



Financial Universe Guide

Contents

About this guide	2
1. Different Financial products	3
1.1 Stocks.....	3
1.2 Bonds	4
1.3 Stocks vs Bonds.....	5
1.4 ETFs – Exchanged Traded Funds	5
1.5 Mutual Funds.....	6
1.6 Derivatives	7
2. All asset classes.....	8
3. Skills to thrive in the industry	9
4. The stakeholders in the industry	10
4.1 Asset Management.....	11
4.2 Hedge Funds	12
4.3 Investment Banking	14
4.4 Equity Research	16
4.5 Sales	17
4.6 Trading.....	18
4.6.1 Traders in a bank	18
5. The most important industries to know	19
6. Accounting Basics	22
6.1. Three statements – Definition and examples.....	22

About this guide

This guide was created to make finance easier to understand for SFC's members. We did our best to make all the relevant topics and common student inquiries as clear as possible: What is finance? What is the industry like? Who are the big players? What are the products that institutions sell or invest in?

1. Different Financial products

In this section, we will try to go through the most used financial products. It is important to know them before coming to presentations from outsiders, cases, workshop or any event that SFC will organize.

1.1 Stocks

Also called shares, *they are a fraction of the value of a firm.*

For public companies, the price of a share is publicly traded on a secondary market (***Euronext, London Stock Exchange, New York Stock Exchange, ...***).

For private companies, it is difficult to know the exact value of the firm at each moment. The simplest rule is *to divide the shareholder's equity by the number of shares to get the book value of a firm.* Stocks have two key components, their economic component, the right to get a share of the profit of the firm, and their political component, the voting rights associated with the stock.

Two types of stocks exist, the ***common stock*** and the ***preferred stock***. The latest has the privilege to get a fixed dividend in perpetuity but has no voting rights. It has a par value, it is affected by changes in interest rates and in a liquidation situation, it has a higher claim than common stocks.

For the common stock, it may have a *dividend yield*. It often has voting rights. It is the board of director who choose the amount of the dividend and the price of it is depending on the rule of supply and demand.

Stocks are used by companies to raise cash on *primary markets*. They issue shares and receive the money to grow their company. Such mechanism is called an IPO, an Initial Public Offering. On the long run, stocks' returns are higher than any other asset class.

1.2 Bonds

They are issued by *companies* or *states*. It represents a fixed amount that this entity must pay at a specific date defined on the contract, this amount is called the principal. Often, such bonds have an interest rate attached to it and the bond holder receives the interest rate payment at each period defined in the contract. Bonds like stocks are also issued on the primary market with the help of investment banks and they get traded on a secondary market. For bonds issued by states, they can be directly bought by individuals on the primary market.

1.3 Stocks vs Bonds

Criteria\Name	Stock	Bond
Date limit	No	On contract
Dividends/Interests	Common: Depends on the board of directors Preferred: Always	Often, depending on the contract terms.
Issuer	Corporations	Corporations and States
Voting rights	Yes, depending on the type of stock.	No
Risk	High depending on the type of firm	Low depending on the type of firm or very low if it is a state

1.4 ETFs – Exchanged Traded Funds

A product that tracks a group of underlying assets. A great example of that is an ETF on an index like the **Eurostoxx50** or the **S&P500**. The purpose of this product is to provide investors the same return as the whole market or group of underlying assets.

Why big indexes? Because most of the active management firms earn their money by earning above average return for their investors. This product exists because most of the active management firms tend to underperform their benchmark index and still charges enormous amounts of management fees.

