responsible, that embraces creativity and diversity, and is financially rewarding for our employees and shareholders. We are dedicated to consistently delivering outstanding financial results.



2.2 Shareholder value and sub-goals

DAIMLER

Company Brands & Products Technology & Innovation Sustainability

News Strategy Business Units Corporate Governance Tradition Daimler



Company > Strategy > Targets

Targets

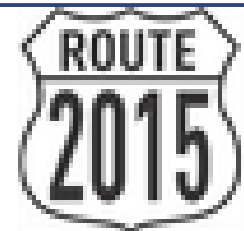
Our overriding corporate goal is to achieve sustainable profitable growth and thus to increase the value of the Group. We strive to achieve the leading position in all our businesses.

Operational excellence and efficiency along with inspired and high-performing people are the key to our future corporate success. At the same time, our entrepreneurial activities are guided by the principle of sustainability. Our employees orient themselves on the four corporate values of passion, respect, integrity and discipline. We want to lead the competition also in terms of integrity.

We have set ourselves clear sales targets. By the end of the decade Mercedes-Benz Cars strives to occupy the Number One position in the premium segment. On the way to achieving this goal, we want to sell more than 1.6 million cars of the Mercedes-Benz brand in 2015. At Daimler Trucks, we want to strengthen our leading role in the global truck business and aim to sell more than 500,000 vehicles in the year 2015. Mercedes-Benz Vans plans to sell 400,000 vehicles and Daimler Buses 42,000 complete buses in 2015. Daimler Financial Services will continue to grow in line with our automotive business and expand its product offering in the field of vehicle financing, as well as with mobility services and insurance.

Additionally to our sales targets, we intend to achieve on a sustained basis a return on sales target of 9% on average for the automotive business.

adidas®
GROUP



Based on our strong brands, premium products, extensive global presence and commitment to innovation and the consumer, we aspire to grow our business significantly in the five-year period from 2010 to 2015. Our financial aspirations include increasing Group sales to € 17 billion, achieving an operating margin of 11% and increasing annual earnings at a compound annual rate of 15%.

Our Group sales growth implies outperforming total market growth, both GDP and the sporting goods industry. Our three key "attack markets" North America, Greater China and Russia/CIS are targeted to contribute around 50% of total Group sales growth. We intend to increase the portion of sales generated through controlled space initiatives to over 50% of Group sales in the coming years.

<http://www.daimler.com/company/strategy/targets>
Adidas Annual Report 2013

2.3 Cash flows and income measures

- The connection between current performance measures (financial goals) and shareholder value
 - Condition of present value identity:

A performance measure is characterized by present value identity if the present value of the periodical performance measures corresponds to the net present value of all cash flows over a firm's life cycle.

⇒ Present value identity if:

$$\sum_{t=0}^T D_t \cdot (1+r_E)^{-t} = MVE_0^{\text{cum}} = \sum_{t=0}^T PM_t \cdot (1+r_E)^{-t}$$

2.3 Cash flows and income measures

➤ Residual income measures:

- (Are supposed to) reflect the value added in a period to the total value (of the firm, the business unit, the investment project)
- In order to be really value oriented, the total (firm/BU/investment) value must be derivable from all residual income measures over the life time: Check for **present value identity**.

2.3 Cash flows and income measures

➤ Residual income vs. income

– Definition of income

– Equity-based

$$\text{Inc}_t = \text{EC}_t + D_t - \text{EC}_{t-1}$$

– Total capital-based

$$\text{Inc}_t = \text{EBIAT}_t - r_D \cdot \text{Debt}_{t-1}$$

EBIAT = Earnings Before
Interests After Taxes.

– Definition of residual income

– Equity-based

$$\text{RI}_t = \text{Inc}_t - r_{\text{EK}} \cdot \text{EC}_{t-1} = \text{EC}_t + D_t - (1 + r_{\text{EK}}) \cdot \text{EC}_{t-1}$$

– Total capital-based

$$\text{RI}_t = \text{EBIAT}_t - \text{wacc} \cdot \text{IC}_{t-1} = \text{IC}_t + \text{FCF}_t - (1 + \text{wacc}) \cdot \text{IC}_{t-1}$$

$$\text{wacc} = r_{\text{EC}} \cdot \frac{\text{EC}_{t-1}}{\text{IC}_{t-1}} + r_D \cdot \frac{\text{Debt}_{t-1}}{\text{IC}_{t-1}}$$

2.3 Cash flows and income measures

➤ Clean surplus condition

Definition clean surplus condition

The clean surplus condition postulates that all increases or decreases in equity capital (that are not dividends) enter into the income.

