Financial Statement Analysis

Introduction

Fahmi Ben Abdelkader ©
ESCP, Paris
Fall 2013

Chapter Outline

Useful Information and Class rules

- Evaluation
- Class Rules
- Contact & Communication
- Material & book reference

Learning Objectives and Course Content

- Learning Objectives
- Financial Analysis: Tentative Definition
- How to conduct a financial analysis?
- Indicative Outline

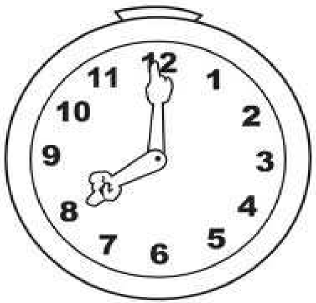
Introduction: fundamental concepts

- The 2007–2008 crisis, or rediscovering financial risk
- Firms' Disclosure of Financial Information
- Who are Financial Analysts?
- Financial Analysis Versus Accounting

Evaluation: quiz and final exam

	% of total grade
Quiz In class At the beginning of session 4 20 minutes Closed book	**20%**
Financial Analysis Report presentation Homework - groups of 4 Presentation in class (Session 5)	**20%**
Final exam Closed book 2 hours	**60%**
Total Class Grade	**100%**

Three Golden Rules

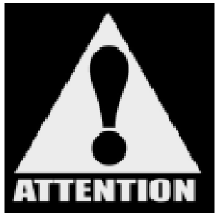


BE ON TIME : Arriving late three times counts as an unexcused absence

- **3 Delays (D) = 1 Absence (A)**

Contact

fahmi.students@gmail.com



Subject: **ESCP FA/ name / subject of email**

fbenabdelkader@escpeurope.eu (Only in urgent cases)

My Teaching Philosophy

The world does not care what you know; it only cares, and will only pay for, what you can do with what you know

Students learn best when they construct their own knowledge through exploration and discussion.

“There are no stupid questions, only stupid answers” Unknown

Finance will never be an exact science; it deals with human behavior

An effective teacher is always a student.

“Once you stop learning, you start dying”. Albert Einstein

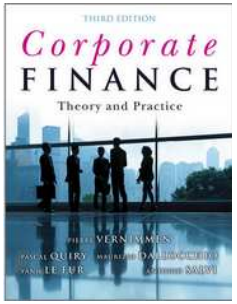
Material

Available on my webpage: www.fbenabdelkader.com

Students will be provided with:

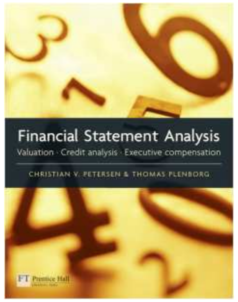
- Lecture notes
- Complementary material with financial statements of different companies
- (by email) Excel files with financial statements to compute financial ratios

Reference Books



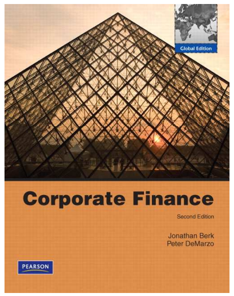
Pierre Vernimmen (2013), Corporate Finance: Theory and Practice, 3rd Edition
With Pascal Quiry, Yann Le Fur, Antonio Salvi, Maurizio Dallochio. John Wiley & Sons Ltd.

Section I
FINANCIAL ANALYSIS



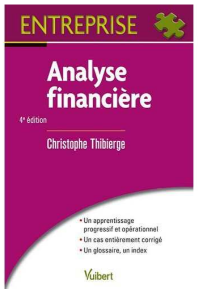
Thomas Plenborg and Christian Petersen (2012), Financial Statement Analysis: Valuation - Credit Analysis - Executive Compensation. Financial Times Press.

Part I: accounting data
Part II: Financial Analysis



Berk Jonathan and DeMarzo Peter (2011), Corporate Finance, Pearson Education, 2nd Edition.