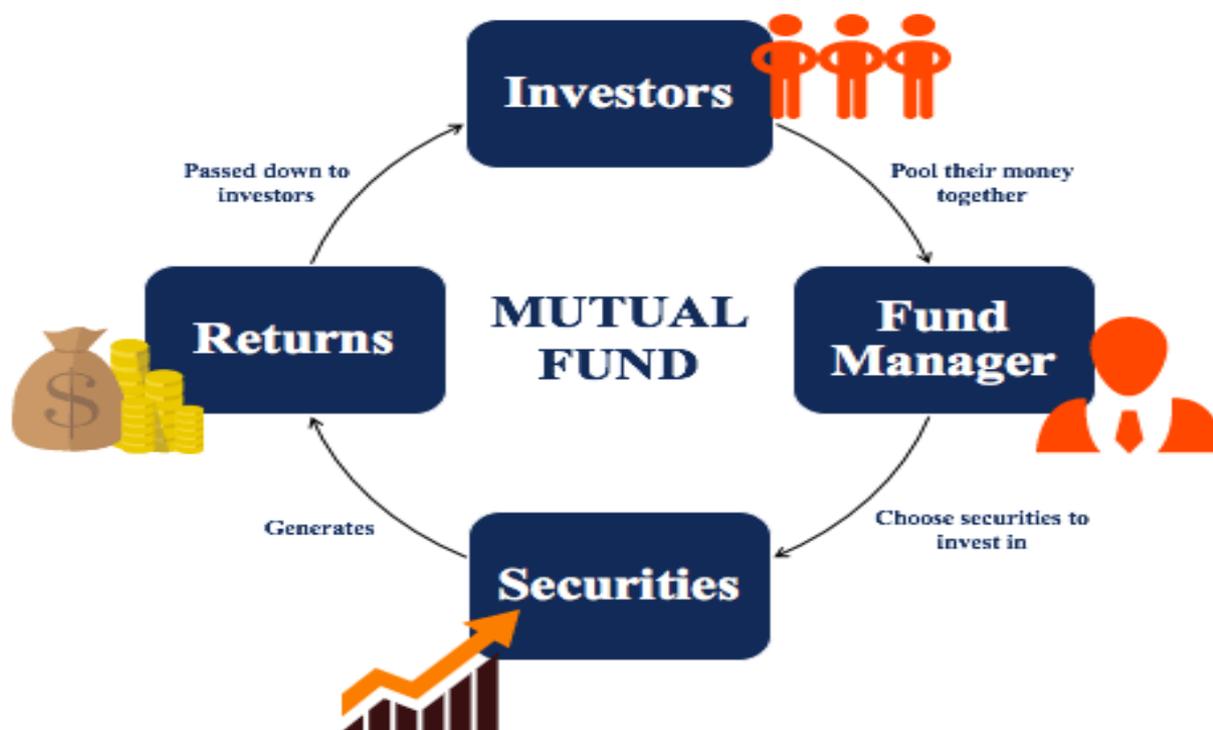
This passive way of investing is known for having much **lower costs** for investors and deliver **good results** over the long run. The firm behind these products are asset managers

who buy shares by weighting their percentage in the portfolio according to the weight of the market cap of the firm in the index. John C. Bogle is behind the creation of this product and explains how he got his idea back in the 70's in his book :

“The clash of cultures: Investment vs Speculation”.

1.5 Mutual Funds

A mutual fund is a fund in which small investors gathered money to access funds that have a high entry investment required. This type of funds can be bought through brokers.



1.6 Derivatives

These are product who only exists with their underlying asset and who have a price who is a function of the underlying assets. The most common ones are swaps and options. Often used by asset managers or by hedge funds to take more risks, deliver higher returns or hedge themselves against a potential risk.

Swaps: this product allows you to exchange flows between two assets. Here is a basic example of it: My bond has a fixed interest rate and I would like a floating interest rate for a period. Someone else has a bond with a floating interest rate and would like to get a fixed rate. A contract can be made between these investors to allow the swap of the income flow.

Options: Two types.

The long and the short. It allows you to buy an underlying asset at a certain price in the future. This type of contract can often be found in the salary package of CEOs of public companies where they receive calls on the stock of the managed firm.