$$\Rightarrow \text{Inc}_t = \text{EC}_t + D_t - \text{EC}_{t-1}$$

$\Rightarrow$ The clean surplus condition implies:

$$\sum_{t=0}^T \text{Inc}_t = \sum_{t=0}^T (\text{EC}_t + D_t - \text{EC}_{t-1}) = \sum_{t=0}^T D_t + \text{EC}_T - \text{EC}_{-1} = \sum_{t=0}^T D_t \quad \text{as} \quad \text{EC}_T = \text{EC}_{-1} = 0.$$

2.3 Cash flows and income measures

- Comprehensive income according to US-GAAP

Comprehensive income is...

„the change in equity [net assets] of a business enterprise during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners.“

(FASB Statement 130: Reporting Comprehensive Income)

2.3 Cash flows and income measures

- Income: Check for present value identity
 - Equity based (cost of equity = r).
 - The present value at $t=0$ of all incomes from $t=0$ is:

$$\sum_{t=0}^T \text{Inc}_t \cdot (1+r)^{-t} = \sum_{t=0}^T (\text{EC}_t + D_t - \text{EC}_{t-1}) \cdot (1+r)^{-t} = \text{MVE}_0^{\text{cum}} + r \cdot \sum_{t=1}^T \text{EC}_{t-1} \cdot (1+r)^{-t}$$

2.3 Cash flows and income measures

$$\begin{aligned}
 \text{Since: } \sum_{t=0}^T \text{Inc}_t \cdot (1+r)^{-t} &= \sum_{t=0}^T (\text{EC}_t + D_t - \text{EC}_{t-1}) \cdot (1+r)^{-t} \\
 &= \sum_{t=0}^T D_t \cdot (1+r)^{-t} + \sum_{t=0}^T \text{EC}_t \cdot (1+r)^{-t} - \sum_{t=0}^T \text{EC}_{t-1} \cdot (1+r)^{-t} \\
 &= \text{MVE}_0^{\text{cum}} + \sum_{t=0}^T \text{EC}_t \cdot (1+r)^{-t} - \sum_{t=0}^T \text{EC}_{t-1} \cdot (1+r)^{-t} - r \cdot \sum_{t=0}^T \text{EC}_{t-1} \cdot (1+r)^{-t} \\
 &\quad + r \cdot \sum_{t=0}^T \text{EC}_{t-1} \cdot (1+r)^{-t} \\
 &= \text{MVE}_0^{\text{cum}} + \sum_{t=0}^T \text{EC}_t \cdot (1+r)^{-t} - \sum_{t=0}^T \text{EC}_{t-1} \cdot (1+r)^{-(t-1)} + r \cdot \sum_{t=0}^T \text{EC}_{t-1} \cdot (1+r)^{-t} \\
 &= \text{MVE}_0^{\text{cum}} + r \cdot \sum_{t=1}^T \text{EC}_{t-1} \cdot (1+r)^{-t}
 \end{aligned}$$

[with $\text{EC}_{t-1} = 0$ and $\text{EC}_T = 0$ due to liquidation.]

2.3 Cash flows and income measures

- Residual income: Check for present value identity
 - The present value in $t=0$ of all residual incomes is:

$$\sum_{t=0}^T RI_t \cdot (1+r)^{-t} = MVE_0^{\text{cum}} = \sum_{t=0}^T D_t (1+r)^{-t}$$

[Analogous to the proof for income.]

2.3 Cash flows and income measures

- Implications of the Preinreich theorem
 - Connects cash flows (as a basis for market value) and accounting accruals with each other.
 - ⇒ Relevance for incentives: Alignment of interests between manager and shareholders.
 - ⇒ Relevance for performance measurement and investment controls: Projects delivering *always* positive residual incomes are value-creating.

2.3 Cash flows and income measures

- Based on total capital invested
 - All relationships hold independent of whether the capital employed, the costs of capital and the cash flow measure are equity based or entity based (total capital).
 - The variables have to be substituted as follows:
 $Inc_t \rightarrow EBIAT_t$, $EC_t \rightarrow IC_t$, $D_t \rightarrow FCF_t$
- Market Value Added (MVA)
 - Present value of all residual incomes for 0:

$$\sum_{t=0}^T RI_t \cdot (1+r)^{-t} = MVE_0^{cum} \Leftrightarrow RI_0 + \sum_{t=1}^T RI_t \cdot (1+r)^{-t} = MVE_0^{ex} + D_0$$

- Thus: $MVE_0^{ex} - EC_0 = \sum_{t=1}^T RI_t \cdot (1+r)^{-t} = MVA_t \equiv \text{"Market Value Added"}$

2.3 Cash flows and income measures

➤ Return measures

- Important: Consistency of numerator and denominator
- Return measures can only be value oriented if they are directly linked to a residual income measures and, thus, are at least indirectly related to a measure of firm value.