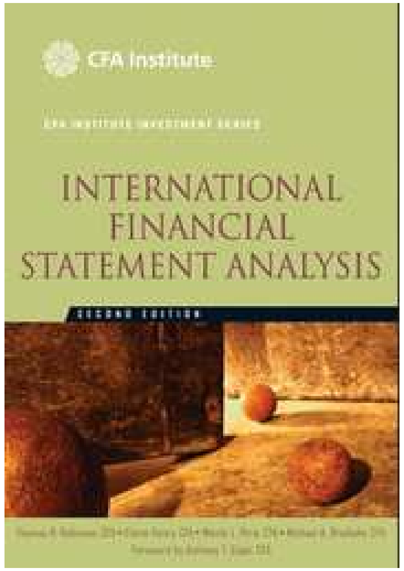
Chapters 1, 2 and 26



Christophe Thibièrge (2011), Analyse financière, 4ème édition, Vuibert.

https://intranet.escpeurope.eu/~bmt/thib/Anafi/index.html

Reference Books



International Financial Statement Analysis (CFA Institute Investment Series), 2nd Edition

Thomas R. Robinson, CFA, Elaine Henry, CFA, Wendy L. Pirie, CFA, Michael A. Broihahn, CFA, Anthony T. Cope,

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- Financial Analysis Versus Accounting

Learning Objectives

After this course you should be able to:

- Know why the disclosure of financial information through financial statements is critical to investors
- Understand the construction of the main financial statements and discuss their limitations
- Use accounting information to construct financial ratios
- Distinguish between accounting analysis (accrual-based measures, book value) and financial analysis (Cash-based measures, market value) of the firm
- Evaluate the sustainability of growth, the quality of earnings, and exposure to risk (liquidity and solvency): assess the process of value creation
- Write a Financial Analysis Report

One central question

Is your company in a strong enough financial health to continue to be trusted by stakeholders and to attract investors?

Good health = no disease

Gareth Bale
Football player hired by Real Madrid (nearly €100 million)

There is no single indicator of good health

➡ A rigorous medical check-up - Financial Analysis - requires a combination and a cross-analysis of different indicators covering several aspects to good health

How to conduct a financial analysis?

A guiding principle

In the long run, a company can survive only if it **creates value** for its shareholders and meets its commitments towards all its **stakeholders**

To do so, it must:

	Financial Analysis
Generate wealth Invest Finance its investments	**Growth Analysis**
Generate a sufficient return	**Profitability Analysis**
Anticipate and manage illiquidity risk	**Risk Analysis**

How to conduct a financial analysis?

The toolkit of the financial analyst

Preliminary analysis	**(1) Strategic and Economic Assessment**	**1.1** Understand the characteristics of the sector in which the company operates… **1.2** … analyse the auditors' report and accounting policies	
Financial Analysis	**(2) Growth Analysis**	**2.1 Growth measurement**	**Sales, Net Income, EBITDA, Total Assets**
		2.2 How the firm uses its money?	**Fixed Assets, WC, Capital Employed, Cash flow from investment activities**
		2.3 Where does the money come from?	**Leverage, Equity, Net Debt, Capital Invested, Short-term debt, etc.**
		2.4 Analysis of the Cash Cycle	**WC in days' worth of sales; Cash flow from operating, FCF**
	(3) Profitability Analysis	**3.1 Margin analysis**	**Profitability ratios, Cost structure**
		3.2 Return on Invested Capital (ROIC)	**ROIC = NOPAT/ Capital Employed ROIC = Oper. Margin * Asset turnover Economic Value Added = ROIC - WACC**
		3.3 Return on Equity (ROE)	**ROE = Net Income/ Equity ROE = ROIC + Leverage effect Residual Income= ROE - r_e**
	(4) Risk Analysis	**4.1 Short-term liquidity risk**	**Current ratio Quick ratio**
		4.2 Solvency risk	**Interest coverage ratio, leverage, etc.**
Summary note	**(5) Recommendations**	**5. Develop and communicate conclusions / recommendations**	