How Do Call and Put Options Work

PUT

A Put is an options contract that gives the buyer the right to sell the underlying asset at the strike price at any time up to the expiration date.

CALL

A Call is an options contract that gives the buyer the right to buy the underlying asset at the strike price at any time up to the expiration date.

Example

A stock put option with a strike price of 10 means the put option buyer can use the option to sell that stock at \$10 before the option expires.

Example

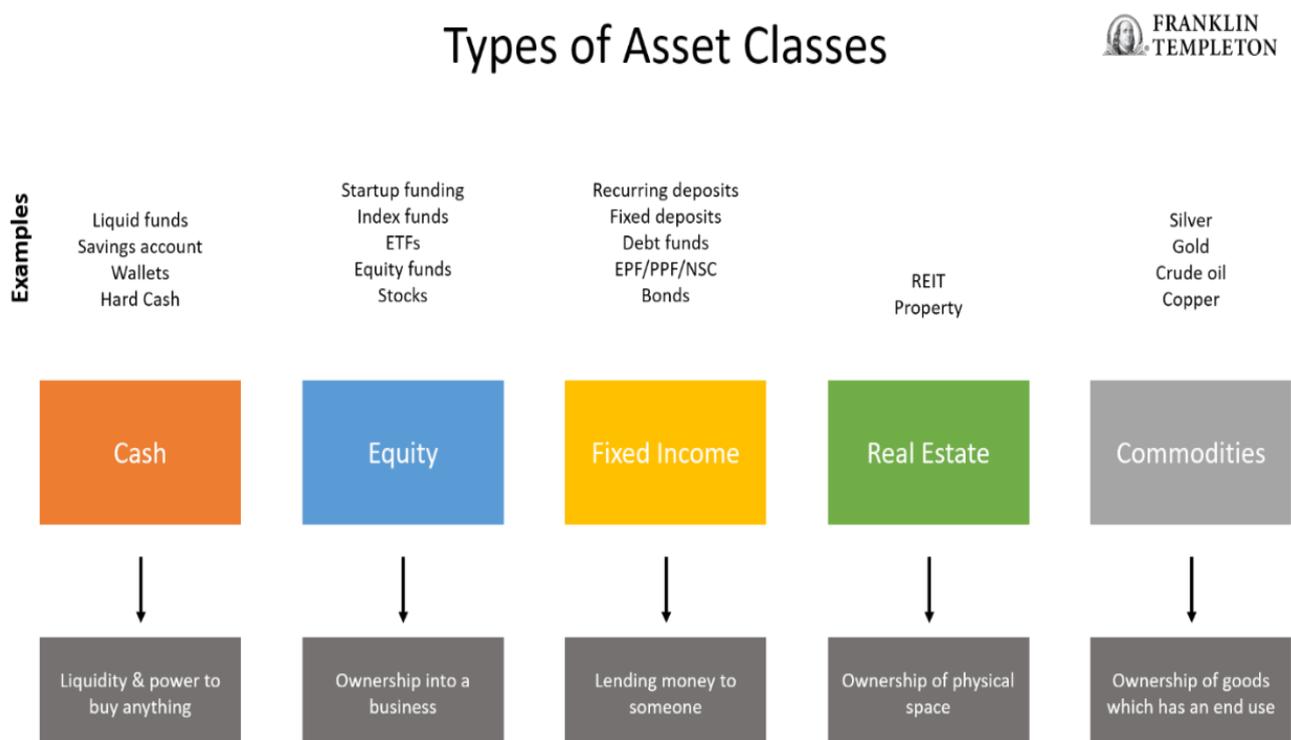
A stock call option with a strike price of 10 means the option buyer can use the option to buy that stock at \$10 before the option expires.

the balance

2. All asset classes

In a nutshell, here are all types of asset classes. You can see a summary of them on the picture of this page.