2.3 Cash flows and income measures

- Return on Invested Capital, RoIC
 - ⇒ Equity based: RoIC corresponds to RoE.
 - ⇒ Based on total invested capital:

$$\text{RoIC}_t = \frac{\text{EBIAT}_t}{\text{IC}_{t-1}}$$

2.4 Strategic alternatives and CFO involvement

- In the following
 - To derive value-creating strategic alternatives, it is necessary to intensively analyze the firm and its environment.
 - **Environment-System-Fit:** Fit of the environment's chances and risks and the firm's strengths and weaknesses.
 - ↔ **Intra-System-Fit:** Align the management sub-systems with the determined firm strategy

2.4 Strategic alternatives and CFO involvement

➤ CFO involvement in strategy development and strategic planning

Table II. CFOs' role images and level of involvement in the strategic planning process

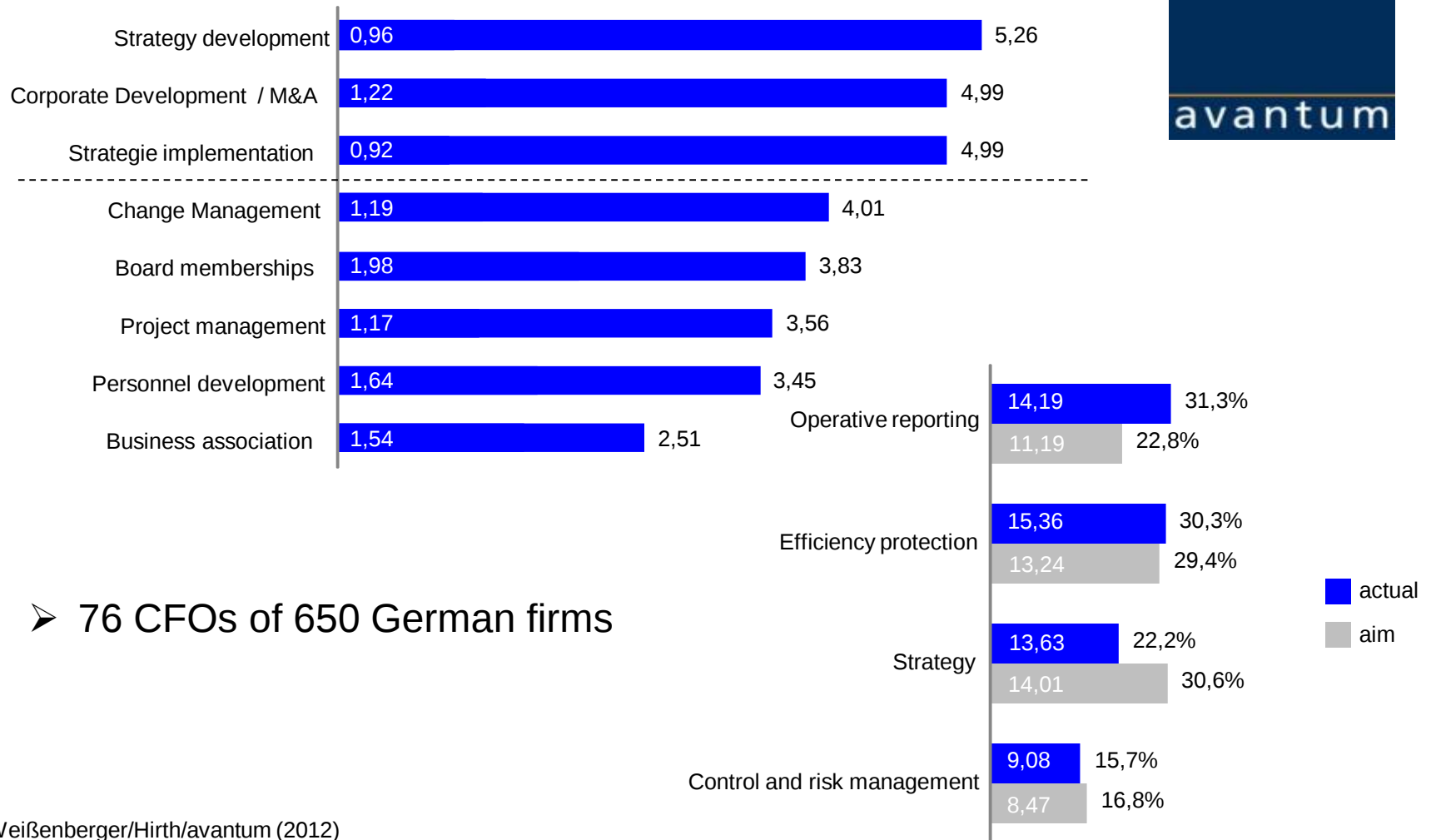
		Firms and interviewee's position																						
		A		B		C		D		E		F		G		H	I	J	K	L	M	N		O
		CEO	CFO	CM	CEO	CM	CFO	CFO	CFO	CEO	CFO	CFO	CFO	CFO	CFO	CEO	CFO	CM	CFO	CFO	CFO	CFO	Total	
CFO's predominant role image(s)	Discussant		✓			✓	✓	✓						✓	✓			✓	✓	✓	✓	✓		11
	Process owner	✓	✓			✓	✓						✓	✓				✓					✓	8
	Challenger									✓	✓		✓					✓			✓	✓		6
	Financial reflector			✓	✓				✓		✓													4
	Moderator						✓															✓	2	
	Innovator		✓				✓																	2
CFO's level of contentwise involvement	Leading												✓				✓							2
	Highly involved	✓	✓			✓	✓							✓				✓	✓	✓	✓			9
	Partly involved			✓	✓			✓	✓	✓	✓	✓				✓								8
No strategic planning process institutionalised														✓								1		

