

[Slide 1: Introduction and goal of the analysis]

Foundations of Economic Analysis & Financial Reporting

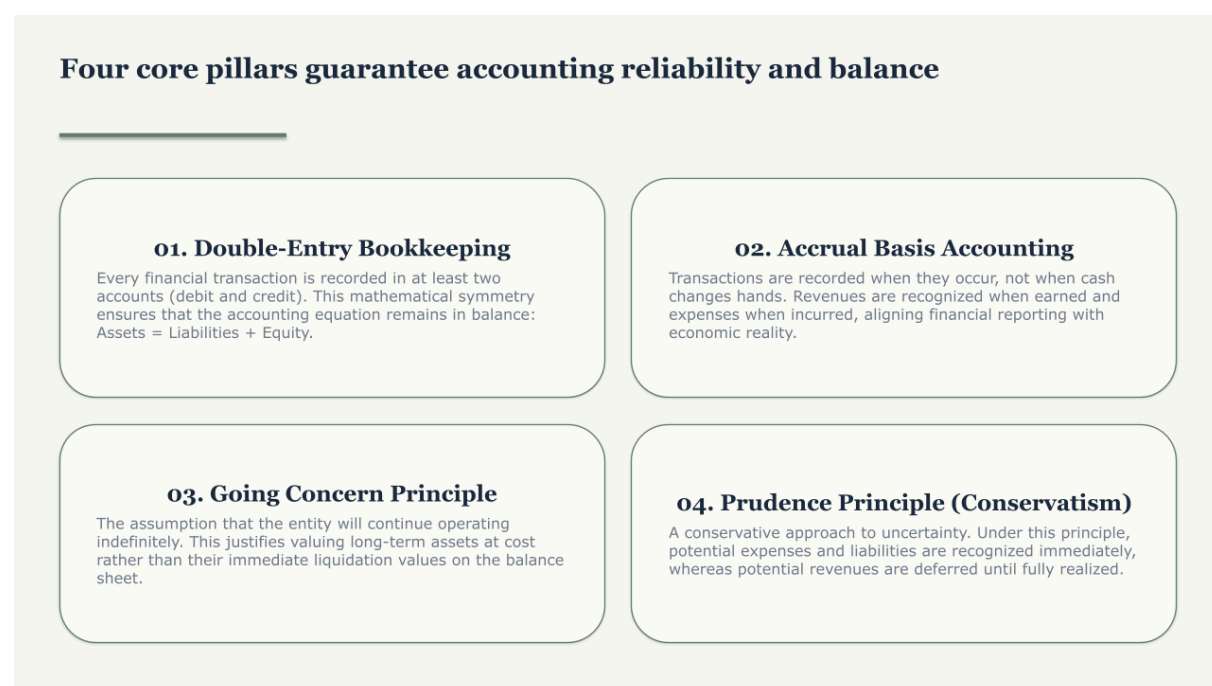
Decoding the Language of Business through Financial Statements and Global Practices

Academic Lecture Slides

Good morning, ladies and gentlemen. Welcome to the first classes of the economic analysis course. Over the coming weeks, we will be learning something that can be called the financial language of business. Our goal is to develop your ability to read between the lines. Every company, regardless of whether it is a technological giant from Silicon Valley, a European automotive concern, or a Polish video game developer, tells a certain story about itself. And this story, ladies and gentlemen, is not written in advertising brochures or television interviews with CEOs. The truth about a company's condition is written in numbers – in its annual reports.

What exactly is an annual report? From a legal perspective, it is a mandatory document summarizing the company's activities for a given year. From the perspective of an analyst, investor, banker, or even the management board itself – it is the only official source of knowledge about whether the company is actually making money or merely burning through capital. Where do we look for such reports nowadays? In the past, you had to request them by mail. Today, we have everything at our fingertips. The primary sources are the "Investor Relations" tabs on companies' websites. Additionally, excellent places are stock exchange portals – in Poland, it is the website of the Warsaw Stock Exchange (WSE), and in the United States, it is the powerful SEC EDGAR database. We also have free aggregators such as Yahoo Finance or Google Finance. However, before we begin analyzing these documents, we must understand the foundations upon which they were built.

[Slide 2: 4 Pillars of Accounting]



Regardless of whether a company operates in Tokyo, New York, London, or Szczecin, professional accounting worldwide is based on four iron pillars. Understanding them is an absolute fundamental to knowing where the amounts in the balance sheet come from.

The first pillar is the double-entry principle. It was born hundreds of years ago in Italy, but its meaning is brilliant in its simplicity to this day: every business transaction must produce an effect in two places. You cannot create assets out of thin air. If we buy a machine for 100,000 PLN, a machine worth 100,000 must appear in the books, but at the same time, 100,000 must disappear from our bank account, or we must book a debt for that amount. Everything must balance.

The second pillar is the accrual principle, which is absolutely crucial for us analysts. Please write this down in bold: in accounting, we recognize revenues and expenses when they actually occur, not when cash flows through our account. Imagine a company that sold goods for one million PLN in December and delivered them to the customer, but the customer has a 60-day payment term and will not pay until February. According to the accrual principle, this sale and this profit belong to December, to the passing year. Who cares when the money comes in? The accrual basis separates the economic fact from the cash fact.

The third pillar is the going concern principle. When a certified auditor signs a report, and we read it, we jointly assume one thing: that this company will not go bankrupt within the next 12 months. Why is this so important? Because if the company were to be liquidated tomorrow, the machines in its factory would not be worth as much as recorded in the balance sheet, but rather as much as the scrap price would be in a forced sale. The going concern assumption allows us to value assets normally.

The fourth pillar is the principle of prudence (conservatism). Accountants are pessimists by nature, and financial analysts should be even more so. This principle states clearly: if you are not sure whether you will earn something, do not enter it into the books yet. But if you know that you face a loss – e.g., a customer stopped paying invoices – you must book it immediately. Assets and revenues cannot be overstated, and debts and expenses cannot be understated.

[Slide 3: Three Main Statements - Balance Sheet]

Balance sheets freeze assets and funding sources at a single point

THE FUNDAMENTAL ACCOUNTING EQUATION: $\text{ASSETS} = \text{LIABILITIES} + \text{OWNER'S EQUITY}$

ASSETS (Majątek)

Resources owned by the business that carry future economic value.

- Non-Current Assets (Aktywa Trwałe): Long-term investments, property, plant, equipment (PP&E), and intangible assets (goodwill, patents). Undergoing depreciation/amortization.
- Current Assets (Aktywa Obrotowe): Liquid resources expected to convert into cash within one year. Includes cash, cash equivalents, accounts receivable (customer debts), and inventory.

LIABILITIES & EQUITY (Źródła Finansowania)

Claims against the assets, representing how those assets are funded.

- Owner's Equity (Kapitał Własny): Funds contributed by shareholders plus accumulated retained earnings. This represents the net book value belonging to investors.
- Liabilities (Zobowiązania): Outsiders' claims. Divided into Non-Current (long-term bank loans, bonds) and Current (accounts payable to suppliers, short-term debt due within a year).

Let us now move on to what makes up a complete set of financial statements. It consists of three main elements (and several supplementary ones, such as the statement of changes in equity or additional notes). The three main ones are: the Balance Sheet, the Profit and Loss Statement, and the Cash Flow Statement.

Let's start with the Balance Sheet. The balance sheet is a snapshot of the company's wealth. Imagine that at midnight on December 31st, we take a photograph of the company. On one side, we see its Assets – this is what the company owns. Cash, inventory in the warehouse, machines, patents, office buildings. They are divided into Fixed Assets (Long-term), which the company uses for years, and Current Assets, meaning what quickly turns into cash, e.g., inventory. But on the other side, we must show Liabilities and Equity – which answers the question: where did we get the money for all this? Liabilities and Equity are the sources of financing. We divide them into Equity (money brought in by owners and generated profits) and Liabilities (debts to banks and suppliers, short- and long-term). Checking the equation $\text{assets} = \text{liabilities} + \text{equity}$ is the first thing we will do in our practical classes on a living organism of a selected company. We will see whether the company financed its factories with equity or with a massive loan.

[Slide 4: P&L and Cash Flow]

P&L tracks operational profit, while Cash Flow verifies survival

Rachunek Zysków i Strat (Profit & Loss)

The 'Movie' of Performance over Time (Accrual basis)

- Top Line (Przychody): Total revenue generated by selling goods or services before subtracting any operational expenses.
- EBIT (Operational Profit): Earnings Before Interest and Taxes. Removes financial structural choices to show core operational efficiency.
- Bottom Line (Zysk Netto): Net income remaining after all expenses, interest, taxes, and depreciation are fully deducted. Highly subject to non-cash estimates.

Przepływy Pieniężne (Cash Flow)

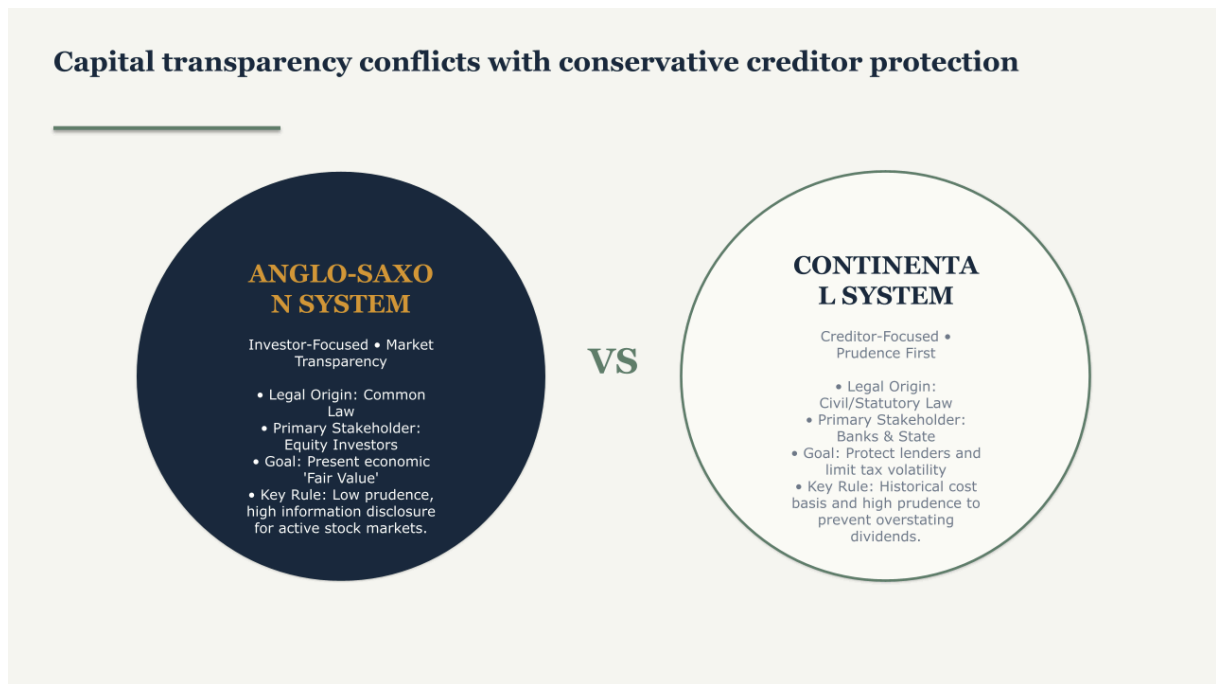
The Reality Check of Real Cash Movements

- Operating Cash Flow (OCF): Cash generated or consumed by the core business operations. The lifeblood that proves if profits are actual cash.
- Investing Cash Flow (ICF): Cash spent on long-term growth assets (CAPEX like machinery or R&D) or acquired from selling equipment.
- Financing Cash Flow (FCF): Cash flows related to raising capital or returning it to suppliers, including issuing stocks, taking debt, paying dividends, or repurchasing shares.

The next statement is the Profit and Loss Statement (P&L). While the Balance Sheet is a snapshot, the P&L is a film recorded throughout the year. It tells the story of how revenue turns into profit. We start at the very top with a large amount: Sales Revenues (Top line). When you analyze this in the workshops, you will see how brutal this process is. From massive revenues, we start cutting off successive layers. We subtract the costs of materials and employee salaries – we obtain the operating profit (the famous EBIT). Then we subtract interest on loans and taxes for the state. At the very bottom, we are left with Net Profit (Bottom line). The educational goal of this exercise? To understand that high revenues do not mean that a company has a high net profit. Margins along the way can drastically melt away.

And finally, the Cash Flow Statement. A moment ago I told you about the accrual principle. Net profit in the P&L is an accounting value. Someone issued an invoice, someone calculated depreciation. But you won't buy bread or pay employees with net profit. For that, you need hard cash. And this is where the Cash Flow Statement comes from. It answers the question: "Why doesn't net profit equal the bank account balance?". Cash flow is divided into three parts: Operating cash flows – how much hard cash our core business generated. We want to see a big plus here. Investing cash flows – whether the company is selling assets to survive (plus), or investing billions in new factories (minus). Financing cash flows – whether the company is taking on new debts from banks (plus for cash), or paying off loans and paying dividends to shareholders (minus).

[Slide 5: Clash of Traditions - Anglo-Saxon vs. Continental Model]

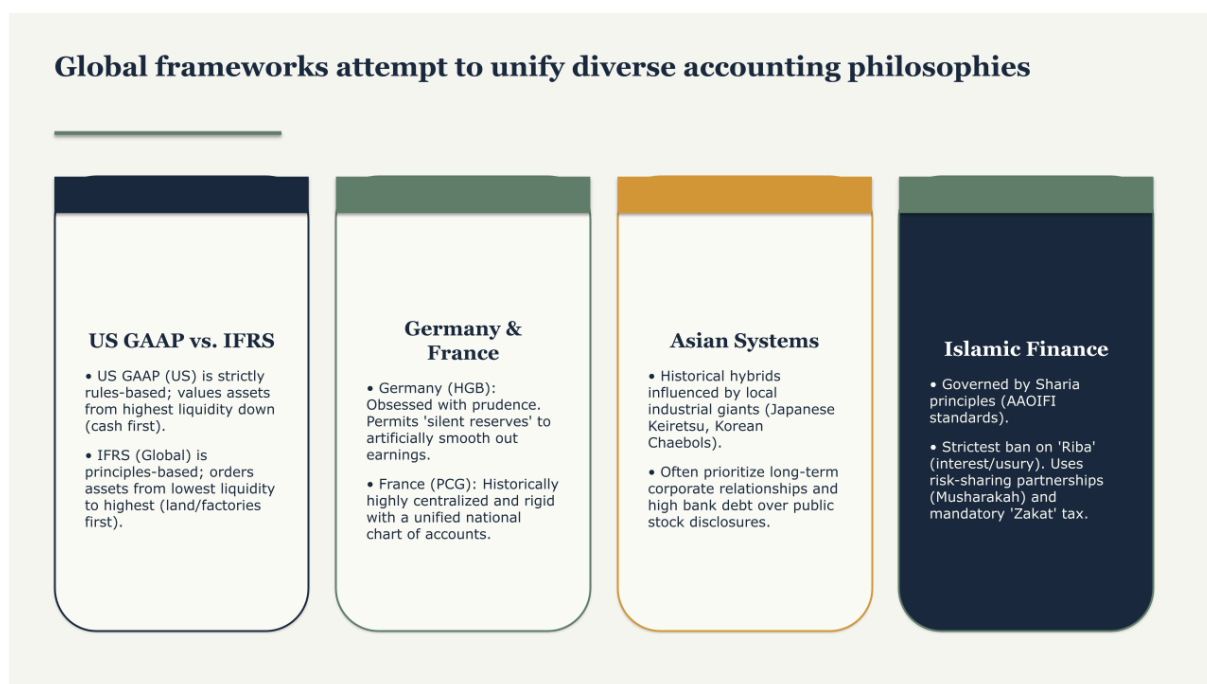


You, as future analysts, must know one more thing. Business is global, but the rules for assessing this business are not necessarily so. Accounting in the world is not homogeneous. This stems from history, law, and who was the most important in a given country. We distinguish two gigantic systems: the Anglo-Saxon Model and the Continental Model.

The Anglo-Saxon Model grew out of the Common Law system. It covers the USA, Great Britain, and Australia. For whom are reports created there? For the investor. On the American stock exchange, it is the shareholder who is supposed to know how much the company is worth today. That is why the Anglo-Saxon model is based on valuation at so-called fair value. It is a flexible system, focused on the "substance over form" principle, where the analyst and accountant can rely on professional market judgment.

On the other hand, we have our European Continental Model (Civil Law), characteristic of Germany, France, but also Japan. Who historically provided capital to companies here? Not a dispersed shareholder on the stock exchange, but powerful banks and the state. That is why this system is rigid, focused on protecting creditors (banks) and the tax office. In Europe, emphasis is placed on historical cost and immense prudence.

[Slide 6: Global Landscape - USA, Europe, Asia]



How does this clash of two worlds look in practice? Let's look at the world map. We currently have two main reporting standards. In the United States, US GAAP (American standards) applies. These are rules-based principles. Thousands of pages of hard, detailed instructions on how to book every transaction. Look at the American balance sheet: assets are arranged from the most liquid to the least liquid. At the very top, you will see Cash, and only at the bottom, factories. Similarly, liabilities – first short-term debts, and equity at the very bottom. An American investor wants to see immediately whether the company has the liquidity to survive the next quarter.

In Europe and a large part of the stock exchange world, we use IFRS (International Financial Reporting Standards). It is a principles-based system. The layout of the European balance sheet is exactly the opposite! First, we show the least liquid assets – fixed assets, machines, buildings. Cash is at the very end. We start liabilities with equity. Europe wants to show the stability and durability of the production infrastructure.

But that's not all. We have many exceptions around the world. Pay attention to Germany and their local standard (HGB). It is characterized by extreme prudence. German law prefers that a company understates its assets, creates so-called "hidden reserves" (Stille Reserven), shows a lower profit and does not pay a dividend, rather than optimizing the result and risking the bank's security. In turn, in France (PCG) we have a completely standardized system, where every company in the country has exactly the same chart of accounts so that the state can easily aggregate data to calculate GDP.

Asia, in turn, is a fascinating hybrid. In China (ASBE), standards are similar to international IFRS, but strongly take into account the specificity of state ownership. In Japan (J-GAAP), the stock exchange has long emphasized stable relationships of companies with powerful banking groups (so-called Keiretsu), although today large Japanese companies have the freedom to choose between IFRS, US GAAP, and Japanese rules. And in the Middle East, you will encounter Islamic financial statements (AAOIFI) based on Sharia law, in which classic interest (so-called Riba) on loans is forbidden, and a religious tax (Zakat) must be disclosed in the report. This perfectly shows how culture and religion influence finance.

[Slide 7: Standalone vs. Consolidated Statements]

Consolidated reports eliminate internal transactions for true performance

The Standalone Trap

Analyzing individual company entities in a conglomerate can lead to dangerous conclusions:

- **Artificial Transactions:** Companies can artificially inflate revenues by selling goods or services to their own subsidiaries.
- **Shifted Debts:** High-risk liabilities can be parked inside hidden off-balance-sheet entities to clean the parent's records.
- **The Consolidated Solution:** Aggregates the entire corporate group as a single economic entity, eliminating all intra-group balances.

How Consolidation Works: An Elimination Case Study

■ Step A: The Internal Sale

Parent Company builds a chair for \$100 and sells it to its Subsidiary for \$150. On standalone books, the Parent logs a \$50 profit. The Subsidiary records inventory at \$150.

■ Step B: The Valuation Conflict

Because both entities belong to the same parent, no actual economic value was created outside the group. The chair is still sitting in a warehouse owned by the same family.

■ Step C: The Consolidated Elimination

Until the subsidiary sells the chair to a third-party customer, the consolidation process must erase the Parent's \$50 internal revenue and restate the Subsidiary's inventory back to the cost of \$100.

Ladies and gentlemen, let us now move on to an absolutely critical element for every analyst. This is a mistake on which many beginner investors have failed. You must be able to flawlessly distinguish a standalone financial statement from a consolidated one. How do they differ?

A standalone financial statement concerns only one physical legal entity – for example, only the "Parent Company." Why is analyzing only this statement a huge trap? Imagine a situation: you are analyzing the Parent Company. You look at the P&L and see a gigantic net profit. You put money into this company. But this profit did not come from the sale of products – it came from a dividend paid by its Subsidiary. The problem is that the Subsidiary is tragically managed, is losing customers, and in order to pay this dividend to the parent, it took out a hideously expensive, massive loan that will shortly lead it to bankruptcy. The Parent's standalone statement will not show this!

Therefore, as analysts, we demand a consolidated financial statement. It presents the entire capital group (the Parent and all subsidiaries) as if they were one large economic organism. However, to make this organism look genuine, a key mechanism called "consolidation eliminations" is applied.

What are eliminations all about? Let's assume that the Parent Company produced a chair for 70 PLN. Then it sold this chair to its own Subsidiary for 100 PLN. The Parent Company has 30 PLN of profit! Great, right? Except that this chair is physically still lying in the group's warehouse. Nobody on the outside bought it. No new cash flowed in. If we just added the results of both companies, we would create artificial profit out of thin air. Consolidation consists precisely in eliminating all intra-group transactions from the report. In the consolidated statement, this 30 PLN of profit simply will not exist, and the chair will still be listed at the cost of production (70 PLN). Thanks to this, the investor learns the truth about what the company sold to real external clients.

[Slide 8: Unusual situations and fiscal calendars]



Approaching the end of our considerations, we must mention that the market reality is much more complex than what classic textbooks teach. Let's start with time. Are reports only made at the end of December? Sometime you will hear that someone issues a "Form 10-K". This is the American name for a full annual report, which must be thoroughly examined by an external, independent certified auditor. An auditor is like financial police who certifies with their signature that the management board is not lying to us. Interim reports are also published – quarterly (in the US it is Form 10-Q), which are usually not subject to a full audit, but only a review.

Furthermore, the fiscal year very often does not equal the calendar year. Have you ever wondered why Apple's financial statements show the end of the fiscal year in September? The answer is simple – the cycle of premieres of the newest iPhones and the return to school in September is the peak business moment for them, which naturally closes a given cycle. Another example is clothing giants. Their fiscal year often ends in January. Why? Because in January the gigantic post-holiday sales end, warehouses empty out, and only then is it easiest to calculate profits from the peak season. And in Japan, almost the entire market traditionally closes the books in March, in accordance with the tax and school year.

[Slide 9: Creative accounting – Where does flexibility end and fraud begin?]

Creative Accounting – Where Does Flexibility End and Fraud Begin?

Market Pressure & Judgment

- Earnings Pressure:
Wall Street and investors demand rising quarterly profits – multi-million executive bonuses depend on hitting these targets.
- Estimates and Management Judgment:
Accounting relies on assumptions. Temptation arises to aggressively stretch standard flexibility rather than outright forge invoices.

Depreciation Example & Analyst Role

- \$10M Machine Depreciation Case:
 - 5-year useful life = \$2M annual expense.
 - Extending life to 10 years = \$1M annual expense.
 - Net Income 'magically' increases by \$1M – with zero additional cash inflow!
- Financial Analyst as Detective:
Uncovering reality in the 'Notes to Financial Statements' (e.g., changes in inventory methods, asset lives, or reserves).

Ladies and gentlemen, before we move on to deconstructing the reports of specific companies, we must touch upon one more incredibly important thread. I mentioned at the beginning that our goal is to develop the skill of reading between the lines. Why is this so important? Because financial reporting, despite all these hard rules, pillars, and directives that we talked about today, is not absolute mathematics. In many places, it is based on estimates and management assessments. And here appears the phenomenon we call "creative accounting."

Company boards are under enormous pressure. Investors from Wall Street or from our native Warsaw Stock Exchange expect growing profits every quarter. Multi-million bonuses for managers depend on these profits. What happens when a company has a weaker year? A temptation appears to somewhat "pull up" the results. I am not talking right away about blatantly forging invoices, but about the legal, albeit aggressive, use of the flexibility of accounting standards.

Let us imagine a machine in a factory that we bought for 10 million PLN. This machine wears out over the years, which we call depreciation. Who decides whether this machine will work for 5 or 10 years? The management board! If we set its useful life to 5 years, every year we will throw 2 million into costs. But if suddenly, in a weak year, the board decides: "Our machine is actually very well made, it will serve us for 10 years", depreciation costs drop by half – to a million a year. The company's profit magically grows by one million PLN! Absolutely nothing changed, except for one assumption in a spreadsheet. Not a single additional zloty flowed in from the business, but in the Profit and Loss Statement, we see a beautiful increase.

That is why a financial analyst is truly a detective. We don't just look at the final net profit. We analyze the so-called "Notes to the Financial Statements". It is there, on page sixty, in small print, that it is written whether the company suddenly changed the methods of valuing its inventory, the useful life of machines, or the way of booking provisions for lost lawsuits.

[Slide 10: Spectacular failures and lessons for analysts]

Spectacular Collapses & Lessons for Financial Analysts

When financial statements lie – case studies of Enron & Wirecard and the vital role of skepticism

ENRON (USA)

- **Special Purpose Vehicles:** Massive creation of off-balance-sheet SPVs to hide toxic liabilities and inflate profits.
- **Auditor Blindness:** Reputable audit firm signed off without hesitation despite extreme opacity.
- **Impact:** Rapid collapse in a matter of weeks, wiping out thousands of jobs and life savings.

WIRECARD (Europe)

- **Fake Cash Balance:** Reported €1.9 billion in cash across Asian bank accounts – supposedly the safest asset.
- **Audit Failure:** Big Four auditors relied on forged bank confirmations for consecutive years.
- **Journalistic Uncovering:** Investigative journalists physically traced funds and proved the €1.9B never existed.

LESSONS FOR ANALYSTS

- **Professional Skepticism:** Maintain rigorous skepticism toward all reports, disclosures, and audit opinions.
- **Golden Rule:** If you still don't understand how a company makes money after reading notes, walk away.
- **Cash is King:** Accrual earnings can be manipulated. Bank cash is real – it is either there or it isn't!

KEY TAKEAWAY: Understanding how easily accounting profits can be manipulated highlights the vital role of the Cash Flow Statement. Cash cannot be created or altered by changing a depreciation estimate.

The history of financial markets is full of companies that on paper were powerhouses, but in reality were drowning in debt. Regardless of whether we are talking about the Anglo-Saxon or the Continental model – no standards are one hundred percent immune to bad intentions.

In the United States, we had the famous case of the Enron corporation. An energy giant, the seventh-largest company in the USA. Their financial statements looked phenomenal, and auditors signed them without hesitation. How did they do it? Enron massively created so-called special purpose vehicles (SPV) – hidden subsidiaries, to which it siphoned off its massive, toxic debts. In the standalone statement and the artificially constructed consolidated one, these debts were simply not visible. When the truth came to light, the company collapsed in a few weeks, dragging down thousands of jobs and the life savings of ordinary Americans.

Do you think that in Europe, with our rigorous approach, we are safe? Just a few years ago we witnessed the fall of a German tech star, the Wirecard company. The company, dealing in internet payments, claimed in its reports that it had almost 2 billion euros in cash in accounts in Asian banks. Big Four auditors believed this for years, relying on forged bank balance confirmations. When independent investigative journalists began digging into the topic and physically started looking for this money – it turned out that it never existed. Two billion euros, which in the balance sheet supposedly constituted the safest assets, were a complete fiction.

What does this teach us at the threshold of our course? That financial statements should be approached with professional skepticism. The golden rule of investing says: "If after reading the notes to the financial statement you still don't understand how the company makes money, it means that the management board is deliberately obscuring the picture." And you should stay away from such companies.

Understanding how easily the accounting result can be manipulated even more strongly underscores the importance of the Cash Flow Statement, which I mentioned earlier. Cash in a bank account cannot be manipulated so easily with depreciation rates. The cash is there, or it isn't. "Cash is King" – this is a motto that should stay in your heads.

[Conclusion of the lecture]

Finally, I must point out to you a change that is revolutionizing today's financial analysis. Today, an investor (at least some) wants to know not only how much you earn, but HOW you earn this money. Are you not polluting rivers? Do you treat employees ethically in all countries of the world? I am talking about ESG (Environmental, Social, Governance) reporting, which, for example, in Europe due to the CSRD directive, is becoming a legal obligation on a par with showing hard finances. Finances are intertwined today with the impact on the planet and society.

Summarizing our theory for today: an annual report is a story. The balance sheet is information about assets and debts, the P&L tells us about the generated profit, and cash flow is a brutal verifier of cash liquidity. When looking at a company, you must know what continent it comes from, what standard it uses, and whether you are looking at a single company or a consolidated organism.

In the second part of the classes, we will move on to practice and open documents from various corners of the world as part of the "Financial Statement Detective" workshops. We will see with our own eyes how these rules work live in companies from Poland, Germany, or the United States. Thank you for your attention, and after a short break, I invite you to the practical part.

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