1. *Currencies (also called cash)*. They are one of the most liquid asset class since holding them allow you to buy other asset classes depending on the currency in which they are traded.
2. *Equity*, often these are stocks publicly traded because of their high liquidity.
3. *Fixed Income*
4. *Real estate*
5. *Commodities*



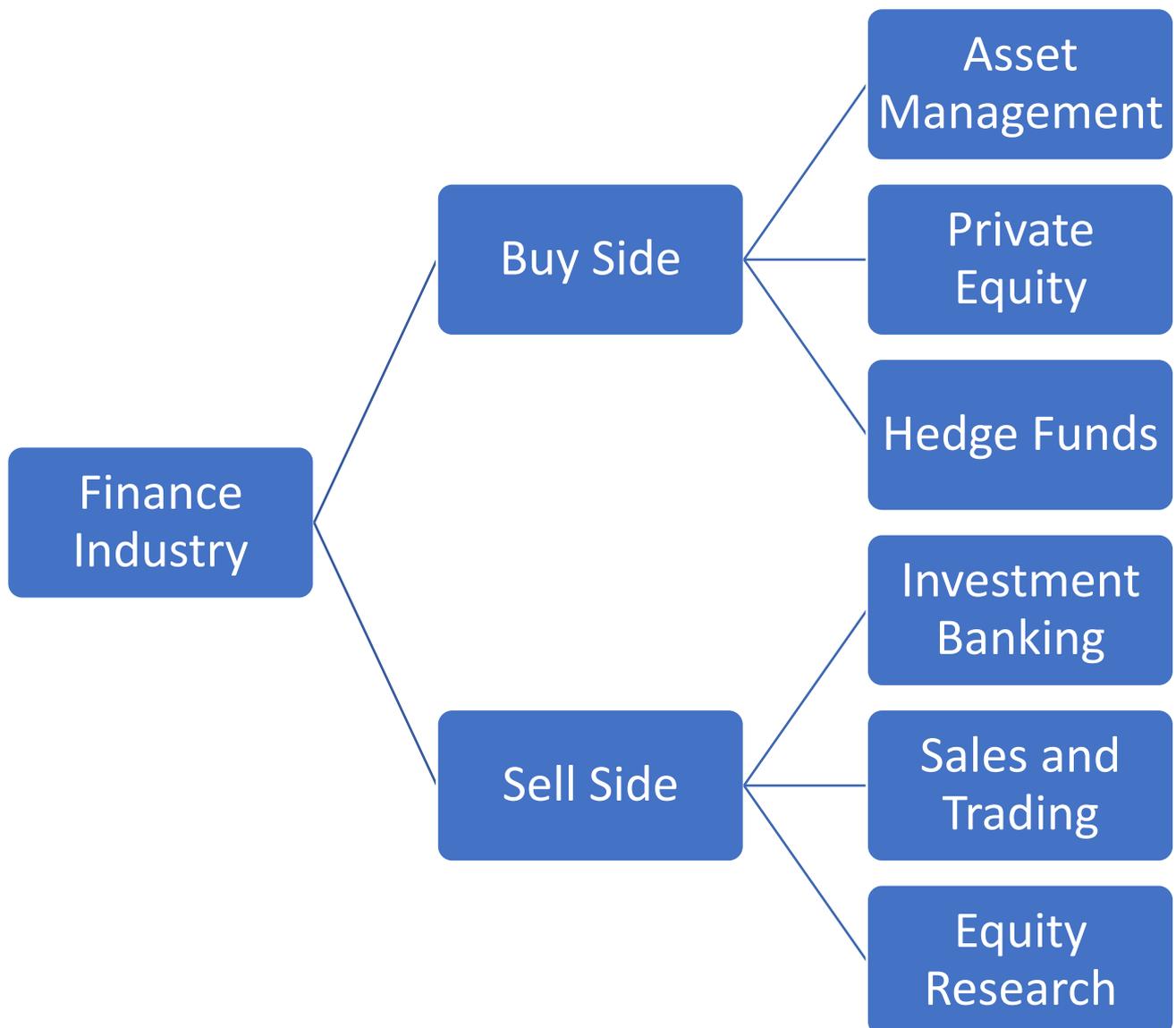
3. Skills to thrive in the industry

Finance is **one of the most competitive industry** and thus it is essential to know some of the most important skills this industry requires:

- **Analytical thinking**: To develop *complex financial models*, perform various financial analysis including valuations, handle comprehensive and in-depth company and industry research. You must love mathematics and numbers.
- **Communication abilities**: To prepare presentation and other materials for clients, communicate and interact with deal team members, build relationships with clients and network with peers. This soft skill should not be underestimated since it makes most of your success in the industry.
- **Resilience and adaptability**: To be able to strive in a high-pressure environment, with long hours, *tight deadlines*. The economic environment constantly changes and anyone considering a career in the industry should be able to adapt quickly.

4. The stakeholders in the industry

Our way of splitting the industry is an **arbitrary choice** and is not the unique way of splitting the industry. This way makes it easier to understand who the players are and what are their goals.



4.1 Asset Management

1. They invest money on behalf of their client:

- each asset manager has his own restrictions based on the needs of the client. Their goal is to achieve returns for their clients.

2. They generate revenues based on two main sources:

- on fees that are charged as a percentage of the total value of assets under management (**AuM**). They are often around 1 to 2%.

- the percentage on the return that they provide to their investors

3. In Asset Management:

- the division is often made between the **AuM** of each firm and their investment style. And the structure of each firm is often divided into the investment branch and the operation branch.

- the investment branch takes care of the portfolio management and decide which investment is going to be made.

- the operation side takes care of the compliance with regulations, the account administrative data, the trade settlement, ...

BlackRock



Amundi
ASSET MANAGEMENT

 **Rothschild & Co**

4.2 Hedge Funds

- They are like *Asset Management* firms because their purpose is to create returns, collect fees on the return created and expand the amount of assets under management to receive more management fees.
- they are also known as *Alternative Asset Managers* and they differ from conventional asset managers in the regulation they face. The regulation around them is lower and they often take more risks than conventional asset managers.
- alternative asset managers can also trade financial derivatives to craft their investment strategies like long and short positions on stocks, bonds and types of assets.
- in terms of number of employees, they differ from Asset Managers in the sense that *they are much smaller in size for both their operations force and investment team.*
- a career in alternative asset management is generally regarded as *being highly lucrative* due the higher return they try to provide by taking more risks and due to a fewer number of people to distribute profits to.
- hedge funds are most often set up as *private investment* partnerships that are open to a limited number of investors and require a very large initial minimum investment.

Investments in hedge funds are illiquid as they often require investors to keep their money in the fund for a certain period, often one year.



- Private Equity firms differ from Hedge Funds in the sense that they operate by buying *only non-publicly* traded securities.
- they make large investments in companies, often gaining an ownership stake and they try to improve the operations, change the management team or make the company grow before selling it for a return. *Their investment horizon is often near 5 years.* They may buy some public company to make them privately owned and less likely to focus on short term numbers that analysts are expecting. By doing so, they generate higher long-term value and benefit from such process to make great returns.
- generally, private equity firms take on a large debt position to finance their purchases, increasing the return on their investment; this strategy is called a leveraged buyout (**LBO**). It is a highly profitable strategy as long as the interest rates levels *stay low* but is still considered by many as a high risk, high return strategy.

- because of the huge borrowing they make, Private equity firms generally look for companies that generate *stable levels* of free cash flow, own a strong base of *tangible assets*, require low capital expenditure, and present opportunities to improve efficiencies within the already existing company.

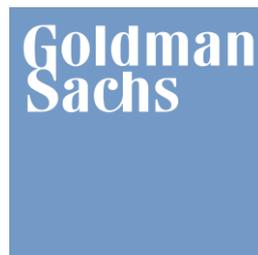


4.3 Investment Banking

- Investment banking is a *division* within the capital markets division of a bank. Some banks deal only exclusively with capital markets and some are diversified and have for example, retail banking activities.

- In this division of a bank, you will *find investment bankers* who advise corporate clients, mainly big firms who are seeking an expertise to raise debt (**DCM**), equity (**ECM**), merge or acquire a company (**M&A**), restructure their activities (**Rx**) and advise private equity firms or help them get loans (**LevFin**). Most of the time, multiple firms work on the same deal to avoid having one bank bearing all the risk of a transaction.

- the hierarchy is *almost the same* in each firm. From most junior to most senior: Summer Analyst, Analyst, Associate, Vice President, Managing Director.
- what differ from bank to bank is the division of their team into geographical focused or industry focused teams:



- in this advisory world, some smaller players can exist because of the know-how they have on a particular region or industry and the network that their founders or partners have. These are called *elite boutiques*:



4.4 Equity Research

- *The equity research desk* generates updates and reports on companies they cover. The main incentive for the equity research team to cover a stock is to generate trade revenues from clients trading the stock, but also to develop a stronger relationship with the companies they cover. This relationship helps generate investment banking business so the company will look to the respective bank when in need of investment banking activities.
- *equity research analysts* are often in communication with the sales & trading teams to communicate information to potential investors. The equity research analysts are also frequently in communication with the management teams of the companies they cover in order to receive the most up-to-date information.



4.5 Sales

- The *sales team* works very closely with the traders (mainly the agency traders) which justifies why they are both located on the trading floor.
- a *salesperson's* primary focus is to satisfy the client. The role ranges from providing investment advice while also scheduling meetings for clients when management teams come to the bank for road shows.
- relationships are built based on the sales rep's success in having the client's trades executed as well as providing returns in these positions.
- it is important to understand that the sales team deals with the *large institutional clients on the buy-side*. These buy side firms will have their own respective salespeople and traders but to a much smaller scale.

4.6 Trading

4.6.1 Traders in a bank

- *Agency traders* execute trades on behalf of the bank's clients. They work in conjunction with the sales team and take orders from clients to execute the trade on their behalf. Agency traders generate revenue from trade commissions on the trades they execute.
- *liability traders* are similar to agency traders in that their primary role is to make trades happen by keeping markets liquid. However, liability traders have their own book and manage the trade-off between making a client happy (by executing the trade at the price the client wants) and the losses they might incur by having the position on their own accounts.
- *proprietary traders* are very independent. They are similar to portfolio managers in that their main focus is to generate returns. **'Prop'** traders are not very concerned with executing trades on behalf of the bank's clients, instead they are measured based on the performance of the positions on their book.

5. The most important industries to know

In this chapter, you will find a **list of key**¹ industries in Europe according to the European Commission. By clicking on them, you should be redirected on their website and find more facts related to these industries.

- [Aeronautics industries](#)
- [Automotive industry](#)
- [Biotechnology](#)
- [Chemicals](#)
- [Construction](#)
- [Cosmetics](#)
- [Defence industries](#)
- [Electrical and electronic engineering industries](#)
- [Firearms](#)
- [Food and drink industry](#)
- [Gambling](#)
- [Healthcare industries](#)
- [Maritime industries](#)
- [Mechanical engineering](#)
- [Postal services](#)
- [Pressure equipment and gas appliances](#)
- [Raw materials, metals, minerals and forest-based industries](#)
- [Social economy](#)
- [Space](#)
- [Textiles, Fashion and creative industries](#)
- [Tourism](#)
- [Toys](#)

¹ Source : https://ec.europa.eu/growth/sectors_en

We also want to give more details related to how banks split their teams. Most banks have within each geographical area either a split of their team by products (**ECM, DCM, LevFin, M&A, Rx**) or by industry:

- **Consumer and Retail (C&R):** Sub-sectors include apparel, drug stores, education, e-commerce, consumer packaged foods, beverages, home and personal care products, restaurants, specialty and hardline retailers, departments and supermarkets.
- **Diversified industrials (DI):** Areas under coverage include aerospace & defense, automotive, building and construction, capital goods, transportation, paper, forest products and packaging.
- **Natural Resources (NR):** Clients covered in energy, power, infrastructure, chemicals, metals and mining, and alternative energy fields.
- **Financial Institutions Group (FIG):** Provides financing and advisory services to institutions around the world, including banks, insurance companies, asset management firms, financial technology companies and specialty finance institutions.

-Financial Sponsors: This group works with major private equity firms, pitches ideas to them, and works with their portfolio companies

-Healthcare (HC): Areas under coverage include biotechnology, healthcare services, healthcare information technology, life sciences, diagnostics, medical technology and pharmaceuticals.

-Gaming, Lodging & Leisure (GLL): Works with companies in real estate investment trusts (REITs), hotel and gaming, and other retailers across a broad stream of sectors including retail properties, hotels and golf courses, shopping centres, office buildings, casinos and gaming technology

-Technology, Media and Telecom (TMT): Sectors covered include electronics, software, internet, media, wireless and wireline, cable and other companies.

However, you should verify on the website of the firm how they divide their teams because this split may be different between banks.

6. Accounting Basics

6.1. Three statements – Definition and examples

First, an example of a standard **Income Statement, Balance Sheet and a Cash Flow Statement.**

These three statements are the most important one for any company.

Income Statement - Function of Expense			
in €m	Reference	2018 Act	2019 Act
Revenue	1	100	110
(-) Cost of Goods sold	2	-30	-33
= Gross Margin	3	70	77
(-) Operating Expenses	4	-10	-11
+ Other Income	5	2	2
= EBITDA	6	62	68
(-) Depreciation & Amortization	7	-2	-3
= EBIT	8	60	65
(-)/+ Net Interest	9	-2	-2
= EBT	10	58	63
(-) Taxes	11	-17	-19
= Net Income	12	41	44

Example Company, LLC
Consolidated Statement of Income
For the Year Ended December 31, 2019

in €m	2019	2020
Revenue	1000	1100
Costs of Goods Sold	-400	-440
Gross Margin	600	660
Research and Development Expenses	-20	-22
Selling, General & Administrative Expenses	-80	-88
Marketing Expenses	-50	-55
Other Operating Expenses	-50	-55
Other Operating Income	50	55
EBITDA	450	495
Depreciation & Amortization	-40	-44
EBIT	410	451
Interest Income	20	22
Interest Expenses	-10	-11
EBT	420	462
Provisions for Income Tax	-126	-139
Net Income	294	323
Basic Shares Outstanding	100	100
Diluted Shares Outstanding	120	120
Basic Earnings Per Share	2.9	3.2
Diluted Earnings Per Share	2.5	2.7

² Source: merger-strategy.com

³ Source: merger-strategy.com

Balance Sheet - IFRS			
in €m			
Assets		Liabilities & Equity	
Fixed Assets		Equity	
Intangible Assets	20	Retained Earnings	20
Property, Plant and Equipment	20	Owner's Equity	20
Long-term Investments	20	Total Equity	40
Total Fixed Assets	60	Long-term debt	20
Current Assets		Current Liabilities	
Investments	2	Current Portion of long-term Debt	5
Prepaid Expenses	3	Deferred Revenue	10
Inventory	5	Accrued Expenses	8
Accounts Receivable	20	Notes Payable	7
Cash and Cash Equivalents	10	Accounts Payable	10
Total Current Assets	40	Total Current Liabilities	40
		Total Liabilities	60
Total Assets	100	Total Liabilities & Equity	100

Cash-Flow statement example:⁵

	Net Income
-/+	Changes in Accounts Receivable
-/+	Changes in Inventory
-/+	Changes in Accounts Payable
-/+	Changes in Accrued Expenses
-/+	Depreciation/Amortization or Write-ups
-/+	Deferred tax assets/liabilities
=	Cash Flow from Operating Activities
	Capex
+/-	Investments/Disposals of securities
+/-	Investments/Disposal of assets
+/-	Investments/Disposals of businesses
=	Cash Flow from Investing Activities
	Issuance/Repurchase of debt
+/-	Issuance/Repurchase of equity
-	dividends/noncontrolling interest
=	Cash Flow from Financing Activities
	Cash Flow from Operating Activities
-/+	Cash Flow from Investing Activities
-/+	Cash Flow from Financing Activities
=	Total Change of Cash

⁴ Source: merger-strategy.com

⁵ Source: merger-strategy.com

Example Company, LLC
Statement of Cash Flows
For the Year Ended December 2020

in €m	2020
Net Income/Loss	1,500
Depreciation/Amortization	(100)
Other Non-Cash Items	(20)
Change in Accounts Receivable	20
Change in Inventories	(10)
Change in Accounts Payable	30
Change in Other Assets/Liabilities (net)	10
Cash Flow from Operating Activities	1,430
Purchase/Sale of Property, Plant and Equipment (net)	200
Purchase/Sale of Intangible Assets	100
Acquisition/Divestments of Businesses (net)	(100)
Purchase/Sale&Maturity of Investments (net)	250
Other Investments / Divestments (net)	(50)
Cash Flow from Investing Activities	400
Dividends/Non-Controlling Interest Paid in Cash	(500)
Issuance/Repurchase of Equity (net)	100
Issuance/Repayment of Debt (net)	(200)
Other Uses/Sources of Funds (net)	(10)
Cash Flow from Financing Activities	(610)
Effect of changes to foreign exchange rates	(25)
Total Change of Cash	1,195

6

⁶ Source: merger-strategy.com

Key financial ratios and formulas - Solvay Finance Club

Activity ratios:

$$\text{Inventory Turnover} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

$$\text{Receivable Turnover} = \frac{\text{Revenue}}{\text{Average receivables}}$$

$$\text{Payables Turnover} = \frac{\text{Purchases}}{\text{Average trade payables}}$$

$$\text{Working Capital Turnover} = \frac{\text{Revenue}}{\text{Average Working Capital}}$$

$$\text{Fixed Asset Turnover} = \frac{\text{Revenue}}{\text{Average Fixed Assets}}$$

Liquidity ratios:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Quick ratio} = \frac{\text{Cash} + \text{Short Term marketable investments} + \text{Receivables}}{\text{Current liabilities}}$$

$$\text{Cash ratio} = \frac{\text{Cash} + \text{Short Term marketable investments}}{\text{Current liabilities}}$$

Solvency ratios:

$$\text{Debt-to-assets ratio} = \frac{\text{Total debt}}{\text{Total assets}}$$

Debt-to-capital ratio	$= \frac{\textit{Total debt}}{\textit{Total debt} + \textit{Shareholders' equity}}$
Debt-to-equity ratio	$= \frac{\textit{Total debt}}{\textit{Shareholders' equity}}$
Financial leverage ratio	$= \frac{\textit{Average total assets}}{\textit{Average total equity}}$
Profitability ratios:	
Gross profit margin	$= \frac{\textit{Gross profit margin}}{\textit{Revenue}}$
Net profit margin	$= \frac{\textit{Net profit}}{\textit{Revenue}}$
Return on Assets - ROA	$= \frac{\textit{Net Income}}{\textit{Return on Assets}}$
Return on total capital	$= \frac{\textit{EBIT (Earnings before interest and taxes)}}{\textit{Short - term Debt} + \textit{Long Term Debt} + \textit{Shareholders' equity}}$
Return on Equity - ROE	$= \frac{\textit{Net Income}}{\textit{Average Total Equity}}$