Hiebl (2013)

➤ Interviews with executives from 15 Austrian firms

2.4 Strategic alternatives and CFO involvement

➤ CFO functions and tasks



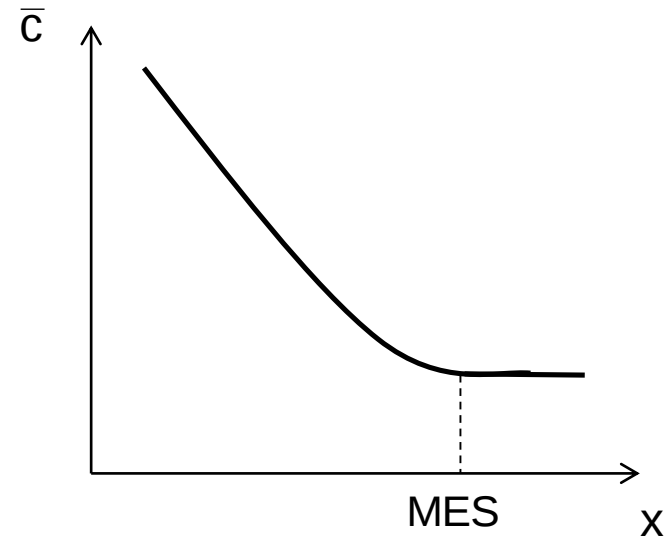
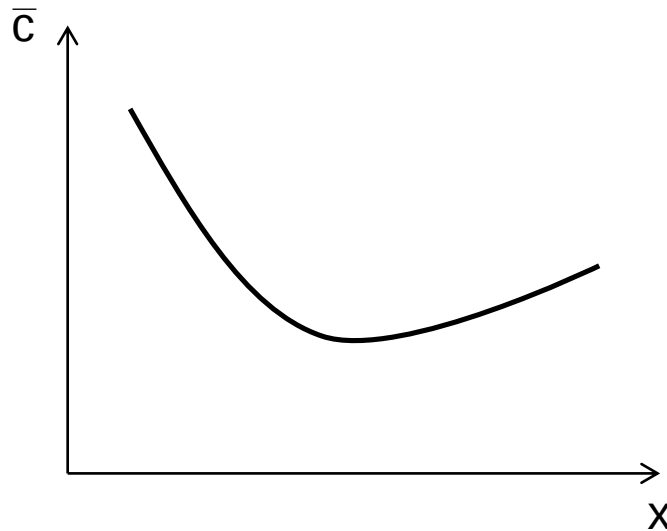
➤ 76 CFOs of 650 German firms

Weissenberger/Hirth/avantum (2012)

2.5 Some economic fundamentals

➤ Definition of Economies of Scale

The production process for a specific good or service exhibits economies of scale over a range of outputs when average cost $\bar{c} = \frac{C}{x}$ declines over that range.