Indicative Outline

1. Introduction: fundamental concepts
2. Classifying Company Cash Flows: the Operating Cycle is of critical importance
3. Balance Sheet: A Reminder
4. The analytical Balance sheet: the Financial View
5. The analytical Income Statement
6. Accrual-based Versus Cash-Flow-based performance measures
7. Profitability and illiquidity Risk Analysis
8. Writing a Financial Analysis Report: Carlsberg Case Study

Students session: presentation of Financial Analysis Report of the company of your choice (groups of 4)

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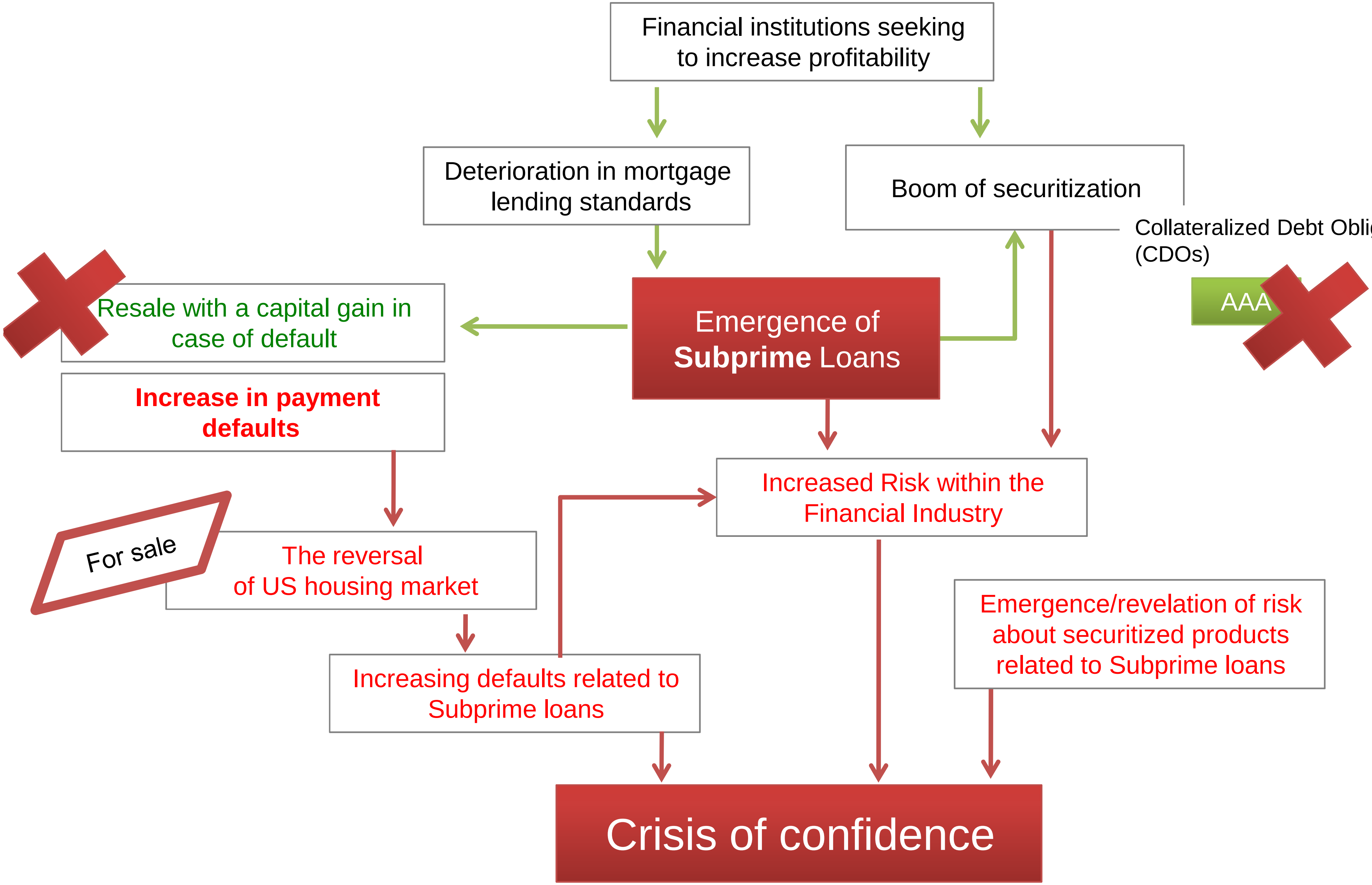
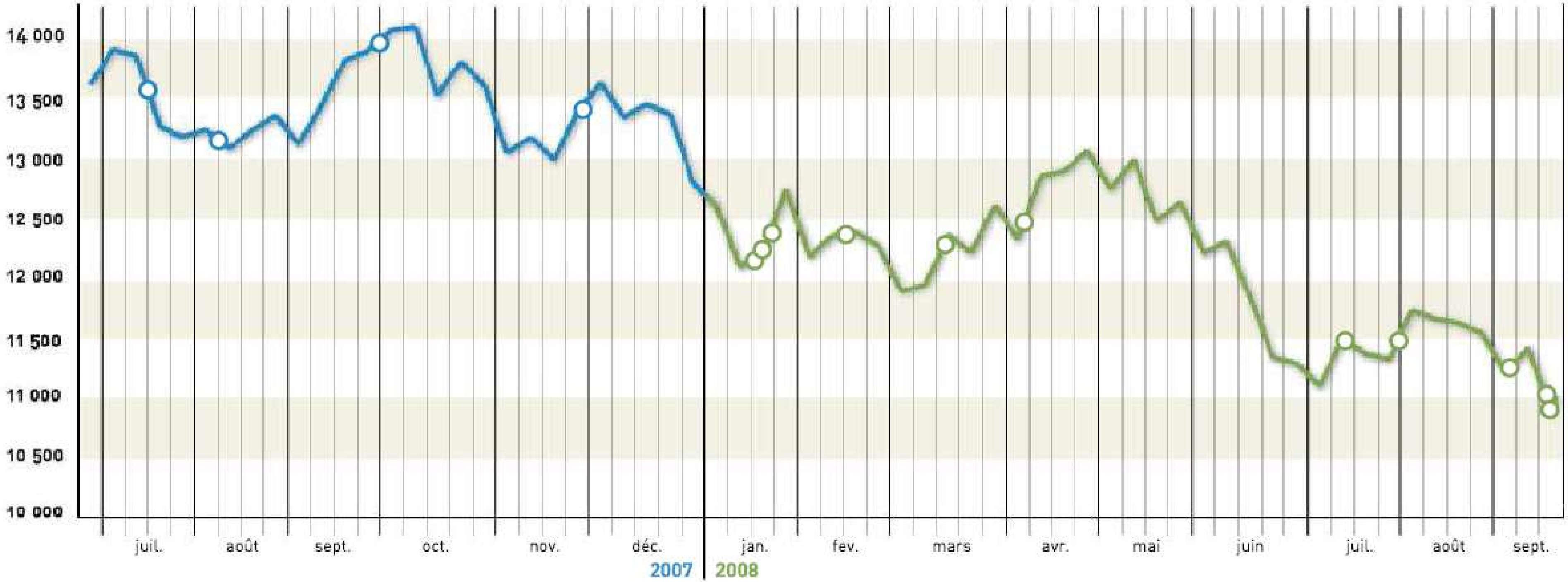
The 2007–2008 crisis, or rediscovering financial risk



The 2007–2008 crisis, or rediscovering financial risk

The Dow Jones lost almost 3 000 points in one year



The 2007–2008 crisis, or rediscovering financial risk

The financial crisis was not an accident, but it was caused by an out of control industry:

Cheap money

- Disconnection between asset prices (houses, securitized products, etc.) and fundamentals (economic reality) : speculative bubbles

Deregulation

- Excessive risk, high leverage, moral hazard (Ex. Too Big To Fail companies), etc.

Massive under-estimation of mortgage risks by financial actors (traders, bankers, hedge funds managers, rating agencies, etc.)

- Academics and professional analysts ignored elements such as : Investor emotions, Market sentiment, mimetic behaviour, « la sagesse des foules », etc.
- **HUMAN BEHAVIOUR COMPLEXITY**

The 2007–2008 crisis, or rediscovering financial risk

- **A rigorous approach of financial analysis is of crucial importance for decision makers…**

… It is the duty of all investors to analyze the products they are investing in

Firms' Disclosure of Financial Information

Financial Statements required by relevant authorities

Financial statements are accounting reports issued periodically to present past performance and a snapshot of the firm's assets and the financing of those assets

- Balance Sheet or Statement of Financial Position
- Income Statement (or statement of earnings, or profit and loss account)
- Statement of Cash Flows
- Statement of Changes in Shareholders' Equity

Who decides what is allowed?

Private Standard Setting Bodies

US Financial Accounting Standards Board – FASB,

International Accounting Standards Board – IASB

Government Regulators

US: Securities and Exchange Commission – SEC

Europe: European Securities Committee + national regulators

Major financial reporting standards

Generally Accepted Accounting Principles (GAAP)

International Financial Reporting Standards (IFRS)

+ Auditor: Neutral third party that checks a firm's financial statements (**compliance and reliability**)

Is it sufficient to set up standards?

Even with safeguards, reporting abuses still happen:

- Enron
- WorldCom
- Parmalat
- Bernard Madoff's Ponzi Scheme

"It's only when the tide goes out that you learn who's been swimming naked"

Warren Buffett

Reliability of the auditors is also crucial …

Bernard Madoff's Ponzi Scheme

$65 billion fund, 17 years of annual returns between 10 and 15%

The Ponzi Scheme: he used the capital contributed by new investors to pay off old investors

What caused the collapse of the scheme?

- the financial crisis spurred many investors to withdraw funds from their Madoff accounts
- the financial crisis = few new investors
- Madoff did not have enough new capital to pay off the investors

How was Madoff able to hide the largest fraud of all time for so long?

- Madoff was one of the largest and most successful hedge fund managers … he inspired confidence
- Manipulation of accounting statements with the assistance of a virtually unknown accounting firm
- Madoff's firm was not subject to the strict regulatory requirements for public companies

Why Do People Commit Financial Statement Fraud?

Among other motivations:

- To meet or exceed the earnings or revenue growth expectations of stock market analysts
- To comply with loan covenants
- To increase the amount of financing available from asset-based loans
- To meet corporate performance criteria set by the parent company
- To meet personal performance criteria
- To trigger performance-related compensation or earn-out payments
- To support the stock price in anticipation of a merger, acquisition, or sale of personal stockholding
- To show a pattern of growth to support a planned securities offering or sale of the business

➡ Typically: agency problems

The Financial Manager and the Goal of the Firm: A reminder

The mission of the financial manager within the firm

In Theory, the primary goal of financial management is to **maximize the wealth of the shareholders**

➡ The financial manager is a caretaker of the shareholders' money

Shareholder Value Versus Stakeholder Value

To maximize shareholder value, the financial manager must consider the impact of her decision on all stakeholders of the firm

➡ The ultimate mission of the financial manager is **to maximize the firm value …**

while preserving confidence between the firm and all its stakeholders

Consequences of Fraud and Unethical Behavior

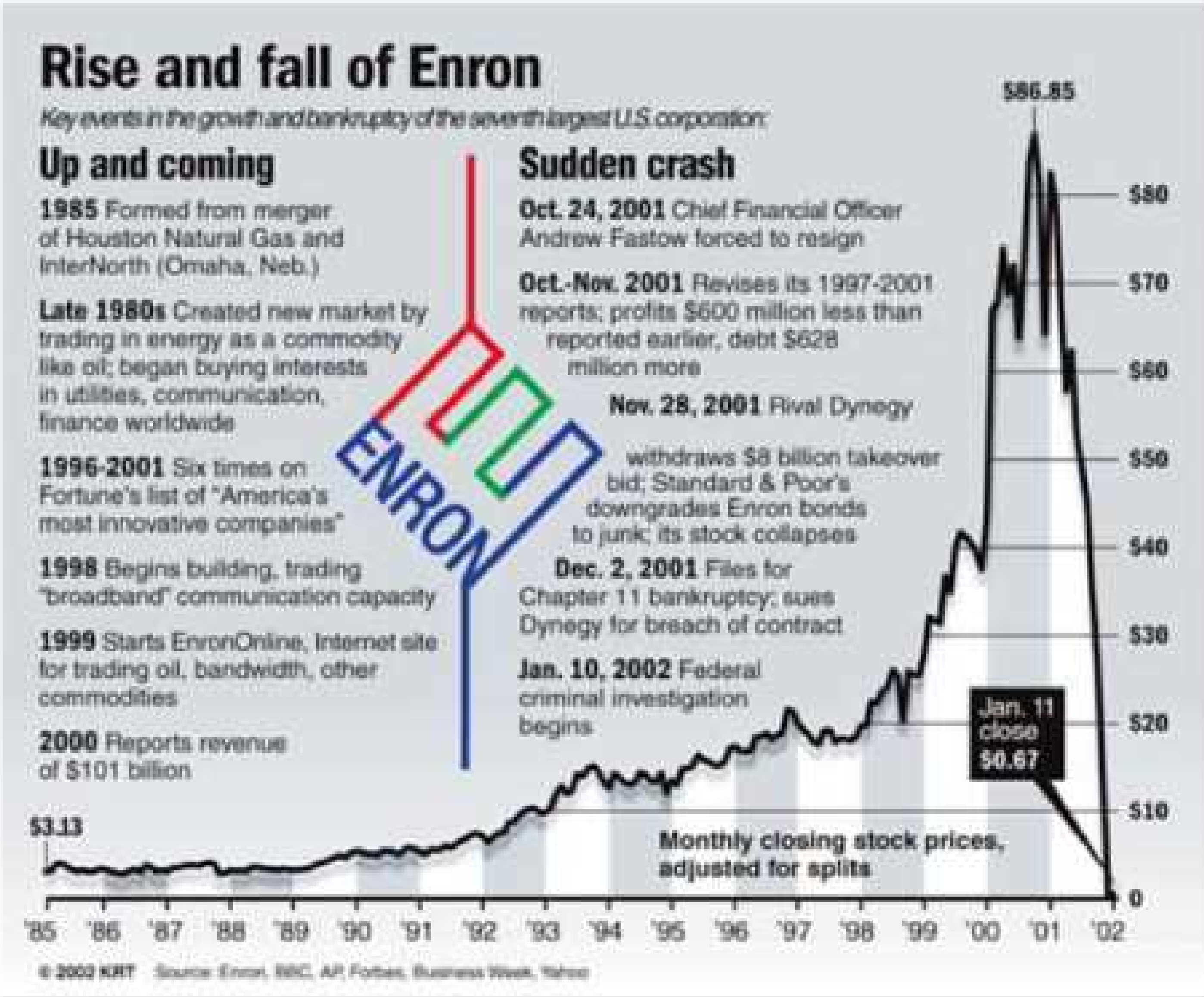
More than 50% of U.S. corporations are victims of fraud with losses of more than $500,000 (Albrecht & Searcy 2001)

Enron, WorldCom, Quest, Global Crossing, and Tyco's loss to shareholders was $460 billion (Cotton 2002)

Other fraud costs are legal costs, increased insurance costs, loss of productivity, adverse impacts on employee morale, customers' goodwill, suppliers' trust, and negative stock market reactions

➡ **The first victim of fraud is the confidence**

Consequences of Fraud and Unethical Behavior



Reliable financial information is critical

Example: The Sarbanes-Oxley Act (SOX)

In 2002, Congress passed the Sarbanes-Oxley Act (SOX).

The overall intent of the legislation was to **improve the accuracy of information given to both boards and to shareholders**.

SOX attempted to achieve this goal in three ways:

- Overhauling incentives and independence in the auditing process
- Stiffening penalties for providing false information
- Forcing companies to validate their internal financial control processes

Who are Financial Analysts?

Three types of typical decision makers (stakeholders) might be interested in financial analysis:

Equity-oriented stakeholders	Debt-capital-oriented stakeholders	Compensation-oriented stakeholders
Investors Companies Corporate finance employees Stock analysts Pension funds Private equity providers Public authorities (tax authorities, etc.)	Banks Mortgage-credit institutes bondholders Companies	Management and executives Board of directors Equity-oriented stakeholders Debt-capital-oriented stakeholders
↓	↓	↓
Valuation analysis	**Credit rating and liquidation analysis**	**Financial performance: Cash, Bonuses, Stock return, etc.**

➡ The decision model determines which types of information are requested: it may vary **depending upon the purpose of financial analysis**

Information required and the purpose of the financial analysis

The use of accounting information can vary depending upon the purpose of the financial statement analysis

Example: The inventory of a company burns and the company is under-insured.

Insufficient coverage → A loss is recognized and must be expensed.
Management reassess insurance policies and updates them.
Management has minimized the likelihood of a similar loss in the future.

How does this loss influences the financial statement analysis?

Valuation perspective:

- Should the loss be included when determining future cash flows?

Bonus schemes for management:

- Should the loss be included when determining the performance measure on which the determination of the bonus is based?

The purpose of the financial analysis: some examples

Possible questions

- Would an investment generate attractive returns?
- What is the degree of risk inherent in the investment?
- Should existing investing holdings be liquidated?
- Will cash flows be sufficient to service interest and principal payments on debt?
- …

You can make money by

- Investing in companies that are better than the market thinks they are.
- Shorting companies with exaggerated numbers

Expert analysts at work: Greenlight Capital example

David Einhorn
Hedge fund manager

Alma mater	Cornell University
Occupation	Founder & President, Greenlight Capital
Salary	$80 million (2011)
Net worth	$1.25 billion (March 2013)

Greenlight Capital founded by David Einhorn in 1996 with $900,000 of capital

More than 25% annualized net return

As of June 30, 2013, funds run by David Einhorn at Greenlight Capital were valued at **$5.3 billion**

Method:

- Identify fraudulent or deceptive accounting practices
- Sell the stock short
- Publicize your findings

Famous shorts:

- Lehman Brothers
- Allied Capital
- Green Mountain Coffee

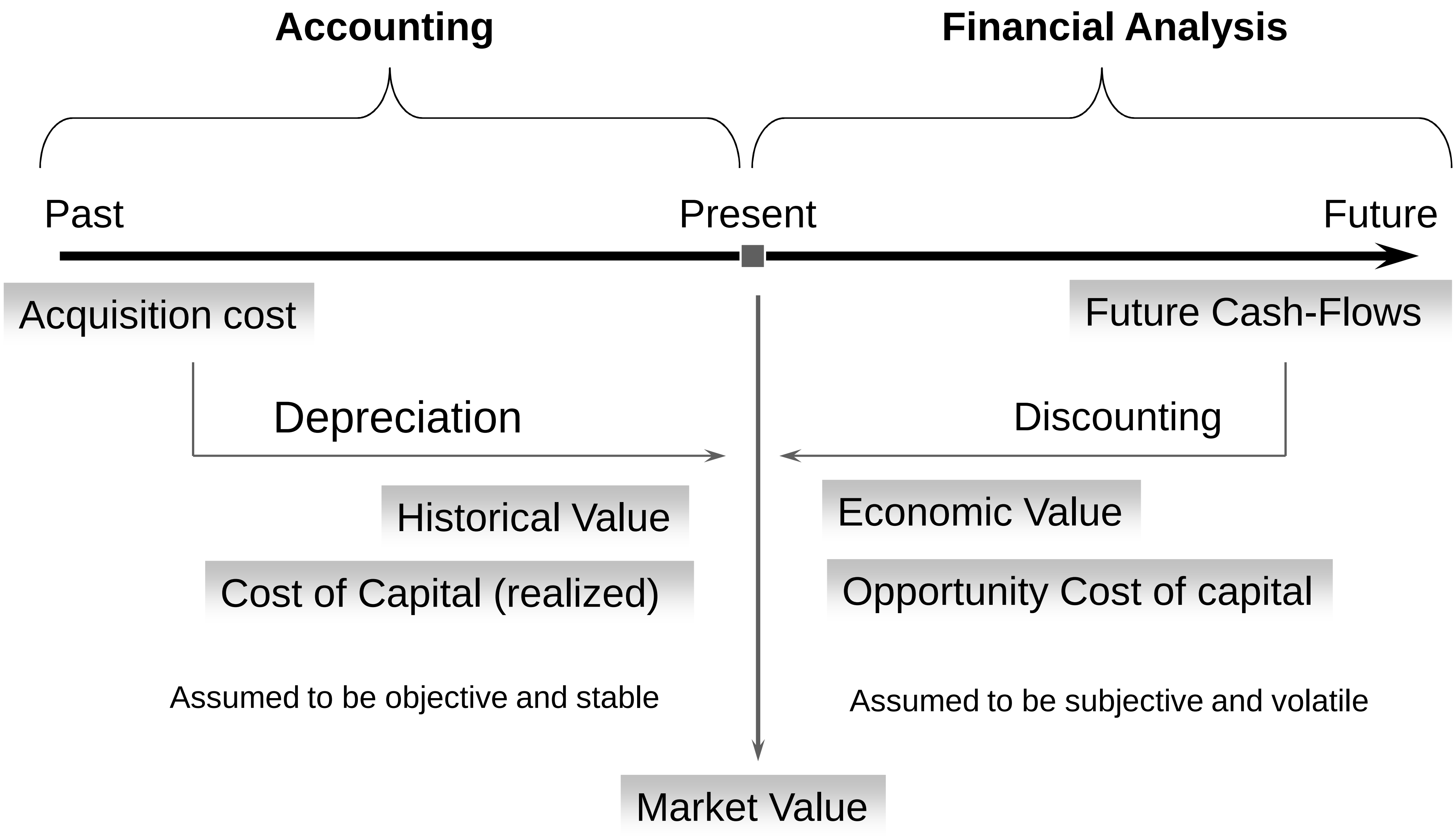
Financial Analysis Versus Accounting

Accounting provides Finance with its principal input

But a fundamental distinction has to be done between Finance and Accounting

Accounting	Financial Analysis
Multi purpose: control, keeping track, give indicators of performance	Purpose: Valuation, investing, raising money,
Backwards looking	Forward looking
Accrual based	Cash Flow based
Rule based	Based on economics and judgment not rules

Financial Analysis Versus Accounting



Accrual accounting

"Earnings are an opinion, cash is a fact"

Principles of accrual accounting: some examples

Historical cost most commonly used to measure and report accounts

Revenue realization principle:
Accrual accounting recognizes a transaction at the time when a sale is made rather than when cash is received from the customer

➡ a sale is recorded as part of net income, but the cash has not yet been received from the customer

Matching principle:
costs incurred in generating revenues are subtracted in revenue realization period

➡ independent of cash outflows

Cash Versus Wealth

What would your spontaneous answer be to the following questions:

- Does purchasing an apartment make you richer or poorer?

	Your Cash	Your assets	Your Wealth
T(0)	+ € 500 000	0	+ € 500 000
T(1)	0	 + € 500 000	+ € 500 000
Δ	⬇	⬆	=

- Would your answer change if you were to buy the apartment on credit?

	Your Cash	Your assets	Your Wealth
T(0)	0	0	0
T(1)	- € 500 000	 + € 500 000	0
Δ	⬇	⬆	=

Cash Versus Wealth

Spending money does not necessarily make you poorer.

Likewise,

receiving money does not necessarily make you richer