2.5 Some economic fundamentals

➤ Definition of Economies of Scope

A production process exhibits economies of scope when a firm realizes savings by increasing the variety of goods and services it produces.

$$C(x_A, x_B) < C(x_A, 0) + C(0, x_B)$$

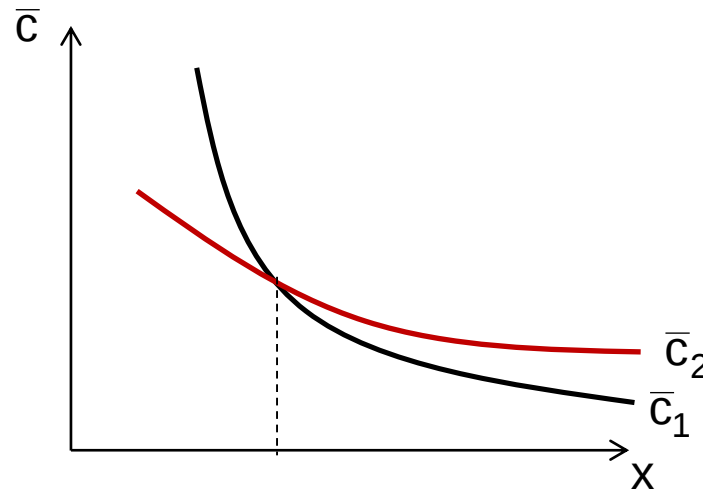
⇒ Less costly for a firm to produce A and B than the combined costs of one firm producing A and another firm producing B.

⇒ Alternatively: $\Leftrightarrow C(x_A, x_B) - C(0, x_B) < C(x_A, 0) - 0$

⇒ The marginal costs of the firm to produce x_A units of A are smaller if the firm already produces x_B units of B than if it produces nothing.

2.5 Some economic fundamentals

- Where do economies of scale come from?
 - Indivisibilities and spreading of fixed costs on a larger output.
 - Product specific fixed costs
 - Tradeoffs among alternative technologies (long run vs. short run).



- Greater likelihood of indivisibilities when production is capital intensive.
- „The division of labor is limited by the extent of the market.“ (Adam Smith)

2.5 Some economic fundamentals

- Special sources of economies of scale und economies of scope
 - Economies of scale and economies of scope in purchasing.

- Economies of scale and economies of scope in advertising.

$$\frac{\text{Cost of sending a message}}{\text{Number of potential consumers receiving the message}} \div \frac{\text{Number of actual customers as a result of message}}{\text{Number of potential costumers receiving the message}}$$

2.5 Some economic fundamentals

- Economies of scale in R&D.

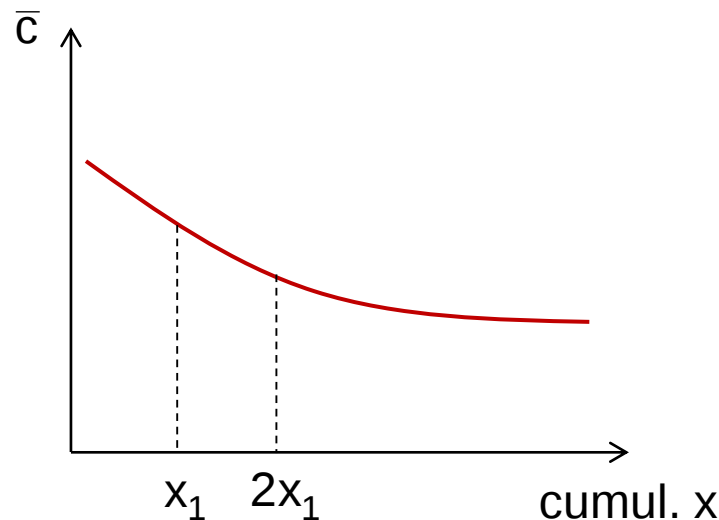
2.5 Some economic fundamentals

- Sources of diseconomies of scale
 - Labor costs and firm size.
 - Spreading specialized resources too thin.
 - „Conflicting out“.
 - **Incentive and coordination effects.**

2.5 Some economic fundamentals

➤ Learning curve

- Cost advantages from accumulating experience and accumulated know-how.
- Decreasing curve of average unit costs: Doubling the cumulative production output decreases average costs by a certain percentage.
- Slope of the learning curve on average -20% but highly variable across industries and products.



2.5 Some economic fundamentals

- Learning curve vs. economies of scale
 - Economies of scale refer to the ability to perform an activity at a lower unit cost when it is performed on a larger scale at a particular point in time.
 - Learning curve refer to the reductions in unit costs due to accumulating experience over time.
 - Economies of scale and low learning economies:

 - Learning economies and low economies of scale: