2019

BASIC KNOWLEDGE OF MONEY AND CAPITAL MARKETS

BASIC FINANCIAL KNOWLEDGE

INTRODUCTION

This book is intended to provide a general understanding of the basic processes of economic operation, and in particular, to familiarize interested parties and learners with the capital markets. It may not help you become experienced investment professionals immediately, but by acquiring content, you can gain a wealth of knowledge, which can be an initial step in the magical world of capital markets. We have to accept the fact that the most basic human need in today's world is money, in which we express most of our demands and meet a large part of our needs. The path to understanding how finance works is extremely long and complicated.

In general, the Hungarian population cares very little about its finances. The basic goal would be to have a clear understanding of our financial revenues, expenditures, to systematize and evaluate the process by which we can make savings, which can be further enhanced by investing, having carefully managed, informed decisions. The increase in household savings is not only in the personal interest but also in the social interest. One of the most important pillars of higher living standards is the growth of household savings.

Hungarian wages have started to rise sharply in recent years and savings have increased, but the time spent on financial matters has increased very little. Focused learning, experience, and continuous attention would be needed on the subject that affects practically everyone in their daily household finances.

However, the lack of Hungarian financial literacy presents an issue not only in the retail segment, or in households, the financial management capacity of the institutions is also extremely low. In the case of SMEs and micro-enterprises, there is hardly any sound corporate financial management. With this book and a teaching model, we are trying to prepare corporate executives who are already assigned executives or those becoming executives in the future, who need a deeper understanding of economic knowledge and capital market processes. How to get capital? Why is not only the bank deposit the only investment opportunity? How fine is the company's stock market presence? Transparency, marketing surplus, reporting obligations, and countless other useful insights related to companies' presence in the capital market.

The knowledge and higher level of knowledge of the players of the Hungarian economy is a fundamental prerequisite for the continued sustainability of a more successful Hungarian economy. Mastering a minimum set of requirements can be a must in the daily practice of finance for the present and future generations as well.

Not only did the authors of the book write a book with a wealth of economic, capital market knowledge, but they also modelled a learning process that would become available to those interested in the form of e-learning. The learning process follows the acquisition of the curriculum of those who want to learn, and it evaluates and analyses their preparedness with a lot of control questions.

Hereby we wish all our readers a successful learning and a well-prepared, careful and conscious future in finance!

MONEY

INTRODUCTION

We hold valuable papers and coins in our hands. Are their weight and material irrelevant to their value? Does their value depend on the number written on them the most? Of course, if it were that simple, we would take a piece of paper, write a number on it and we could get rich very easily. Colourful papers with images, embossed coins. They can be beautiful, rare and significantly more valuable than what their "production", material represents. These papers and metals are by no means a means of payment. Made from precious gold, silver, memorabilia and rarity, these papers and coins can be valuable, their goodwill, financial value can be measured, calculated, but it cannot always be done easily. Just because something resembles money it does not mean it is money. What is more, even papers and coins used as old money are not money today, if they are not in circulation, they do not represent a transaction or payment value.

For money to be real money, to have a market value, it is necessary that the market, society, legal and prudential regulation recognize and accept it as a means of payment!
Money is a "commodity" that has an accepted value and can thus be exchanged for commodities whose value can be expressed in money. However, not everything is commodity in today's world or could be expressed in value, in money. If people believe and trust that they can get anything in exchange for money, they are obviously wrong. There are a lot of things that cannot be bought or exchanged for money such as love, family, all forms of health and countless things. However, thinking that money does not matter is also a huge mistake. Most of the needs of today's world, the material, tangible, or intellectual properties are expressed in money. It should also be noted, however, that the value of these goods or commodities is not constant, just as the value of money can be variable in relation to other money, means of payment, or even its own value.

Buying something, getting it for money, is a very simple process. We go to the cashier and pay in cash, and we remit payment from our bank account by wire transfer. There are different forms of money, not only in their appearance but also in their application. What is so simple and straightforward to today's people has been flourishing for centuries as a habit of human action and it represents one of the defining elements of adulthood for all of us. Everyone can and does make money and spends money. Only a small segment of society is capable of managing money and save money consciously.

Financial processes are complex. What we consider just shopping, as an act itself it is a very complex set of regulatory and operational problems in terms of cash flow. It is not all the same, how much money is in circulation, what denominations and how many of them are issued, what rate the deterioration of money is, what its pace and its impact is on the economy, how much the interest of the money is and for how long it is paid, whether the conditions for spending money are for saving or stimulating. These "not all the same" things will be featured with many their "not all the same" companions in the chapter on money. We will learn exactly what money is, what it is made of, what we use it for, and countless other interesting things that we do not, or only rarely say about money as a tool in our daily lives.

People usually think they know a lot about money. They do know a lot about money, but the majority of the population cannot think responsibly or take care of their finances as a financial awareness. It does matter how much money we have in our pockets, keep in our bank accounts, invested in securities, movables, real estates, works of art or many other investments, financial assets or valuable assets.

"Money never sleeps." Money held, the existence of assets, can bring not only returns, interest, yield, but it can also mean costs, burdens, time, and a lot of risk.

THE DEVELOPMENT OF MONEY

PRIMEVAL COMMUNITY (SELF-SERVING COMMUNITY)

In order to understand the reason for the emergence of money as a currency having value, we have to travel back very far in the history of mankind. **While the aim is not to delve into what is otherwise such a wonderful history, it must be made clear that a self-sufficient society is not a social form, and that is why we include the concept of the primeval community. Rather, the term "self-sufficient society" refers to the lifestyle of the pre-communal society, which we know from our studies as hunting, fishing and gathering.** It should also be noted that the social primacy of self-sufficiency cannot be clarified, since the basis of the most advanced economic theory can be the complete self-sufficiency mechanism of the economy, where today's communities (countries, federations) would be able to meet their every need within their own borders. However, this theory is severely limited by the concepts of efficiency and rationality, which says that the efficiency and comprehensibility of the production of certain goods was not only limited by borders but also by territorial, weather, developmental and other characteristics, so it may not be necessary to fish where there is no fish, to industrialize where there are no natural resources or to improve and provide services where there is no densely populated population. So, let us stay with the very likely fact that the ancient communities were self-sufficient. They produced for their basic needs that met the demands of the people of that time: having a place to live, food to eat, to drink, and to have very rudimentary needs met, such as clothing. Another important element is that hunting, fishing and gathering also have a simplified set of requirements, which may have been considerably wider over time or even in the beginning, but it was not sufficiently formulated during the examination of history. Not to mention generalization, since these many ancient communities did not have the same level of development at the same time, surely it would have been impossible, nor would it have been the evolutionary regularity that encourages further development.

The historical development of the ancestral communities was severely limited, precisely because of the self-sufficient way of life. These societies were characterized by low population density, variable self-sufficiency, low population growth and self-sufficiency depended on many factors and the periodic difficulties also led to the dissolution of many ancestral communities.

Time has passed and the world has evolved. And with the development came the demands. Carrying out works to a higher standard began, which led the experts to the path of specialization. **Specialization has made it increasingly possible to build up a diverse pool of goods, where the locally generated surplus made it possible to fill the gap in other places and so barter trade has begun.**

BARTER

The newly found specialization dates back to the end of the Prehistoric age and the beginning of the Ancient Age. The surplus of commodities "set off" to find its place in places where the supply was

not enough. We call the party offering the surplus the seller and the buyer the party, suffering the shortage. **At the commencement of trade in commodities, commodities were traded directly for other commodities, in some places at the exchange rate resulting from the demand-supply ratio. However, the precondition for this direct barter was to get the goods needed to replace the goods on offer.**
In short, what the buyer lacks is the seller's surplus. The shortage of the buyer of the original barter was the surplus relative to the goods being offered, while what the surplus was to the original barter was the shortage in relation to the barter goods. Complicated? Then let us move on and not read it back just note that if I had fish and wanted to swap it for salt, then I really had to find a buyer for the fish who wanted to give salt for it in exchange. If these two demands did not occur at the same time, the exchange could not be completed. So, if they wanted to pay for the fish not with salt, but with fruit, then there was no deal because I didn't need the fruit in exchange for my fish.

However, the problem with bartering was not only the problem of matching goods offered and expected. Another problem was that the business had to be made at the same place and time, which was very difficult and not always successful. Not to mention that the shortage of goods and demand did not necessarily occur at the same time, there were places with too much surplus or extremely large shortages. Nor should it be overlooked that a more valuable commodity in exchange for another more valuable commodity could not necessarily be multiplied by the number of commodities. It is not certain that we would give two live ducks for a live goose nowadays if the "normal" value of a live goose was one and a half live ducks.

"Pay for goods by goods" barter has faced a number of problems, and soon there has been a demand for commodity money to pay for smoother bartering.

COMMODITY MONEY

Commodity money is an intermediate in the barter of commodities that was most easily exchanged for other commodities and the value of which could easily be determined in relation to other commodities. Of course, this would not have been enough, commodity money also had many other expected qualities, such as keeping its value, having relatively small and larger denominations to be divisible and the basic condition relevant in today’s world appeared here already, that it had to be generally accepted as well.

When it comes to finding such commodities quickly, we mainly think of salt and sugar. However, few people know that even 150 years ago sugar was the "accessory" of noble courts. As salt remains it can be argued as well but the fact is that in ancient times men were able to use salt from the seas, and produced salt even in the Bronze Age, but this easy belief is severely damaged by the assumption, that in ancient times, and even in modern times, salt-related economy was the most dominant monopoly.

Let us stay focused on salt for the sake of simplicity. Salt had all the necessary supplies that merchandise money should have. It could be easily transported and it could be used as a means of payment for anything (if it was not for things of tremendous value, or even in that case to have someone carry the tons of salt there) it was always in demand, recognized and accepted in most places.

So in exchange for the goods we sold, we were given salt as commodity money, and it was not a problem if we could not get the goods we needed at one place (called the market where commodities were traded), we went somewhere else where the right commodities were sold and for our salt (which was needed everywhere or was accepted in exchange for all the goods) we could buy the goods we needed. Barter trade has developed, society has developed, and the most rudimentary economy has developed as well.

However, commodity money used for barter was still not a fully functional currency without its share of problems. Commodity money in commodities, barter in commodities, moreover, the many kinds of commodity money instead of a few still meant a difficult trade.

COMMODITY MONEY OR MONEY REPLACEMENTS (PRECIOUS METALS)

As humanity progressed, the first precious metal-based currencies appeared probably around the 6-7th centuries, which we can rightly call money, a means of payment. Coins were cast from gold and silver and accepted by the then "economic" players, they knew the rarity and value of precious metals. Of course, we cannot talk about having money cast out of the same gold or silver in the world at this time either The weight of gold and silver in the currency, expressed in terms of its own value, has made it suitable for trade in commodities. Gold functioned with a higher value while silver functioned as lower value commodity money.

Bimetallism: Gold and silver together functioning as money

Monometallism: when a single precious metal (basically gold) fulfilled the function of money

Commodity money or cash substitute? While gold and silver, the precious metals, even in their own right represented commodities of commodity exchange, in their function they can be more or less called cash substitutes, because for centuries the underlying value of precious metal-based money issuance was tied to gold and gold reserves. Even today, defining the potential for gold reserves is part of the central bank's general policy, which is still used by the central bank's "economic-security policy".

Unfortunately, the amount of "coins" that can be cast out of gold and silver is not infinite either. Development and, most importantly, industrialization necessitated the exchange of huge stocks of goods, assets, real estate, and movables, for which there was no sufficient gold or silver money substitute to be applied.

As part of the transition, which “considered” gold-covered gold and other money substitutes as money that could be issued as gold covered money, the issuance of commodity-based cash substitutes also appeared.

Currency theory: there can be as many money substitutes released into free circulation as the underlying gold collateral

Banking Theory: the issuance of cash substitutes should not be tied to the existing gold collateral but to the commodity collateral

THE AGE OF FREE MONEY (BANK)

We mention it as a short detour, that in the United States, virtually anyone could "issue" their own money because of the lack of regulation, or its permissiveness. Private banks, shops, restaurants and even individuals. A prime example of this is that the money-making mechanism of the market is able to create a currency from any "device". We are now in the era of crypto currencies, which can also function as a currency, but beyond the general market acceptance of the means of payment created in this age, the regulatory environment must also be receptive, otherwise, it may prevent the created payment instrument from being accepted.

It can be argued that the concept of "free money" cannot exist indefinitely (in an unregulated way) today.

REGULATORY MONEY

We have arrived at the concept of modern money and currency. Regulatory money is money which is brought into the economy by someone in order to place it on the market, keep it and extract it from circulation and obviously, state regulation may have the right to do so. The underlying value of the regulatory money can be expressed in other commodities, or even in precious metal, as it is brought to the economy by the "Regulator," but may be put into circulation without definition. The acceptance of regulatory money put into circulation by means of regulation is obligatory and it is described the best by the following term: **issued as a national currency, a national payment (or paying) instrument with a state guarantee.**

The economy is aware of and acknowledges the role of the payment instrument as a mediator in the trade of goods and services, as well as being a payment instrument. The social system of rules and laws strictly punishes counterfeiting, theft, or the misuse of money.

Modern money, regulatory money, is a basic concept in economics. Without it, there would be no modern economics or science today.

Today's money is generally issued by the state, not only serve for measuring goods, services or goods that can be expressed in money and value, but also have value relative to one another, which is the cross-currency exchange rate of national currencies. For example, defining how many forints is a euro or a dollar, while the euro can be expressed in dollars as well, etc.

TYPES OF MODERN MONEY

On the one hand modern money is basically present in several physical forms of paper money (banknotes) and coins, and on the one hand as account money, which is in practice a virtual tool for completing transactions between bank accounts.

So, we can distinguish two basic forms of modern money: cash and account money.

Currency coins in circulation today, most likely promoting the exchange:

5-forint coin
10-forint coin

20-forint coin
50-forint coin
100-forint coin
200-forint coin

Banknotes and paper money present as cash:

500-forint banknote
1,000-forint banknote
2,000-forint banknote
5,000-forint banknote
10,000-forint banknote
20,000-forint banknote

Counterfeiting is severely punished by law, is extremely harmful to society, and disrupts the confidence of economic operators, which can induce a crisis in a massive scale!

Summary: in this chapter, we have learned and understood how money as a means of payment was developed and what kind of barter functions it has. Understanding the path to modern money is the basis for assessing the importance of a currency.

CHARACTERISTICS OF MONEY

MONEY REPRESENTS AND EXPRESSES VALUE

The role of money, as well as its essential function, is to express value and to calculate the price of a good, product or service. All commodities representing value can generally be expressed as monetary values. Still, it is important to note that prices of identical or substantially similar goods may vary. The price of one kg of white bread can vary at many bakeries and department stores where they are sold. There is no fixed price (not in the official sense) and it cannot be, since the basis of the market economy is to establish the (pricing) value of goods, products and services in order to create a competitive position between producers and service providers, so that buyers can get (under optimized terms) the sold commodities cheaper. **Commodity price competition is a fundamental prerequisite of a market economy. The act of predetermined mutual fixing of prices, market sharing between competitors, restricting competition between them is called cartelling. The "collusion" formed by salesmen like this is called a cartel, which is severely punished by the applicable laws (competition law).**

It is also important to emphasize that many interrelationships must be considered in determining the value of a commodity, and for this reason it is also worth clarifying what value means.

Value: the quality and usefulness of a material, intellectual property that makes it worthwhile to acquire, hold, possess it, and the determinable price of that thing.

These are the two things that represent value together the value of which can be expressed in money.

To write it down again as it is decisive, not all values in life can be expressed in money. This makes the world diverse and beautiful. In addition to material goods, there are values that exist in the form of conceptual, non-monetary values. We can try to express everything in monetary value, but expressing love, freedom, health and many other material and conceptual values in monetary terms, is the coefficient of the subjective and imaginary factor. How much can another twenty years of healthy life worth to someone? If the true love of our loving partner represents an affordable value, is it real? So, on.

Determining value, evaluating our continuous material and intellectual goods is extremely important. The basis of our careful financial planning is the assessment of our assets, plan, price, and value the goods we want to acquire in the form of a future cash claim. To create and have real value, to build wealth, to improve living standards is usually possible with careful, conscious financial evaluation and planning only.

MONEY AS PAYMENT AND MARKET INSTRUMENT

Many times, the term payment instrument and market instrument become one. From what we learned earlier, we know that by getting money as a means of exchange, the seller sells his goods for money - we are not necessarily talking about closing a final deal, because the seller is not necessarily acquiring money for the money, but then to use the money to buy some other goods, as a replacement. If the transaction is not completed by the acquisition of the money, then money is a market instrument. Where from the seller's point of view the receipt of money closes a transaction or obligation, then money is used as a means of payment. In today's world the multitude of chain buying and selling needs have completely blurred the distinction between these two functions.

At the same time, there is another approach that basically defines the movement of goods and money based on time. This approach interprets the role of money in payment and circulation according to the following definition:

Means of payment: money and goods move in opposite directions at different times.

Means of trade: in the trade of goods transactions are concluded with the help of money, money and goods move at the same time but in the opposite way.

MONEY AS AN ACCUMULATION DEVICE

The role of money is not limited to investing in instant purchases. It is also a means of accumulating, moreover, it is the most liquid asset, which can be spent immediately at any time to meet immediate or (already) deferred needs, but it can also be invested by continually delaying our needs, for which we are expecting a "reward" in exchange that is the return on money and investment. Disposal of money is a value, and the transfer of disposition is justified by the hope of a future return on money, gaining profit.

A large part of the population holds money, not only for investment purposes, but also for the sake of security. Often, the reason why money kept under our pillows - the value of which is falling, depreciating- is not put into bank deposits, government securities, equities is not because we do not want to have future-value money that promises returns in the future, but because we are afraid that we can lose it, somebody can take it away from us, etc. The silly notion supporting the hiding of money is usually callused by foolish fears.

At the same time, it should not be overlooked that the hidden or partially declared wages and incomes that are part of the grey economy are also hidden under the pillows as investments are usually much more prominent than the carefully hidden money

(The theory of the "rich dead". The author is of the opinion that the majority of social individuals corresponding to the term "wealthy" in the present day used subjectively are people who accumulate wealth for a lifetime but devote only a small part of their accumulated wealth to their needs. Therefore, the cumulative value of money and other invested assets accumulated in a bank account essentially goes to the grave with the man. In a more fortunate case, the family members inherit it, in the unfortunate case, the state does, in the absence of a legal heir. The theory is that honest, well-paid wages can meet most real and universally expected needs, and accumulation of wealth is not required for those.)

Summary: in this chapter we have learned about the characteristics of money. It represents value it can be expressed as a means of payment, a market instrument, and as an instrument of accumulation.

WHAT IS MONEY FOR?

Money is for everything. **From the individual's point of view, we say that the purpose of money is to serve our needs.** However, the word "need" means a lot of things and when interpreting, it is important to clarify that the needs of every person, apart from the basic needs, can be different and variable, and even if the needs exist, the intensity of the demands may change. It is precisely for this reason that the consideration of money, as a means of meeting everyday needs, is highly subjective.

Changes in needs and necessities are a very important part of the development of humanity. In the Middle Ages no one needed a car, a cell phone, a TV, or many other "essential" devices of today's world. There was no need for it (since they did not exist), there was no necessity, so there was no need, and nobody has spent money on it. The need of the medieval man was much easier to derive, even though we obviously do not have much of that need nowadays. Today's advanced societies are consumer societies, the diversity of our needs is asserted by the goods and services on offer, but those are basically in accordance with our own human needs.

Everybody has money, in today's world, it is a must-have for family funds, to run a household, to meet our basic needs, not to mention the multitude of additional essentials to be able to communicate, travel, have fun and relax.

BASIC NEEDS

But what does the term "basic necessity" mean? It is a feeling of lack which one seeks to eliminate. Satisfying our needs is a human motivation. The needs can be diverse. **Essential human needs are things that are essential to the life of modern man in today’s world.** (If someone feels they wouldn't be able to live without a cell phone that could of course be a necessity as well…)

Above all, it is worth understanding the Maslow Pyramid, which properly groups the needs that motivate people in general. Maslow's pyramid was heavily criticized, but there is no better grouping known currently.

PICTURE, MASLOW PYRAMID

It is worth noting the basic needs at the bottom of the pyramid, which are fundamentally related to species conservation. Even though trivial things are included within "Physiological Needs", we cannot say that people are entitled to all primary needs in today's developed world. Food and water (drinks) are necessities we pay for, and we pay a lot. Not to mention the value and ongoing cost of a flat, house, determined under the term “shelter” which can only be secured for money. The air is the only thing people may be entitled for, it is not likely, that anybody could find a partner for sex without spending on anything in life other than breathing and it is not likely that anybody could have a relationship without having enough money for food, drink, or shelter, having no money at all.

Satisfying our basic needs is a human motivation that determines our actions and guides our behaviour. Our behaviour-driven actions are aimed (among other things) at obtaining or satisfying our needs, and for eliminating this lack we use money as a tool the most.

QUALITY OF LIFE

Satisfying our basic needs is a human minimum. It does not mean that we could live a full and happy life just by ensuring we satisfy our basic needs. Quality of life can be directly related to the standard of living, they are not related words by meaning, not synonyms. The standard of living is determined by material well-being, the availability of basic living-related goods in society, while the quality of life can also be based on material well-being, but combines a broader concept because it depends or may depend on many other influencing factors beyond that. For example, the standard of living of one of the richest people in the world, assuming he is also using access to goods is as high as possible, while his/her quality of life, due to cancer can be extremely bad, in spite of the immense money and wealth.

Thus, the basis of the quality of life can be the material prosperity, money, but it is by no means a must. While living standards are a commonly measured concept, meanwhile, the quality of life can be deduced from the tiny moments of an individual's life, a concept of the individual. Providing feedback to the previous thought we must add that you can't buy everything for money or express everything in money.

Quality of life as a social science concept dates back to the first half of the 1900s. Perhaps the following is the best interpretation of the term: **In the words of WHO, quality of life is "an individual's perception of one's position in life as influenced by one's culture, value systems, and goals, expectations, patterns and relationships. It is a broad concept, which intricately involves the physical health, psychological state, degree of independence, social relationships of the individual, his/her personal beliefs and relationship to the important phenomena of the environment."**

The components of quality of life are basically the sum of physical, psychic and social "elements". In the early 2000s Küchler and Bullinger set the following levels in their theory:

Bodily Level:
We mean general bodily complaints, symptoms of illness.

Psychic Level:
Emotional, cognitive and behavioural aspects are included in this level.

Interpersonal Level:
Experience and the subjective evaluation of the established relationships.

Socio-economic Level:
Work, living conditions and financial situation all are included in this level.

Spiritual Level:
Religiousness, living in the spiritual world and moral values dominate in this level.

There are also views that consider the quality of life as how the individual feels (in his or her skin).

LIVING STANDARD

However, the standard of living is essentially dependent on money. It doesn't depend solely on the individual's "well-being" but the overall, average standard of the individual and the community in question prevails. Most of all, because in a society, and more specifically in a particular community, where the quality, type and quantity of goods that can be obtained are limited, the individual is not necessarily able to maintain a high standard of living, despite his/her money and material well-being.

Therefore, the standard of living usually means the levels of a community, which levels can have an average "degree" and can be differentiated by social strata, the different levels of standards and the different standards of living.

The average standard of a given society affects all those things that represent the redistributive system of the state, such as health, the pension system, education, the scope and availability of social benefits, but it also means companies with subsidized operations and the functioning of business entities distinguished due to the public / community interest, the managing and supporting of those which represent community development, pretence principle, overall social standard and the standard of living.

However, the social approach to living standards is not only a matter of importance. Investing in the future and managing the basic processes leading to social well-being is a state responsibility as well, not to mention regulating the functioning of "welfare societies". The measures we are taking now have a decisive influence on the lives and standards of the future generations, so not only the important things of the present have to be defined but the aspirations towards the future as well. In addition, a society, a community with a higher standard of living is more than capable of donating, investing, exploring the present and the future, therefore the quality base is also important, which in the case of the future is the present.

In international comparison, GDP per capita is often used to measure living standards. The indicator used to express the level of development and standard of living primarily shows how the total annual output of a country is in proportion to its population (value per capita), i.e. the value of all goods produced (output of goods and services or primary, secondary and tertiary sectors, that is, agriculture, industry and services) depending on the size of the population. Gross National Product per capita is intended to compensate for differences regarding the size of the countries.

However, regardless of the division per capita, there are areas where the question of development and quality can only be measured in its entirety. Such things are research, armament, influence and thousands of other defining things, examined on state and social levels.

WHY PEOPLE NEED MONEY?

Fundamentally, an individual needs money because achieving, obtaining and satisfying the needs and demands that determine our lives and standards of living can be measured and obtained by money.

In the present day satisfying basic needs are not everything, the man of today and his demands go far beyond, at least strongly categorize or transcend the concept of basic needs.

First of all, it is very important to clarify that the "what do you need money for" question will give everyone the same answer for a long time, but after a while the range of answers will be decidedly different from person to person. The diversity of human beings in terms of sex, age, standard of living, individual position, attitude, value system and many more transforms human spending into an enormous matrix system and even pushes it towards extremes.

While most of us can eat, drink, have fun, etc. not all of us can go to a clinic abroad because of a disease, not even dreaming of paying for a space trip is common. Some people, even if they have a lot of money would not buy a car that cost a fortune, while others can obtain serious amount of credit to meet the immense amount of money their car worship needs and their own luxury needs, "necessity" that he/she could not afford.

Finally, the philosophical question arises, whether there is a real need, or a set of demands bounded by need and the demands that go beyond them are merely "unnecessary needs" of the individual.

Let us look at some of the human demands that are common to individuals in today's general societies:

- Basic needs;
- Security (future concept);
- Supporting our loved ones;
- Donations;
- "Money-wasting", games;
- Spiritual factors;
- Our desires;

and many more unique needs, that can be purchased for money.

Summary: in this chapter we have learned and understood what money is all about, that our need for money is a general human need, our needs may vary from person to person, and the degree and intensity of our efforts to meet our needs will vary according to our habits.

MONEY DETERIORATION, INFLATION

There is no clear value for money, or currency. The value of money lies in its purchasing power. When we pay with money, the value of the goods is expressed in terms of the value of the currency in question, but this value is not constant. There are several reasons for a change in your monetary value the reason is not necessarily the change in the overall value of money. **If on the other hand, the price level of goods, products and services expressed in money rises, so that you have to pay a higher price (more money) for them, it means the deterioration of money, and a deterioration of money is defined as an inflation of its value.**

Inflation is not necessarily a negative process. Low (slow) inflation stimulates the economy, shakes and encourages economic players and participants to become more active. However, if inflation "escapes" and becomes significant, the process may not be kept under control and all "hell" could break loose as it happened in Hungary after World War II.

INFLATION THEORY

What does the existence of inflation depend on, why is the purchasing power of money deteriorating? First of all, it is worth clarifying, that money can be used for a lot of things, but the statement that its use is always based on the same scenario, is not true. For example, in times of general uncertainty (fears of catastrophe or war), the population may increase the reserve of their consumption needs, putting additional demand on the supply side, but it may be that another life situation will encourage the individual to save the money to accumulate it, restraining, delaying the immediate fulfilment of its needs, hence a decline in the demand side versus the supply side.

The perception of inflation is different in economics, essentially in the context of the combined effects of its existence and extent. The best-known theories are:

Neoclassical Theory:

In a given economy, an increase in the money supply causes inflation. This theory is also the basis for today's commonly used regulatory principles. Central banks influence demand-supply ratios by using the total amount of money released into and withdrawn from the economy. Monetary policy pursues interest rates and other auxiliary measures to accelerate or slow down the economy by increasing or reducing the amount of money it contains overall. If interest rates go up, it results in a narrowing of money, this is a restrictive monetary policy. If interest rates fall, money increases and it is an expansionary monetary policy.

Keynesian Theory:

John Maynard Keynes, an English economist is the creator of modern macroeconomics. In his opinion, the increase in demand stemming from monetary growth does not necessarily lead to inflation, because the economy is capable of reacting quickly and the supply side is expanding by taking advantage of available capacity thus, supply prices will not increase. In addition, an increase in the amount of money can also increase an individual's wealth, which does not necessarily have an impact on the increase of demand.

The Austrian School of Economics:

A school with renowned economists from the early 19th century in Vienna concluded that the amount of money injected into the economy directly influences inflation, regardless of the growth in demand. Therefore, it is enough to limit the amount of money issued and the inflation can be suppressed.

The variety of inflation theories prove that there is no clear theory for deriving inflation. The matrix of many contingent items results in higher price levels. In addition, it can strongly depend on the forms of social responses and reactions to different situations.

INFLATION RATE

We determine the impact on the economy by the rate of inflation. This effect can be beneficial, or it can be extremely harmful. The step-by-step approach is as follows:

Slow inflation: also known as creeping inflation. It is desirable for the economy to lose the values of money at a rate of a few percent a year. It supports the activity of the players and the further expansion of the economy. Beneficial

Galloping Inflation: we calculate the value of the rate of deterioration of money above a few percent. The economy may be able to remain stable, but the process can easily turn into unmanageable. Persistently high inflation could lead to uncertainty and disruption of the economy. Dangerous

Hyperinflation: its value can be up to many times over several hundred percent, the economy itself is no longer capable of curbing monetary collapse, destroys stability, creating unpredictability and economic chaos. It can only be curbed by government intervention. Harmful

The highest rate of inflation known in Hungary so far was after World War II. The reason is clearly the lost war, the looted treasury and the lack of production. In response to the unstoppable inflation began the so-called "banknote press", the printing of the pengő with increasing denomination.
The price of one kilogram of bread was 6 pengő in August 1945, and as a result of the ever-accelerating inflation, by August 1946 8 million pengő had to be paid for it. At that time, the pengő was replaced by today's forint, where the exchange rate was 1 forint for 400 quadrillion pengő.

REASONS OF INFLATION

The reason for the change in inflation can be the result of many different things. Increase in the total amount of money in the economy itself, its decrease can only partially change inflation and as we have seen above, different theories do not come to the same conclusion, although effective "management" of monetary inflationary processes is general and widespread in today's modern world economy.

Prices are shaped by the relation between supply and demand and their changes. If demand intensifies, it generates a competitive position of buyer power against a given commodity and, thus, demand pressure (competition) can lead to an increase in the commodity price. Increasing demand for a particular product, goods, or service can increase your purchase demand for inventory. The new equilibrium price that emerges when demand and supply meet, where the goods are 'exchanged' for a currency already (may) leads to a higher price, demand can therefore be met at higher prices, which induces an increase in the supply side.

Why is the change of the "pricing system" conditional? Because of the short-term satisfaction of disposing of property, there are many other factors. Increasing pricing - if it is not accompanied, for example, by an increase in the price of raw materials (increase in cost level) over a period of time - encourage the sales side to make full use of available capacity, or the creation of overcapacity, which increases the supply side and prices can return to pre-existing levels, even below that. Competition on the demand side can increase prices by increasing supply side margins significantly, encouraging new players to produce and appear on the supply side.

The market economy is the most perfect economic mechanism at present because it is capable of self-regulation, but it is essential that, in addition to self-regulatory mechanisms, it also needs to maintain external regulations, otherwise, the most important basis of the overall market economy which is competition, could easily be misused and become vulnerable.

TYPES OF INFLATION

Demand inflation: The rise in price levels is caused by the demand side. The demand side for the economy can be either domestic demand (domestic) or external demand (international). The internal and external nature of demand is irrelevant as long as it does not jeopardize the healthy balance of the national economy.

Supply inflation: also known as cost inflation. The cost of producing a commodity is rising and this leads to an increase in the general price level. In fact, the increase in costs is not just due to the rise in the price of raw materials, but also as a result of rising labour costs. And the increasing labour cost is not just a cost-side of the supply side, but it also increases the demand side by increasing the amount of solvent demand generated by the population.

Money and capital market inflation: this includes many different types and weights of different processes. Some of the most important influencing factors may be the change in the loan-saving ratio of the population, loss of confidence, which can significantly worsen the appreciation of the currency, unsecured cash printing, long-term price increases in capital market products and its stimulating effect on general demand as a result of rearrangement of domestic and foreign holding ratios, etc.

HOW CAN INFLATION BE MEASURED?

Inflation can and is measured by many factors. Usually, they create a basket to pack goods, products, services, price changes of which they want to detect, follow, and possibly intervene in the event of unfavourable changes or shifts.

Of course, the basket does not mean that everything is included and with such weight, as it maps the general method of spending money regarding everyone. The Consumer Price Index, which is designed to track inflation, is not a "consumer basket" that is tailored to the average of society.

Inflation is measured over different periods such as monthly, quarterly, yearly periods, but different periods can be compared as well. The price index represents the change in the price level of the goods in the basket compared to the last measured data (base).

At present, the composition of the basket in Hungary is about 1000 representatives (goods, products and services), which are classified into 140 groups and thus measure the price change. The basket mostly shows the proportion of different goods in the spending of the population. The proportions and weights are changed according to the behaviour / use of the population.

Main groups	In the consumer price index	In the consumer price index for pensioners
Food	26.195%	27.839%
Alcoholic beverages, tobacco	9.581%	8.454%
Articles of clothing	3.851%	2.238%
Consumer durables	7.181%	4.744%
Household energy	7.323%	9.913%
Other items, fuels	18.151%	18.856%
Services	27.718%	27.956%

Total	100%	100%

Data: Central Statistics Office (2019)

The table above defines the main groups of 140 groups of 1000 different commodities and their proportions when assessing changes in the CPI.

Summary: in this chapter, we have learned how to understand what money failure or inflation is, what its characteristics are, how it is measured, how its percentage is calculated, and whether or not its existence is harmful.

SAVINGS

INTRODUCTION

Everyone who works has a certain amount of income and finances their daily lives from that income. Still, most of us never have a meaningful amount of savings, that we could use for many things later, or we could just simply have our money set aside to feel more confident about the future, the prosperity of our children, to plan for retirement, travel, have a new house, a car, whatever our great future plans are that may seem inaccessible in the present, but its potential is not impossible. What has to be done to have savings? Most people who can make a living from their earnings (essentially their wages) can also have savings.
Why can it be stated so confidently? Because 95% of the Hungarian population is unable to spend ten minutes a day to plan their finances, systematize and interpret their basic expenses. So, the statement is that anyone who makes ends meet but has no significant savings and does not deal with their finances on a daily basis could indeed have savings. What do you need to do? You should deal with your finances!

The profession of finance can lead from simple things to theories of infinite complexity, even to financial philosophies. Yet, it is easy to say that general factual data shows that the average person has little understanding of his finances, not to mention the philosophical claims. This is also strange because almost everyone has serious practice and know-how about their finances, as we generate daily expenses and at least (most of us) monthly incomes.

Consciously organizing and understanding revenue and spending, shaping our own decisions, is the way to have savings, a mass of money that we do not spend, and the spending of it at a later stage is based on awareness. Just because we do not spend all our money does not mean that we do not buy anything from it (investments can also replace physical money). It means that we do not spend all our money on our immediate demands, so we defer our satisfaction in obtaining the goods. Why do we do this? Not just because we see it as a good thing, but because we have a plan. And this plan is nothing more than an opportunity for growth through conscious savings. We can call it the yield of our savings, interest, percentage surplus, the point is, to exchange our needs for the present with a future fund, which is surplus to our current money, so we can satisfy even more of our demands.

The existence of a savings can not only serve to cover our future planned expenses that can be planned along with the value of the surplus yield, but it can provide cover for unexpected, also for unpredictable expenses, when it is important to have a financial background, giving us the ability to solve unexpected problems.

INCOMES

There is probably nobody who does not have some kind of income. These revenues can come from a variety of sources. Their point is that, taken together, they are summing up, figuratively speaking and the amount of money in our pockets. Nowadays, this money is mostly made up of salary and other income in our bank account, in the form of account money. Today's modern economies probably will only use cash for a short time. Physical money is an increasingly useless device, which revives the grey and black economy, its exchange and circulation are hard to follow compared to the account money.

With the advancement of technology, nowadays money used as a replacement for most of our demands is no longer required to be handed over in cash, credit cards and card acceptance systems have become available, enabling cash cards to be accepted more and more widely. The bank card we own knows our identity, the amount of the money we have in our bank account in the bank (it is not yet possible to use our balance at several banks with one card), it is much safer than having cash and in addition, we can verify all of our spending at any time based on the bank documents.

REGULAR INCOME (WORK)

The most common source of fixed income is income in the form of wages. In current societies, it is a common practice that most people work, if not, there is a reason for it. Such reason may be the taking care of many children or health related unfitness.

Work: work is defined as the effort made by man to use his physical and mental abilities to produce useful goods or other endeavours to be used by others in society. Work is an activity in which we produce, create, and transform something that others consume, use, and fulfil their own needs and desires from it.

Wages: we expect a reward in exchange for our work, which in the vast majority of cases is cash or other cash benefits. Work is a commodity, which we "sell" in exchange for wages, by selling our work, we get money and benefits.

By selling our physical and mental abilities, we can essentially make money, so work is an indispensable element of human existence and, as a concept of economics.

The kind and type of work done can be extremely diverse. **We differentiate intellectual and physical work**, stationary and non-stationary work, but it can be time-bound, time period-bound or freelance. We can do more than one job at a time (not necessarily doing the same thing at the same time, but more jobs, workplaces), **we can do casual work as well**. From free intellectual employment to physical work in mines, all decent work can be done as a means of making money.

Employer: also known as the employer who hires the employee for work purposes. An employer employs the worker.

Worker: the person performing the work, the "worker", who, in exchange for a wage, sells his own physical or mental work. The employee is employed by the employer.

State regulation of work: regulation, as in so many other areas, is indispensable in relation to work, so the state, as a regulator, must operate a system of laws, regulations, recommendations, minimum obligations (e.g. minimum wages, rights, etc.) and to take care of the lack of employment opportunities, forms of unemployment benefit (benefits) and the provision of a "pathway to employment" (retraining, community service, etc.).

The wages you receive in exchange for our work usually come after completing a period of work, the most typical is monthly pay and wages, where the "worker" receives his monthly salary as a periodic settlement for his continuous work.

Regularity does not only **mean that** the employee is paid at certain intervals, **but also that the work performed is continuous, in most cases for an indefinite period, under a contractual relationship between the employee and the employer or as a fixed-term employment contract.**

Regular wage income makes it possible for the majority of the population to predict and plan the cost of living and to finance everyday life.

Nowadays, however, a man no longer necessarily judges the ideal job on the basis of the amount of money he receives in return for his work. The schedule, the type of work, the working conditions, employer behaviour, attitudes and many other factors, not to mention the potential health effects of work, count in this respect.

REGULAR INCOME (OTHER)

Regular pay or income can be received by a person through sources other than their regular work based on an employment contract. When planning the household income, there may also be income components that will continue to increase our income over time and yet do not involve any direct work. Such forms of income can be countless, and we would not go deeper into that list, only showing a couple of examples to illustrate the diversity of the regular income.

For example, if you divorce and raise your children alone, the children's father may pay or be legally obliged to pay **child support** on a monthly basis, in the form of an amount calculated under different conditions, or even under a contractual agreement.

We can talk about childcare, but also not so general and well-known in this case is the **spousal (wife) support**, the "beneficiary" party can expect to receive regular income, moreover, it can even be planned as a long-term revenue stream.

OTHER INCOMES

In addition to regular incomes, we may have many other sources of revenue. Wages can be classified into categories such as casual jobs, starting from assignments to the revenue from gambling, which is not very common and likely.

Many types of income can be generated in human life, most of which are unpredictable and cannot be planned. Who would have thought that there would be a wealthy uncle somewhere far away in America who leaves us with a lot of money when he dies at an old age and we are his only distant relatives? Anything can happen, but the probability is very low, and it is absolutely impossible to plan because we are not aware of such an eventuality, and we are hoping that there would be an uncle without knowing about him at all.

While inheritance from a distant, unknown uncle is not very likely, people usually inherit from their parents. Inheritance is also revenue and there are cases where, due to the size of the family estate, there is an already well-structured preparation for the inheritance, even decades before it actually occurs.

The list of other earnings may contain everything. It is not excluded that we will find a wallet, no records in it, we will not find its owner and we will treat it as a gift of heaven as our own. And in this way, gifts can be classified into this group. We do not count on them, but on the through life, the sum of many small values can become significant together.

Most of the other income is characterized by the fact that most of us cannot plan them, they occur randomly in our lives, even if we do something for them, their value cannot be determined or planned in advance.

It is also a fact that in a person's life, predictable, regular income, as generally accepted, have a natural income, their existence is a mandatory part of everyday life, their “Being” is essential, to be able to fund our entire lives with confidence. That is why we' are so excited about an unexpected return. If we were to calculate how much of an ordinary person's life is accounted for by regular and irregular income, we would be very surprised to find that regular income is, for the most of us, over 90 percent of our income.

Human nature, behaviour, needs and demands are also rather characterized by a preference for safe and predictable income, than the occasional, more uncertain, but in some cases significantly more casual, occasional revenues.

REVENUE FROM SOCIAL AND STATE BENEFITS

Most people live in communities, societies, those are what we usually put into limits, projecting the living space into the community and these communities, societies to label as countries, as the notion of living territory and the people, living in them denominate, based on the country as homeland, or perhaps as mother land. So, there are Hungarians in Hungary, Americans in America, Romanians in Romania, Serbs in Serbia and so on.

Communities of countries bordered by living space create a community just by combining rules, laws, customs and habits, this is typical of their value system, their expected and required value judgment. Basically, you should not rob a bank, because it's a nasty thing because, according to the order of society, it is one thing to be punished. In a word, ideological, ethical, moral, (etc.) social standards have evolved into the rules of communities over many, many years.

The community makes sure to unify, shape, equalize, or just simply set things as a minimum, what society thinks should be the basis of today's life, lifestyles, regardless of whether the individual has the power to accomplish it. But not only does the community system set social minimum, it values the present and the future, the importance of development and survival, and thus supports and guides the life of the community. For example, a minimum wage may be a minimum or an example of unemployment benefit and support, guidance (for the community) extra support for large families, even with serious financial means, because if the number of individuals in a society is running low, then species conservation requires vital support.

A state's redistributive system generally includes the revenue from taxes, levies, and other revenues on the basis of predetermined principles, so state subsidies, social benefits for the country's needs, are designed to meet the goals, needs of the country.

Based on the above, we can see that our revenue can also come from the fact that the society we live in makes sure to help and to encourage us.

The state, the management of the community, must pay attention to the negative extremes, as well as the generally formulated and attainable values. If someone cannot find a job, a community of good values supports the plight of the individual, but not just with help, it also encourages and helps the person get back to work. There is a need to address at a social level support for the disadvantaged, the concept of vulnerability, the requirement and guarantee of universal human rights, and many other things that often cost a lot of money and are not paid directly by households (even if it is done so by them indirectly).

Converting rules into laws and regulations provides a direction that can ensure long-term development and the healthy survival of society.

The system of social, state benefits is present in almost every household. Family allowances, maternity allowances, health care, retirement and many other benefits are all part of the state benefit system.

The purpose of this chapter is not to introduce the social, state benefits in detail, but to take into account their role in understanding, managing and systematizing our income. **These earnings can be regular, one-time, or periodic. Their measure is usually a predetermined or calculated value.**

INVESTMENT INCOME

If you have a bank account and some money in it, you have certainly come across the concept of interest in the past. **We keep our money at a financial institution that uses our money and pays interest in return for that use. Nowadays, when money is plentiful in the money and capital markets, there is hardly any interest on the money in our bank accounts.**

You must have heard most people say that **there are government securities issued by the state to finance its operations, because most states have a negative budget, so the state has to spend more than it has and so it has to fill the gap. Government securities are bought for money and the state that uses our money pays interest on its use.**

If we have money that we don't spend (savings), we can invest that money in different assets and we expect our money to make even more, so we can sell those assets at a profit. For example, **we can make money on the stock market stocks purchased, if we sell at a higher price compared to the purchase price.**

We can also start a business. We can buy assets using our free funds, which we can use to make products what people who need them buy from us, and the purchase price, what we get is profitable. If not immediately, but with time, more and more products are expected to be sold.

If we have a lot of money and consider a house or apartment cheap, we can put our money into buying a house or apartment, and if property prices rise over time, we can sell them for a profit so we would have more money.

Many forms and tools of investment will be mentioned in this book, so it is important to remember right now, that by investing our free money we hope to profit, and these benefits can also generate revenue.

However, the (surplus) revenue from our invested money is a completely different source of revenue than the revenue expected and received in exchange for our work. There is no guarantee that the investment is profitable because every investment has its risks. While being employed we risk, that in the worst-case scenario, our mental or physical endeavour will eventually go unpaid, until then in the case of investments we risk not just the benefits, but also in most cases the invested money.

The potential additional revenue expected from our investments should be evaluated at the time of the investment and you have to count on the risk, because this expected revenue could be a potential loss, it can turn into an unexpected expense, regardless, if we exchanged our money for an investment instrument in the hope of profit.

We can spend our money on a lot of things which we expect to bring in some extra money (profit) in the future, or we just think to preserve its value in any situation, while regarding money, it may not always be true. However, there is a risk to these exchanges, because the money we didn't spend right away, we expose to a variety of risks in terms of value. In exchange for this risk, we need to expect profit, if we do not do this, we are doing it wrong.

Summary: in this chapter, we have learned what kind of incomes we can have in everyday life and how we can categorize these revenues.

EXPENDITURES

A lot of things can be imagined in life, but not spending at all is almost unimaginable in today's world. There is hardly anything in this world for which we should not pay, and it is part of our regular material life. However, that our income and expenses exist is the most basic principle of a market economy. We buy something, so we pay for it, it means spending. We sell something, we make something available for purchase, so we expect a payment for it and it means revenue. In the revenues chapter, we did not count on revenues from the sale of the consumer durables we had already acquired, simply because the revenue from the sale of the non-investment asset usually claims the need to purchase another similar or substitute durable, which in most cases results in even more spending.

Just as the most basic income for households is the money originating from the sale of labour, the sale of goods, the most basic expenditure for households is made up of an enormous number of different items.

Most people need just a few sentences carefully written down, to list their incomes, while they can write down their spending through long pages, in order not to forget anything.

PERMANENT EXPENDITURE

Regarding permanent expenses, we keep track of our expenses that appear regularly in our lives and are an essential organic part of our lifestyle. These expenditures, which can be called household fixed expenditure, are not a set of expenditures typical of the whole population but represent an average set. In presenting this expenditure set, we relied on the Consumer Price Index basket, where the components of the basket are determined centrally (statistical office).

Main groups	In the consumer price index
Food	26.195%
Alcoholic beverages	9.581%
Clothes	3.851%
Consumer durables	7.181%
Household energy	7.323%
Other items, fuels	18.151%

Services	27.718%
Total	100%

The above table shows what an average Hungarian household spends a part of its revenue on, which is called a permanent expenditure.

So, if we assume that an average family makes HUF 300,000 a month as its total monthly income and we assume that they spend that amount, that is, the entire HUF 300,000 is going to be spent permanently, you can see this in the table the following way:

Main groups	HUF 300 thousand permanent expenditure, spent monthly	In the consumer price index
Food	HUF 78,585	26.195%
Alcoholic beverages	HUF 28,743	9.581%
Clothes	HUF 11,553	3.851%
Consumer durables	HUF 21,543	7.181%
Household energy	HUF 21,969	7.323%
Other items, fuels	HUF 54,453	18.151%
Services	HUF 83154	27.718%
Total	HUF 300,000	100%

It can be said that an average household, when it comes to meeting its needs, spends the most on food and services, so these are the two permanent expenses.

At the same time, it is also important that the consumer price index may show a significant difference between households in countries with different living standards.

According to the consumer price index, the main groups of the households' main fixed expenditure are the following: food, spirits, tobacco, clothing, durable goods, household energy, other goods and fuels, and services.

However, average consumption does not necessarily mean essential main groups, not to mention the need for proportions within the main groups. For example, the main group of alcoholic beverages and tobacco according to common sense could be minimum of other, maximum luxury expenditure, but it is not because it is a constant expenditure of a decisive part of society.
That’s how the mainstream alcohol and tobacco group becomes part of our daily spending, and if it is in this set, then that means that almost everyone can afford it (does not necessarily mean

that you can afford it) and almost everyone can handle as a spending month by month, so it is nowhere near the luxury type...

The whole economy is striving to produce more and more useful goods, and utility comes from what more and more people in the world need, desire, therefore, meeting the need is a crucial and also an economic task, it is also in the interests of those doing business.

OTHER EXPENDITURES

As we spend money every month on a number of regular expenses, there are always some unexpected, unplanned other expenses. These other expenses may also be part of the household's fixed expenditure if you put them in one of the main groups, but regardless of classification, we do not consider them to be a regular expense.

The cost of a disease - not covered by social security or if we are looking for other ways -, the funeral cost of a sudden death, the replacement of a defective durable equipment, or simply the expense of a little relaxation plan and many, many more expenditures can be present in our lives.

Other expenditures are the expenditures on which we spend money that is not included in our monthly fixed budget, so it is not "obligatory" expenditure that occurs regularly.

As a consequence of welfare societies, other expenditures are steadily increasing as the standard of living increases, and more and more expenditures appear in our regular expenditures and are reclassified from the *other* category to the permanent category. For example, if we were to spend one week each month in a hotel, relaxation would become a regular expense.

LUXURY EXPENSES

What makes luxury spending part of the expenses? Just because it is not a necessity, it is not a compulsory component of fixed expenditure and can hardly be defined as a basic need and even if it could be another expense, we call the expense a luxury expense, if only a small segment of society can afford it.

Luxury spending is an expense we can afford because we have a one-time or ongoing financial surplus.

The subject of luxury expenditure is mostly a product, a good or a service that can only be accessed by a limited social circle.

THE CREDIT

Credit is our only source of revenue that is more of an expenditure than a revenue. At the time of taking out a loan, we agree to repay the amount received as a loan at a later date or in instalments, in exchange for interest and "charges" on the loan.

By providing a cash loan, the lender of money, the creditor, is expecting to receive a future return of value-added money, in exchange for deferring the ability to spend the money immediately, to meet the immediate cash needs.

(In reality, however intermediaries in general lending processes many times are banks, collecting deposits and lending them in the form of loans, so they act as mediators balancing surplus and shortage of money.)

A significant proportion of households have credit. Moreover, medium-term (3-5 years) and long-term loans (5+ years), which means, that the monthly amount of the loan repayment is a permanent expenditure in their budget.

Credit also plays an important role in the life of households. On the one hand, it can provide immediate, larger sums of money, financing to purchase a larger consumer durable, buying a flat, car, making it accessible, used in the long run, but the satisfaction of immediate expenditure needs. On the other hand, it enables the population to overcome certain payment difficulties in time.

The lending and loan intermediation is subject to license, regulated activity, which is supervised by the National Bank of Hungary. The unauthorized, not licensed lending is punishable by law.

When borrowing, the borrower, who gets the credit, must make sure that they are able to repay the loan, including any interest and costs. For example, many people in Hungary have become insolvent due to the multiplication of instalments on Swiss franc-denominated foreign currency loans, when sudden changes in the exchange rate of the Swiss currency imposed huge debt obligations on debtors, which could not be afforded by a high proportion of them. There are also many foreseeable and unpredictable risks of borrowing. We can never be sure that what we easily pay today tomorrow does not become an unaffordable obligation. The evolution of our revenue is changing, while the burden of many cost elements can accompany us for long periods, even during periods of our difficult financial life.
The repayment of a loan is typically the cost element that is our long term liability and the indebtedness from reckless sudden consideration carries many long-term problems. While being a loan provider, the money lender is interested in providing you with a loan with as much security as possible (to minimize the debtor's payment risk), in the meantime, the debtor is often unable to properly weigh the issue of long-term burdens. The security of the lender is not the same as the debtor's solvency, as in most cases the loan is secured by other security such as real estate. If the debtor, bearing the cost, cannot

meet its payment obligations, the lender may be entitled to sell his/her house, apartment or movable property.

PLANNING AND ORGANIZING EXPENDITURES

In order to interpret, understand, manage, plan, organize our revenues, we need something extra, and that excess is much more complex than keeping in mind some essential figures or items of our revenues. Planned and systematic spending is the way to go which can ultimately empower most people to have savings.

The key is to understand the awareness of spending. Consciousness assumes that we know exactly what we need and what we can spend, so we can plan and manage the amount of money flowing through our hands (cash flow), as our budget. Awareness allows us to define two groups, one set of compulsory and non-compulsory expenditure, on the other hand the saying "a lot of little things amounts to a lot" interpreted for our expenditures.

The existence of compulsory expenditure is what is compulsory, not its amount. We eat and drink every day. How much do we spend on this basic need? On the one hand, it depends on what is the material of food and drink, of our meal and “drink” and how much they cost. On the other hand, it doesn't just depend on what food and drink we have to meet our basic needs, but also how much we pay for the same good. For example, if this commodity is bread, many different prices for bread, value in money can exist. **If we buy our compulsory spending items cheaper, then we spend less, increasing cash flow efficiency, buying our compulsory spending items in a more expensive way will reduce the cash-flow efficiency, so we use the same amount of money faster or simply spend more on our compulsory spending in one unit of time.**

Regulating non-compulsory expenditure can be the easiest way to save money. In the life of households, a lot of expenses can be identified which are not mandatory or does not require the alienation of an asset at that price level. It is not obligatory to go to the cinema, but if we go to the cinema on a regular basis, we should not "savour" the costly merchandise of the cinema bar. If your car is a must-have household item, it is important to consider how much you consume and how much other maintenance costs are.

Life is made up of countless expenditure of sudden considerations, the cost and existence of which is not necessarily justifiable. Lack of efficiency (more favourable price for the same goods, amount of money) and justification takes out an enormous amount of money unjustifiably from the household budget. The saying "many little things amount to a lot" can be said to be extremely true about the long-term effectiveness of an average household's retaining of money, cash-flow.

One month consists of an average of 30.5 days and one year consists of 365 days (excluding leap years). If you spend HUF1,000 more every day, this means an average monthly spending of HUF 30,500 and $ 366,000 a year. This would be a surplus of $ 3,660,000 over 10 years in terms of cash flow, calculated without any yield. Based on a 5% annual return on a ten-year government bond, this amount, after continuous monthly investment (HUF 30,500 / month), would approximately enrich the household by 4,700,000 forints (depending on the frequency of investing money, without taxes). How much does a box of cigarettes cost today in 2019? The cheapest is 1070 HUF / box. So, a person that smokes 2 boxes of cigarettes a day (rounded down to 1000 HUF / box), over a 10-year period, compared with a "risk-free" 5% investment in government securities, smoking costs approximately HUF 9,400,000, so he spends this much unjustifiably and this is how much worse the cash efficiency of a 10-year household cash flow is. If we continue to look at the health effects of a cigarette, the medical costs, it is a huge asset, which is a regular expenditure for most households, not even *other* or luxury…

We have arrived to the pledge of our future, a basic prerequisite of a carefree future, the SAVINGS.

Summary: in this chapter we have learned how to fundamentally describe what kind of spending we can have in our everyday lives and how to group them, and why it is important to systematize and plan our spending.

SAVINGS

We can save money by spending less on something or not buying any goods, products or services at all. In this case, there will be savings regarding our particular expenditure, compared, with spending more on a particular good. It's a completely different concept compared to the fact, whether we have savings or not. Saving money on a particular good does not mean that the savings we make are not spent on another good or we don't spend it on other goods, more for a product, a service, as much as we saved, recovered on other goods. All in all, savings is an ambiguous word. We cover the following concept in this chapter:

Savings: a positive surplus in the balance of our income and expenses. So, over a given

time period, our earnings are greater than our costs. We save if B-K} 0 (where B = revenue, K = expenditure), but the amount of the savings represents a meaningful saving, if the total value of our not used, free, unspent funds exceed our three-month earnings total value.

Savings is the part of the income that we do not immediately spend to satisfy our needs, we do not spend it. Savings are deferred to satisfy our needs at a later date.

The above interpretation is meant to serve the purpose that incomes vary by household therefore, it is not possible to calculate a minimum amount when interpreting the minimum amount of savings. It has its own significance whether a household manages HUF 250 thousand or HUF 1 million every month. Higher revenues are usually coupled with higher spending, so a three-month aggregate income brings us closer to interpreting the minimum savings.

WHY ARE SAVINGS IMPORTANT?

Even though we live in a "modern" world in the modern sense, modernity does not necessarily mean that we are also "modern" in our finances. Let us say, the average person, the population, is constantly evolving in terms of financial literacy, but we can't say that today's average households are financially aware.

Money gives you the opportunity to spend it right away, to satisfy your immediate needs, no matter how much you need them, for immediate satisfaction. It is a fact that money is there to spend it (to satisfy all our needs), but the justification for immediate satisfaction is very difficult to determine.

Why is it important to save, to have savings? If one can save, decide to postpone his immediate spending then he is already on the path to awareness. Saving is important for many reasons, but the most important reason is, that in many cases, the size and timeliness of our spending cannot be planned, in terms of spending, the future is not always visible. It is in the individual, personal interest (the interest of households) to be prepared to provide financial cover for expenses that may occur in larger volumes and at an unknown (future) date. The financial way to prepare for such events is to save. The larger the size and amount of the savings, the more secure the household's financial position is with regard to future spending. This means increasing security, increasing financial security.

Today's people are characterized by a lack of savings and, in some cases, unjustified savings. Raising our savings in the direction of the infinite is just as useless as having no savings. Quantitative concentration of unspent money on an individual is as much a barrier to a healthy market economy as a lack of savings. Since only a very small proportion of the population has unreasonable (subjective judgment) savings, this aspect is less well-worded in the present day, based on market economy utility.

The process of saving is not only important for the financial security of "vital" expenditures. It is the basis of planning for the future, more expensive trips, consumer durables, child support, elderly security and is also the basis for a number of conscious

preparations to meet individual needs. Unspent money in the present, unsatisfied consumer demand is justified by the need to achieve a conscious goal in the future, moreover, you can expect from the future value of the money saved, to provide you with a reward in addition to the amount you save, for postponing your immediate needs or demands.

LUMP SUM (CASUAL) SAVINGS

Savings can be casual. If we get a bigger amount of money, premium, inheritance, from gambling (lottery), etc., we can make conscious decisions that we do not spend a part, or we don't spend all of our revenue on it and we save it.

However, experience shows that the majority of households that do not regularly have savings are incapable of saving from occasional income. **Households that do not have regular savings are poor (their income needs to be spent immediately), heavily indebted, or simply they lack conscious money management, which encourages them to spend money immediately, therefore their occasional revenues are used for their already accrued needs, or for trying to repay their debts or to just apply their general behaviour: everything is spent right away (this term *right away* represents the process here, which can take months in time, but ultimately indicates a lack of further savings).**

Saving higher lump sum revenues requires a deeper understanding of investments, because if you have a larger amount at hand and invest larger amounts of money negligently, you may experience a greater loss and the task of rebuilding or replenishing the financial loss you suffer from it may be a much more difficult one. Achieving a return involves risks, no matter how prepared we are to manage those risks, how well we know them, whether we can identify their true magnitude or not. It's no coincidence that those, winning the jackpot on the lottery, the majority of people who get rich through gambling get to the same place or gets deeper down in their finances over time, than where they were without their money won.

REGULAR SAVINGS

The ability to save on a regular basis already requires awareness. With regular (weekly, monthly) savings, households are aware of their income, they usually plan their expenses and also control the amount of cash flow, they are aware what and how much they spend and are able to adapt to potentially fluctuating revenues and expenses.

The best way to make a regular savings claim is to accurately manage your revenue and expenses in some form. Initially it may be in a form of pen & paper. All of the revenues and expenses on the paper already provide some serious budgetary insights. The next step is to use spreadsheets (Excel, Numbers), later on even household income, expenditure, investment-specialized applications or programs.

Organizing our revenue and expenses can provide a relatively reliable answer to a myriad of questions. We can provide detailed information about the security, regularity, and volatility of our revenue, while our expenses will initially allow us to decide on their importance, right to their existence, and in the future we can decide what and where to spend it, if we have a choice, where we can buy the same goods, products, services at a cheaper price.

If a household is able to make a living every month from its income and has never dived into its finances, then it is certain that it can also save. The easiest way to save is to divide our managed monthly spend into two groups. The first group includes compulsory expenditure (anything that we consider mandatory) and to the second group includes non-compulsory expenditure. There are two ways to save on non-compulsory expenditure. Either leave out a non-compulsory expenditure and save that amount, save the money that would be paid on it, or determine the percentage of total non-compulsory expenditure to be saved (for example, we would have spent HUF 50,000 a month on non-compulsory spending and we decide not to spend 30 percent of that, HUF 15,000), when we consider what and how much we don't spend on the expenditure.

Conscious management of expenditures can actively increase the efficiency of household cash flow, which also increases the volume of our regular savings. In the example above, it was clear that saving an average of HUF 1,000 per day as the efficiency of a household's cash flow, a 5% return on regular investment, would result in a savings of HUF 4,700,000 over 10 years.

Regular savings can help us access otherwise inaccessible assets, satisfy our greater and more difficult needs, and provide financial security and prepare us for difficult times, when, for example, knowing the expenditure side is a significant benefit to the revenue side, it can also make life more bearable, even if we won't be able to save at those times, we can decide more effectively about our spending.

Even if not all households are able to make monthly savings, knowing their income and expenses and their financial awareness are essential.

CHANGE IN THE EXTENT OF SAVINGS (USING SAVINGS)

The point of saving is to have a surplus of cash available at any given time. Plenty of money can be used to meet any need that can be covered by a steady household budget, savings or some form of credit. In fact, the purpose of saving is to meet, at some point in the future, our deferred or planned, or possibly unforeseen, needs. The mentality of people today, their relationship to money, only partially fulfils the true purpose of saving. Saving is often a straight path towards a wealth building where a substantial part of the assets is never met by deferred claims, unused at the end of our lives, becomes a financially cumulative asset, which in good cases is transferred by inheritance as a saving for the next generation.

The degree of savings and changes in the rate can depend on many things. Such things may be age, the size of savings already made, the purposes of use and how they change, and so on. Saving is a process that can be intense if we assume that the amount we are constantly saving is not equal to the maximum amount that we can save, or if we do not justify saving all possible money because the expected amount of satisfaction of your needs does not require such magnitude in the future.

The change in the intensity of savings is well illustrated by, for example, saving money for retirement supplements, savings. The savings collected for retirement supplements serve the needs that may arise in our retirement years and are not expected to be adequately covered by the projected retirement rate. Therefore, the period prior to our retirement years (active, working years) is intense in terms of savings, while entering our retirement years, the intensity of savings will decrease, cease, and the continued use of the savings is expected, pointing towards an actual decline of savings. In the classical sense, the essence of savings is the even satisfaction of our financially secured needs, where the even character is not uniform in time, but uniform in the satisfaction of needs.

What does the non-classical saving mean? This is wealth building, maximizing savings, accumulating savings. While yields can be interpreted in the least meaningful sense of savings, because of the delay in meeting our needs, we want to achieve by using our financial tools, basically assumes security aspects, as protection against money laundering, physical protection of money (not storing money in the pillowcases at home, etc.), meanwhile, in the building of wealth, the increase in invested savings and wealth is more and more dependent on the total return of the savings and assets rather than on the continuous nature of the savings (for example, a HUF 100 million annual 5% return is HUF 5 million, while revenue from our annual savings remain HUF 30,500 per month, which is only HUF 366,000. We can see that wealth is increasing by HUF 5 million a year, as a yield and only 366,000 forints, as a regular savings.)

When savings reach a level, where the further growth is much higher than its yield, than from regular additional savings, we are basically talking about wealth and the efficiency of investing wealth means further growth, less regular savings.

Summary: in this chapter we have learned how to save money and why it is important to have savings.

INVESTMENT

When we already have savings, the old saying arises, let our money work instead of us and for us! What does, investing our saved money means exactly? The first step - this is how our savings came about - was to postpone our immediate need, not spend the money (which was not required).
But if we have money in our account or at home, the question arises as to what we can do in order to achieve, for our money to work instead of us, for us.

What is certain is that if we do nothing with our money, if we just keep it, it will either bring us very little (possibly bank deposit interest) or nothing at all, which can be called extra yield. In order to get our money back, to achieve, that our money would work instead of us, and for us, we have to invest.

Investing: investing is an operation where we exchange the free money we currently have at our disposal for future money in the hope of a higher return, so we exchange our current money for future money, increased by yield.

This exchange means we swap my money for something, be it an investment instrument, investing in a productive asset, artwork, etc., anything that promises that I will get my money back in the future with an extra profit, a return.

However, investing also carries risks that we must always consider and evaluate as carefully as possible when making our investments.

INVESTMENTS AND TIME

Investments are based on decisions these are called investment decisions. There are many factors to consider when making investment decisions and more things to be determined in advance.

The most basic questions: how much? How long? Where should I invest? However, these three questions are worthless if we cannot determine the most important aspect: **what do we expect from our investment?** (YIELD!) However, in order to be able to decide these four issues with sufficient certainty, we need a great deal of basic knowledge and experience to **be aware of the expected returns and the risks of investing!**

There are mostly two ways to invest and a combination of the two. Self-managed investments, when we manage our money and asset management forms, where our decisions are controlled by someone or he/she not only controls us but also makes decisions for us. In the following, we will also analyse these two forms of investment.

Time is a decisive factor in investing. On the one hand, yield is expressed in time. If an investment ends up with a 20 percent return, it sounds good, but "sounds good" is relative. It doesn't matter if the yield is 20 percent in one year or thirty years. Therefore, yields are usually determined over time, usually on an annual basis. So, if an investment yields 20 percent in a year, it represents an annual return of 20 percent. It is as if an investment produces a return of 1 percent during the 20th of the year because it is also considered a return of 20 percent a year. On the other hand, we need to be able to estimate the length of an investment when making an investment decision, because this is the only way to see the annualized availability of expected returns, the probability of achieving returns over time (the longer the process, the more uncertainty) it is also important because the money we invest in it is not necessarily available indefinitely.

Investments are defined in the following time intervals (investment intervals): short, medium- and long-term investments. Short-term investments are investments between 0 and 3 years, medium-term investments are between 3-5 years and long-term investments are longer than 5 years.

Money has a time value. Time value is the expected return on time, which is precisely the result of deferring our needs to be met for a certain period of time, which is denominated in the return on investment, as the time value of money.

It is often true, that a certain but lower, long-term yield is more valuable than a more uncertain but higher short-term yield. All investments made over different time periods fill the entire investment period, and the yields of some investments do not guarantee that money will be invested in new investments under similar terms.

SELF-MANAGEMENT

It is our responsibility to preserve the value of our savings, our assets and to ensure their growth. Regardless of whether we manage our own assets, or somebody does it for us, in most cases we are responsible. If our investments don not turn out well and we lose, it is unimportant whether we or somebody else has invested our money, the money, the wealth we have, will be less, we are burdened with the entire loss.

As a result, we can say that always the most careful "hand" is the one that has the money, wealth, that is there to be invested. This is not true! The main reason is that we are not necessarily the best suited ones to manage our investments, because we do not necessarily understand the investment, its rules and we do not know enough about the potential risks. Managing the money, you have carefully earned and saved is a huge responsibility and it is only worth doing with the right knowledge and experience.

If our savings are rising to the point where it is worth investing in its actual investment, then the question arises as to what to invest in and how to manage it. When making investment decisions, after the questions- how much, for how long, to what and with what kind of return-, the biggest question of responsibility arrives: what are the risks and the chances of investing?

Textbooks usually say: the investor's risk-taking willingness is his risk profile. This formulation is extremely general and misleading because the average household investors have no idea of the real risks, they are not necessarily aware of them and may not be able to identify them. As a result, they are inadequate for assessing risks and interpreting their willingness to take risks.

All investment products and assets have risk characteristics. The difference lies in the degree of risk. In order to invest our savings in Hungarian government securities, we do not need to take any substantial risks, because government securities are low risk, of course that does not mean that they are risk-free. (We will discuss the risks in another chapter.)

Until all of our savings reach a certain level, not self-managed investment, asset management projected on our capital involves high cost. It is therefore worth initially investing in low-risk government securities or trying only a very small part of our capital for other products.

The larger the size of our savings, the value of our assets, the harder it is to replenish or partially recreate the money we lost due to our investment losses. Keeping money is always a more important task than looking for a risk-based return, so the point is to look at the ratio of risk to expected return. (Risk vs. return on investment.)

The investments we make ourselves can be divided into several groups. The two main groups are financial and real investments. In financial investments, we buy a financial product (stock, bond, investment fund etc.) whereas in real investments we invest our money in some non-financial product (real estate, land, artwork, etc.).

ASSET MANAGEMENT

Asset management means that we get advice on how to invest our money, this is called investment advice, or investment decisions, which others do for us this is called portfolio management, or we decide on the investment field, but the concrete investments are made by others, this is called investment fund management.

Our money in asset management does not represent a complete risk to us only if the investments have capital or / and a guarantee of returns. In other cases, the positive or negative outcome of the investment is considered as our burden, or our benefit. However, asset management is not free, and in most cases, regardless of the success of your investment, you will be charged a fee to get "support" when managing your investment.

All forms of asset management are subject to authorization, which is authorized and supervised by the National Bank of Hungary.

The concept of investment advice: investment advice is a transaction related to a financial instrument, providing personal recommendation, not including the fact, data, circumstance, study, report communicated to the public, publishing analysis and advertising, and provided to the client by the investment firm, prior and subsequent information subject to law.

Portfolio Management Activity: portfolio management is the activity during which the Client's assets are subject to predetermined conditions, on the client's order, they are invested in financial instruments for the benefit of the client and are treated considering the fact that the client is exposed to the risk and reward of the acquired financial instrument, that is, he/she bears the losses and the profits directly.

Wealth management also has significant benefits. One of these benefits is that investing, executing, and reviewing investments requires a significant amount of time, no matter whether we need to do it or somebody else executes these tasks on our behalf. Another benefit is that investments are coordinated by professionals with expertise, experience and knowledge who have a daily routine in the investment world.

The disadvantage is that we have to pay a fee for asset management, in many cases, investment managers are less careful in terms of our money, as we would be ourselves.

We have to make the basic decision if we manage our money ourselves or we entrust the management of our assets to professionals.

UNDERTAKING

Investing in a business also belongs to self-managed investments. When starting a business, we spend our money on the purchase of such means of production, with the help of which we produce products and by selling these products over time our invested money will pay off
and realize benefit, and in this way, we make a profit as a yield of our business and the resulting future cash flow.

The following are some of the questions to answer when starting a business: what? how? to whom? So what goods, products or services do we produce? How will we carry out the production together with all the work tasks of the company? To whom will we sell the produced goods, products, services and who will be in solvent demand?

Our start-up fits into the general cycle of the real economy, competing with other businesses with similar activities.

The return on the money invested in the business can be the dividend, after the positive annual profit (profit) generated and paid, but with subsequent sales of our business share, our shares, we can also realize exchange gains. For example, if we invested 5 million forints in a bakery, out of which we took 500,000 forints of net profits every year, so our company had a 10 percent annual dividend yield and if we sold our business for 10 million forints after 10 years, then our bakery also produced good dividends and exchange gains. The future positive cash flow of the company was represented by the aggregate value of the annual dividend and the exchange rate gain on sales. Our investment of HUF 5 million resulted in a dividend of HUF 5 million and a gain of HUF 5 million on the exchange rate over 10 years, which means a total of HUF 10 million. On a return basis, based on the time factor of the return, our investment yielded an annual 10% return for 10 years and a one-off additional HUF 5 million after 10 years. The difference is because that dividends of HUF 500,000 a year are significantly more valuable because of the distribution of cash flow over time, then exchange rate gains of HUF 5 million (we can assume that we received HIF 500,000 a year we were able to invest again and so make another profit every year, while it is not possible regarding the exchange gains).

But we can invest in a business in a way that it is now ours we are not the only ones to work with it and we don't bear all the benefits and risks. Most businesses are social enterprises, in which we can play a decisive but even entirely secondary role. We can be a professional or even a financial investor. The extent of our ownership and the role we play in the business determines the investment quality of our investment.

An investment feature of our own business is not the same for example, as the share owned in a listed company, with a small share compared to the size of the business. Listed shares bought that way mean investing in a financial product.

RISK MANAGEMENT

The increase of the volume of money saved through further savings is a risk-free process. Either we are capable of further savings or not. The risk can be maximized by saving less or not at all compared to the plans.

Increasing our savings, our wealth through investments, is absolutely not trivial. Every moment - when we make an investment decision and this is how we spend the money from our direct possession, swap it for some investment instrument, invest, - carries the risk that maybe we will not get what we exchanged or we do not get enough for it. The fact, what depends on how much, when and how we get back regarding the investment, may need to be calculated, relative to its future projected value, not much of a matter of luck, but a conscious investment decision-making mechanism, where risks are properly assessed.

Making investment decisions without risk assessment is incomplete and irresponsible. The promise of a return in itself is of no value unless it is accompanied by careful consideration of risks. We decide to invest our assets based on the risks involved, assess and interpret the risks and we decide whether we undertake and whether it is worth taking the risk.

Not all forms of risks are always predictable or can be evaluated. Therefore, the assessment and identification of risks is a process that goes from investment decisions to investment completion (completion). This process is called risk management.

There are many forms and rules of risk management. Many rules are not only important for individual investments, but it sets tasks to be followed with investing all of our wealth, and the asset classifications.

What are many years of "deprivation", financial gain through savings worth if, at an irresponsible moment, all our savings are lost through a careless investment? Our goals, dreams, desires can be destroyed because we have not properly considered the risk of our investments or simply failed to treat our money with due care. Financial awareness doesn't just mean that we are able to start and walk the way which is savings, can be a great asset in the future, but also means that what we got, what we own, what we possess, which is ours, our family’s, we can keep, preserve. In this way, it can accomplish all the goals, dreams, desires we have made for so many years.

Summary: In this chapter we have learned how to invest our savings, our assets, and the basic ways of investing.

FINANCIAL RISKS

INTRODUCTION

Perhaps one of the most difficult concepts to explain is risk. However, it is present in almost every area of life, only one of which is the risk of money, of finance. Virtually everything has a risk. It used to be said, when we step out the door, it is not impossible that something would fall on our heads. Not impossible, but not very likely either. Certainly, when we think of risks, something bad comes to mind. Something that is not good when it happens. Let's see how risk can be defined.

Risk: risk is a hazard that, if it occurs, has a negative impact on the risk bearer. There are many types of risks, with two main groups being predictable and non-predictable. Risks can be of a constant probability or a variable probability.

A significant part of the risks can be successfully prevented (prevention), and their monitoring is an important task to assess and calculate the threats that can affect our lives, our money. In many cases, prevention can eliminate a hazard, and monitoring can enable timely intervention to reduce or eliminate risks.

Risks occur with different probabilities throughout our lives, many times we may ignore the ones that are very unlikely to occur. If we are afraid that something will really fall on our heads when we step out into the street, we will never leave the apartment or the house, but if we recognize the risks, present in the apartment, we will not even get out of bed and if we face the risks of how our body works we must realize that life is unacceptable without risks.

Risks take us 'everywhere'. They lurk in the bushes, in the apartment, on the plane, in the car, in the food we eat, on the playground climbing frame, wherever one exists, there is usually a risk to everything. That's why a **risk-free state is a relative concept which means the lowest risk possible, but we cannot exclude it because conceptually a risk state does not exist.**

Financial risks are a well-analysed and interpreted group of risks. Money doesn't grow on trees, that's why what we have earned, we try to pose by reducing the number of threats, risk, while we also want to make a profit using it. There is no risk-free money either. We can be robbed at home, somebody can find the money we buried, the money in our bank account is endangered by the operation of the bank and money lent to the state also carries risks (we have seen this in Greece and Cyprus recently).

If we are confident that our money is at risk by its very existence, then we need to anticipate and manage the risks. And if in every case the presence of risk can be justified, the question arises, when making an investment how much risk is involved. If we know the risks of investing, then we can compare them to expected yield, returns.

Initially, we accept the fact that there is a certain risk to our money that is inflation, which is almost always present. If we do nothing with our money, it is doomed to deterioration due to continued inflation and monetary deterioration.

For all these reasons, we can say that it is our duty to do something that guarantees the value of our money. To ensure this, we need to be aware of the financial risks and understand that the least we need to do when managing our money is to "beat inflation".

Financial risks are extremely diverse, and they can originate from one another in a matrix-like manner. If a country goes bankrupt and the money becomes irrecoverable, no matter what financial product we invest in, our investment may be depreciated, or it can be the investment that saves us from our money becoming worthless. In order to become aware of the risks of financial products and assets, we must first become aware of some of the risks that indirectly affect investments, but the risks that come with them are not negligible.

INDIRECT RISKS

Indirect risks are innumerable factors. When the evil extraterrestrials come to us and threaten humanity by destroying its breed, then all stock quotes are likely to plummet. We may have seen such a movie already as a product of imagination. Stock indices would lose 30, 40, or 60 percent in one day. But why is that? If all is over, what can we do with the contra value of the shares we sell, the money? Probably nothing. However, if we were to escape, we might be better off with something other than stock, say gold, which remains rare even in the event of partial destruction of the earth, but may, that something completely different would be a real investment vehicle instead of "fading" corporate shares, that we can swap quickly our otherwise worthless money. Mystical? Yes, but not impossible. Probably nobody expects this risk, does not try to analyse it, does not want to follow it, because the probability is immeasurably low, it is more worth saving the energy that we would spend on this risk, that it is really worth with the probability it carries.

However, there are also more probable dangers to our financial investments. These risks may reflect the changing level of risk not only in their full appearance, but they can also partially do it, reflecting the resulting risk factor. A company does not need to go bankrupt for its stock price to fall. A factory plant may burn (unexpected risk) a company may lose its market, which may weaken its sales returns and profits. All of these events can negatively affect the stock price. It is by no means true that none of these are visible, measurable risks. The trade war between the US and China from 2019 has clearly / had an impact on Chinese companies and Americans as well. The details of the commercial war were often revealed in a twitter post. Which company would be affected could not be predicted, but it was known that all US companies (with Chinese market) supplying to China and all Chinese companies supplying to America are in danger! This risk is a known risk. However, its size and exact involvement are not. If anyone wanted to avoid all the risk, he didn't buy such shares. Others wanted to buy equities that were undervalued by risk because they trusted that the conflict would be resolved and that prices would rise, so they used the risk to increase their return.

The degree of risk depends not only on the size of the risk in a given investment, but also on our exposure to the product. If the risk is enormous, but we are only exposed to 1 per thousand of our wealth, we should not be too much of a loss. If a significant part of our wealth is in a risky product, it can have a negative impact on a risky investment throughout our lives.

Country risk can affect us both when investing in a foreign country and when we are citizens of that country. You can also be indirectly affected by investing in a company stock if the company or part of its business is in a country with something negative that could affect the company concerned.

Country risk: country risk is the risk of investing and lending in a country, where changes in the basic conditions of investment and lending activities may have an adverse effect on the value of the fixed asset, of-sale, the profitability of the investment, sustainability of credit value, refundable capacity. Such risks may include changes in regulatory conditions (legal), civil war, change of government, etc. (political), the economic situation in the country and its perception (credit rating), and all those things which can have a negative impact on the investment tool and carrying out lending activities.

Country risk is determined by a combination of many different factors, the most well-known being the economic, political and human rights related risk factors.

Country risks are constantly assessed. It is categorized based on the rating. The best known such rating is the rating of foreign, major credit rating agencies, who comment on the risk of a country's investment risk, with a government debt rating. Moody's, Standard and Poors and Fitch Ratings are the three internationally ranked credit rating agencies that continuously review, evaluate, and classify Hungarian government debt. In today's world, the most important requirement is that a country reaches at least the investment grade in the rating system, which means that the credit rating agency considers the country's government debt and, through it, its investment assets to be recommended for investment. In 2019, Hungary is in the investment category (above it) for all three credit rating agencies.

The table below illustrates the categories of sovereign debt of the three CRAs and the ratings assigned to each category.

MOODY'S		STANDARD AND POORS		FITCH RATINGS		
Long term	Short term	Long term	Short term	Long term	Short term	Rating
Aaa	P-1	AAA	A-1+	AAA	F1+	The best (P)
Aa1		AA+		AA+		High category
Aa2		AA		AA		
Aa3		AA−		AA−		
A1		A+	A-1	A+	F1	

A2		A		A		Higher-middle category
A3	P-2	A−	A-2	A−	F2	
Baa1		BBB+		BBB+		Lower-middle category
Baa2	P-3	BBB		BBB	F3	
Baa3		BBB−	A-3	BBB−		
Ba1	Not Prime	BB+	B	BB+	B	Not investment category speculative
Ba2		BB		BB		
Ba3		BB−		BB−		
B1		B+		B+		Highly speculative
B2		B		B		
B3		B−		B−		
Caa1		CCC+	C	CCC+	C	Basically risky
Caa2		CCC		CCC		
Caa3		CCC−		CCC−		
Ca		CC		CC		Extremely speculative
		C		C		Threatens with insolvency
C		RD	D	DDD	D	In bankruptcy, insolvent
/		SD		DD		
/		D		D		

In 2019 Hungary is classified as Moody's: Baa3, SP: BBB, Fitch: BBB. It is clear that Hungary's debt rating is in the investor category only for Moody's, while in the Standard and Poors and Fitch Ratings, it exceeds the investor category threshold by two levels.

Country risk is very important for investments because most foreign capital can only come to Hungary if we are in the investment category. Foreign investors mostly determine the riskiness of a country on the basis of credit rating agencies. Many foreign investment funds can only buy investment assets in one country if it is at least in the case of two of the three qualifiers in the investment category.
The risk classification is also important because foreigners invest their assets in a particular country in the official currency of the country and are thus significantly exposed to the exchange rate of the currency. This is a significant part of foreign exchange risk. The devaluation of investments in the country's currency means that investors will be able to exchange their forint nominally for less euros, dollars, other means of payment, after they want to take home the money from the sale of the investment.This is exactly the case with foreign multinational

companies operating in Hungary, who are making their forint-denominated profits. It has its own significance how many currencies they will be able to convert.

For a country to have healthy foreign and domestic investment and be able to stay at this level, it is essential that the country's risk rating is in the minimum investment category.

In the evaluation and examination of country risk it the behaviour of the government of a given country is extremely important regarding its market economy, social values and other decisive, confidence building activities. Government direction, behavior is a strong risk-increasing or reducing factor.

SECTOR RISK

The various fields of activity and branches of economic activity are usually divided into sectors. A significant part of the financial risks may come from these economic sectors. The truth is that the term sectors is somewhat mixed in economic terms, because the adoption of American sectors in the securities trading concept differs from the three basic sectors of economics (primary, secondary, tertiary).

The organizations that create and operate the indexes, MSCI (Morgan Stanley Capital International) and Standard and Poor's have created the so-called Global Industry Classification Standard (GICS), the primary financial standard for the sector classification of securities. GICS comprises 11 sectors, divided into 24 industry groups, 68 sectors and 157 subgroups.

The operating areas of the economy were divided into sectors by establishing the GICS standard. The breakdowns by these sectors are suitable for tracking the operating areas on the basis of various metrics and indicators. The US-based operating sectors of the economy are the following: 1. Energy. 2. Goods. 3. Industry (Industrials). 4. Consumer Discretionary. 5. Consumer Staples. 6. Health Care. 7. Financials. 8. Information Technology. 9. Telecommunication Services. 10. Utilities. 11. Real Estate.

It is important to note that crises in the world (economic and financial risks) typically had sectoral starting points. Crises in individual sectors often cover most of the economy, or even the whole, and can be used not only to represent immediate economic risks, but also to spread through economic problems to real social problems that can eventually escalate into civil wars or wars.

The crisis caused by such a sector was most recently the financial crisis, which started in the financial sector in 2008, but has had an impact on the real economy as a whole worldwide and has had some social consequences.

Recent major crises:

1997 - Far East crisis (real estate) - real estate price problem;
1998 - Russian crisis (financial) - partial Russian bankruptcy;
2000 - dotcom crisis (technology) - Internet bubble;

2008 - Great financial crisis - rampant lending;

Sector risks are therefore constantly with us. Regulation continues to try to mitigate emerging crisis situations, which are quite normal in a cyclical market economy. **The regulation, with the development of tools for prevention surely we can find a "cure" for countless situations, occasion, but in modern economies it is just that beautiful, that every situation, occasion cannot be modelled, so we can't even prepare for everything and we can't prevent everything. The basic concept of a market economy is cyclicality, which is a systematic source of crisis situations.**

The economic sectors, as operating areas of the market economy represent well the various spheres of the whole economic mechanism, but it is far from true, that division into sectors is a completely correct procedure. In the economy, these areas are interdependent in many factors, so total segmentation is incorrect. Sector specific indicators and their changes can have a direct impact on the performance of other sectors, how it works, so tracking their metrics, measurement in many cases incorrect as a separate sector analysis and the risks involved, usually appear in a matrix form, less often as an independent risk of the individual sectors. For example, a crisis in the financial sector may result in a decline in the willingness of the population to purchase consumer goods, an extreme increase in indebtedness, a fall in the real estate market due to a lack of purchasing power, and many more.

It is typical of the market economy as a whole that the performance of the sectors is different, even if in many ways their operation is interlinked. For example, in the present (2019), technology is the dominant sector, whereas before the 2008 financial crisis, finance was the fastest growing and best performing sector in the world economy. As with their performance, their risks vary across economic sectors. The level of risk is highly dependent on the general operation of the sectors and the (state) conditions of regulation. **The development of a market economy creates a mandatory set of rules for every economic area, but these rules are neither perfect nor often inadequate regarding perfect treatment of the dangers, the risks and the resulting crises.**

BUSINESS RISK

Businesses populate different areas of the economy. These business organizations are called upon to answer three basic questions of economics management: What? To whom? How? Businesses are created by risk. They take risks to achieve their profit goal. The very word 'enterprise' implies that we undertake to accomplish something, but there is no guarantee of that performance, but it indicates that we are working to bring it about.

We can start a business by investing some capital, basically money. In the course of running a business, this is the money we risk, except, if the investment involves other obligations, liabilities that may exceed our invested capital.

The company's operation is determined by the market and its viability, while producing a good, product, service to make a profit from the sale of the good produced, i.e. the total cost of production of the good (including all direct and indirect costs) minus the selling price of the good to make a positive difference, which is the business benefit.

A business is exposed to countless risks while striving to achieve its profit goal. Many risks can be significantly reduced, many risks can be eliminated, but it is impossible to exclude all risks. Risk is inherent in the business. The risk-taking of the business must be commensurate with the size of the profit target, and in return it can be undertaken. The perception of risk as a factor and the profit target as an expectation is a subjective factor that must be accepted by the holder of the enterprise risk by taking the risk in exchange for the right to profit.

The risk of a business is any potential threat that has a negative impact on the business or management of the business, which directly affects the amount of money we invest in the business or our ability to generate yield.

The risks of a business do not just mean losing our invested money. The danger of anything happening is a risk that negatively influences the phenomenon, which is our expected profit goal, our business plans.

The success of a business can depend on many factors. The person (s), body (s) involved in running the business is called upon to make the decisions necessary to run the business, consider the risks associated with the operation of the company.

(TOP) MANAGEMENT RISKS

Companies are being run by humans, despite the growth of robots and the rise of artificial intelligence in recent years. The number of executives with management powers, the number of governing bodies and the bodies that oversee the management are most likely to be the size of the business, depends on the magnitude of the operating activity performed.

Listed companies are public limited companies. Most of them have a Board of Directors, which has the power to decide on issues related to corporate governance. Under the Board of Directors, there is usually operational management, with the Chief Executive Officer, who is responsible for all the employees of the company who work in managerial and executive positions for the day-to-day operations of the company.

The Supervisory Board is responsible for overseeing the operation of the company and the proper process of its decisions and implementation. (Many institutions also have other control areas, such as internal control, compliance.) The role of the Auditor is also considered a control area, who is responsible to ensure that the accounting of the company, the resulting balance, statements and other mandatory financial documentation correctly present the company operation, its, value, financial and economic characteristics.

Performing management roles has a fundamental impact on the operation of the

company. There are many risk factors involved in the decision-making mechanism. The work of senior management consists of a lot of good and bad decisions, where bad decisions can pose significant risks to one part, or even the whole company.

Management can not only cause damage to the company with bad decisions, not only their decisions can carry risks. Individual interests can often be different from those of a company and this conflict of interest can be detrimental to the company and beneficial to the person performing the management duties. Preference for personal interests over company interests is fundamentally prohibited by law, and such senior management behaviour is usually constitutes as a criminal offense.

In addition to the above, managerial risk can be identified in many, many other cases. For example, termination, death, disability (etc.) of a key manager is also a significant risk factor.

The company's organization strives to reduce the risks in relation to its executives through policies, procedures, and the development of an interest system for its managers.

Summary: in this chapter, we have learned what the indirect risks in the territory of financial risks are. These risks are an important basis for financial risks, but rarely incorporate directly the risks of each financial product.

RISK OF A FINANCIAL PRODUCT

There are countless financial products. The range of these products is constantly changing, expanding most, but there are also examples of regulations that prohibit certain types of products or apply regulations that fundamentally change the characteristics of certain products.

The definition of financial products is specified by the Hungarian law in force (Act CXXXVIII of 2007) as financial assets. Financial products, tools are not covered in this chapter, only their general risks, as a summary of risk characteristics.

Financial products are assets that can be bought for money. This purchase as a procedure is called investment. So, we invest our money while investing in the money and capital markets into an investment asset. After we buy this asset, we expect it, that is, from the investment it represents, to provide some sort of yield. This added value can take many forms, including interest, yield, dividends, exchange gains, the yield of possible capital reduction, etc.

We need to take risks both in terms of our capital and our expected returns. There is no

guarantee regarding neither the exchange rate gain nor the dividend, etc., and if the issuer of the asset assumes a buy-back (higher than the purchase price) or dividend payment guarantee, even then, due to many factors, it would be impossible for this issuer to meet its guarantee for some reason. The guarantee promised / undertaken by the issuer itself is not complete because the issuer itself may be a form of risk (issuer risk).

When investing in financial products, we must take a risk, and the question is how much we consider this risk to be and how much it is in relation to the expected return. For example, if you are buying Hungarian government securities, you have to consider the risk (the probability of not paying back your money) and in relation to this risk what is the yield, interest that we can get for investing in government securities.

Anyone who thinks there is a risk-free investment is very seriously mistaken and does not know much about the real risks associated with financial instruments. Anyone who wants to exclude all risk, however, tries the impossible, because the risk is also present even with our uninvested money (e.g. inflation), the only case when financial risk is zero is if we have no assets, we may not be exposed to financial risk, which is very rare and it occurs in case of very few in today's "modern" world.

LIQUIDITY RISKS

Probably the risk considered the least important and "feared" among the best-known risk factors is liquidity risk. While we are basically concerned with how our financial instruments, such as stock prices, change day by day, we don't really focus on the very important issue, whether we are able to sell our investment at all, and if so, for how long we can sell it. Exactly the same goes for that if we want to buy a certain product, can we buy it and if so, what time period is required for that?

The term liquidity of a financial product is a measure of how much a product is traded over a period of time, that is, how many units of a product changes hands over a period of time, with relatively balanced exchange rate movements. Trading can be related to all tradings, or the financial instrument number (for example, daily stock volume relative to the total number of shares issued for a specific share), but it can also be quantified. High-turnover financial assets are referred to as high liquidity ones and low-turnover financial assets are referred to as low liquidity ones.

High-turnover, high-liquidity financial assets can be bought and sold in larger volumes easier and faster, and low-turnover, low-liquidity financial assets are more difficult to buy and sell at higher volumes.

At the same time, “higher volume” is relative, as is the “magnitude” of issued financial products and assets. Liquidity therefore needs to be measured not only in terms of numbers and monetary value, but also in relation to the total size of the financial product issued, in terms of both number and monetary value.

The true measure of liquidity may not necessarily be clearly deduced from the known turnover of a given financial instrument. Many unknown factors may occur. For example, volume buy or sell offers (with lower sales volumes the purchase offer will not be activated and vice versa, for smaller purchase volumes the sales offer is not activated), but it is also possible to have a buy or sell form that would only be measurable on the buy and sell side if there was a significantly higher counterparty bid.

A very good example of the unpredictability of the real volume of liquidity market maker trading, where on the buy and sell side the market maker quotes the price and "showed" during the quotation buying and the buying and selling volume which arrive is many times as much as the new offer, if the "shown" buy and sell quantity of quotation is satisfied.

The risk of low liquidity is crucial, because in whole or in part it may become impossible to sell a financial instrument, going out from the financial instrument, as an exit from a position, closing the position, further loss, elimination, avoidance of financial risk.

EXCHNAGE RATE RISK

There are basically two ways to achieve exchange rate gains with financial products. In the case of the so-called “Long deals”, we first purchase the financial product (we take a long position in it), and later we try to sell the product at a higher price than the purchase price. If we manage to sell at a higher exchange rate than our purchase price, we will realize exchange rate gains. In the case of so-called "short deals", we first sell the financial product (we take a short position, it is either automatically possible due to the nature of the product or, for example, a share sale can be executed from a loan), and later we will try to buy back the product at a lower price than the sale price was. If we succeed in taking it back at a lower exchange rate, then our selling price was, then we will realize exchange gains.

So, the point is, whether we are initiating a Long or Short deal, we can make a profit, if our purchase price is lower than our selling price, that is, our selling price is higher than our buying price.

However, the achievement of exchange rate gains depends not only on the purchase and sale rates but also on transaction related costs. Such costs may include transaction costs that are charged to the transaction, but we must count on overheads, which is the fees associated with keeping and maintaining our account. In many cases, costs are responsible for the negative outcome of a transaction, although our purchase price was higher than our selling price.

We take the risk to achieve exchange rate gains because there is no sure guarantee that we will be able to sell a financial instrument at a higher price than our purchase price (Long range), or, we can buy back a financial instrument (Short transaction) at a lower exchange rate than our selling price. The level of risk can depend on many factors, including our total invested funds fail because in some cases (leveraged trading) we may experience losses in excess of our invested amount.

Financial instruments include many structured products exchange rate fluctuations of which not only have a direct effect on the gain or loss on exchange rates, but may also be linked to other conditions of performance or to other assets. These products generally have special and non-general rules.

RETURN RISK

Yield risk can imply several different types of risk, and the concept of return may be different when interpreting the return on investment. Yield may be the interest rate but may be the yield from the expected earnings per share or even a complicated yield curve, as the maturity structure of the bonds. Yields can be fixed, that is, a mandatory investment return premium, but they can also be a variable-value, something that can be linked (for example, to inflation).

Return (simply): the capital gain of investments.

Return risk is the risk of not meeting the expected return, and the risk of a change in the yield environment on the investment, if the investment is sold, or settled periodically (investments of fixed income character).

For example, if you buy a ten-year government bond with a fixed yield of 5 percent and one year from now as a change in the yield environment the yield on ten-year government securities Changes to 10 percent, in case of an immediate sale we have a significant loss, because of a 5 to 10 percent yield on a bond sold (5 percent annual yield over 9 years) we can lose a significant part of our investment. Conversely, if we keep our 5% bond until maturity, then we make a profit instead of a loss, but this yield is relative, whereas, in the meantime, in a significantly higher yield environment, we could count on a much lower return on the investment.

The concept of negative interest rate investments has appeared in the last decade, when the expected yield, results in an investment with a negative outcome calculated at the start of the investment, which means a decrease of capital of the investments. Processes such as these carry significant risks in themselves. On the one hand, it is because of unknown territory economics, in the mechanism economics of action operating during decades, on the other hand, investments calculated without yield, with negative interest rates (Yields) can cause money and capital market turbulence impossible to judge.

Financial products brokerage is a set of licensed, controlled and supervised services provided by the National Bank of Hungary. Financial products, instruments as investment tools may be brokered or traded by Investment Firms ("investment service providers") or by banks with investment services activities.

In the course of their activities, investment firms, banks ("investment service providers") provide or carry out investment services to third parties (clients) for consideration. The activities of the service provider may pose different types and levels of risk during the execution and carrying out of the service.

The most important, highlighted risks are the following: 1. Risk of bankruptcy of the service provider. 2. The risk arising from the contractual relationship between the service provider and the client. 3. Transaction risk. 4. Settlement risk. 5. The risk of the service partner is applied to the client risks. 6. Risk of suspension of the activity of the service provider by the MNB. 7. Risk of legislation over service provider accounts, risk of state regulation (regulators). 8. Etc.

1 Risk of bankruptcy of the service provider. The failure of banks and brokerage firms in the financial field can basically occur for two reasons. This may occur because the service provider is exposed to an amount of damage exceeding its total assets due to its own risk or that of its partners. These risks affect all areas, not only the risks arising from positions, but the most likely risk of insolvency is the unfavourable and extreme exchange rate movements of the position sponsors or / and their own portfolio because in other risk situations, the occurrence of insolvency generally does not affect separately managed client assets, it may be provided even if the service provider is unable to settle his other obligations. Another case that could lead to the bankruptcy of the service provider and the loss of client assets is the damage to client assets resulting from a crime committed by the service provider's employees. In both cases, in order to prevent bankruptcy related to operational and employee abuse, service providers are subject to extremely high and stringent rules regarding the conduct of their activities in relation to their staff. In Hungary, the bankruptcy of Budacash, Quaestor and Hungária brokerage firms swept through the Hungarian capital market causing hundreds of billions of HUF of damage to investors.

2. The risk arising from the contractual relationship between the service provider and the client. This risk means that the client is exposed to a number of risks under the contract with the service provider that are not or only difficult to enforce legally against the service provider. For example, changes in business conditions and client traceability, burden of obligations and many contractual requirements that can result in a significant financial burden. Even if there was a way for the client to litigate, it would in itself require time, effort and financial burden.

3. Transaction risk. The Service Provider shall be responsible for receiving / accepting and fulfilling the Client's orders. However, there may be many situations where the client's order is not fulfilled, or only partially fulfilled, in some cases less favourable than it might have been. Examples include the availability of a communications channel provider in online trading, the operation of a stock exchange system, the availability of a broker, etc., regarding which the

service provider seeks to exclude, but the risk is specific, the client may suffer damage that he or she cannot clearly enforce against the service provider.

4. Settlement risk. The risk of physical settlement or settlement of a financial instrument purchased by a client in the course of securities trading, which may or may not be executed on time, which may cause damage to the client.

5. Client risk of the service provider's counterparty risk. Most investment service providers work with other partners, custodians and executives. He/she can exclude part of the risk borne by these partners and charge directly to the client, if these service providers are not responsible for any damage that may be caused.

6. The risk of suspension, pausing of the service provider's activities by the MNB. The activities of the service providers are supervised by the National Bank of Hungary. If the MNB experiences serious misconduct, breach of law or offence against the law in the course of its monitoring and oversight activities, the MNB may suspend or possibly revoke the license. In these cases, the client may suffer numerous damages. For example, restrictions on the movement of money and securities (access to assets, disposal), the impossibility of placing orders, the locking of open positions, etc., all of which may cause damage, loss, and enforceability against the service provider is questionable.

7. Risk of legislation, governmental regulation, regulation over the accounts kept by the service provider. The summary of regulatory risk is that regulatory changes that occur regardless of provider or client - which at the time of the establishment of the contractual relationship were different or did not exist - may have an impact on the operation of the service provider, on the conduct of its activities or on the client and its assets, either directly or indirectly. Frozen accounts, extraordinary taxes, etc. as an unexpected event, may cause damage and costs to both the service provider and the client.

8. Etc. there are several others less relevant or unidentified risk factors that may arise from the cooperation between the client and the service provider, the activities of the service provider and regulatory provisions.

NDIF AND IPF

Provider risks need to be considered not only on the individual level, but also on an overall social basis: the importance of financial confidence in a country, a guarantee system that mitigates the exposure of individuals and companies regarding financial institutions.

In Hungary, the money and financial assets of the general public and legal entities are protected by two types of funds in the event of a potential bankruptcy of service providers. However, these funds do not always provide protection for all products and have many rules, including the limit of values, to which the insurance applies.

NDIF - National Deposit Insurance Fund

The members of the NDIF are banks, savings banks, savings and credit unions and their foreign branches. The insurance service of the NDIF covers only its member institutions.

NDIF protection is not provided for every banking product, a form of savings. Deposit insurance coverage is limited to registered bank deposits with affiliates or branches abroad, regardless of the reservation (certificate of deposit, deposit accounts, current account, bank account, payment account). Due to periodic changes in the law, NDIF protection is extended to bonds and depository receipts by the banks issued, between 1 January 2003 and 2 July 2015, until they expire.

Only NDIF members are eligible in Hungary to receive deposits and only these can be members of the NDIF. Under the legal provisions in force, NDIF membership is mandatory for organizations licensed as a credit institution.

In the event of the credit institution becoming insolvent, NDIF pays the client compensation within 20 working days if the bank deposit cannot be withdrawn. Indemnification is up to EUR 100,000 per depositor and per credit institution (this amount may be increased by up to EUR 50,000 in exceptional cases).

If a client (a private individual or a legal entity) places their money in more than one bank, it becomes ...more than one bank, he /she is insured up to EUR 100,000 per bank.

IPF - Investor Protection Fund

IPF indemnification applies only to investors who have entered into a valid contract with IPF member and have money and / or financial instruments registered in their name and the investment service provider cannot provide it to them.

IPF insurance comprises commissioning, securities trading and portfolio management, and custody of securities, deposit handling securities and client account management services.

IPF provides insurance up to a maximum of EUR 100,000 per client and service provider. The amount of indemnity up to one million forints is 100 percent, ninety percent of the amount of one million forints and over one million forints.

IPF will not pay compensation in the following cases

- If the investor-contracting entity was not a member of IPF at the time of the conclusion of the contract,
- If the investment is based on bank deposits,
- If the claim is based on an impairment of an investment,
- Where the investor is legally excluded from compensation,
- If the investor has no insured contract or the claim is not for the issue of money or financial instruments held by an IPF member,
- If the investor is not listed in an IPF member register.

Summary: in this chapter we have learned about the direct risks to our investment.

LIVING WITH FINANCIAL RISKS

Risk elimination is only possible if we try not to take risks at all. As we have examined above, it is impossible to exclude all risks, even if we do nothing with our money (e.g. inflation). However, the rationality is that it is not worth avoiding all risks, and there is an explicit need to analyse, investigate and manage the risks in order to make rational decisions regarding our investments.

We have to live with risks, but the more professional we are in weighing and managing our risks the more likely we are to achieve outstanding results as a result of our investments.

In recent decades, serious models have been created for the processes of risk analysis and risk management. It is very important to emphasize that the process of risk analysis and risk management are not inseparable systems. It is possible to analyse risks before and after investments exist, while risk management is essential for investments made.

In risk analysis and risk management, it is not necessarily justified to “go deep”. Risks and threats are basically the analysis, identification and management of high risks. If we were to analyse the risk of the coming of the Martians on a daily basis and have procedures in place to justify proper risk management, our life would be limited to this and the examination of such disinterested risks.

Risk analysis and risk management procedures are designed to help you decide what risks you are willing to take and how much they represent in relation to the expected return on your investment, and how to deal with the situation when the risks are finally fulfilled, how we are able to effectively handle claims and reduce them.

RISK ANALYSIS

The concept of risk analysis and risk management is intertwined in many areas. However, it is a process that can be separated into different stages.

Phases of risk analysis

1. Research of risks;
2. Identifying risks;
3. Risk grouping (matrix based, also as model);
4. Determining the likelihood that risks will materialize;
5. Determining the expected effectiveness of risk exposure;
6. Preparing a decision to take or reject the risks;

1. Research on risks. This means that all the risks that may affect the effectiveness of our investment (within reason, there is no "Martian syndrome") must be considered.
2. Identifying risks. The comparison of the risks taken into account with other known and identified risks, linking the features to the model, and gathering all known factors.
3. Classification of risks. Risk classification into different groups and how the risks assigned to each group affect the other groups, how they reinforce or weaken each other in terms of occurrence or effect.
4. Determining the likelihood that risks will materialize. The likelihood of the risk occurring should be considered. This is usually divided into percentage groups and may include sample standards.
(For example, country risk may take into account percentage probability data from international standards.)
5. Determining the expected effectiveness of risk exposure. It refers to the nature and extent of the potential impact on our investment or its return, if any, of the risk materialized.
(For example, a bankruptcy in the form of country risk, the extent to which it may result in a loss for money invested in government securities of that state.)
6. Preparing a decision to take or reject the risks. A summary of risk analysis to help you make your investment decision, based on points 1-5, considers the risk level of the particular investment. The risk summary can be used to decide whether to take the risk (entry into the investment) or to reject the risk (to reject the investment).

Many models have been created regarding the risk analysis process. However, it should be noted that the risk analysis part of financial investments is only a small segment of the risk analysis. However, it should be noted that the risk analysis part of financial investments is only a small segment of the risk analysis. Most of the models are not used to prepare a specific investment decision, but are part of corporate governance systems, a model that supports IT, and so on.

To make well-considered investment decisions, to correctly judge the risks you can take or reject, we need to know not only the risks and their likelihood, and its effects, but also the amount of investment (relative to all stocks), and our willingness to take risks. This is why risk analysis is only a preparatory and not a decision-making mechanism used by an organization or individual to make its own responsible financial decisions.

Same as with risk analysis, risk management can be divided into different stages, but in this case the time zones of the different stages may vary:

Let us also examine the different stages in terms of risk analysis and stages of risk management:

Stages of risk analysis:

1. Research of risks;
2. Identifying risks;
3. Risk grouping (matrix based, also as model);
4. Determining the likelihood that risks will materialize;
5. Determining the expected effectiveness of risk exposure;
6. Preparing a decision to take or reject the risks;

Stages of risk management (including risk analysis):

7. Monitoring the risks taken;
8. Processes and methods applied when risks materialize;
9. Risk review - risk analysis;

If, in Section 9, there is an increase in risk by identifying new risks, then the risk analysis of points 1-6. is re-implemented and in point 6, the continuation of the investment or liquidation thereof (exit factor) will be the end result of decision making.

7. Monitoring the risks taken. Whether or not all or part of the risks have been realized must be determined continuously, or periodically during the investment. That is, we need to notice if the risks identified in the risk analysis prevail.

8. Processes and methods applied when risks materialize. During a given (open) investment, we need to know exactly what reactions we are responding to when known risks occur. (For example, we may close a long position as a cause of unfavourable exchange rate developments as a valid risk because we have reached our maximum risk of exchange rate risk (stop-loss limitation)).

9. Review of risks. This is where the analysis and the treatment come together, in terms of time and stages of risk analysis and risk management. In order to be able to evaluate our existing investments in terms of risk, we need to periodically reconsider the scope of risks and possible changes in identified risks.

Even in the case of risk management, it is true that only a small part of the procedure used for a particular investment is more of a corporate risk management structure. This is the case, for example, with the so-called "implementation plan" that is mandatory for investment firms and banks as part of the risk management that it is intended to regulate, what the given service provider can and must do, if some of the risks prevail, what predefined responses and procedures can be applied by the given organization.

A high level of risk management cannot only address the risks to the investment under consideration and to the investor itself but can also affect the financial system as a whole, its operation and security.

RISK-REWARD

Risk and return. This is how the effectiveness and usefulness of all investment and investment actions can be summarized. Any kind of risk can be taken, but that does not mean that it is worth taking it or that it is reasonable at all. An important factor is that it is not necessarily the risk that is high or low that determines whether a risk is reasonable. The question is, above all, what is high or low relative to. "Compared to what" should always be understood in relation to the return on investment or the risk of other investments deemed to have a similar return.

Risk - Return on Investment: ratio that denotes how much our return on investment per expected risk is, per unit of risk. Risk is always a value of 1, plus a multiple of the risk value as the expected return. For example, 1: 2, 1: 3, 1: 4. If we buy a stock for HUF 10,000 and we think the real fair value of it is HUF 12,000, so we are planning this HUF 12,000 for the exit point of our investment, then our return on investment is HUF 2,000. This is a ratio of 1: 2 to a ratio of 1000: 2000, that is, we are willing to take a maximum risk of HUF 1,000 if the share price falls to HUF 9,000, we get out of the investment, we sell the stock. The ratio we use depends on many factors, but the generally accepted minimum is 1: 2.

For many investments, both factors of the ratio pair are a real challenge because the total risk and the expected cash loss of the risks are not clearly defined, and the expected yield / return is an extremely subjective value, as there is no guarantee that our expected return will be met.

It is a common misconception that returns are calculated on a gross basis and do not take into account the costs or burdens of investing. In many cases, the positive outcome of an investment depends on the cost. Therefore, as a probability calculation, it is in vain for a stock market trader to open profitable positions above 50 percent, the distorting effect of costs and the inappropriate management of position size can be ample reason to trade at a loss.

Not only in stock trading, but also in our other investments, we need to evaluate the risk-return ratio, and also to assess whether or not to enter this investment. Because the elements of total risk and expected return, or a combination of factors that affect them, cannot be fully calculated, risk-based investment is only one element of the investment decision-making process.

Summary: in this chapter we have learned how to deal with risks and that taking risks can be not only a danger but also a value.

RISK SHARING (DIVERSIFICATIONS)

With reference to the US Securities and Exchange Commission Interpretation on Diversification:

“One of the most important ways to lessen the risks of investing is to diversify your investments. It’s common sense: don’t put all eggs in one basket. If you buy a mix of different types of stocks, bonds, or mutual funds, your overall holdings will not be wiped out if one investment fails. If you had just one investment and it went down in value, then you would lose money. But if you had ten different investments and one went down in value, you could come out ahead.”

In Hungarian, this means: “One of the most important ways to reduce risks is to diversify your investments. Common sense: don't put all your eggs in one basket. If you buy a portfolio of different types of stocks, bonds or investment funds, your entire investment / savings will not disappear if one of the investments fails. If you only have one type of investment and it loses value, you lose money. But if you have ten different investments and one loses its value, your overall investment can be positive.”

Well considered by the SEC, this is one of the most important ways. However, this does not mean that it is the only tool for risk management. Not to mention that the SEC is only talking about sharing the risk of the financial instrument, the diversity within the investment class of the financial instrument. But this in itself is very little.

WHAT IS DIVERSIFICATION?

Diversification (diversification): basically, it is about sharing risks, with the variety of investments where we do not invest money in a single investment class, group, asset, but we invest in different investment classes, groups, assets based on some sharing principle so that the risk does not occur at the same time, endangering all of our invested money.

The aim of diversification is to preserve wealth, while the concentration of investments serves to increase wealth more actively. This is an important but contradictory thing, which means that without taking the risk factor into account, you can grow assets more actively, but there is no guarantee that it will remain. The essence of diversification is to minimize risks and ensure a steady, stable return.

There are many forms of diversification. Any way to share your investment is conceivable, but it is definitely worth thinking at levels. The pinnacle of sharing when managing an asset is division by class, form. For example, the class of cash and financial assets, from here you can divide the money into different currencies, or you can divide the invested funds into bonds or equities by calculating securitized financial assets. The more divided your entire investment portfolio is, the greater the certainty you will be in preparing for any eventuality, but not necessarily equal to using the risk / reward pair effectively.

Practical experience shows that the higher the total value of an individual's or group's assets, the greater the need for the preservation and value of assets to be the primary consideration and the high-risk appetite becomes secondary. Asset building and asset preservation is a complex and multi-factor process. It is difficult to categorize a few million forints into investment classes, but it is difficult to diversify even in individual investment areas, while most people with a few million forints dream of having tens or even hundreds of millions, for which the path is possible with active risk taking (usually), but if successful, how to change the exaggerated risk-taking strategy so far and instead become risk averse, if the money comes from taking the risk? "What came easily goes away easily."

Risk sharing can take many forms. It is not just about the subject of investment it is about diversity. It can even be aimed at the duration and length of investments, for example, if it is a risk that we will need to use our savings in the future, to meet our needs.

A production company can also diversify the range of products it produces, the different groups of goods produced, the production of which is targeted at the client, the quality indicators etc. to diversify its product portfolio.

ALLOCATION ACCORDING TO INVESTMENT FORMS (CLASSES)

Diversification by type of investment is the pinnacle of risk sharing and is usually the way to go for those with larger savings. The peak here is not the development of things, but the location of things. The first task of investment sharing is to classify, allocate the investments into classes.

The most commonly used classification for investments is "Division 3", which consists of the following INVESTMENT CLASSES:

1. Money and financial instrument
It is liquid and generates new investment. Mostly currency, foreign exchange, government securities, equity bonds etc.
2 Property
It is illiquid and valuable. Flats, houses, properties, land, etc.
2. Enterprise
Evolving, changing, adapting to the market. Business shares, stock, etc.
(4. Other)

The three classes are groups with different risks and investment characteristics as investment categories.

Money and financial instruments. Generally, the cash and financial asset class has the fastest and highest rate of gain. Simply because the high liquidity of these assets allows us to buy and sell investment assets almost immediately, which means extra efficiency, if we have an investment need in relation to the subject matter of the investment or wish to regroup, in whole or in part the existing but variable-risk, return-on-investment, investments.

The real estate investment class can also be a huge asset growth opportunity, but this is not necessarily true in general; rather, they have such characteristics periodically, and in the longer term, security plays a more important role in risk sharing. Its liquidity is variable. It may have high liquidity characteristics over time, but it usually takes much longer to dispose of a real estate investment as well as to purchase it with prudent and careful consideration. An investment in real estate can be a very important part of actively reducing the risks of higher volume assets, the risk of cash and financial products may, in significant and rare cases, carry the risk of losing the entire invested amount in the meantime, most of the risks of real estate investments can be completely eliminated, effectively reduced to the exclusion of very high risks.

Enterprise. The role of business ownership in risk sharing is diversity. An enterprise can survive any period of time if its activity has demands. While wars and economic turbulence characterize the world, a significant proportion of businesses are able to adapt to the changed situation, shape their activities, and transform the products, goods, services they create according to changing needs, pricing, etc. For example, if the purchasing power (currency) of a country's currency deteriorates significantly, the enterprise adjusts the price of its product, goods and services to the change in value, so that its activity may be partially independent of the risk of inflation.

Risk-sharing does not only mean that our money is classified in category 3, sorted into one-one investment class. Correct diversification means dividing the amount invested by class and diversifying according different investment groups, moreover, we buy different items for that group as an even more effective tool for risk sharing.

The more multiple and diversified the whole set of investments - the greater the diversification prevails - the more time, attention and caution is required. Excessive diversification at an unreasonable depth will impair efficiency and may also have a negative impact on the income-generating capacity of investments (cost, size, convertibility, etc.).

ALLOCATION ACCORDING TO FINANCIAL INSTRUMENTS

Group of financial assets (financial products) s a group of one of the classes of “division 3”. It is a group and not class because money and currency diversification itself are not included, although we are able to share the currency risk by purchasing financial products themselves, as long as the products are denominated in different currencies and foreign exchanges.

For example, putting together a stock exchange portfolio (financial instrument) could mean sharing it according to the following risks:

Our total available investable funds should be HUF 100 million. Of this, HUF 34 million goes to the cash and financial asset class, HUF 33 million goes to the real estate investment class, and HUF 33 million is invested in companies in the corporate investment class. We do not deal with the further division of real estate and business classes.

Further diversification of HUF 34 million in the cash and financial asset class, to the financial asset group. HUF 12 million will be invested in Hungarian government securities, HUF 10 million in corporate bonds and HUF 12 million in equities. We do not deal with the further division of the Government Securities and Corporate Bonds Group.

The diversification of HUF 12 million in the cash and financial asset class the financial asset group and the equity subgroup. We select 4 shares on the stock exchange worth HUF 3 million each.

What happens if one of the equity issuers goes bankrupt regarding our investments? We may lose all or part of the HUF 3 million we invested in that share, up to 3 percent of our HUF 100 million. What would have happened if we had invested all of the $ 100 million in this one share? We could have lost both our total investment amount, the HUF 100 million.

The group of financial assets is the group where we have the most different assets for our investments and where the value of our assets can grow the fastest, but it also includes the most-risky investment opportunities. For this reason, the cash and financial asset class is the most-risky investment class within Division 3, with generally the highest profitability characteristics.

In defining diversification, many people consider only the class of financial assets in the class of money and financial instruments. This is an extremely inappropriate approach to risk sharing. The practice of diversification is of paramount importance when investing in financial assets, but this does not mean that when investing all of our assets we should only count on financial assets and invest our money exclusively in this group.

RISK REVIEW, RECLASSIFICATION

Risks are with us all the time, but not only their identified existence can pose a danger and thus a problem but also their predictability. What's more, our risk appetite, risk tolerance and risk acceptance may change significantly over time as our assets change or our personality changes. There may be a different relationship to the risk of investing in an amount that is equal to some of your monthly income and the equivalent of your many years of income. The importance of taking risks is different in our young adulthood and this can change significantly in our retirement years.

The risks and evaluation of their commitment are a continuous task for everyone. To formulate why we invest the money we have available as savings, for how long and what we invest it in is the basis of our long-term financial success, if we even need to increase our wealth at all, we have goals to meet, we need even greater savings, and wealth.

Building wealth is just as difficult a task as realizing that taking on additional high financial risks is not necessarily over time. Money is a tool, a tool to make our lives more beautiful, meaningful, and partly happier, but that does not mean that beyond the frontier, it has any role to play in the further enrichment of wealth.

A risk can be minimal when tested, but it can grow over time. In our investment timeline, we must always evaluate how well-known identified risks change and whether they are accompanied by new risks.

Risk analysis and risk management are our partners in protecting our invested funds. If we are faced with unacceptably increasing risks and / or identifying new high risks, we face unreasonable risk factors in our investments, in order to protect our money, it is appropriate to exit all or part of our investments, to group the released funds into other investments.

The decline in the efficiency of our money-investing process for any reason (age, huge assets that are difficult to manage, etc.) should guide us towards reducing risks. Keeping our money, savings, and wealth is a much more important task than the need to maximize our return on investment!

Summary: in this chapter, we have learned about what risk- sharing means and why it is very important regarding protecting our money.

FINANCIAL INSTRUMENTS, PRODUCTS, SERVICES

PRODUCTS AND TOOLS OF THE MONEY AND CAPITAL MARKET

INTRODUCTION

IFA: Act CXXXVIII of 2007 on Investment Firms and Commodities Providers and the Rules of Activities Therein

"Section 6: Financial instrument

(a) transferable securities;

(b) the money market instrument,

(c) securities issued by a collective investment undertaking,

(d) * it is an option relating to a security, currency, interest rate or yield, trading unit or other derivative, financial index or financial instrument, stock exchange futures, swaps, OTC futures, and any other derivative contract, which can be accomplished by physical delivery or cash-settled,

(e) * they are commodity options, futures contracts, swaps, OTC futures contracts and any other derivative contracts that have to be settled either in cash or at the option of one of the parties to the transaction, not due to maturity or other termination- cash-settled,

(f) * they are commodity options, over-the-counter futures, swaps, and any other derivative contract that may be physically settled provided, that it is traded on a regulated market, MTF or OTF, with the exception of wholesale energy products traded on that OTF, naturally they have to be settled (actually delivered), as defined in Article 5 of Commission Delegated Regulation (EU) 2017/565

(g) * they are commodity options, OTC and OTC futures contracts, swaps, and any other derivative instruments that may be settled by physical delivery, other than those under (f); and as defined in the delegated regulation of the Commission (EU) 2017/565 not for commercial purposes,

(h) credit risk transfer derivative transaction,

(i) the financial agreement on the difference,

(j) * it is an option related to climate, weather, freight, inflation rate or other official economic statistics, stock exchange futures, swaps, over-the-counter interest rate futures or any other derivative contract, which has to be settled in cash or at the option of one of the parties to the transaction - not because the time limit for performance has expired or for any other reason- cash-settled,

(k) * they are other derivative instruments relating to any instrument, right, obligation, index, measure other than those referred to in points a) to j), which has the characteristics of one of the other derivatives, including whether it is traded on a regulated market or MTF, as well as derivatives as defined in Article 8 of Commission Delegated Regulation (EU) 2017/565,

(l) * it is a Greenhouse gas emission and air pollutant emissions law which consists of components which meet the regulations pursuant to Act CCXVII of 2012 on Participation in the Implementation of the Effort Sharing Decision about greenhouse gases in the Community trading system (September 2019)

The law seeks to carefully define the category of financial assets. It is a very difficult task to conceal the potential of all the tools because financial instruments are expanding rapidly, and completely nonsense products are created.

A major area of investments is the range of financial instruments. They can be bought and sold quickly, efficiently and liquidly, at least relative to investment opportunities in other investment classes.

Financial instruments are grouped in many ways. According to their commercial characteristics (listed, not listed), on the basis of contractual relationships (credit relationship based, membership provider, etc.), according to their settlement, maturity (prompt, futures), etc.

Financial assets are products that, inter alia, represent claims on real assets. Financial assets can only be exchanged for other goods or commodities through other assets. When purchased for cash, the performance of the financial instrument (exchange rate and other factors affecting its income) depends on the performance of the instrument represented, subject to the investment.

A financial instrument is any investment instrument that is admitted to trading on a regulated market or, in the absence of a regulated market, has trading conditions similar to those of a regulated market (OTC, MTF, etc.)

As a “product” of financial investment, the object of an investment can be divided into two main groups: cash (asset) and financial asset. This means that money is just as much a money market instrument as it is a capital market instrument and government securities with a maturity of less than one year, as a money market instrument is a financial asset. As a result, the group of money and financial instruments grouping is higher rating, than the money market and capital market product classifications.

MONEY MARKET AND CAPITAL MARKET PRODUCTS

Our money can be invested in a variety of products and forms of investment in countless ways. The performance of these investment tools and formality depends greatly on the time factor.

The difference between capital market products and investment products basically depends on the duration of the investment. Capital market products are generally of over a year, in many cases, forms of investment without maturity, while money market instruments are within one-year ones.

However, even though a product has an investment maturity of less than one year, we may not yet be talking about a money market product. Therefore, the distinction between money market and capital market products is not always a function of time. (For example, a futures financial instrument with a maturity of less than one year is not a money market product.)

Money market products are financial instruments traded on the money market that have a maturity of one year and represent a cash claim. The money market product line includes mainly debt securities with a maturity of up to one year (e.g. Discount Treasury Bill), bank deposits and all money market products, which are customary in the money market product range, applied for trading.

We call a capital market product any investment product that with a maximum investment duration or maturity of over one year, and any investment with a maturity within one year, is not designated for the money market product range (for example, regarding derivatives, the basic product).

MONEY AND MONEY EQUIVALENT

In our hands, our account is our money, which is the most possible liquid asset. When something has features similar to our money, but it is physically not money, then we are talking about cash equivalents. These are the "products" that can be converted into cash almost immediately, their behaviour is practically equal to that of money, the only difference is that we invest our money in these tools, because we expect them to make a yield, profit.

Cash equivalents include money market instruments and money market services. Typically, they are as liquid as money and short-term investments, usually of within one year.

Due to the short investment period, investments are mostly low risk but also with low expected returns. Since investments have a short lifetime, they are easy to measure, price, liquidation from investments (product sales) can be accomplished efficiently in the short term because of the low risk factor.

CURRENCY, FOREIGN EXCHANGE

We must always express our money in some currency and use that currency as domestic money. This is important because the basic function of money is, to meet our needs, but it has its own importance, what currency we use to meet these needs. For example, a Hungarian person prepares for the fact, that his money is in forints, and its value-added yield will and serve as a basis for meeting this need sometime. If the use of the currency in the forint is foreseeable, it is reasonable, that the domestic currency shall be the forint. If we are preparing to move elsewhere and use our money over the years, the domestic money need not be the forint.

We can exchange our money to another country's currency at any time if we think it will retain its purchasing power. In such cases, we must continuously evaluate this currency and express it in domestic currency. This can be done with the help of cross rates. For example, if we were buying euro for 300 forints a few years ago, then with the current exchange rate of HUF 300, our forint is worth 10 percent more, if we switched back to our current exchange rate and the forint is our domestic money.

But when it comes to investing, it is not just about for what kind of currency we have exchanged our domestic money and how its value has changed relative to domestic money, but also what kind of investments we could have made during this period for example, in our forint and what in the converted euro. It is quite possible, for example, that for many years, for example, the yield of a Hungarian government bond so much higher, like a German government paper, that we get more in vain, if we could have achieved a higher return on our forint-denominated government investment in the same period, when converting the euro to the forint (the example above is 10% higher forint value), than the total value of our EUR / HUF exchange rate gain and the yield on German government securities invested in EUR.

Currency: currency is the official physical banknotes, coins of a country, in another country's cash flow. Banknotes and coins of the Hungarian Forint are not considered currencies in Hungary, only abroad.

Foreign exchange: foreign exchange and currency are not the same. Our claim is called Foreign exchange, which is about a currency, as a means of payment for international settlement.

Cross exchange rate: countries' currency assets exchange rate, relates to each other and expressed with each other is called the cross-exchange rate. The cross-exchange rate denotes the conversion rate between the currencies of two different countries. For example, EUR / HUF 330 means that you can get HUF 330 for one euro when you convert the euro to forints, and for one euro you have to pay 330 forints when you convert the forint into the euro.

Money (portfolios) held in the currencies of different countries can also be one of the decisive elements of diversification, because of country risk and other, specific degree of risk associated with that currency is reduced by sharing, variety.

Cash assets and savings are our most liquid assets, but they are also the ones with the lowest return on investment. Cash and cash equivalents are most often included in our managed savings and asset portfolio, because either they are part of our total wealth tools for safety to reduce portfolio risk, or represent our expectation regarding an investment opportunity which has not yet arrived, or hold cash and cash equivalents in the short term to meet our needs for their use. As we have discussed before, holding money for unknown reasons carries risks in itself, most of the time our lack of willingness to invest is due to our low level of knowledge.

BANK DEPOSIT

You can also put your money in a bank account. This is a much more sensible act than keeping home, hiding money. Not only can we deposit the money we already have in the bank with an account opened in the bank, but nowadays the employer also transfers the payments to the bank account in exchange for the work done.

However, depositing money into our bank account also gives the bank the right to dispose of it, which does not mean that you can do anything with it, but that the bank may use it in accordance with applicable laws, regulations, with the obligation, that it has to pay it back to us.

Our money placed in the bank can be withdrawn at any time from our bank account and can be transferred from the account to other financial institutions and financial service providers. The money we put in the bank is the bank deposit. Normally, the bank pays interest in exchange for the use of our money, which is transferred to our account at

various times (contractual terms) and recorded with the rest of our money. It is also possible for higher interest to put our money into the bank in the form of a term deposit, which means that for a predetermined term (the period of the term), the bank pays a higher interest rate (interest on the term deposit) than without the term (loose deposit and interest thereon), because it rewards, that it can expect a concrete period when using our money.

Theoretically, having money in a bank excludes a number of risks (money theft, banknote damage, detection of counterfeit money, etc.), but it does not mean that we do not have to take any risks. While the likelihood of a cash crash can be offset by a high interest rate (relative and floating), for example, a bank's operations involve risks (bankruptcy, service provider risk, etc.) and many other, both have already detailed and unspecified.

There are also costs associated with opening an account with your bank where you can place your money. Account management, transaction etc. the multitude of costs is deducted from our money at the bank. There are instant charges, and some are periodic (monthly, quarterly). When opening an account, you should carefully read the contracts and the applicable price list (list of conditions), as well as follow the contractual modifications and changes as often as possible.

GOVERNMENT SECURITIES

The largest and most liquid market for financial products in the world is the government securities market. Each country's central budget is revenue-generating and has expenditure. It is a generally accepted theory that it is essential for the development of a country, to spend more (spending) than what it gets (revenue). If we accept that budget deficits are beneficial for the functioning, development and revitalization of the economy, then it is a general consequence, that this deficit, minus, the missing funds need to be replaced, because you can only spend what is available.

The financing of the government deficit can be covered by government loans, the most common form of which is the securitized, government securities, incorporating debt. Government securities may have a maturity of up to one year (e.g. Discount Treasury Bill) and may have a maturity of over one year (government bonds of different maturities). The government pays interest (yield) on government securities to the lender in exchange for using the money borrowed.

In our investments, government securities are called risk-free investments. This is not true, of course, but assuming that the state maintains its solvency and repays its loans, as well as the interest and returns payable on it, government securities-based investments can be considered risk-free, if we consider only the payment guarantee as a risk factor. For example, it has often happened that the money repaid could not be converted into foreign currency, so foreign investors could not take our money home, but there was also an example where loan repayments had to be restructured and, in the case of Greece, there was a recent "haircut", as a result, investors received only a portion of their investment in government securities.

Therefore, from the above, it can be interpreted as a fact that the state deficit is in most cases not a disadvantage of the market economy, but it nevertheless carries risks, however, the least risky investment instrument is government securities, because the guarantee of payment of the investment the state ("endeavours") to guarantee.

When calculating the return on investments, when calculating the risk-free rate of return on investing in the currency of a country (Hungarian Forint), we calculate the yield value of government securities issued by that country. For example, if you want to buy stocks for a period of five years, if we believe that the target return (risk-free return + risk premium) is not available, we prefer to invest in government bonds, if we believe that the target yield is attained or exceeded, then we choose the equity investment, then we take the interest on the five-year Hungarian government bond, as risk-free yield (if we do not want a material risk, we can buy the Hungarian government bond for five years) and we also calculate the risk premium for the equity investment, based on our expected return.

MONEY MARKET FUNDS

Money market funds are created to provide an alternative to short-term money investing. These funds mainly invest in bank deposits and short-term government securities. They offer low returns but, in a relatively high yield environment they can also provide short-term money investing yield, while the “standing” HUF in the bank account as at hand deposit has no interest or less interest, as a money market fund has.

It is important to note that there is no guarantee of the performance of these funds, so we may consider a loss instead of a positive return.

If you do not know when you will need your money (in the short term), or if you only have a short period of time to spend your money, you may want to invest in money market funds. However, in a low yield environment, when the yield on bank deposits and short-term (within one year) government bonds is very low (as in 2019, at present), there is a significant risk that we will not be able to generate returns on these funds.

SECURITIES

“A security is a unilateral legal statement, which is a paper form document, or is created as otherwise prescribed by law, recorded, registered and transmitted as a set of data (as dematerialized securities) that embodies the right contained therein, in a way that to exercise that right,, to make provisions to it is only possible by the security, being in possession of the security.” Section 6:565 of the Civil Code.

This is quite complicated. Securities were invented for simplification. Instead of always having to deal with complicated contracts, we can “standardize” a lot of things. The properties and content of securities are standardized, so they can be easily bought and sold and carry their most important properties.

Securities embody relationships, rights, obligations, and are practically standardized documents where the same types of securities, series also contain the same conditions. For example, if you have an OTP share (a security, a share) you can be sure that holders of the same series of OTP shares have the same rights.

Securities are financial assets, but in many ways, they are similar to money. Earlier, securities were traded in printed form, with lots of beautiful colour patterns that were difficult to identify, their authenticity as a sheet of paper was difficult to verify. Nowadays most of them are "lying" on central accounts they have no form, no colour their standards are described in their general description.

TYPES, KINDS OF SECURITIES

Regarding the TYPES of securities, they can be divided into three main groups:

1. Debt (credit right) equity securities

In the case of a loan, the borrower issues securities, in exchange for this, it gets a loan, credit, usually in the form of account money, while the buyer of the security, gives a loan in exchange for the security and the security represents its claim at a later date (maturity), which is a claim on the money lent and its interest or other return on a service rendered, unless the security issued has no maturity or its maturity is subject to other conditions.

For example: bond, bill of exchange, Treasury bill, etc.

2 Shareholding Rights embodying (Ownership) Equity securities

Equity securities certify that: their owner has a stake in a company (stock company), contributed money to the company's equity capital they cannot take it out of their business they can only sell it in secondary circulation. Their participation in the business gives them membership rights. Equity securities also include investment certificates and are held and traded differently from shares.
For example: stocks, investment units.

3 Securities embodying a commodity right over a commodity

It is a security embodying a commodity right over a commodity, a security giving the holder a right of disposal.
For example: public warehouse ticket, bill of lading, etc.

TYPES of securities may be classified as follows:

Securities can be **public- and private**, without entirety of the statutory provision, **the basic difference is that publicly traded securities can be bought by anyone, while securities traded in private placement only one selected circle of people can buy.**

Securities can be **bearer securities** (less and less due to money laundering and other reasons) and can be **nominal**, **the owner is the holder of the bearer security** (who holds the security) while **the owner of the nominal security is the person to whose name it is nominated**.

Securities can be **physical, documentary** and **dematerialized** ones, **physical securities are produced by printing** (with strict security rules), **while securities registered in a dematerialized securities account,** that are not produced by physical means, do not exist physically.

SHARES

Regarding securities, we will be dealing the most in later chapters with shares incorporating right of disposal. **Through the shares we get ownership from a company, we get share from its result**. Shares represent many types of entitlements, but the following three entitlements are usually the most important:

1. The right to free alienation;
2. Voting rights;
3. Right to share profit (dividend);

The shares may be securities of a private limited company (Ltd.) or a public limited liability company (Plc.) incorporating their dividend rights. In the case of Plc., the shares will be listed on the stock exchange. The concentration of supply and demand on stock exchange trading allows you to buy and sell stocks on the regulated market (stock exchange) most efficiently.

Owners have ownership rights to the share (except for preference shares) Company's chief decision-making body is the General Assembly with which they can exercise their voting rights, they can decide on the most important matters of the company.

Shareholders are entitled to a share of the profits, generated by the public limited company on the basis of their proportion of ownership (excluding preference shares). The General assembly may decide on the distribution of profits and the shareholders may receive a dividend (distributed profit).

There are basically two sources to earnings per share: on the one hand, as stock prices rise, on the other hand, dividends received as a share in the profits of the shares.

The rights attached to the shares can be shaped in many ways. So-called preference shares give their owners some priority, usually as a restriction on certain other rights. For example, there are dividend preference shares where shareholders may receive more dividends than holders of non-dividend preference shares, but in most cases, these shares have no voting rights. There are, also preference-voting shares, these shares usually being accompanied by an additional voting right, a lower or a zero dividend right.

Growth stock

A growth stock is called an equity investment instrument when the company that issues the stock is essentially growth oriented. Growth means that the company is growth oriented regarded its markets (market share), income and result.
Growth can come from existing markets, based on activity indicators organic growth (growth of existing products, services and introduction of new products), and acquisitions.

Growth equities offer the potential for endless profits, but in many cases the underlying activity carries extreme risks.

Share dividend

Dividend-oriented investments are the underlying issuer activity is usually a predictable one, established operating model, which can "promise" an estimated profit every year for investors, which the corporation pays in the form of dividends.

For example, the market calculates dividend-based investments and compares them with other factors:

Example: Random Capital Ltd. MTEL Analysis (2018)

“The price of MTEL shares classified as Dividend Securities is mostly driven by what investors expect from the stock. Government securities, denominated "risk-free", are a basic starting point for evaluation. The rapidly changing yield environment also poses another serious risk, which investors also place on the exchange rate and their expectation of extra returns this is the Equity Premium, which includes all share-based risk premium. So, for dividend securities, the correct calculation of the expected return is:

E (r) ≅ r (time) + r (risk)
Expected return per share = Risk-free return (%) + β (beta) * × (Stock market risk premium (%) - Risk-free return (%))
* correlation between stock return and stock market return (β = 1, our valuation is linear)

$E(r) = r(f) + \beta \times (E(rm) - r(f))$

Where: r (f) risk-free return (5-year Hungarian government bond yield), E (rm) is the expected return on the market portfolio)

Derivation:

5 Year Hungarian Government Bond Yield: 2.71%

Stock market risk premium: 2018 forward P / E = 9.52 and 2019 forward P / E = 8.74 (source: bloomberg.com) (9.52 + 8.74) / 2 = 9.13, so 2018 - ra 10.54%, 2019 11.4%. (10.54 + 11.4) / 2 = 10.97 ≈ 11%

Risk premium: 1 × (11% -2.71)
Expected Yield = 2.71 + 1 × (11% -2.71) = 11%

Net result based

Net profit for 2018 is expected to be HUF 44.97 billion, Net Profit Expectation for 2019 Billion (Source: bloomberg.com) (44.97 + 45.39) / 2 = 45.18 ≈ 45.2 Billion

Net profit of HUF 45.2 billion at HUF 400: 11.3% return

Dividend yield based

25 HUF / share dividend payment at 400 HUF exchange rate: 6.25% dividend yield

FCF based:

HUF 60 billion FCF * with 11% expected return: HUF 545 exchange rate (25% dividend yield 4.6% dividend yield)

* annual free cash generated

Growth + Dividend Share

When it comes to deciding what the ideal investment should be for equities, in our opinion (generally stated), the market most appreciates the **mixed model**, so a **share should be both of growth and dividend.** Growth is a constant story, excitement, opportunity, while dividends are a kind of money back, that investors can count on over the life of the investment and not only generate virtual (unrealized) profits, but also a real positive cash flow, moreover, it can be planned periodically.

Even if the company would be able to spend all of its free cash in a reasonable way and even have to realize it from external sources instead of paying out dividends, the mixed model is justified.

CORPORATE BONDS

There are many ways companies can raise capital. Access to capital can be an important element and a prerequisite for a company to operate.

The company can borrow money, issue shares and issue bonds to raise capital. While giving shares (ownership, shareholding) for money and assets resulting from the share issue to the shareholders, until then the credit and money received for debt securities, it has to pay back during certain period of time.

The bonds issued by the company may be privately and publicly issued (see above: Public and Private Securities).

Corporate bonds have to pay interest to bond buyers, and the bonds have maturity, when money borrowed for the bond must be repaid to investors.

The bond carries the obligation of repayment and thus the risk of non-repayment. However, few people know that corporate bonds are less risky than corporate equities however the returns they produce are not of the same order of magnitude compared with equities. Without the repayment of corporate bonds, the owners of the company will not be able to obtain any assets owned by the company, because the obligation to repay the bonds takes precedence over the shareholding, or if the company is unable to pay back investor claims on the bonds, then the company may go bankrupt.

Bonds, issued by companies is a debt, the world's leading bond issuers just like countries' sovereign debt are rated by rating companies (Moody's, SP, Fitch).

GOODS RELATED RIGHT REPRESENTING SECURITIES

These are the securities we are dealing with only tangentially. We acknowledge that they exist, but we do not record them in the repository of investment tools.

Securities representing a right in a commodity can in principle be understood as a means of settlement. For example, a security issued for a commodity in a public warehouse, certifies that the warehouse has housed / received the goods, and the holder of the security has the right to dispose of the goods. As a good’s label, the right to dispose of the goods, as a pawn ticket, it represents a debt to the extent of the loan taken for the goods in public storage.

SPECIAL SECURITY (REDEMPTION TICKET)

Not only can a security have a standardized rating. Just because we know most types of securities does not mean, that there can be no special securities. A security is not a means of payment like money, so accepting it is not like doing it regarding money.

The creation of special securities is usually regulated by law. At present, the regulation classifies products as money and financial instruments, qualifying as investment tools, but in rare cases, the securitization relationship may become an element of regulation.

These are the redemption tickets that are still in public circulation that came after the change of regime, as physical securities and they were basically providing state compensation to the victims of nationalization they offered state assets for them. The series of redemption tickets have been introduced on the Budapest Stock Exchange can still be traded, although in recent years it has not been possible to exchange them for any public assets.

INVESTMENT FUNDS

WHAT IS INVESTMENT FUND?

A special way of managing our money can be investing in mutual funds. On the one hand, buying mutual fund units allows us to decide what kind of investment we are interested in (for example, investing in a real estate fund) on the other hand, the money that comes into the fund is handled by professionals who are knowledgeable in the field, so it is up to them to make targeted investments.

In this way, an investment fund as an investment presupposes both financial supervision (purpose) and asset management, whereby investment decisions are made by professionals for us.
The role of mutual funds in the world has grown significantly in recent decades.

£m	Total	Securities	Fixed Income	Money market	Mixed funds	Real estate	Others	ISA
2018	1,153,730	658,361	249,941	21,710	208,927	31,449	119,679	149,372
2017	1,234,456	724,071	257,433	25,115	219,342	30,721	119,260	161,869

2016	1,062,136	634,638	214,987	19,850	197,846	28,603	83,379	154,791
2015	929,733	561,982	185,739	11,501	165,146	31,993	71,848	138,492
2014	892,469	527,583	195,724	10,660	157,290	24,062	65,111	136,519
2013	820,437	492,793	169,969	9,273	151,990	17,212	58,709	131,155
2012	703,621	397,722	166,708	6,916	130,132	14,487	55,406	114,822
2011	578,646	337,626	133,843	4,580	112,888	13,681	32,239	103,157

2010	587,998	362,407	127,033	4,119	106,885	13,195	26,063	105,330
2009	484,270	303,328	111,811	4,641	77,251	10,154	16,092	93,460

* Value of UK registered funds,
Source: theia.org

The table above illustrates how investment fund assets have continued to grow over the last decade.

An investment fund is a fund created by an investment fund manager (with the assistance of other institutions), which is a pool of assets that is jointly owned by investors. Management of the assets of the created fund is carried out by investment fund manager. A fund manager can create multiple funds.

By purchasing units of a fund, created by an investment fund manager, investors can acquire stakes. An increase in the value of the units represents the return of the investors.

INVESTMENT FUND MANAGER

The activity of the investment fund manager is a licensed activity, which is authorized by the National Bank of Hungary and subsequently supervised and controlled by it. The investment fund manager creates funds to manage the assets of a "community", creating value for the community by achieving a return on the money paid.

The investment fund manager is responsible for creating and operating the fund, funds and performing the functions, related to the operation.

Investment funds created in the course of the activity of an investment fund manager are collective investment forms. Collective investment is an activity, whereby an investment fund manager collects capital from several investors in order to invest investors' money through a pre-regulated activity in accordance with the investment policy of that fund.

There are two very important regulatory aspects to be highlighted: 1. all investment fund managers must be authorized (HNB). 2. the law defines two forms of investment fund manager: the UCITS fund manager and the AIFM (alternative investment fund manager).

The investment manager will / can use and have access to additional players in managing the funds he / she has created:

Custodian: a bank that holds the assets of the fund executes transactions, related to the fund and calculates the value of assets.

Distributor: distributes the Fund's investment units, informs investors in accordance with applicable laws and prudential requirements, and provides information about the Fund, its units and the Fund's marketing.

Adviser: may assist in the preparation of investment related decisions of the fund manager.

Auditor: Checking and auditing the Fund's activities, statements.

The investment fund manager divides its funds into units (nominal value of units). The total value of the units issued, represents the total assets of the fund. The value of units must be determined daily and published. The depositary calculates the net asset value per fund unit, which determines the value of a unit.

Investors can buy or redeem units of the fund at the net asset value for the day (open ended). A given day in this case is the predetermined settlement date, which means that buyers and sellers (redeemers) are not fully aware of the future value of the net asset value at the time of the initiated transaction at a later settlement date. (For example, under current regulations, real estate investment fund units can only be redeemed for 180 days, based on the net asset value 180 days later).

In Hungary, HAIFAM (Hungarian Association of Investment Fund and Asset Managers) is an association of investment fund managers. HAIFAM is an Interest Representation Association, which also helps those who want to invest, with constantly published statistics, data on mutual funds.

Mutual funds can be grouped according to several types of characteristics.

Open-end or Closed-end

An open-end investment fund means that the fund is established for an indefinite period. The distribution of fund units is continuous. The net asset value per unit must be determined daily, new or redeemed units may be purchased at this value, either directly from the fund manager or by repurchase by the fund manager.

In these funds, we can keep our savings, assets for as long as we want, and if we want to withdraw our investment from open-end funds, we can simply redeem them.

For open-ended funds, it is worth considering the recommended minimum investment time period.

Closed-end funds are established for a limited period of time and the fund manager will not sell any new units prior to the fund expiry date, or does not redeem units, at the end of the term, it repays the fund to investors in lump sums together with the return.

Closed-end funds are usually listed on the stock exchange, so if we want to sell them, then we can sell our investment depending on the demand on the stock exchange, however, this does not mean that we can get back the "real" value.

When buying closed-end funds, it is advisable to consider holding them to maturity.

Public-Private Placement

Public investment funds: anyone is free to purchase them according to the fund's terms and conditions.

Private Equity Funds: units issued by the Fund may be purchased in private only by qualified - or predetermined persons.

As in general with the characteristics of securities it is also true:

“Securities may be public or private, without completely assuming the statutory provision, the

basic difference is that publicly traded securities can be bought by anyone, whereas private placement securities may be purchased only by a designated circle of people. "

Guaranteed-Not Guaranteed

By setting up their own funds, investment fund managers take the risk of "investing" in the form of collective investment. Risks assume that the investor may eventually end up with a loss on his investment rather than a return. The risk assumptions of investment funds depend on the rules, the investment policy the rules of the investment fund and the ongoing risk management activities of the investment fund manager.

In order to reduce investor risks, the fund manager may take over part of the risks. These two types of risk taking are the **capital guarantee** and the **yield guarantee**. In the case of a capital guarantee, the fund manager undertakes to repay the invested capital under all circumstances. In the case of a Yield Guarantee, the Management Company undertakes to pay the Guaranteed Yield to investors under any circumstances. In the first case, nothing guarantees the return in the second case, nothing guarantees the invested capital.

Guaranteeing has special regulatory conditions.

TYPES OF MUTUAL FUNDS

There are many types of mutual funds, most of which are internationally traded. The “type” basically defines the nature and target area of an investment fund.

The following types of mutual funds are the most important investment orientations:

There are two main groups: securities-based, real estate-based - but it is important to note that securities-based can often be described as a category of financial assets.

Securities - financial asset funds

a) Liquidity funds: The fund invests in debt instruments (bank deposits, bonds), with a maximum maturity of 3 months.

b) Money market funds: The fund invests in debt instruments (bank deposits, bonds) with a maturity of up to one year.

c) Short bond funds: Mainly bond-type instruments with a maximum maturity of 1-3 years.

(d) Long-term bond funds: the maturity of the bond-like assets is over 3 years.

e) Bond Overweight Mixed Funds: The fund already holds other financial assets in addition to the bond investments, but their weight does not exceed 30 percent, so the bond overweight is at least 70 percent.

f) Balanced Hybrid Funds: Depending on changes in the investment environment, the weight of financial instruments may already be in the range of 30-70 percent.

(g) Equity-Overweight funds: equity and other financial instruments have a significant weight, up to 70-90 percent.

h) Pure Equity Fund: Equity based investments can reach 90-100 percent.

i) Guaranteed funds: Equity and return guaranteed funds.

j) Derivative funds: Funds that involve highly risky derivatives of financial instruments.

k) Index-Tracking Funds: Funds that follow an index and have an asset weight of at least 90% of the weight of the underlying products (e.g. BUX, MSCI, FTSE, CECE, etc.).

l) Absolute Yield Funds: You can invest in any financial instrument that can provide you with the opportunity to make a profit as the market changes rapidly.

REAL ESTATE FUNDS

There are two types of real estate focus funds:

a) Real Estate Trading Funds: The 'profile' of these funds is rather the utilization of the existing real estate portfolio, with a maximum of 30% of the real estate under construction compared to the whole portfolio.

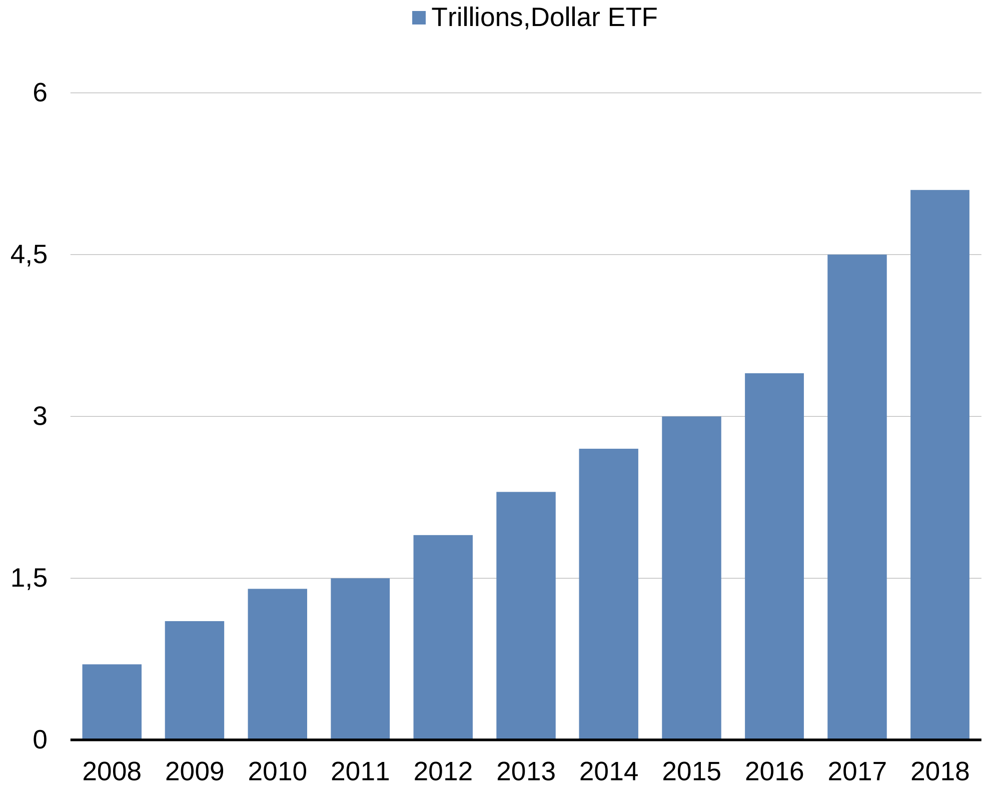
b) Real Estate Development Funds: These funds are basically engaged in construction with a portfolio construction ratio of at least 60-70 percent.

Apart from all these categories, there are many forms / types of funds. Besides, it is typical of the current investment environment that it names and creates new formations. Only funds investing in crypto currencies can exist or investors in regional economies (e.g. South American equities), etc.

ETF - Exchange Traded Fund

We are in the era of exchange traded mutual funds. The most popular funds are mutual funds, which represent the economies of regions and countries.

The long-term "famous" stock market traded, and "indexes" of US indexes are SPY, which follows the SP 500 index (the US 500 most important stock index), QQQ, a follower of the Nasdaq 100 index (American technology index).



For example, many traders prefer trading stocks funds, compared to an equity investment because they can simply buy a product that can handle many stocks, indexes, sectors, goods and to purchase any other investment group at the same time. This can reduce risk and simplify diversification.

ETN - Exchange Traded Note

These products are designed to track the price of an underlying product or group of products. They specifically follow the basic product, for example, there is an ETN that follows the movement of a sector index only within a given day, regardless of constant exchange rate fluctuations. They are often leveraged, so we can open much larger positions out of our money, which increases the chances of gaining and losing.

These products are generally issued by investment banks for which the issuing bank is responsible for the performance obligation. ETN behaves like a bond and tracks the exchange rate change of the underlying product in the form of a bond. ETN can be explained as a combination of an ETF and a bond.

ACTIVELY MANAGED FUNDS, PASSIVE FUNDS

The most controversial issue of current investment fund strategies is the following: Is it worth investing in active or passive funds?

The most important thing is to clarify first what do active and passive strategies mean?

Actively managed mutual funds - The funds work with professionals who are constantly searching for the following answer: what to invest in, what can deliver the highest returns with the lowest expected risk?

Passive funds: The most illustrative example is index tracking funds, that do not require any expertise, for example, who invests in a fund following the BUX index, it wants to track the change in the index of the Budapest Stock Exchange, which does not depend on any investment pre-selection.

The question basically should not be a question. Theoretically, we are more likely to make money with the help of professionals who have the greatest knowledge, expertise, while investing ("freely") our money. However, the trends examined, show, that in the present low-yield environment the much cheaper passive mutual funds perform better.

DEADLINE PRODUCTS

WHAT IS A DEADLINE PRODUCT?

No matter how incredible it is, but there is a much larger volume of futures in the world of trading financial instruments, than s prompt / spot transactions. This is exactly where futures and spot transactions are different, that their accounting is different and yet it is not…

Basically, the concept of a futures contract means that performance obligations related to the purchase of the product sometime move into the future. That is, the financial payment and delivery obligation are not immediate, but is due sometime in the future. Which is why the previous paragraph ended: and yet "not", that is true because in some cases, whereas the final date for the settlement of futures contracts is due in the future, but in the meantime, positive and negative daily changes in the exchange rate of the product are recognized immediately, thus eliminating the possibility of future default.

The concept of a futures product means that the product's settlement obligations are due in the future, that is, the transaction takes place at a predetermined future date.

There are two types of futures contracts, so-called 'futures' and 'forward'. **Futures are called futures, while forwards are called OTC.**

Futures transactions are linked to a financial instrument, but there are two types of settlement: physical delivery and financial settlement. This means, for example, if you buy a stock for a term and it is a physical futures contract, then at a future date of performance against payment of money the shares are credited to the buyer's account. However, in the case of a financial transaction, then, at the future settlement date, the parties will account for the price of that share, that is, the difference between the strike price of the transaction and the exchange rate at the time of future settlement is recognized as the financial settlement of the transaction.

For example, in the Budapest Stock Exchange individual equity futures are physically settled, while the BUX index futures are settled, financial difference based.

It is interesting to note that in most of the world's largest trading markets, most of the oil and gold traded on commodities is traded financially these are basically speculative transactions, while the dominance of physical settlement transactions has declined significantly in recent years. In the case of physical delivery, the quantities of oil and gold are indeed delivered in accordance with various freight standards.

The attractiveness of futures contracts is that, over a longer investment period (time period of a deadline, its maturity), there is no need to fully finance the purchase of the product, only financial coverage is required, this means that we can buy many more products from a single fund on time, which reinforces speculation as an opportunity for increased profit and risk.

In most cases, a futures trading is conducted at a higher exchange rate than the current exchange rate, because the market prices the interest rate for the time interval between present and future settlement, and the risk of settlement in the case of OTC transactions.

The rate of the futures contract is based on the future expected value of the contract, the interest rate of the futures period, and any other cash flow from the product (such as dividends, capital reduction payment, etc.).

The popularity of futures products also stems from the fact that you do not need to have all the money in both financial and physical transactions and the product either. Therefore, the 'long' and 'short' positions can be easily opened. For financially cleared products anyone can easily short the products with financial backing, whereas it will have to be matched with cash at a future date of financial settlement, according to changes in exchange rates, the product itself is not accounted for.

The futures contract maturity date is only an end date. For example, in futures trading, it is possible to close positions on a daily basis.

SHARE DEADLINES

One of the most popular futures products is equity derivatives. Stock trading today is extremely popular in the capital markets. It does not mean that, the equities are the easiest to understand capital market products, but they are the most popular in the investment product market. This may be, because the overall growth of companies in recent decades has been spectacular. Investors can simply imagine that they can easily make significant gains from investing in a stock, and this is just a step away, to buy shares in the form of a futures contract, which results in a much larger investment, due to leverage which in the optimal case can have a much higher return on investment, as a stock, purchased as a spot one (of course, there is also the risk and thus the possibility of loss).

Another major attraction of futures equity markets, apart from leverage is the potential for “short selling”. In fact, the rise periods of the world's stock exchanges are much longer on the “plane” of time, while periods of fall are fast and aggressive. Making big money quickly with “short” positions is easier, provided if somebody guesses it right, when to take a short position.

The notion of speed is also important for futures products (also), because the funding obligation, as long as the position is open even on the 'long' page in money, even on the 'short' page in stock, can cost you, the extent of which depends primarily on the length of the time interval.

A futures contract transaction is a speculative trading, as a short-, medium-, not as long-term equity exposure.

INDICES DEADLINES

The futures trading of indices can be different in its “basic philosophy” from equities and futures trading. It is simply stated that, unlike individual equities, indices cannot be bought in a spot transaction because they do not exist as a commodity and cannot even be interpreted as a derivative because their product nature depends on the totality of many other products. For example, if you want to buy a BUX index on the Budapest Stock Exchange, we can only do this as a futures product, if you want to interpret the BUX index as an instant product, then the shares included in the BUX index as components should be bought in the spot market, based on their weight in the BUX index, divided by our money to invest. This would be cumbersome and, in addition, not necessarily cost effective.

While the futures product of the indices is also called a derivative, at least we are arguing about it, even if we don't reject that denomination …

The futures trading of indices is characterized by the fact that nowadays in OTC markets, also in market making systems they are highly traded by investors, one of the major advantages of which is the size (in many cases it is also possible to trade in smaller sizes), and trading hours, which is typical of these over-the-counter markets from Monday to Friday all day long.

The essence of futures trading in indices is that we do not trade changes in the price of a particular instrument, but we do it as trading the change, the one of a group, relevant to risk sharing and understandable market trends.
The most popular futures products today are the American Dow Jones Industrial Averages (DOW 30), the SP 500 index, the Nasdaq 100 index, the German DAX 30 index, and the Japanese NIKKEI 225 index, as instruments derived from the world's leading indices.

CFD

Contract for Difference

The contract for difference is a non-genuine futures product, because it is a derivative, i.e. a derivative transaction, but the basic product is only quoted at the exchange rate. The point is that no physical delivery can end the deal, even the derivative nature of the product is, that the value of our position is recognized on the basis of the exchange rate, generated by the continuous transactions. **CFDs are cash-based transactions, where changes in the price of**

the underlying commodity (stock, index, commodity, etc.) change the CFD exchange rate and, consequently, our transaction cash holdings. If we buy a product at $ 100 and the next deal is at $ 102, then $ 2 immediately increases their cash holdings, then if the product falls to $ 10, then the $ 10 will be deducted from our balance. While most futures products are settled daily or less frequently, most CFDs are immediately charged or credited as changes in exchange rates.

CFD products are “created” ones you can create them as an authorized form and can quote a price to follow the basic product. **The CFD product is not standardized product created in the financial services system.** While a share grants rights to its owner (of which a right is only a right of alienation), in the meantime a stock CFD is an exchange rate order, with the fulfilment of which we will only be entitled to financial settlement, resulting from exchange rate changes. **Trading CFDs can incur other additional costs, which the service provider deducts from the clients for their own benefit and that of the CFD issuer.**

CFD trading is increasingly restricted, banned, on the one hand, due to the lack of proper capital market regulation, on the other hand, because of its leverage nature, in the framework of which providers of trading platforms often allow multiple 100 percent referrals.

CFD trading is also very popular with investors, because it is easy to leverage it and take short positions.

In 2019, ESMA (European Capital Markets Authority) considered CFD trading as highly risky and temporarily restricted its free use, through investment service providers.

STRUCTURED PRODUCTS

Perhaps this product line represents the product structure that is most difficult to understand, because a structured product category can contain an infinite set of conditions.

Structured products can be divided into two types, based on their type: deposit-based structured product and investment-type structured product. Investment-grade structured products can also be divided into two characteristics, based on their risk, capital-guaranteed (capital-protected) structured products and non-equity-guaranteed structured products.

What is a deposit-based structured product? The essence of a deposit-based structured product is, to put our money in a bank deposit under some condition, which if fulfilled, then we get a predetermined higher premium rate, if not met, then we only get a predetermined lower interest rate or no interest at all. For example, when the condition is the HUF / EUR exchange rate, which if you do not leave a certain band during the term (for example, HUF 325-350) then the condition is met and you get a higher interest rate, if you quit, the interest is lower, or zero to the investor.

What is an investment-based structured product? For example, in the case of a structured investment product with the condition that we buy a forint-based structured product, that if the forint / euro exchange rate does not leave a particular band and the transaction condition is met in this way, then we can realize a pre-fixed profit on the product, but in case if the condition is not met, then our forint will be converted to euro for our forint (two currencies not capital protected structured product).

We have classified this group of financial assets as futures products, because of the maturity, the predetermined condition is met in the future, at the end of the maturity, or not fulfilled, and structured products are settled at a future value as a function of the condition and are not considered as money market products.

The underlying conditions of structured products are usually provided by options, that provide a conditional return on the product creator, or, if the condition is met, to the investor.

RISK OF FINANCIAL INSTRUMENTS

INTRODUCTION

We have already dealt with defining what risk means in its entirety:

"Risk: risk is a hazard that, if it occurs, has a negative impact on the risk bearer. There are many types of risks, with two main groups being predictable and non-predictable. Risks can be a constant probability or a variable probability. "

With regard to our money, we have also stated that whatever we do or even if we do not do anything with it (unless we spend it) we take risks. There are also many risks to unspent money, and risk is a fundamental calculation factor for investments.

By taking the risk, we can make a greater profit on our investments, which is mainly due to the fact that **we are able to assess, and use the ratio of risks and potential benefits in the most efficient way**. In the case of investments, the perfect optimum can be summed up as//**to take the lowest risk to achieve the highest yield**. However it is better to put it this way: **to achieve the highest yield while taking the most optimal risk.**

Why is this better? Because we are basically striving for the highest returns, not for minimizing the risk taking. In fact, striving to eliminate risk altogether overshadows the potential for returns.
Investment risks have a level of tolerance that investors consider. It is just as wrong to invest money in diversified government securities, as to use 400 times leverage to invest all our money.

In this chapter we will look at the risk groups, associated with financial instruments by instrument and not generally.

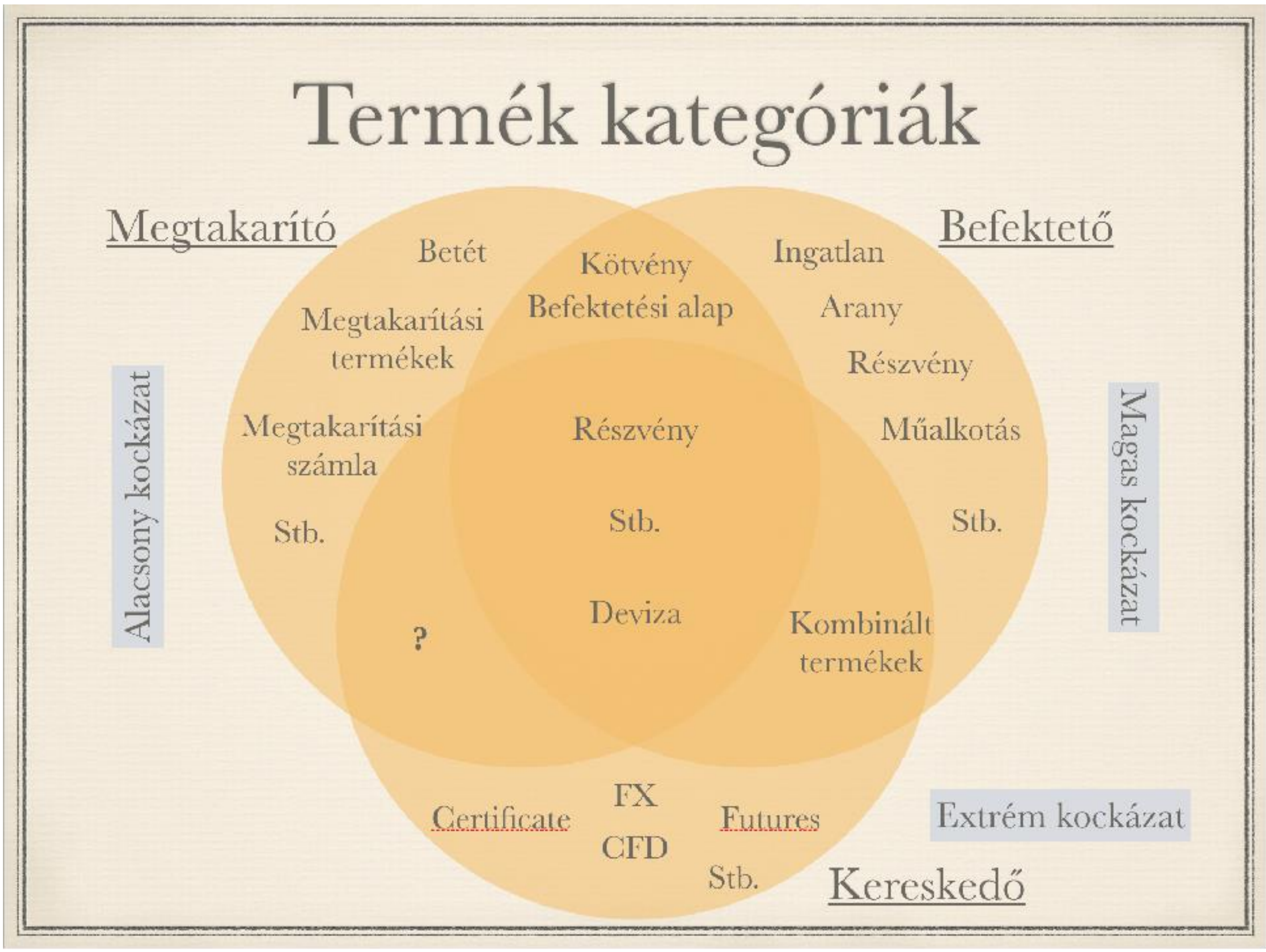
Above all, we need to identify the key risk groups and their combined opportunities. The risk of an asset alone does not mean that we cannot use the same asset in transactions of even higher risk, or we cannot reduce the risk of a particular asset.

For example, buying a stock for 10 percent of all our money is not the same risk as spending all of our money on that stock and this can be further enhanced by borrowing money beyond all our money, so we can buy even more of it. In each case, we are talking about the same asset, the stock, but our risk-taking is very different.

In this case, of course, the available yield also increases significantly, but while yield / return rates remain the same, the risk to the individual (investor) increases tremendously regarding our total wealth.

The following principle applies to all the ideas in this chapter: **the primary goal is to protect our assets, our savings, the secondary goal is to maintain value the third objective is to increase wealth and savings beyond value. All three goals must prevail, in the order of the first, second, and third goals and they do not represent a substitution.**

RISK CLASSIFICATION (INSTRUMENTS)



Product categories (Termék kategóriák)					
The person who saves (Megtakarító) Low risk (Alacsony kockázat)	Deposit (Betét)	Bound (Kötvény)	Real estate (Ingatlan)		The person who invests (Befektető) High risk (Magas kockázat)
	Saving product (Megtakarítási termék)	Investment fund (Befektetési alap)	Gold (Arany)		
	Saving account (Megtakarítási számla)	Share (Részvény)	Share (Részvény)		
	Etc. (Stb.)	Etc. (Stb)	Artwork (Műalkotás)		
	?	Foreign exchange (Deviza)	Combined products (Kombinált termékek)	Extreme risk (Extrém kockázat)	
	Certificate	FX	Futures		
		CDF	Etc. (Stb.)	Trader (Kereskedő)	

It is worth classifying financial assets into risk groups, to see how much risk we are willing to take in the fight for returns.

It should be mentioned again that the degree of savings and wealth can determine the nature of our risk-taking. Someone who is risking their three-month income with significant risk-taking may not have the same motivation as someone who has a multiple amount of their three-month income and is going to invest that wealth. In the first case, many different factors are motivating, such as the higher yields that you can take with increased risk taking, because in the worst case scenario (loss of capital), the amount of the savings equal to 3 months of income, can be reproduced over time, but losing multiple three-month incomes can be an impossible task for re-production.

It is clear that the willingness to take risks must be personalized. But this categorization is not only about the magnitude of money, but the needs of the individual, personality, goals and anything else, may depend on the individual characteristic. There are a number of regulatory provisions, that seek to define this individual portfolio of investment assets, so that everyone can measure, that the risks, the dangers of realizing a threat can be understood by anyone, to assess and decide whether to undertake it.

Taking care of our money is our own responsibility, but just as important, to be aware of all the risks, like accepting and declaring that our right to dispose of our property is one of the basic rules of the existence of a modern social form, which also means that we can do it with our money, with our wealth what we want, if we want to act irresponsibly, no one can stop us from doing that.

If accepted, that money is an indispensable and obligatory part of today's human existence, and also keeping in mind that our family, the fate of our loved ones may depend on our financial diligence, then it is mandatory to deal with our finances on a daily basis, understand the possibilities, to uncover the risks.

We have already learned about the various investment-and financial instruments, and now we will learn about the risks (perhaps) involved in investing in these instruments.

LOW RISK GROUP

As already explained, every investment instrument or product has a risk. However, the risks can be very different.

The low risk group includes those financial instruments, for which there is a very low probability of loss and it is almost impossible for the investment to result in a complete loss of capital.

The devices that fall into this group (of course, not all existing devices) are the following:

GOVERNMENT SECURITIES

Generally, government securities are considered risk-free investments by the capital market, but based on what we have discussed above, we all know that there are risks, also for government securities. In the case of investment in government securities, the purchaser of government securities lends money to the state and the state guarantees the full repayment of the money borrowed.

The Hungarian state has never failed to repay the borrowed money. Non-payment would mean a state bankruptcy. "Partial bankruptcy" has already occurred in the euro zone in the case of Greece, where the state, after agreeing with investors, only repaid part of the amount borrowed (haircut), not the entire amount.

In the case of government securities, we finance, provide credit for, lend to the state and repayment is guaranteed by the state itself. If it cannot repay the loan we are talking about bankruptcy, if it needs to restructure loan repayments, we are talking about partial bankruptcy. Ratings of government securities are made by credit rating agencies (Standard and Poors, Moody's and Fitch Ratings are the best known agencies), the rating indicates the state's solvency.

BANK DEPOSIT

Credit institutions shall collect deposits from their depositors in accordance with applicable legislation. Bank Deposit Guarantee Schemes are a multi-step process. On the one hand, the bank takes full responsibility for the deposit placed at the bank, so it is responsible for the repayment by all its means, on the other hand, the NDIF’s (National Deposit Insurance Fund) collective system is liable in the event of a temporary or total insolvency of a bank guarantee (there are fixed terms and conditions for the OBA Guarantee).

Therefore, in the case of bank deposits, the repayment guarantee for the amounts deposited, is primarily of the bank, receiving the deposit. The creditworthiness of large banks is also carried out by rating agencies.

Bank deposits are also considered low-risk products, as in case of deposits, capital is basically guaranteed. The risk of repayment of principal and interest is the solvency of the credit institution, which may pose a risk in rare cases.

CAPITAL PROTECTED PRODUCTS

The feature of capital protected (capital guaranteed) products is, that the issuer of the product, the announcer, takes full responsibility for the repayment of the invested capital. Such products can be structured products, securities of certain investment funds.

Capital protection means that the announcer, issuer, "issuing organization" takes full financial responsibility for the repayment of the capital, failure to repay means the bankruptcy of the issuer. The issuer of the capital protected product assumes guarantee with its own assets, however, this guarantee may be subject to very different risks, depending on the issuer.

The mere fact that an issuer promises capital protection for the product issued, does not mean that it will be able to repay the guaranteed amounts under all circumstances. It is important to examine the volume of all repayment obligations in relation to the issuer's capital, the size of the issuer, its reputation and its market reliability characteristics.

CORPORATE BOND

The market for corporate bonds is huge. This is a form of financing, where companies can raise money by issuing securities, the secured loan, credit relationship, where the bond is issued by that company, the recorder of the bond, the buyer is the lender.

In the case of a corporate bond, the repayment obligation on the cash and interest on the bond is undertaken by the issuer of the bond, the company. If the company is unable to repay this money, the company may go bankrupt. The credit rating of large companies is also carried out by credit rating agencies.

MONEY MARKET FUND

The money market fund differs from the products listed above, as the “product in the product” description is correctly applied for it, because the essence of the money market fund itself as a product is to invest in money market products. Therefore, for a money market fund, the risk is on the one hand the money market fund itself (or its manager) and all the products the fund invests in. The money market fund and the underlying investment fund manager risk should be interpreted in the way that the trustworthiness of the fund manager should be examined first, and the generally low-risk money market products second, which are mostly bank deposits and short-term government securities, that we have already discussed.

For the money market fund the risk is the fund manager, as the organization responsible for the fund, and money market products that are fundamentally low risk as investments in a money market fund (bank deposits, short - term government securities).

The above does not mean that only these financial and investment instruments can be of low risk, nor does it mean that these instruments are always of low risk. Risk categories accepted by the market are generalizations, that need to be treated according to, what investors generally think of these investment instruments. Of course, a Venezuelan government bond is unlikely to be a low-risk investment and it is certain that it is not comparable to an American or either to a Hungarian government bond in terms of risks.

It is important to investigate prior to investing, based on what you have learned above, making investment decisions after and based on the risk assessment concluded.

HIGH RISK GROUPS

A high-risk group includes products that pose a direct risk to our invested capital, so the purchased product carries the potential for loss, or because there is no guarantee of equity and the risk is not due to the enforceability of the guarantee, the nature of the product is not capital protected, or because the issuer of the guarantee (bond) is not clearly considered an adequate guarantor.

EQUITY

Equity investment is already an investment, focused on equity risk. That is why we buy stocks, so that we can make a profit on the increasing exchange rate, but no guarantee of any kind protects us from the fact that instead of a rise in the exchange rate, a decline in the exchange rate can happen, which in turn can lead to losses, partial loss of our capital or occasionally up to the total amount of capital.

On the one hand, the risk of a share is presented by the company issuing the share (the issuer), whose incorrect or weaker than expected performance can result in the weakening of the share price. This management problem can even result in the failing of the issuer, or in the worst case scenario, it may also result in a total loss of the share value. On the other hand, a number of other factors, known as the investment environment, can also represent equity risk. Potential deterioration of this investment environment could include negative performance of international capital markets, fear of war, economic events, etc.

However, risks are not only due to the hazards of unknown factors, risk can be anything that may encourage investors to sell their stock. For example, in the event of a dividend expectation, a lower than expected amount of dividend payment could cause a surge in sales, a lower than expected level of profit also, but a lower than anticipated company revenue is often enough as well for the investors to sell their shares, because they fear that the future will not be so beautiful and they want to get rid of their investment in time.

Equity risk is an exchange loss, a lower than expected return, or any other factors that may adversely affect the expected return on an equity investment. Equity investment may also result in a partial or total loss of capital.

Equities can also be divided into different groups, which can also determine their investment risk, such classification is the Small, Mid and Large cap categorization based on the "order of magnitude" of the share, capitalization, but it can also be the category system of the Budapest Stock Exchange (Xtend, T, Standard and Premium categories).

BOND

In the case of bonds of small and medium-sized companies, the issuer of the bond, the company itself shall undertake to repay the money and interest on the bond however, these companies are less reliable debtors than large companies (of course, this is a generalization). If the company is unable to repay this money, the company may go bankrupt. Most of the time the creditworthiness of small and medium-sized companies is not examined by the credit rating agencies.

INVESTMENT FUND

Investment fund risk = money market fund risk (learned earlier). The difference is that investment funds can be diverse, they can not only invest in money market products, therefore, they may suffer greater losses on the investments, which applies to the price of the fund's investment certificates and this can cause direct negative returns for investors, lower than expected returns.

Like equities, mutual fund risks include exchange rate losses, lower than expected returns and all other factors that can negatively affect the expected returns.

FOREIGN EXCHANGE, CURRENCY CONVERSION

Foreign exchange is also a product that can be traded and invested in many ways. If we buy euro for investment purposes, we do so because we want to buy a product traded in euro, or because we think the euro will be stronger than the forint, that is, later we can get more forints for the euro we bought.

With foreign exchange and currency conversion we take the risk, because if we want to exchange back to the original currency at a later date, it is not obvious that we will get back more than what we initially paid for it. The risk is that the exchange rate of the

currency we bought depreciates against the exchange rate of the initial currency, so in the end we may realize a loss.

A common and popular diversification tool is to convert part of our money into another currency. In this case, the motivation is, not necessarily the other currency denominated investment products that we can buy, but the fact, that we do not take the full risk of the initial money (basically the forint in Hungary). In recent decades, more and more people have chosen foreign exchange and currency exchange as a tool for reducing risks, one of the essential factors of which is, that Hungary has not yet joined the euro zone.

EXTREMELY HIGH-RISK GROUP

This group includes products that we buy with a risk on a higher amount of cash than the total volume of our own money. Of course, the extra risk also may result in the possibility of an additional profit, while our costs (transactional) may also be multiplied.

This form of investment and related products will be referred to as "leverage" in the following section.

LEVERAGE

WHAT DOES LEVERAGE MEAN?

A leveraged transaction means that when buying an investment or financial product, a transaction can be initiated for more than the available capital, so that the total invested money can be many times more than our own money.

In some cases, such as index transactions (DAX, SP500, DOW, etc.), you can use up to hundreds of times more of your capital as leverage, in such case less, than a percentage change in exchange rates may result in the loss of your entire capital.

Leverage is a financing transaction where you can initiate an investment of more money than your capital, thus multiplying the potential for profit but also for loss. There are two forms of leverage transactions, on the one hand, leverage that is automatically built into a given product (CFDs, futures, FX transactions, etc.), on the other hand, leverage (investment loan, Lombard loan, etc.), that is available during the transaction, that can be used through excess capital.

In leveraged trading, most of our own money is locked in as collateral for the transaction, when the loss is close to the volume of our own money, the investment will be closed (settlement). Our own money covers the exchange rate loss, and the costs, including charges for the use of excess capital and interest. A leverage transaction is extremely risky because it increases the risk of loss, the same exchange rate movement in the negative direction can result in multiple losses, as if we were just investing our own money to buy the product.

The use of leverage increases the risk significantly. At the same time, the “market principle” is that everyone has to weigh the risks themselves and decide whether to take them or not. Using today's modern capital market product range, a number of legal and prudential regulations have been created for the service providers to protect retail clients, requiring providers how to disclose potential risks to their clients, and the guidelines for identifying their clients' preparedness according to the risk groups created, whether or not to recommend a product group to that client.

WHAT IS LEVERAGE GOOD FOR?

Using leverage creates an opportunity for making an investment deal bigger than we would otherwise be able to initiate using our own equity. A larger investment is an opportunity for multiplying the expected profits and gains. Leveraged trading is the preferred form of investment for speculators. However, it is always necessary to emphasize that higher risk exposure may result in larger losses.

However, in specific cases, leverage can also be a means of capital allocation. For example, we may want to initiate an investment without winding up another investment, in which case we are looking for additional capital in addition to the funds available for us, in order to scale up the planned investment. With this approach, we are not taking greater risks than we would have done otherwise, but we will have to pay interest and fees in this case as well, which will increase the cost of the transaction.

The opportunity to get rich quick has always attracted retail investors in the capital market. The products were created, to serve the most unrealistic “demand” which are traded in high liquidity markets, platforms, with high leverage, at high volatility arising from the product, bringing the quick “money making” capital market operations to an attractive but fundamentally inaccessible proximity.

LEVERAGE PRODUCTS

We can see CFDs, FXs and other futures on many trading platforms, by buying those only part of our capital is set aside, as collateral. These products carry leverage, that is, our available capital is set aside as collateral (margin account) and we can open another position up to the required coverage, or bear the risk of the transaction (s) however, when our coverage is no longer sufficient to meet the required minimum, all or part of our position (depending on service providers) will be automatically closed(margin call). Thus, our money in this form of investment is only one cover that the service provider requires for all open positions and this covers the exchange rate loss and all costs, including the cost of financing the transaction (interest, rollover, etc.).

These products are generally investment products, created by service providers, for trading an underlying product (stock, currency, index). So, the terms of the deal are very different from one service provider to another, the difference in trading conditions, premiums,
the levels of leverage vary.

Most CFD, FX platforms are spread-trading, which means, that the buy and sell pages are subscribed (market making system) by the service provider or an investment bank, guaranteeing liquidity provided by the service provider (liquidity provider), with costs built into the spread of the buy and sell page. For example, for a TESLA stock CFD, the spread between the $ 310 buy price and the $ 315 sale price is the $ 5 difference, whereas in American stock trading, this is a bunch of purchases and sales made by principals (clients) results in a much narrower spread. The liquidity provider is able to recoup the underlying CFD products sold or purchased on the provider platform through normal stock trading, which is his transactional profit, which is why he commits to quoting on these platforms.

In recent years, the European Securities and Markets Authority (ESMA) has sought to introduce a number of regulations for the transparency of costs, to reduce the risk of leverage.

INVESTMENT LOAN

Leverage (over-capital case corner) cannot only be used as built into one product. In the framework of the so-called investment loan as a service, the service provider may act as a sponsor and, for example, in case of stock transactions it is willing to provide investment loans in the amount, many times over our capital.

Providing investment credit is a licensed activity regulated by the Investment Firms Act. In the case of an investment lending, the investment service provider provides credit to its client, for the purchase of securities only. The client is obliged to repay the money received later as a loan together with all costs and interest.

The investment service provider shall ascertain that the collateral is adequate and the value, and enforceability of the collateral. The service, provided within the investment loan as a transaction, contains the securities to be purchased, the price of the purchase initiated, the maximum duration of the transaction, the costs and interest charged in connection with the transaction, etc.

SECURITY LENDING

In a securities loan transaction, the client may not use money, but securities. In a “short” transaction, the client may sell the securities (mostly equities) received on the loan speculating that these securities can be bought back at a later date at a lower exchange rate and thus making a profit. As in all other cases, the coverage (usually in cash) must be provided by the client for the leveraged short transaction, providing the coverage for the loss (the securities can only be bought back at higher, to close the short position), the costs, including the loan fee and interest on the loans received.

The securities lending service is a licensed activity regulated by the Investment Firms Act. In the case of a security loan provision, the investment service provider lends securities to its client who can use it according to clients demands and contracts(it can basically sell it).

The client must return the security received as a loan at a later date, with all costs and interest.

Lending transactions in securities may also be accompanied by leverage, meaning that the client may borrow more stock, than the value of its available cash. Even in this case, the transaction is extremely risky, as the sale and then repurchase of a larger amount of securities may result in greater losses and the larger transaction size leads to higher costs and interests.

COVERING TRANSACTIONS

ARBITRATION TRANSACTION

For professionals, an arbitrage deal is a business that offers immediate profit, on which it can only win without risk. It is not that simple, of course, because there are many things that can reduce that certain gain.

We call it an arbitration deal, when the price of a particular product shows differences in two or more markets and we initiate buying in a market with lower exchange rates, then at the same time, in a market with a higher exchange rate we start selling for the same product, in the same amount, thus ensuring secure profits.

If the above is true, what could be **affecting** the **achievement** of secure **profits**?

Costs: both the purchase and the sale may have costs, so the profit must be higher than the total estimated cost of the transactions.

Delivery: cross-market passage is required, otherwise, transactions cannot be executed as counterparties.

Performance risk: there may be risks involved in completing a transaction. Hedging-, counterparty, etc.

An Arbitrage Dealer is called an Arbitrage Guard. The arbitrage guard is in most cases an investment bank, an investment fund manager, who has interoperability in different markets and can constantly monitor trade in products, changes in exchange rates and their potential divergence across markets.

HEDGE TRANSACTION

Hedge transaction means that we wish to secure or hedge our existing investment or position of the present with another transaction. The essence of a hedge deal is that we can offset the risk of our investment with another investment. However, a hedge transaction does not always provide a guarantee against risks.

Here are two examples to illustrate the concept of a hedge transaction:

1. Budapest Stock Exchange Futures Index (BUX) trading vs. Budapest Stock Exchange Shares:

The BUX index of the Budapest Stock Exchange currently (2019) consists of a basket of 15 equities listed on the BSE. The BUX index can only be bought or sold on time, as a futures product, there is no immediate product rendered version. If the value of the BUX futures product is significantly higher than its immediate value (calculated from the immediate value of the 15 shares), then the following hedge transaction can be profitable: we buy from 15 different stocks according to the weight of the BUX basket, and at the same time we sell futures BUX index products having the year last month's expiration. If we wait until the end of the year, the futures BUX as a December settlement, will expire at the immediate BUX (December) value, so we win in expiration the value which is between the immediate value, which was at the time of opening and the one of the futures BUX, provided that the shares are also sold at that time. In this case, we bought stocks in the spot trading as a mapping of the BUX index, that we covered with another (but practically identical) product as a hedge position, which was BUX's December futures product.

2. Starting from the Euro, the foreign exchange hedge deal of the purchasing of Hungarian Government Bond:
For example, if we have euro, but we want to buy government securities in forint, because the forint interest is much higher, than the interest on the euro, then the real risk, the danger is, that after the conversion of the euro to the forint, in case the exchange rate of the forint weakens against the euro, then after the transaction has ended (in vain we made money on the interest rate of Hungarian government securities) we may suffer material loss, when we want to convert the forint to the euro but get less of it, due to the weaker HUF exchange rate. We can successfully complete the transaction
if we can cover the euro and the forint exchange rate change relative to one another. We can do this with a hedge deal in a way, that against the purchased forint (exchange) we buy euro against the forint in the futures market (until our sovereign paper expires). When the futures position runs out, if the exchange rate of the euro significantly strengthened against the forint, then the gain on the euro, purchased as a futures position, will cover the loss on the spot redemption, if the exchange rate of the forint has strengthened but we don't make any money on the exchange rate change, because the immediate redemption benefits are taken by the loss of futures position, however, as a hedge transaction we excluded potential risk. Of course, this transaction is done at some extra cost, but not nearly at as much as, in extreme cases, the exchange rate of the forint could move against the euro. (This type of deal is still working today, because outside the retail government securities market (MÁP +: 5-year Hungarian government bond interest rate with a rising band of 3.5-6%) neither the euro, nor the forint has significant interest, therefore, hedging can be done at a relatively low price and at a low premium over a period.

In both cases, it is important to note that the basic condition for hedge transactions is, to have another product covering the position and, that the level of costs do not exceed potential gains on the underlying transaction.

SERVICES AND SERVICE PROVIDERS OF CAPITAL PRODUCTS

INTRODUCTION

An investment service provider, also known as an investment firm and a credit institution is the last line of defence in the capital market, that connects investors with the market itself, with investment products from the market. That is why their regulation is so important. The idea, that supervision of investment firms (brokerage firms) (HNBs) is so important, because it guarantees that clients', investors' money and financial instruments are safe as a result of it, does not necessarily cover reality. Of course, the safety of investors is essential, but the supervisory body's basic task is to protect, control and regulate the capital market, of which the protection of the investors' money and financial assets is only a minor component that is even more so important from the investors' perspective.

The intermediary role of the capital market rests primarily with banks and investment firms. This mediation role requires extreme care. Investment service providers are establishing the framework on how to buy or sell an investment product through them, what settlement obligations exist, how to register investors' assets, how to support investment decisions, how to have all laws, regulatory, prudential, standardization and last but not least market habit prevail in practice, becoming feasible between investors and the capital market.

Investment service activities are not routine tasks. Client and investor needs must be taken into account as it is a service, but it also needs to be translated into the language of the capital market, even denying the execution of transactions in particular cases, reporting any irregular client activity to the supervisory bodies while also living together with the continuous self-renewal of the capital market and the regulatory expectations.

There were once more than one hundred brokerage firms in Hungary, and they served as providers of the Hungarian primitive capital market. Nowadays, the number of independent brokerage firms remains barely a few and the players in investment services are mainly banks and investment firms with a banking background.

It is a major problem, that only a fraction of the banks' (credit institutions) revenue comes from their investment service activities, therefore the expected business focus and developing the capital market is not a priority for them. It is no coincidence that there are four independent brokerage firms in the top 5 of the Budapest Stock Exchange's turnover ranking and only on with a banking background. (Independent: Wood, Concorde, Equilor, Random; Bank background: Erste).

In this chapter we summarize how the service provider part of capital market works, what do the investment firms and banks (service providers) do.

“BROKERAGE FIRM”

WHAT DOES A “BROKERAGE FIRM” DO?

"Brokerage firms" (investment firms) must comply with a very diverse set of legal requirements from the very beginning, but this activity may work as part of a commercial banking activity (with separate license), or in the form of a limited company, and rarely as a foreign service provider’s branch in Hungary.

The following institutions may have an investment services license in Hungary: investment firms, Credit institutions, branches in Hungary. Foreign service providers, carrying out authorized cross-border activities.

The investment service activity is a profit-oriented activity. The service providers carry out this activity to make money on it. The examples listed below show how an investment service provider can make money (examples of revenue groups and items):

1. Commissions
E.g.: fees for stock exchange orders for purchase, for sale
2. Interest
E.g.: Interest on Securities Loans and Investment Lending
3. Order Fee (not for securities sale and purchase)
E.g.: Fees for investment advice, other consultation
4. Brokerage fees
E.g.: Investment certificates distribution fees, stock fees
5. **Standing fees**
E.g.: Account management fee, deposit fee
6**. Information services, sales**
E.g.: Real-time stock exchange reporting
etc.

Later, we will read about specific services and revenue opportunities related to them.

What does a brokerage firm look like?

Passive area:

The passive area is an investment service provider’s area for the execution of transaction. The **Back Office** is, where various tasks are performed, regarding settling transactions, keeping accounts, moving the instruments, creating the various statements. **Accounting** is, where providers are legally accounted for, at some points regarding clients, areas built into accounting (account class 0, balance sheet total, etc.). **Front Office** is, where account openings, client communications, and corporate administration take place.

Active area:

The active area is the business area, the activities included here consist of revenue generation and activities, from which the company seeks to make a profit. **Transaction**, where transactions are executed on the basis of client orders, for which the service provider receives commissions, **Own account activity**, where the company seeks to make profits by risking its own money, essentially by buying and selling securities. **Investment consulting**, which is advising clients in the context of a transaction involving their cash and financial assets, on the one hand there is a commission, on the other hand, there are often some consultancy fees. **Etc**.

Service areas:

Service areas are mostly areas supporting the active area, such as **Analysis**, where they provide information to clients as the valuation of each financial instrument (nowadays it is mostly a free, servicing activity, rarely preparing the analysis for money), **Product development** is, where development, design, recast of new constructions, investment services or products is being carried out, also for example **Marketing** with the purpose of acquiring clients, branding etc. There are many other activities in the service area, such as **information, data services** (delayed and real-time exchange rate services, news, **etc.)**

Control Area:

Control of internal processes, monitoring client activity, audit of the company's integrated accounting system, controlling the management of the company, is all about ensuring transparency, law and prudential compliance-based operation. Such key area is **Compliance**, which serves legal and prudential compliance, **Internal audit**, examining the work of the company, the work of its employees and the control of its processes, **Auditing**, which ensures the accounting adequacy of the company and client protection, the **Supervisory Board, the** body carrying out the inspection and control of the management, management statutory and ownership. It is the duty of all areas to carry out control activities to protect clients' assets, comply with legal and prudential requirements, regularly inspect the performance of investment service activities, based on internal and external rules and regulations (policies, rules of procedure, instructions, recommendations, etc.).

Managing area:

The performance of investment service activities is also subject to personnel requirements. So it is mandatory, that persons who are in the governing bodies of the investment service provider, managers of investment services activities must have appropriate professional experience, appropriate education, unblemished life, a certificate of good conduct, a good business reputation. Such governing body is the **Board of Directors**, where decisions are made on the most important business decisions of the company, **Operational Management**, whose members are responsible for the organization of the company, for the daily operation, general operation and everything else, **Executives**, depending on the size of the organization, and **Executive bodies** (committees, boards, etc.).

In the current period, the management and supervisory departments of the investment services area have a strong focus on ensuring that investor protection EU MIFID II. guidelines are integrated into the service system as a basis for operation and to shape and ensure the compliance of the activities of the investment service provider with the international regulations, principles and recommendations in the process.

IT area

Investment service providers must comply with the material and technical conditions, required as a basic requirement. Investment service providers are required to maintain a system of record keeping, from which everything can be detected without delay, money owned by their clients, and financial instrument, and all activity-related data, arising from the provision of investment services.

The law summarizes the basic requirement of the IT field as follows:

Pursuant to § 18 (2) the investment firm should be suitable to determine its accounting, registration and IT system and its current financial situation; to determine client due financial instrument, handed over by the client and cash holdings and its amount at any time; and to fulfil its reporting obligations regarding the investment firm, required by law.

HOW TO CHOOSE A “BROKERAGE FIRM”?

The question of how to choose a "brokerage firm" always assumes that we know who we are and know exactly what we want. However, there are many types of clients whose needs may vary. In this section we refer to retail clients included in three known categories:

Savers, Investors, Traders. These are the retail investor categories. A saver who brings regular savings to the market, basically as an opportunity to collect and raise money, characterized by long-term thinking. An investor who focuses on the return on the investment activity, thinking in medium to long term. A trader who seeks to make money daily on the fast movements of the stock market.

From the above, we can make assumptions on two things: activity, and time span. Based on these factors, it can be stated that the Savers have the least activity and the longest time span, Investors are characterized by medium to moderate activity, while Traders have the shortest time span and highest activity overall.

Therefore, the first and most important condition is to determine who we are?

Security: Represents the investment service and provider security, problematic fulfilment of transactions, the risk of bankruptcy for the investment service provider.

Product Quality: The investment product portfolio, mode of service, service interfaces, and any client-side appearance that supports the service.

Cheapness: Any circumstance that is charged to our wallet during the service, mainly costs. commission-based
- If we are **Savers,** then **safety comes first, cheapness is second and product quality is third.**
- If we are **Investors,** then **safety comes first, product quality is second and cheapness is third**.
- If we are **Traders**, then **cheapness comes first, product quality is second and security is third.**

Why?

- The Saver puts aside his cents on a monthly, semi-annual, annual basis and their vision is saving everything, so safety comes first. The saving is continuous, and it results in an increase, less from investing savings for profit, therefore product quality is secondary. Transactions are so rare, that cheapness is practically irrelevant (of course, high stock fees may be a problem).

- The Investor manages his assets, which may not be easily "re-produced" if he/she suffers a loss on a deal, or his/her service provider goes bankrupt therefore safety is paramount. Product quality is decisive when looking for the return on investment, how and when we choose, select, so that we can get the highest return with the lowest risk. Investing is not a rush, a medium- or long-term investment commitment, so transactions are not common, at most, their immediate volume is high, but this cost is usually very low relative to the expected rate of return.

- The Trader makes a lot of quick deals, so the most important thing is how much the transaction costs. The type of tools used by the Trader and how effectively he/she trades makes a difference, that is why product quality ranks second. A Trader may not be able to trade huge amounts of money efficiently, quickly, without moving quotes (for example, trading on the Budapest Stock Exchange), so security is generally not an issue, because the Trader operates at a value less than the maximum amount of the IPF insurance coverage, detailed above.

If you can decide which category you belong to from the three population categories, then you have an easier job. If you cannot decide, or you think, that your interest covers more than one category (so you will be a Saver and a Trader at the same time), then you are in a difficult situation. It is worth noting that the successful implementation of multiple market behaviours rarely works, so it is justified, to be in only one category over a period of time.

Why? (Examples)

- Active traders, if they have a strategic investment portfolio, every single moment, when they sell a security in their daily trading, because they are pessimistic about the sudden processes, they can easily sell their investment portfolio - their decision of active trading influences their longer term investment as well.

- The money saved can quickly become the "booty" of active trading, if our trading fails (up to 10% of clients can make money from daily transactions in the long run).

- Losses of active trading in our investment portfolio can also endanger our underlying money, our devices.

- If we have investments, then savings are of little importance, so it can unwisely divide our attention and can take up resources at the expense of managing our investment.
- The active trading approach requires a completely different attitude than the investor approach, so it is difficult to mix the two.

- etc.

That is why it is important to know where we want to belong. However, there is one small additive to the decision making:

The Saver is able to generate money as a balance of revenue and expenditure, so he/she can continue to grow. Return on the Investor' money (the size of your investment money) can exceed the revenue-expenditure potential and this makes the investor an investor. The Trader wants to live comfortably, get rich, with an almost impossible activity- let this be the basis of our consideration as well!

Saver: Safety!
Investor: Safety + Product Quality!
Commerce: Cheapness!

What should we do when choosing an investment provider?
1. Get to know the service provider (security). Banking background strength.
2. Get to know the list of conditions - fees, commissions
3. Get to know the products, services - website
4. Get to know the interfaces and the service process - website, personal inquiry
5. If a demo system is available, then try it out and make inquiries in forums.

FORMS OF SERVICES (ONLINE, OFFLINE)

Long ago, brokers were exalted people, people of money. This was not justified at that time and especially not today. In the past, stock market trading and presence in the capital market were the "mischievousness" of the rich. They were entitled to have a broker who gave them smart and honest information about what to buy and sell, at least that is what the common man thought. The upper class may have thought the same, thinking that they were entitled to have a broker, but this was not true either as true information that would have been shared with anyone has never existed, and if the brokers really had some true information, then that the same category of criminal law, as it is today.

The stock market has changed a lot. In the mid to late nineties, online, electronic service providers appeared, who already sold their securities trading service on the internet, as a communication channel and the path (Client-exchange) was also provided through the internet. In this way, stock market service can become a mass commodity, because not only the rich, but a large number of clients were able to call a limited number of brokers, and by massively being served by the Internet, exchange trading, and later other markets, MTF and market making systems have become available to anyone. The Internet has completely rewritten the structure of capital market players.

For a long time, the prime rich institutional client base continued to use the offline channel provided by brokers, but nowadays, prime clients are reaching out directly to the stock exchange trading (DMA - DIRECT MARKET ACCESS) through electronic channels as well. This process made stock trading not only effective, but also cheaper-and cheaper. At the moment more than one service provider can provide free American stock-and ETF products in a limited form.

Online trading is widespread in the world and many domestic providers are able to use their online interfaces to provide trading to its clients.

The following are the domestic investment firms with online interfaces, serving the largest population:

1. Random Capital Ltd.
2. Erste Investment Ltd.
3. KBC Equitas - Online brand of the Hungarian branch of KBC Securities.

In the retail clientele, online trading has increasingly become the primary service route for connecting clients and investment vehicles.

But it is also important to say that there are many areas of the investment service, the electronic access of which is not yet complete. Such are is investment consultation, that does not work through an online channel in most cases.

All functions of online interfaces include not only trade, or the possibility of electronic trading. We can place orders (invest, trade), track account information, move devices (transfer, wire), read news, monitor exchange rates, read analytics, etc. at the service interfaces available on desktops, tablets, or mobile devices. With integrated interfaces, you can access the investment service online from anywhere, anytime, with all of its important activities and information backgrounds.

Interfaces are offering more and more support in providing information to the retail clientele, by providing education, product information as creating the possibly more responsible and more efficient investment services activities.

(BASIC) SERVICE OF BROKERAGE FIRMS

MANAGING CASHAND SECURITY ACCOUNTS

In the framework of investment services investment, firms manage the money and securities accounts of their clients, who can keep their money and their financial assets at the investment service provider this way.

These accounts serve solely as a basis for using investment services, they are not suitable for conducting other payment transactions. We cannot transfer money for example to pay utility bills, purchases, or other things. In fact, the limited account management service also means that from our cash account at the investment firm we can initiate a transfer only for a registered current account that is in our own name.

Investment service activities do not provide an account management function that is appropriate for the purpose of a complete payment services. The investment firm shall refuse to conduct transactions other than the use of the investment service.

TRADING SERVICES

If we want to trade securities on a regulated market, we can only do so through an investment service provider. The focus here is on the regulated market, because with the same securities, that can be traded on regulated markets (exchanges), we can actually trade over the counter (OTC), for which we do not necessarily need investment service providers.

Stock exchange trading is standardized trading, where conditions and rules are set for different parts of trading. These rules are primarily demanded from the clients by the members of the stock exchange, investment firms and credit institutions. For example, if someone wants to sell a security on a Sunday afternoon, it cannot be done immediately because there is no trading on Sundays. The investment service provider is aware of this rule and will only send the orders of its clients to the stock exchange on Monday morning, even though the order is placed through an online trading platform on a Sunday afternoon. Standards and rules are required by the stock member investment service provider from its clients, acting on their behalf.

The most well-known investment service activity in the service of the population in Hungary is the conduct of stock exchange trading. In this context, clients entrust the investment service provider that in a pre-parameterized transaction it shall buy and sell securities and other financial instruments at the Budapest Stock Exchange.
*How to imagine this (in the case of an online service provider)?*The client logs into the online trading system with his / her login ID. He/she can find all the details of his/her account here

and can see (if they have a BSE subscription for real time data) how much (if the stock market is open, otherwise the last price, basically the closing price can be seen) an OTP share costs. The interface lets you specify at what price you want to buy OTP stock, how many shares and with what validity (time interval). If you enter a price (limit price) at which the share purchase can be completed, then the deal is immediately concluded, if it is lower than the market price and its validity for that day's offer, then the buy will remain in the stock exchange system, until the price is there (in this case it is concluded) or the offer will expire at the end of the day (withdrawn). If the deal is concluded, you will have an OTP share.

What does the investment service provider do in the meantime? Lots of things. It checks to see if the offer is marketable (for example, the client does not want to buy for ten times as much money which cannot be done), checks to see if they have enough money to buy and for commission, verifies that the security is not suspended and explores many other options, depending on what stage of trading is, what bid type the client wants to use, etc.

This also shows that a stock exchange investment firm standardizes and complies the transaction with the set of rules initiated by its clients.

What does the client see from all this? The offer is fulfilled or not fulfilled, the balance of money and securities changes, the transaction, etc. may be rejected etc.

The ways and conditions for placing orders may change over time, based on the given stock exchange, the law or the rules of the investment service provider. This is also true for obligations and their changes. The investment service provider is responsible to the client for the execution and settlement of the transaction, and on the other side against other market organizations (stock exchange, clearing house, banks, etc.)

PROVIDING INFORMATION

The investment service provider may also provide the services of delayed and real-time exchange rates, used for stock exchange trading. **By using this service (Vendor, Subvendor) the client has the opportunity, to know the exact price of a financial instrument at a given moment, which is listed on the stock exchange.**

Immediate knowledge of the information is essential for active trading.

Investment service providers may have a direct contractual relationship with stock exchanges (Vendor) for the provision of real-time quotes and delayed rates, or work with Vendors in a contractual relationship with the Exchange (Subvendor) to provide their clients with listing information.

TOTAL INVESTMENT SERVICES

This section lists all investment services activities, subject to authorization and ancillary activities, without going into detail.

Article (1) of Section 5 includes investment service activities which may be carried out on a regular basis in the context of the financial instruments, listed in Section 6. These are the following:

(**a**) **acceptance and transmission of orders,**
(b) execution of an order for the client,
(c) own account trading,
(d) portfolio management,
(e) investment advisory;
(f) placing a financial asset with an obligation to purchase the asset (a security or other financial asset) (quotation guarantee),
(g) placing a financial asset without an obligation to purchase the asset (financial asset); and
(h) the operation of a multilateral trading facility

Article (2) of Section 5 indicates the following ancillary services:

(a) **safekeeping and administration** of financial instruments, as well as the **management of the client account** relating thereto,
(b) **custody**, and the management of the related **securities account**,
in the case of printed securities, keeping a record of this and keeping a client account,
(c) **granting of investment credit**,
(d) **consultancy** and services, relating to capital structure, business strategy and related issues, as well as mergers and acquisitions,
(e) **own account trading in foreign exchange and own currency relating to investment services activities**,
(f) **investment and financial analysis**,
(g) providing service, related to **quotation and providing guarantee**;
(h) **investment service activities or additional service, related to the base of underlying transactions device** included in items (e) to (g), (j) and (k) of Section 6.

Pursuant to Article (5) of Section 8, an investment firm shall provide investment services and ancillary services exclusively may carry out activities as

(a) specified in Article (1) of Section 9, that is, the activities **which the commodity exchange service provider may carry out,**
(b) **stock bookkeeping,**
(c) **authorized agent** (nominee) **activity of shareholders,**
(d) brokerage activity **according to the Credit Institutions Act,** with a licence issued by the Credit Institutions Act for the activity, regarding mediation in case of providing financing services,

(e) as **an insurance broker according to the Insurance Act,**
(f) **securities lending,**
(g) **the sale of data and information, relating to a financial instrument,**
(h) **group financing** activity as defined in subsection i), item 10.2. of Chapter 1, in Annex I to the Credit Institutions Act.

For investment businesses a very narrowed activity license range is applicable and there are a number of rules specifying, what kind of investments, capital structure they can have.

Investment firms may carry out activities, investments, management in a limited way due to the exposure of the service client device. The method is referred to by laws, regulations, directives, their compliance is monitored and controlled by the National Bank of Hungary.

While many conditions apply to the business processes, a number of other conditions determine expectations related to managers and owners.

SPECIAL SERVICES

In performing investment services activities, many unique products, services can be created, among these are those created as part of legislation and regulated products, services, and there are products, services within the general legal framework, that are created individually.

The investment culture of a country's population, the overall magnitude of savings, a server environment that meets the demands is a prerequisite for today's modern economies. It is typical, that society acts in a supportive way towards its citizens, based on well-defined common interest.

In this chapter, we deal with two basic constructions (long term investment account, retirement pre-savings account) to make it clear, how the legislator creates products, using more favourable conditions than the general procedures to assert social interests.

LONG TERM INVESTMENT ACCOUNT (LTIA)

The purpose of the Long-term Investment Account is to encourage medium- and long-term savings in Hungary. To this end, the legislator provides benefits in tax payment terms by allowing 10% tax liability instead of the 15% over three years and allowing tax exemption over five years on the returns on a cash account, invested in investment instruments, placed in a closed account structure.

Let us see how this arrangement is described as a service, by the investment firm Random Capital Zrt.:

"**Collecting Year**
After sending the application to open a LTIA, the bank account number of the LTIA account will be immediately displayed on the Netboon interface, to which the clients may transfer the amount of money they wish to deposit in the LTIA (the minimum amount specified by law is HUF 25,000, or its equivalent in foreign currency). Further payments to the LTIA may be made until December 31 of the year of opening the account.

After the collection year, payment can only be made by opening a new LTIA for that purpose thus, a client can only have one LTIA opened per service provider per year, however, the client may have multiple LTIAs for a given year at more service providers.
3-year deposit period Withdrawal within 3 years of the collection year automatically terminates the LTIA and tax is payable according to the general rules. At the end of the 3 year term for partial withdrawals a reduced tax rate of 10% shall be applied, the legal minimum sum must remain on the account. The withdrawal of the total amount on the account means the termination of the LTIA and the reduced tax burden is 10%.**5-year deposit period**Withdrawals in the 4th and 5th year of the contract automatically terminates the LTIA, with a 10% reduced tax burden.At the end of 5-year term, at the end of the calendar year the LTIA ceases, all investments and returns made by the client are tax free.

LTIA transfer

It is possible to place your LTIA held at another service provider at Random Capital Ltd., with legal continuity, taking into account the original deposit period."

LTIA is a very popular account construction among retail clients.

RETIREMENT PRE-SAVINGS ACCCOUNT (RPSA)

The Retirement Pre-Savings Account is also part of an incentive scheme. It encourages the population to be self-aware, by starting to have savings at an early age, considering the possible difficulties of our older age. The essence of RPSA account construction is the tax-free income and the possibility of claiming up to HUF 100,000 or HUF 130,000 a year, provided that we keep the amount in our account until the end of the deposit period.

Let us see how this arrangement is described as a service, by the investment firm Random Capital Zrt.:

“State subsidy for paid personal income tax

Each year after making payments for the current year, 20% of your personal income tax can be recovered as a savings benefit up to HUF 100,000 (HUF 130,000 if you reach retirement age before 2020).

Tax-free yield at the end of the deposit period

Yield on RPSA-R account (excluding dividend yield) is tax free and free of contributions. This discount applies if the payment is carried out from the RPSA-R account in the 10th tax year following the account opening at the earliest.

Making independent investment decisions

You are free to decide on the investment of the savings, placed on the RPSA-R account. You may invest your money in lower-risk instruments that require less active management, or you may take a higher risk by trading corporate shares.

Self-care for retirement years

Having savings is important for the younger population and for those closer to the retirement age as well. Consider your financial security and have savings for your retirement years.

If payment is made before the deposit period from your RPSA-R account, the savings on the account do not qualify as a tax-exempt pension service. In case you would like to access your savings before the 10th tax year from the opening of the account:

• The return on the account is treated as other income, which is subject to PIT and HCC payment obligations by declaring the income.

• You must repay the tax savings previously credited to your account, plus 20 percent.
• You also have to close your RPSA-R account if you wish to access your savings earlier, you cannot claim savings support on your payments in the year of payment, only from the following year.

You can trade on your RPSA-R account with shares available on the Budapest Stock Exchange, government securities, investment units and money market instruments. Foreign exchange trading, trading foreign equities and leverage transaction are not possible. The annual fee, to be paid for the account is HUF 2,000, in accordance with the applicable law."

KEY ADVISOR (XTEND)

The securities markets need to be operated and constantly improved as well. This is also true when a particular market, in our case the operator of the Budapest Stock Exchange is the Hungarian state, representing the owner of the HNB. In the fast-growing capital markets it is necessary to follow the changing product structure, the regulatory basis of the service, to provide training to and develop the players of the financial distribution system, not only the users of the products, but also the service providers.

The Budapest Stock Exchange applies an eased procedure to those potential issuing companies - basically SMEs - that want to get closer to a regulated market. With the launch of the market or at a later date, fund raising is also possible.

This process should be interpreted as follows:

XTEND Market is an MTP (Multilateral Trading Platform) operated by the Budapest Stock Exchange, which is the stock exchange trading system, but in theory it is not considered a regulated market.
Companies that are eligible to enter this XTEND system on eased terms are those that can then move on to the regulated market. XTEND market conditions are more favourable, a significant proportion of stock exchange members with trading privileges is also present in this MTF market, while the activity of issuers is promoted by top advisors, selected and listed for this task by the Budapest Stock Exchange.

Advantages of the XTEND Market (BSE listing):
"Xtend, the Budapest Stock Exchange (BSE) market launched in 2017, supports growth plans for mid-sized businesses.

NATIONAL STOCK EXCHANGE DEVELOPMENT FUND

The equity fund launched in Q1 2018, together with private investors provides capital to businesses which undertake appearance on the BSE Xtend market and furthermore the preparation for the issue of listed shares. The typical investment size of the equity fund is HUF 1 billion, for which a minority stake is acquired in the given company.

TAXATION

Shares of a company listed on Xtend can be placed in a long-term investment account. If the owner does not withdraw the yield and the amount deposited in the long-term investment account d for at least five years, in that case, after a period of five years the owner can get the entire stock tax-free.

INVESTOR CONFIDENCE

The listing on the Xtend market can take place without any public transactions, typically after private equity raising. This way the company has the opportunity to get to know the public operation, and later reach out to investors successfully during the public share issue.

GROWTH

The Xtend market is ideal for already mature mid-sized businesses in the public domain, that plan to grow significantly in the years to come and would require external financing for this.

SCOPE OF INVESTORS

In the new BSE market, companies can reach investors who want to invest in dynamically growing companies."

STOCK EXCHANGE TRADING AND SETTLEMENT

THE MONEY AND CAPITAL MARKET DISTRIBUTION SYSTEM

INTRODUCTION

As our world evolved and money appeared, different forms of financial intermediation were developed as well. In the economy, there are always players with surplus and those who need more money than what is available for them, be it individuals, companies, or even the state. This transformation, that is, the transfer of monetary savings from savers to users is provided by the money and capital market distribution system. The financial distribution system does not deal with traditional commodities (bread, milk, etc.), but deals with money and related financial services, e.g. brokerage, lending, payment services.

There are countless definitions of a financial intermediary system – here is one example:

The financial intermediation system is a set of markets, individuals, institutions, laws, customs, mechanisms, techniques that ensure the financial and capital relationships of the economy.

The main function of the financial intermediary system is to ensure meeting the savings occurring in the economy (population and companies) and the investments and funding on the demand side. This transformation ensures that savings are transformed into working capital. Its important role is to bring savings back into the economy, thereby financing the production cycle and economic growth.

The above is illustrated in the figure below, illustrating the relationship between savers and source-claimers, where financial intermediaries play a decisive role.

source: Pénziránytű.hu

SAVERS	DIRECT CAPITAL FLOW	SECURITIES MARKET, STOCK EXCHANGE	DIRECT CAPITAL FLOW	THOSE DEMANDING SOURCES
HOUSEHOLDS STATE COMPANIES				HOUSEHOLDS STATE COMPANIES
	INDIRECT CAPITAL FLOW	FINANCIAL INTERMEDIARIES	INDIRECT CAPITAL FLOW	
		Commercial banks Investment companies Investment funds Retirement funds Insurance companies Savings banks		

In the following pages, we will discuss elements of this definition. In this chapter we will deal essentially with the financial markets. Regarding the capital market, we will provide details in the next chapters the stock market and the clearing house.

FINANCIAL INTERMEDIARY SYSTEM AND ITS PLAYERS

First, as it is perhaps the most important player, let us look at the "Saver" among the players in the financial intermediary system.

SAVERS

Saving itself is perhaps best interpreted as part of the income, not spent for consumption. In these cases, the saver does not want to, or plan to spend part of his/her income, but will do it at a later time. Meanwhile, in the hope of extra income or a small return, he/she exchanges the present, current money for future money (e.g. bank deposit – taking out the deposit + interest at maturity).

But who can be considered as a saver? Most of the population, but we cannot forget the temporarily released money or savings of companies', business organizations'. Typically, the population is the largest net saver, meaning that savings are greater than loans taken.

According to a HNB study in Hungary (Péter Koroknai) -:

Hungarian households' financial savings ratio of 6% of GDP is the largest in the region, as a result the net financial wealth of households is high, compared to our level of development, it is more than 100 percent of GDP.

Several factors played a role in the growth of savings:

• *With the decline in lending, Hungarian households became net loan payers - more loans have been repaid, than new loans have been taken, which increased the net financial wealth.*
• *With increased precautionary considerations, households have generated much greater financial savings than previously.*
• *Labour market processes have also supported the rate increase: in addition to wage growth, employment growth has also contributed to this direction.*
• *Since 2010 many economic policy measures have contributed to the increase of household financial savings (e.g. labour taxes, utility cuts).*
• *After 2013, a number of central bank actions have been taken, which supported higher retail savings (conversion of FX loans, debt brake rules for a healthier loan portfolio, etc.).*

Overall, Hungarian household savings have increased significantly since 2010, as a result, nominally doubling the financial wealth of Hungarian households, which is considered high at a regional level, and also taking into account the level of development of the countries.

In terms of composition of the household savings the high level of cash stock is worth highlighting. As a result of the increase in recent years, the Hungarian cash stock as a proportion of GDP counts high, more than 10% not only in European but also in regional relation.

The Government Securities portfolio has also increased, close to 15% in 2019, while bank deposits - although they are decreasing are still around 25%.

When we look at the real economy and everyday life, it is clear, that the needs of savers and users of savings often do not meet. These "gaps", or differences are usually bridged by the actors of the financial intermediation system, by developing products, services.

But what are these "gaps"?

- The first thing that may immediately arise is that savers, especially individuals, tend to have smaller amounts than the needs of users, companies (e.g. investment plans),

- Another major difference may arise from the fact that we can only let go of our savings for shorter periods, than for how long users would use it (expiration „gap"),

- A further important difference is the at what risk (at what risk level) would people be willing to make available their savings to a user,

- And finally, we can't forget, that as an individual saver I don't have the right knowledge and enough information about investment opportunities, so it is better, if I entrust this activity to professionals.

There are many tools and forms of investment to solve these problems, let us just pick a typical one right now, such as the banks' deposit collection and lending activities, which may be the solution to the above problems.

Perhaps the most important task of financial intermediaries, is to help the savers and the users of the savings find each other as quickly as possible and coordinate different expectations, demands like yields, risk levels, or in terms of maturities.

The form of this mediation may be direct or indirect:

We can talk about direct forms, if the saver e.g. buys securities directly, within that, primary securities, thereby giving the user the opportunity to use the savings to achieve their goals. In this case, the decision is made by the investor / saver himself/herself, as opposed to the indirect form of investment.

We can talk about indirect forms of investment when the investments are preceded by the raising of capital by an "intermediary" and thereafter the intermediary places the available source at the users, considering the above-mentioned risk, expiration, magnitude, liquidity requirements. This activity is basically performed by banks, commercial banks, investment funds and insurance companies.

In Hungary the two-level banking system was introduced in 1987, until then, the National Bank of Hungary and some specialized banks operated in the economy only.

With the introduction of the two-level banking system, classic commercial or "business" banks appeared.

The most important activities of these commercial banks can be summarized as follows:

- Deposit collections
- Money lending (creditor)
- Payment performance

Of course, the above activities entail risks, since the bank lends money collected in the form of deposits and bears the risk that the borrower may not repay the loan received.

Regarding banks as business companies it is a real expectation, that they shall be successful, to make a profit during their operation, but they must do all this safely.

The Supervisory Institutions and applicable laws and regulations are required to ensure that banks operate in accordance with these requirements.

From the above, one can deduce the threefold expectation regarding the operation of banks, meaning that a bank should be safe, have sufficient liquidity (to always repay deposits) and be profitable, to be interested in the pursuit of the activity.

Let us briefly review the transactions made by commercial banks.

Deposit transactions - with which the bank provides funds to its lending activity as follows:

- collecting deposits - from citizens, companies, municipalities, etc. Regarding deposits the following are defined in each case: rate of interest, the method of interest payment, schedule, maturity;

- borrowing from the central bank and other commercial banks;

- issue of own securities - which may include, inter alia, bonds, mortgage bonds;

In order for the deposits collected to also generate income, the banks use these amounts to lending. Lending may be carried out to the public / individuals, but companies, local governments also often make use of the borrowing facilities.

Credit transactions that can be considered typical:

- lending (to companies, municipalities and the general public);

- deposit placement (at another bank, central bank);

- purchase of securities (purchase of corporate, government bonds).

Another important activity of commercial banks is the payment flow, that is executing financial transactions among the money holders. We see cash flow every day as individuals, even when we pay our bills, or when we get paid by our employer. There are two main categories of cash flow, cash and non-cash - cash flow accounts. For the latter, participants must have an account in a bank. The banks' income originates from fees paid by account holders and transaction commissions.

In addition to the classic commercial banks, it is worth mentioning the so-called Investment Banks. Investment banks were mainly developed in the Anglo-Saxon territories. Their formation was helped, and partly enforced after the Great Depression by the "Glass - Steagall" Act of 1933 in the United States, which made the separation of the commercial and investment banks mandatory. Although in continental Europe there has long been a mixed banking business, financial crises have also prompted European regulators for the separation of commercial banking (deposit collection - lending) and investment banking, thus reducing the possibility of risk spreading between the two market segments.

But what is an Investment Bank?

The definition of "ecopedia" reads as follows:

“An investment bank (or “merchant bank”) is a type of bank that mediates financial resources, helping to get capital to the right place. Investment banks thus do not invest their own assets in companies, but the capital of their other clients. Investments are usually long-term, which is why they are most instrumental in issuing bonds, and facilitate their sale and purchase. Another important task is to organize the transformation of the company, and related consultancy. It is accompanied by ancillary activities such as preparation of various financial analysis, advisory activities, and many other financial activities or services. "

It is worth to add the following to the above detailed definition:
Investment banks do not collect deposits or lend in the same way as commercial banks. Although they maintain client accounts, they may only have a limited function and are not capable of handling payment transactions. Their role in capital mediation is crucial, and almost everyone knows some of the bigger names in the industry, like Merrill Lynch, Morgan Stanley, or J.P Morgan.

INVESTMENT FUNDS

If we manage our investments ourselves, we spend a lot of time and energy in a sea of possibilities to find the most appropriate form and investment tool for us. If we choose only one or two tools, then we assume that our portfolio will not be sufficiently diversified and in a given situation we will be exposed to excessive risk. Mutual funds can help with this, collecting money of many investors with the help of professional experts, to make sufficiently diversified investments.

That is, an investment fund is a form of investment where the savings or free money of small investors are invested in an organized / institutionalized manner by professional investors, the fund managers. Their advantage is the large size, the resulting efficiency and the fact that the small investor does not have to spend time looking for investments and trying to find the optimal risk / return.

By definition an investment fund is a pool of assets with a legal personality, created by the public or private placement of units (which are bought by investors), operated by professional asset managers, managed to increase investor wealth.

An investment unit is a transferable security representing the property rights issued on behalf of the fund.

Mutual funds are also distinguished in terms what maturity they have, or if those are open-end or closed-end funds.

Open-end funds are created for indefinite term, they have no maturity, and can be bought by investors at any time or redeemed at the fund manager.
In contrast, closed-end funds are created for a predetermined period and cannot be redeemed during the term.
Depending on how the fund units are marketed, they can be private or public. If private, units are sold to a predetermined circle of investors, while anyone can buy from the public offering. It is also worth mentioning, that based on what the money raised by the funds is invested, we can talk about securities or real estate funds.

Securities Funds are usually grouped according to the risk taken, and related to that, according to maturity:

- money market funds: invests in very liquid short-term government securities,

- bond funds: risk-free government securities, government bonds are included in the portfolio, corporate bonds can also be bought,

- mixed funds: equities appear here as well as bonds, increasing the chances of higher returns but also increasing risks,
- pure equity funds: the investments are diversified to reduce high risk, in hopes of higher returns, e. g. by industry segment.

Equity funds can be further grouped according to their investment strategy:

- Index - tracking and mapping stock indices in the portfolio;
- Regional - tracking certain economic regions;
- Sectoral - tracking of individual industries / sectors;

When it comes to mutual funds, it is important to know that funds are required to calculate and disclose (make public) the value of the fund's assets on a daily basis, to inform investors and the market regarding the value of investments. This gives rise to the price of funds, which can be traded or redeemed, for example, with open-end fund items.

In addition to asset value, an important concept and information is **net asset value, which is the asset value of the given fund, reduced by the fees, costs charged by the fund management**.

MORTGAGE BANKS

Specialized credit institutions specializing in mortgage bonds (bonds) are usually included in this category. Land Credit and Mortgage Bank (LCMB) as the first player in Hungary started its activities in 1998. **Mortgage banks help finance real estate and agriculture, they collect investors' money with the bonds issued by them.**

Special rules are defined for mortgage banks by supervisory institutions, for example, they cannot collect deposits.

Mortgage banks are basically trying to satisfy long-term credit needs (10-15-20 years), as opposed to commercial banks in case of which much shorter maturities are specific.

In the case of mortgage bonds, the mortgage loan is secured by real estate or land, which significantly reduces the risk of these products, because if the debtor cannot pay, then the bank withdraws the cover and sells it under the mortgage.

PENSION FUNDS

Pension funds serve as long-term investments. The goal is also to invest the regularly paid money in financial assets, and through this to repay as much as possible for the investors as a pension during the retirement period. At the same time, they should also seek security in their investment policy for the retirement savings to actually serve as pensions, pension supplements for the savers.

INSURANCE COMPANIES

Insurance companies play a different role in the financial intermediary system than the ones listed above. **Their basic goal is to pay in the event of an unexpected or damaging event.** A life insurance policy e.g. pays for a death occurred, a non-life insurance policy (such as a home insurance) pays for the return on the damage to property. Reserves are mostly invested into government securities, that is, risk-free, but most of them are also present at other markets to a lesser extent in order to achieve a higher yield.

Their specialty product is called "unit linked" or investment unit-related life insurance. The special feature of this product is that life insurance is linked to an investment opportunity. The amounts paid by the insured are invested in pre-agreed portfolio types. Upon expiration of the insurance contract, the insurer pays back to the insured the return on investment with the increased amount.

PENSION FUNDS

Pension funds are of great importance, especially in Anglo-Saxon countries with significant capital market traditions. They appeared in Hungary in the 1990s. **In the case of pension funds, members (savers) save from their income during their working years, paying money to their pension fund accounts (individual accounts). These savings are invested and the amounts increased by earned income are paid out during retirement.**

Pension funds are self-organizing institutions, operating within a strictly regulated environment, framework.

VENTURE CAPITAL

It is not a classic element of the mediation system, but due to its growing importance in the last few decades it is worth mentioning.
Its primary role is to invest from the money collected by savers and investors, willing to take high-risk mostly into new businesses which are in their early development, in their early stages, based on innovative technology (which are, not infrequently at a very early stage -such as ideas).

Venture capital companies, funds can best be categorized and described based on, what stage the funded company is in its life cycle. Here are some typical forms:

Seed-money - basically investing in projects at an early stage, often at the idea level.

Start-up capital – can be considered the “realization phase” following the idea phase,, providing resources that are required for company building, 'product' development, market research, marketing and sales plans.

Fledging capital - appears when production has started, the product is validated, and it is necessary to finance the production ramp up and expanding sales.

Management buy-out – the buy-out of founding executives, placing a new external , in most cases professional management at the head of the company.

Exit - the emergence of a newer venture capital, usually buying shares of the company with a profile specialized in the industry, but in many cases the motive is that the original investor's venture capital runs out of investment maturity (usually investing for 3-5 years)

Following the introduction of the market players, let us look at the types of financial markets, and their characteristics.

TYPES OF FINANCIAL MARKETS (MONEY MARKET – CAPITAL MARKET)

Financial markets are a special market where money and financial instruments are exchanged.

Financial markets can be categorized in several ways, such as:

- regarding time, or the typical maturity of the transactions we can talk about **money markets and capital markets**. **Money markets are typically short-term commercial transactions-within one year.**

- we can differentiate based on whether the **issue of those assets**, the selling **was carried out by public issue or private sales,**

- we can also consider whether the financial product is received by the saver directly, indirectly, or through a financial intermediary. If directly, we can talk about **primary**, in the latter case **secondary distribution**, or market.

- these can also be categorized according to the fact, whether the transaction regarding its due character will be an immediate execution, or a futures execution . In case of **immediate, or "prompt" transactions,** the execution takes place at the same time as the transaction, whereas in the case of the **futures transactions**, all this may be separated by months.

MAIN PRODUCTS, MARKETED ON THE MONEY MARKETS

Let us take a closer look at the financial markets and the products traded therein.

The money market is basically a market for short-term (within 1 year), liquid, fixed-rate, low-risk, easy-to-trade debt instruments.

A possible grouping of key financial assets is the following:

DISCOUNT TREASURY BILL (DTB)

Discount Treasury Bills are generally securities with a short maturity of 3 and 12 months. Typically, they are not interest bearing, but are placed on the market below their face value (usually HUF 10,000 basic denomination), at reduced, discount prices. Payment of face value at maturity will be completed in full. (Of course, if any, tax will be deducted). Yield of the DTB is the difference between the nominal value and the purchase price.

Discount treasury bills are marketed in Hungary by GDMC Ltd. (Government Debt Management Centre) in the framework of auction procedure, public bidding. The specialty of auctions is that only banks that have a primary distributor agreement with GDMC can participate. The ultimate investors, so do individuals, can purchase the securities from primary dealers.

By buying a discount treasury bill the buyers give credit to the Hungarian state, and while these instruments are considered risk-free on the market, economically rather investors bear the risk of the issuing State.

BILL OF EXCHANGE

This instrument (cash and securities) is not widespread in Hungary these days which embodies claim while it was used daily before the world war. On the one hand the bill is a loan instrument, on the other hand, it is a currency, since by "applying" it, the claim can be transferred to a third party. **Its economic meaning can be formulated as follows: the issuer of the bill of exchange recognizes that it owes money to another party and undertakes to**

equalize it in a predetermined time and manner. The bill and its operation are backed by strong legal bases (bill-call law), its use is subject to predetermined formalities.

There are two types of bill of exchange: own bill of exchange and foreign bill of exchange. In the first case, the issuer of the bill promises payment, whereas in the case of a foreign bill, the issuer calls upon another person (either individual or company) to pay to the beneficiary.

It is not uncommon to have a bill of exchange discounted before maturity - that is, for example, it is sold to a bank and the creditor gets his/her money sooner.

The cheque is a claim embodying equity security just like the bill, but it has not been widely used in Hungary.

INTERBANK LOANS

In addition to their core business, such as collecting deposits and lending, banks must continuously maintain their liquidity. If they need money, then for a temporary, short term - usually for 1-2 days - credit, they can contact the central bank, or another commercial bank. In the same way, when they are in abundance of money, they try to outsource the "excess" in a revenue generating way to the interbank market.

This circulation is basically carried out between commercial banks, but it can also be an important channel for liquidity management for the central bank.
Interest is charged on the money lent in the interbank market as well and this is the indicator for these markets, for the reference rate. WE can often hear about LIBOR in the international news , which is the London Interbank Offered Rate, that is, the reference rate on the English interbank market. The European Union reference rate is quoted in Frankfurt and is called EURIBOR.
In Hungary, this role is played by BUBOR (Budapest Interbank Offered Rate).

When it comes to BUBOR, it is important to keep in mind the following:

BUBOR is the interbank forint loan rate, that is, the average lending rate of commercial banks.

The value of BUBOR is calculated daily and published as a percentage, with the assistance of the National Bank.

"Since 1st November 2016, the National Bank of Hungary has been carrying out production and management of the Budapest Interbank Forint Loan Rate's (BUBOR) financial benchmark.

The daily value of BUBOR is based on the interest rate quotations submitted by the panel banks. The BUBOR interest rate refers to the filing of interest rates, by using which interest rates, the interest-bearing bank on that banking day regarding different maturities, would make a business offer to another interest-bearing bank regarding provision of unsecured interbank loan, (so-called unsecured interbank loan), denominated in HUF.

Of the interest rate quotes received, after leaving the highest and lowest values the HNB defines by averaging the given daily value of BUBOR, which is published by it on every Hungarian banking day at 11 o'clock."

source: HNB

The value of BUBOR has been calculated since 1996 for 1 and 3 month periods, then in 1997 it was extended to a 6-month maturity.

BUBOR is, on the one hand, a guiding indication for the market and, on the other hand it also serves as a basis for interest rate futures trading.

BUBOR also plays a significant role in floating rate loans, where it serves as a reference base, that is fixed with the interest rate BUBOR + or - percent or fixed with base points in the agreements.

(For example, a BUBOR + 30 bp - means that the interest will be) 0.3% over BUBOR value.

REPO TRANSACTIONS

The name repo has come to be known from the English acronym - sale and repurchase agreement -, which in Hungarian can best be translated as a repurchase agreement

Repo is basically nothing else, but a security repurchase agreement, which is the combined management of two reverse transactions. Repo transactions typically involve government securities, especially short-term government securities are included within that.

Its economic content is short-term lending and depositing, secured by securities.

In the case of repo, the dealers agree in advance on when and under what conditions they will buy back the securities in the business. In other words, the initial part of the business is the prompt sale or purchase of securities, which includes an agreement on the future repurchase / sale of a given security (reverse business start-up). When setting out repo conditions, sale and repurchase prices are determined in a way to ensure interest income for the lender.

Based on the above, the repo business can also be interpreted as a security loan and a relating money loan.

Repo transactions are also often conducted by central banks, which can regulate the liquidity of the banking system.

In the case of passive repo, the central bank sells government securities, with which it withdraws money / liquidity from the banking system.

In the case of an active repo, the reverse is true, the central bank, buying government securities, creates excess liquidity in the banking system.

Repo transactions are also distinguished based on the ownership of securities during the agreement, included in the transaction. If the ownership is transferred from seller to buyer, we are talking about a so called “delivery repo” transaction. In this case, the buyer is free to hold the security, they can even sell it, but upon return, they must provide the original or equivalent paper to the seller.
The other type is the "hold in custody repo", when the ownership remains at the seller but they are obliged to have the securities placed to a separate custody account for the buyer.

FX-SWAP TRANSACTIONS

Swaps are basically swap transactions and like in the case of the repo, in a single transaction, there are actually two transactions. FX, or "foreign exchange" means currencies, that is, if we are talking about fx-swap, we are talking about exchanging two currencies, for example, forints and euros (HUF / EUR).

In the case of banks foreign exchange swaps have a role in managing foreign exchange liquidity, but they are also provided as a service, primarily for corporate clients, who want to reduce their foreign exchange risks through these transactions.

For example, if a company, which has the appropriate forint sum and which knows, that it has to pay a carrier in euro, but it does not have the required euro amount, and it also knows that in 15 or 30 days it will receive roughly the same amount of euro form a buyer it can enter into foreign exchange swaps with its bank. In this context it buys the amount of euro required for payment now at a spot rate and at the same time it sells the same amount in euro for a later date. So its exchange rates are fixed, it can calculate with fixed amount of expenditure and revenue, and as a cost it pays the deadline interest rate differential.

Foreign exchange swaps consist of a spot and a maturity foot, and a future, futures repurchase belongs to the sale of a particular currency in the present

In the case of fx-swap transaction, calculation of the exchange rate of the two swaps there is basically carried out, based on two factors. Based on the all-time spot (immediate) exchange rate and the interest rate differential of the two currencies involved, expressed in exchange rates value.

CAPITAL MARKETS AND INSTRUMENTS

After reviewing the financial markets, the players and products, let us move on to the capital markets and the instruments and tools traded there.

The capital market is a market for long-term investments, as opposed to financial markets. Long-term savings can be invested in the capital market.

Securities are the basic assets in capital markets. Securities can be grouped based on their:

- legal
- economic
- financial content.

SECURITY – LEGAL CONTENT

In legal terms, a security is a document that embodies and carries various rights.

SECURITY – ECONOMIC CONTENT

In economic terms, securities embody property related rights and are tradable.

SECURITY – FINANCIAL CONTENT

In financial terms, they can also be defined as tools for exchanging money at different times.

CHARACTERISTICS OF SECURITIES

Another grouping option is the characteristics of the security:

- what **rights** they embody;

Receivables, i.e. bonds, or equity type, i.e. shares.

In case of shareholding in proportion to ownership it embodies membership and property rights. Under property rights we consider the dividend, the liquidation ratio, while under membership we mean the right to vote, attendance at general assembly.

- what **returns** are provided by them;

According to yield, securities may be non-interest bearing, fixed rate, variable yield or securities of a mixed type.

- their rules regarding **transferability**;

Regarding the issue of transferability, we can talk about registered securities and bearer securities. In the case of registered securities special procedural rules apply to the transfer. In the case of bearer securities, the holder of the security is free to transfer the security without restrictions.

- their **maturity**;

On the basis of maturity, a distinction is made between short-term (shorter than one year), medium-term (usually 1-5 year bonds) and long-term (more than 5 years) bonds and mortgage bonds.

There are securities with no maturity - stock is a typical example.

MATURITY OF SECURITIES

As we became familiar with the products, let us look at what kind of transactions can be carried out with them. One possible grouping of financial market transactions is the following:

Based on maturity

- **Prompt** transactions

It is typical that sales, execution and technical execution are not separated in time, the transaction is completed within a few days. For example, in the case of stock exchange transactions the settlement happens within two to three days.

- **Futures transactions**

The feature of the transaction is that it is for future fulfilment, transaction and fulfilment are significantly separated in time. Terms of business - price, quantity, quality, date of completion - are specified in advance by the parties.

- Degree of concentration - **where the transaction is done**

In this respect, there are three types of transactions, the so-called OTC (Over the Counter), Concentrated Market (such as Stock) and Auction sales, which is typical in many cases for the selling of government securities, and in the case of a primary share issue it is also a commonly used form.

- On a **risk** basis

Based on the relationship to risk, it is customary to divide the business into Speculative, Hedge and Arbitrage.

Speculators are indispensable players in the markets, as they provide liquidity in the course of trading. Their goal is to exploit the movement of prices, exchange rates and to make a profit. Speculators, waiting for rising prices are called Hausse (long - direction of buying) players, while those who wait for a fall in prices are called Baisse (short - direction of sale).
Depending on how long they trade, they can be called "scalpers" who try to take advantage of the price movements that are taking place in a very short time, or they can be called Intraday - day trader speculators, and there are also those following the trends, who can follow one lasting direction in the market for days or even weeks.

Hedging traders want to reduce the risks inherent in their day-to-day business, and they execute forward, futures or options businesses.

Arbitrage guards try to take advantage of the price, exchange rate, interest rate, etc. differences in the markets by carrying out parallel sales and purchases, at the same time, but in different markets.

- **Derivative** transactions

We can list Forward, Futures and Option trades in this category. The main point of differentiation between Forward and Futures is, that futures transactions are standardized, they are usually traded on the stock exchange, while in the case of Forward transactions the parties have a chance to customize the transaction. At the same time considering their economic content, there are really no differences.

In the case of Options one of the parties is the tendering party of the option, and he/she takes the risks in return for the Option Fee, while the Option buyer bears the risk only to the extent of the Option fee paid.

GROUPING OF SECURITIES

Previously, we have looked at capital markets from multiple points of view, now let us look at the most common types of securities.

Debt securities

The issuer of the security (borrower) repays the capital borrowed from savers with interest at maturity.

Best known forms: corporate bond, government securities, mortgage

Equity securities

It means a stake in a business and embodies ownership, with which the shareholder has the right to participate in the management of the public limited company (general assembly) and is entitled to dividends as well.

The most well-known forms: shares, investment units

Securities representing **commodity** rights

They represent a right of disposal over some commodity, primarily used in commodity trading.

Its most well-known kind: public warehouse unit

Let us take a closer look at bonds and their main features:

• Debt embodied interest-bearing securities;

• It has a specific expiration date;

• The purpose of the issue is to raise loan capital;

• The bondholder acquires creditor rights;

• Bonds may be issued by the following: the state, the National Bank of Hungary, the local government, an entity with legal personality, an international organization;

It is a group of bonds, but government securities play a decisive role in the economy:

Types of debt securities issued by the State:
- interest-bearing government securities
  - defined (short, medium or long) maturity ones;
  - of fixed or variable interest rates;

- discounted government securities
  - issued at a discount price below face value;
  - payment of the face value is carried out at maturity, in one sum;
  - the yield is the difference between the face value and the purchase price;

It is also worth knowing about equities the following:

• It is an Equity Security;
• It has no expiration;
• The purpose of its release is the acquisition of share capital;• The shareholder acquires ownership rights:
  - has membership rights;
  - is entitled to dividends;

- is entitled to a liquidation share;

Shares may be issued only by public limited companies:

The main types of share:

- ordinary shares;
- preference shares;

A possible subdivision of capital markets regarding the issuance and trading of securities in the capital market:

- primary market;

- secondary market;

- stock exchange;

- OTC market;

PRIMARY, SECONDARY MARKETS

PRIMARY MARKET

In the case of securities, the primary market is the market where the security was primarily, in the first case placed on the market. This is the market where the savings reach the users and users and companies can raise and collect funds.

SECONDARY MARKET

In the secondary market, financial instruments that have already been issued are traded and bought between investors and savers, using members of the financial intermediary system.

The concept of secondary market includes regulated markets, the stock exchanges, OTC markets as well as direct trade between the parties.

The institutional background of the securities market is comprised by the stock exchanges, clearing houses and investment service providers. We will talk about these actors in details in the following chapters.

STOCK EXCHANGE

INTRODUCTION - DEFINITIONS

DEFINITION OF STOCK EXCHANGE

Almost everyone knows about the stock market, we hear about the changes in stock prices -be it shares or oil – or how Indices change daily in the news, we read about them on portals, in newspapers, , but what is the stock market? To have a clear understanding and an exact concept, here are some definitions:

On Wikipedia we can read the following:

A stock exchange is a public, centralized and organized market, a place where certain commodities can, at specified times, be sold by specified persons under strict rules of procedure. The Hungarian stock exchange is a legal entity, a profit-oriented stock company. A deal can only be concluded through a stockbroker. Regarding commodities traded on a stock exchange or securities don't have to be present, because the individual goods are substitutable or interchangeable. Stockbrokers get the price ideas of those who want to sell and buy, and they are trying to enforce these ideas in the market. Those who want to sell and buy price ideas are called stockbrokers, who are trying to enforce these in the market. The stock market is not only a market, but in the modern economy it is also an essential economic evaluator and an information centre.

Or we can also use the definition of ecopedia.com:

The stock market is like a market, where the products put into circulation can be traded publicly in a centralized location. Stock exchange trading is conducted through agents (brokers). From the nature of the market, a stock exchange differs in the sense that the securities, goods, traded there, don't have to be physically present and this is due to the standardization (i.e. commodities being interchangeable). The stock market price is driven by supply and demand. We call a stock exchange deal the contract, concluded by parties between each other that have the trading rights, for the distributed commodities. The transaction can be prompt or futures. The futures contract is settled later, speculative transactions are common among these transactions. A special derivative is an option, where the buyer buys a future decision right for himself, which may represent a right of sale or purchase.

In Hungary, the Budapest Stock Exchange (BSE) provides the opportunity for stock exchange trading.

Or let us read the definition of the HNB's publication on "What you need to know about the stock exchange":

What is the stock exchange? The stock exchange is an organized, concentrated market, where specific products can be traded according to stringent rules. The details of purchase and sale orders and concluded deals are public.

For centuries, stock markets and concentrated markets have met these definitions more or less. There are countless versions about the formation of stock exchanges a d about the creation of the first stock exchanges. Some people have researched ancient futures and futures trading, especially in the grain trade. In the modern sense, commodity and stock exchanges are most closely linked to the mid-1400s and the city of Antwerp. After that mainly from the 18th century stock exchanges have become common. **Some of the stock exchanges and the time they were founded:**

Frankfurt (1585), Milan (1613), Copenhagen (1684), Berlin (1717), Paris (1724), Vienna (1771), **New York (1792),** Brussels (1801), **London (officially 1802),** Madrid (1831)), Toronto (1852), Pest (1864), Zurich (1876), **Tokyo (1878).**

In Hungary, after years of preparation the Budapest Commodity and Stock Exchange officially opened on 18 January, 1864. At its start in 1864 18 shares (4 banks, 2 mills, 2 insurance companies, 3 mines, Chain Bridge, Tunnel), a mortgage letter, 11 foreign currencies and 9 bills were listed on the stock exchange. The first president of the stock exchange was Frederick Kochmeister, who played a decisive role for the stock market to succeed.

Today, the BSE commemorates the Founder with an annual Kochmeister Award.

After the crises and wars, the stock market could recover and function, however, on 25 May 1948 two months after the nationalization that affected most of the industry the government dissolved the stock market.

THE STORY OF THE NEW ERA STOCK MARKET (BSE)

The history of the "modern stock exchange" dates back to the late 1980s.

1987 is a turning point regarding the Hungarian securities, and the bond market development. On 1 January 1987, a two-level banking system was created, which resulted in the parting of the central bank and commercial banking functions. More than 20 commercial banks were established in no time, most of which were interested or was involved in the bond market and in the issuing of bonds. As the bond market continued to expand, there was no organized secondary market for these securities, so the banks' and their clients' selling and buying intentions could not meet. This shortage was soon filled by the market and in **December 1987, the so-called Securities Trade Agreement was signed by 21 banks, the National Bank of Hungary and the Ministry of Finance, which recorded the most important rules of the organized secondary market - bonds -.**

Within this framework, the Exchange Council and the Securities Trading Secretariat were established, and the so-called trading days had begun.

On the stock exchange days, representatives of the signatories of the contract were authorized for trading, commercial and own account transactions could be concluded. Stock exchange days were held once a month in the first half of 1988,starting from the summer of 1988 once a week and since November 1989 three times a week.

The most important milestone in the history of the Budapest Stock Exchange was in October 1989, when a government decision was made that gave a green light to the drafting of the Securities Act. The bill, was placed before Parliament in January 1990 and on the 1st of March it entered into force. Simultaneously with its entry into force, **the inaugural general assembly of the Budapest Stock Exchange was set for 21 June. The stock exchange reopened on 21 June, 1990**. With 41 founding members and one introduced share, with IBUSZ, as a sui generis (independent and self-regulating legal entity) organization.

In the life of the Budapest Stock Exchange role privatization in Hungary played a decisive part, which began at the same time as the stock exchange was established. Although larger state-owned companies were sold often through the involvement of strategic investors, especially in the early nineties in the privatisation of many leading Hungarian companies, for example, IBUSZ, Skála-Coop, MOL, OTP, Matáv (today Magyar Telekom) in the privatization of Domus, Globus, Gedeon Richter the stock market played a significant role. Many of these companies are still dominant players on the stock exchange, and like a "blue chip", generate significant turnover.

Following the establishment of the BSE in 1990 the main stages of its development summarized below (see: BSE website - and the book of Tamás Korányi G. and Nóra Szeles: Stock Market is born).

"Over the years, the operating conditions, organization and function of the BSE have changed a lot. The first trading room was in the Váci Street Trade Centre, then the Stock Exchange was moved to the tarnished building at 5 Deák Ferenc Street, District 5, in 1992, where trading lasted for fifteen years. In March 2007, since its re-establishment in 1990the BSE moved to its third headquarters, to the former Herczog Palace on Andrássy Avenue. Since February 2015 the Budapest Stock Exchange has been operating the parquet in the financial centre of the capital, in the neighbourhood of the historic Stock Exchange Palace located in Bank Centre

In terms of the spot market the stock exchange hall, open auction, operated at the BSE until 1995 with partial electronic support. From then on, trading in securities was carried out in the trading room, and through a distance trading system until November 1998, when a new, fully-fledged distance trading system, the Multi Market Trading System (MMTS) was introduced. Less than a year later, in September 1999, the trading "battle noise" finally stopped in the room, that is when the futures market electronic remote trading platform was launched.

The BSE derivative market has been available to investors since 1995, where futures and options contracts can be traded. BUX contract can be traded from the start of the futures market, since 31 March, 1995. In July 1998 the BSE- one of the first in the world - introduced its Contracts based on individual shares, the options market appeared, a new set of standardized products was released in February 2000 and on 6 September, 2004 the second index-based product , the BUMIX contracts trading has started as well.

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To maintain and strengthen competitiveness, in April 2002, after twelve years of operating as a legal personality the new stock market council chose the economic form of company. Two and a half months later, on 1 July 2002 the Budapest Stock Exchange was established (Since

April 2006: Private Limited Company). The Exchange Council and the stock exchange secretariat was replaced by the board of directors and the management occupying the operating positions.

2004 was a year of major events for the Exchange. There was a major restructuring in the ownership structure of the BSE, following which, strong Austrian banks, and the Wiener Börse, and Österreichische Kontrollbank AG have bought the majority shares of the stock exchange.

By integrating the activities of the Budapest Stock Exchange and Budapest Commodity Exchange, commodity trading has been carried out in the BSE as well since 2 November, 2005. The Budapest Commodity Exchange was launched in 1989, when a commodity company with a minimum share capital (Commodity Exchange Ltd.) started to establish the institutional background of the futures industry in Hungary. Parliament passed the Act on the commodity exchange and commodity exchange transaction in 1994. By the end of 1995, the BCE had become one of the world's top 35 stock exchanges. The Single Capital Market Act, adopted in 2002, caused significant changes, according to its specifications, Budapest Commodity Exchange became a joint stock company on 20 May,2003. After a significant change in ownership and following months of preparatory work, the Budapest Stock Exchange successfully integrated the BCE markets on 2 November, 2005, then in 2006 - 17 years after its formation - the BCE ceased by liquidation.

The Budapest Stock Exchange has been a member of CEE Stock Exchange Group AG Holding since 14 January, 2010.

The BSE launched its alternative trading platform in November 2011 under the name of Beta Market, on which at the start, trading could be carried out regarding ten European Corporation papers.

6 December 2013 a new trading system of the Exchange started, the XETRA®, which replaced the old system that had been used for fifteen years. With the introduction of the new trading platform, companies listed on the Hungarian stock exchange, are directly linked with traders and investors from 18 countries in Europe, while domestic investment service providers and investors get direct access to thousands of new investment instruments, providing the possibility for further market expansion.

Since February 2015, the Budapest Stock Exchange has operated the parquet in the financial centre of the capital, located near the historic Stock Exchange Palace office building.

On 20 November 2015, the National Bank of Hungary has entered into a sales contract with the Austrian CEESEG AG and Österreichische Kontrollbank AG. which had 68.8 percent ownership in the Budapest Stock Exchange (BSE). With the transaction HNB Became the Qualified Majority Owner of the Domestic Stock Exchange."

In 2017, the BSE launched a new market, the Xtend. The Xtend Market supports the growth plans of medium-sized businesses, ensuring favourable conditions for listing.

Within this concept, in connection with the HNB Growth Bond Program, the Xbond bond market was also launched on the BSE in 2019.

After a brief history review let us examine, how the stock exchanges work, what kind of important elements and players are at the stock exchanges.

THE ROLE AND FUNCTIONS OF THE STOCK EXCHANGE

Before we go any further, let us look at the role of the stock exchange - primarily a stock market - in the economy.

CAPITAL RAISING OPPORTUNITY FOR COMPANIES

Companies need resources continuously for their operation. There are several ways to get these resources, they can come from operation, by returning the revenues generated to the continuous production. Larger investments can be financed through credit for faster growth, what companies typically take from the banks. And regarding out topic, in the most important way by bond issuance or by issuing shares, which can also happen on the stock market. While the bond issuing is most like a loan, in the case of share issues there is a change in the ownership structure of the issuer, as buyers of new shares become owners in the company. While in the case of a bond, the issuer will pay back the value of the issued bond in accordance with the terms and conditions of the bond - the rate of interest, maturity, interest payment schedule, capital repayments, etc.-, in the case of share issued, the owners purchasing the shares can expect income, only regarding the increase in the share price, or the dividend, payable by the company. Beyond that, they can sell the previously purchased shares any time at a well-functioning, liquid stock market.

Why do companies choose listing and what benefits does the stock market offer for them?

ADVANTAGES OF LISTING

The most important reason for being listed is the need for financing, the need for capital, that is, the main mover of companies / issuers regarding the stock market appearance is the money.

Another, not negligible advantage of being listed - and surveys confirm this - that the awareness regarding the company increases, the brand (branding) gets stronger, stock market appearance means significant marketing value.

Another advantage is transparency through listing, which is realized through continuous reporting and information obligations, performed by the company.

Many more could be listed and there are a few other aspects companies should consider preparing for the stock market:

- Strengthening business confidence, partner confidence can increase.

- Better borrowing opportunities – the confidence of banks increases , thus better credit terms can be achieved.

- More flexible future financing options. Once we are on the stock exchange, it is easier to raise additional capital, or shares of the company can even be used as "means of payment", e.g. in the case of an acquisition, merger.

- Continuous company valuation - on the stock exchange the investors express “judgment” every day, the value of the company is defined every day.

- Possibility of developing an interest system, with a bonus program, or even with the Employee Share Program (MSP)- linked to the performance of the company in the framework of the promotion system. These programs can also be good tools for retaining the workforce in the long run.

- An important aspect that founding owners have the opportunity to reduce their share, while keeping the control over the company, or there may be opportunities fora total sale (exit options).

- Exit opportunities are gaining more and more attention with the change of generations, since in the case of successful family businesses the continuation of the business is not always ensured within the family.

The demand and the supply side come together, meeting within public and regulated frames.

One of the major functions of stock exchanges is that it concentrates the supply and demand in one place, at the same time, and displays them within regulated frames. The stock exchanges do not set prices themselves, those are developed in public trading, depending on current supply and demand. To conduct the trading, to see the offers, the stock exchange sets rules in order to ensure clean and transparent trading.

LIQUDITY

One of the most important tasks of the stock exchanges, to concentrate supply and demand in space and time, and as a result investors can make their decisions on selling or buying having as much information as possible. As a result of this, the liquidity of a given product or security develops in the market. In stock market sense, liquidity is no different, then the share turnover of a specific product. The products, having big turnover are called liquids, while the products, having little or minimal amount of turnover are usually called il-liquids.

If we look at the BSE, then we can determine that leading shares - such as OTP, MOL are considered liquid, but at the same time we also need to be aware, that the liquidity of these papers is only a fraction of a “blue chip share”, appearing on an American market.

Liquidity is very important to investors as it shows how quickly a particular investment can be converted to cash, that is, how fast I can close my position and without market influence.

If the average daily turnover of a share is, say, 100,000 in a given market, then it is almost certain, that I can sell later my 1000 piece investment without the influence of time limit and exchange rates. Or if I want to buy fresh, then I can do it for 1000 pieces without raising the prices.

Regarding investment decisions, liquidity of a given product is always an important risk factor, for example, that is why large mutual funds avoid or minimize their investments into smaller size, low liquidity products, in shares.

The importance of liquidity is illustrated well by the fact that most of the exchanges count some metric to measure liquidity. The BSE, for example applies the **BLM, i.e. the Budapest Liquidity Measure.**

"In 2005, the Budapest Stock Exchange has developed the Budapest Liquidity Measure based on internationally recognized methodology, which quantifies the individual stock products' market liquidity along different dimensions.

The BLM approaches the concept of liquidity from the most important aspects for investors: it quantifies those implicit, hidden costs, which investors face in the case of a less liquid product. Accordingly, the more liquid the security is, the lower the BLM value is, which means, that the price of liquidity, that is, implicit expenditures are lower.

A market can be considered really liquid, if an order, made any time, regarding any quantity, is immediately feasible without significantly affecting the market price level."

An example for BLM interpretation: if the BLM is 50 basis points (0.5%) and an investor in this shares takes a within-a- day position (day trade) in the value of HUF 6.7 million (~ EUR 20,000), then along with the brokerage commission, it has to also calculate the implicit cost of the transaction, which is about HUF 33.500 (EUR 100). This amount comes from the fact, that early in the day the investor cannot open a position worth HUF 6.7 million, at mid-rate of the offer book, then at the end of the day it cannot close its position at the mid-rate, and this cost decreases the transaction profits.

(Source: BSE.)

PRICING, INFORMATION AGGREGATION

The stock exchanges always determine in their trading rules, what pricing mechanisms, trading stages they operate. The so-called free-phase trading can be considered typical, when the offers are constantly appearing in the trade and are fulfilled depending, whether the buying and selling side can meet in price and quantity. Unlike this, for example for less liquid products the stock exchanges often use so-called auctions, bid collection stages, as they can concentrate demand and supply in this way.

Development of stock market prices is basically based on the information that the investors can get and their expectations. Hundreds of analysts process day to day financial, economic, political data about companies, individual businesses and based on these analysis and by using them, stock market investment decisions are made. So, we can say that in the market prices always show the aggregated information, reflecting supply and demand.

There are two distinguished periods in trading, the opening and the closing of the market, when turnover tends to be concentrated and the opening and closing prices, formed by investors - and by technical analysts – are closely monitored.

In the last years there is a significant shift in stock exchanges in terms of the fact that a growing part of traffic - up to 30-40% in some markets - is concentrated on trading closing stages.

Stock Indexes - BUX

When it comes to stock market news, every media announces that an "X" index closed with a certain increase or decrease

But what is the index and why is its movement in focus so much? Let us examine this in connection with BUX, the leading index of the BSE.

The BUX and any other stock index shows given daily average price changes of - indexed – shares which are the most significant in the market. The leading stock indexes are calculated in real time, during the trading time, so their index values, calculated on the base of current values (stock prices), can be followed at all times.

When writing the book, the composition of the BUX index (consisting of 16 shares) was the following:

4IG, AutoWallis, ANY Security Printing House, Appeninn, BIF, CIG Pannonia, Graphisoft Park SE, Konzum, Hungarian Telekom, MOL, OPUS GLOBAL, OTP Bank, PannErgy, Gedeon Richter, Savings Mortgage Bank, Waberer's.

Each stock exchange defines the principles of index composition, methodology- for the BSE this is included in the Index manual.

Basically, the size and the freehand ratio of companies, as well as the liquidity of that paper define, whether a share taken into the index or not. The BUX Index is reviewed twice a year – in March and September - and firms, not performing the index requirements are taken out or new companies, steadily performing the requirements are taken into the index.

You can imagine the structure of the index as a basket, which contains a certain amount of equities included in the index. This basket can make up to thousands of billions of assets (the market value of the papers in the basket). Naturally, price changes of companies introduced with the larger amount and value work better regarding the value of the whole basket, so the index changes are also primarily defined by the leading shares. In the case of BUX, the leading papers of the BSE - OTP, MOL, MTELEKOM, RICHTER – constitute almost 90% of the value of the index.

For comparability the value of the index is always given relative to the starting value. **The initial value of the BUX index is considered to be 1,000, what was specified, based on the prices of January 2, 1991.**

For example, on 6 September 2019 the index value was 40,312.46 points, which means that between 1991 and 2019 stock prices increased at an average of 40.3-fold rate.

Indices are widely used tools to measure the performance of each market, to compare them - though it should be noted here, that the picture cannot be completely accurate, because the different indices are calculated in different currencies, so the exchange rates can distort in comparison, as well as you also have to pay attention to the fact, that calculation of each index could have been started from another time and other bases.

Evolution of the BUX index from start to date

Indicator of economic trends

Stock markets are widely considered as economic indicators, that is, stock prices and especially the indices give a snapshot about that market and through it, also about the condition of the economy. This statement is all the more true the more shares are traded on a stock exchange and these shares map as fully as possible the given economy structure. Say, if all sectors of an economy through several companies is present on the stock exchange, then an index, calculated from these prices can really show a good picture. Specialization of stock exchanges - e.g. NASDAQ = Technology Equities - can give a good picture about the state of some sectors.

The big international stock exchanges – the leading American markets, such as NYSE (New York Stock Exchange) where daily approx. 2300 shares and somewhere around $ 5,000 billion a year is traded, can really be considered as a kind of indicators. Indices developed in these markets - DOW Jones Industrial Average, S&P-500, or FTSE 100, the representative of the London market, can indeed give a picture of the economy and the prevailing trends there.

The stock exchanges can be grouped based on countless aspects – let us look at some of these:

RANGE OF PRODUCTS TRADED ON THE EXCHANGE

COMMODITY EXCHANGES

As mentioned in the historical section, various commodities are also traded on the stock exchanges. In the definition it appears, that the goods do not need to be present in the trade, as they can be standardized, replaced and are interchangeable. It is also an important aspect, that the price of the given product is free to be calculated. For the latter statement the oil is a good example - which today is one of the busiest stock product (see Brent and WTI oil contracts). However, for its stock market appearance they had to be waited until the mid-1980s, because before that, OPEC (Organization of Petroleum Producing Countries) controlled prices, so they could not be fully formulated based on demand and supply, which in turn is indispensable in the case of a stock market product. Typical and very successful commodity products are cereals, metals, oil and petroleum products. It is important to mention that in these products mainly futures (for future settlement) trading, that is, closing / completing transactions, happen not immediately after the deal, but pursuant the rules of sock exchange and product, at pre-recorded dates. In futures markets deals are typically made on specified day of the spot / current month and the following last months of quarters. Another feature of futures markets is that a decisive proportion of the transactions carried out (although varying by commodity, but 70-80%) happens not by delivery (handover) of the goods in question, but by financial settlement. The explanation for this is that the market is typically used by players who hedge, that is, they enter into price insurance / hedging transactions, or speculators, who are only interested in the price movement and not in the given product.

STOCK MARKETS

On the stock exchanges basically shares and bonds are traded. They also qualify for the definition of standardization, inter-changeability requirements. For example, in the case of MOL shares listed on the Budapest Stock Exchange, it does not matter, which stock we own, since those all grant the same rights (voting rights, dividend rights, etc.) to their owner.

Typically, in these products, so-called spot trading is carried out and after trading on the stock exchange, money and exchange of securities, pursuant to the relevant market and / or clearing house standards happen within 2 or 3 days. (T + 2 or T + 3 settlement). In the Hungarian market where the settlement of transactions concluded on the BSE is carried out in KELER, in the case of the shares, T + 2-day settlement cycle is applied. (see more details in the section on the settlement).

Naturally futures market can be developed also for securities and shares and stock indexes can be traded for the future execution. There are also futures equity contracts on the BSE and active trading takes place also in futures contracts, created from the BUX index.

In many places mixed exchanges were created based on tradition, regulation or simply from economic rationality, where both goods and securities can be traded.

Although in Hungary the "modern" stock market history started with two stock exchanges, since, beside the BSE, the Budapest Commodity Exchange was established, which traded mainly grain contracts, but besides that it provided trading opportunity for futures foreign currency contracts as well.

The two stock exchanges were merged and consolidated in 2005, so since that time **on the BSE, trading can be carried out in the following sections:**

- Share (Shares, Investment units, ETFs, Structured Products, Compensation notes)

- **Debt Paper** (Government Securities, Mortgage Letters, Corporate Bonds)

- Derivative (Futures products, Options contracts)

- Goods (Immediate Products, Futures, Options products)

- **BSE** market (foreign securities not admitted to BSE but can be traded on the BSE system)

Two other new market segments need to be mentioned, which are the products of the initiative, supporting the innovative development of the BSE and the one of domestic stock market.

In 2017, the BSE launched a new initiative, and besides the official stock trading it provided home for the so-called Xtend market as well, which is a Multilateral trading platform (MTP), formed for small, and medium-sized enterprises.

Beside the Xtend stock market, the X-Bond market was brought to life in 2019, which is connected to the growth bonds Program, launched by the HNB.

STOCK MARKET PLAYERS

Among the stock market players Outside the Exchange - providing the trading framework, regulation and infrastructure - further important participants can be identified.

INVESTMENT SERVICE PROVIDERS

It is the characteristic feature of exchange trading, that not everyone can be directly involved, only licensed intermediaries, as we use it in common language the brokers, brokerage firms.

A short definition

It is a company with trading rights and supervisory approval on the BSE (bank or brokerage firm), to which we can give an order for the conclusion of stock exchange transactions.

Investment service providers are indispensable players in the operation of stock exchanges. Capital market regulations and stock exchange regulations specify, what kind of permissions are necessary and under what conditions can someone do investment services activity. For more details on these frames and rules see Chapter 2 of this book.

Role of investment service providers

Since a large number of investors are not directly involved in trading, to invest in the stock market, first and foremost, we need an investment service provider (bank or brokerage firm).

They are the institutions that maintain securities accounts for clients (securities are registered there), and execute their orders, since they have trading rights on the stock exchanges.

As a result of technical progress, keeping contact with the investment service provider, and doing business on the stock exchange greatly simplified, we do not necessarily have to deliver our orders personally. Nowadays, many companies already provide so-called online services (online brokers), where from the trading platform, operated by the brokerage firm, orders entered by clients directly and are traded in the stock exchange systems without the touch of hands.

The activities that may be carried out by investment service providers, are regulated by law, in Hungary the Act CXXXVIII of 2007. (IFA) shall apply.

Under Hungarian regulations, investment service providers may provide the following services to clients:

▪ **account management**

▪ **receiving and forwarding of orders**

▪ order **execution for clients**

▪ **portfolio management**

▪ **investment advisory**

▪ **ancillary services related to the above (e.g. custody, currency conversion)**

Once we decide to do stock exchange trading the important question is, **HOW TO CHOOSE A BROKERAGE FIRM?**

Perhaps the most important aspect is security, make sure the brokerage you choose has the proper regulatory approvals. In Hungary, licensing is the competence of the National Bank of Hungary and the HNB website contains information on licensed firms. Furthermore, we can also check here whether a brokerage firm has committed any irregularity, has been condemned or fined.

On the websites of brokerage firms, based on "company information" published by the HNB (financial statements of brokerage firms) we can check the company's financial background, we can get the information about the owners as well.

We can also find out more on the stock exchange website, where you can find the list of brokerage firms with trading rights in each stock exchange section, as well as statistics on stock market turnover for each brokerage firm.

Aside from security, the **cost** of the services the brokerage firm will charge should not be neglected. Remember the eternal truth - not always the cheapest is the best.

There are basically four main types of fees charged by investment service providers:

• **Account Management related Fees:** This group includes the one-time and ongoing fees for opening a client account, a securities account, a securities custody account, and a current account, as well as the cost of extracts therefrom.

• **Trading Order Fees:** This fee may be most significant for an active trading investor. The commissions for stock exchange transactions are usually determined as a percentage of the exchange rate value of the transaction performed and are usually accompanied by a minimum fixed fee per transaction.

• **Cash Flow related Fees:** Investment transactions are executed using funds placed in the client account. For cash payments to the client account, for cash payments from the client account and for transfer of money from the client account, charges may apply. Keep in mind, however, that the bank of your choice may also charge fees for transfers.

• **Fees related to Custodian Services:** There are fees associated with depositing, holding and moving securities of clients. Most investment service providers sometimes perform securities-related tasks for a fee, so they take an extra cost for custody, collection of interest and dividends, or transferring securities between client accounts.

An important consideration when choosing a brokerage firm is the **range of services** the company provides.

Services range from simple execution only contracts of an administrative type to quite complex packages, with counselling and decision-making support.

Investing without an investment advisor is ideal for those who have sufficient market knowledge to manage their investment independently without the help of an expert. In this case, the role of the brokerage firm or bank is purely technical, limited to executing client orders.

If you choose investment advice, you will already receive significant support from your broker in choosing the right products and deals. The current capital market regulation - MIFID / MIFID II - imposes significant obligations on brokerage firms to inform their clients.

It is important to note that regardless of the information and investment advice received, **the investment decision is still made by the investor and they should bear the consequences of that decision.**

You also have the opportunity if you want to entrust specific investment decisions to a specialist, to enter into a portfolio management contract. In this case, we have to choose the investment policy that is attractive to us (preferred securities, risk taken and expected return, etc.), the choice of specific assets is already the task of the portfolio manager. Most portfolio managers work on a success fee basis, i.e. their income depends on the yield produced.

It is also important to note that the range of services and products provided may differ from one investment company to another. There are brokerage firms where we can trade every product, and there are companies where there are some restrictions. It is often the case that a company does not offer trading opportunities, for example, in leveraged products because of the risks involved.

STOCK EXCHANGE ISSUERS

Issuers are those who put their securities issued / traded in the primary market, either in the form of bonds, shares or other securities, on a stock exchange in a so-called secondary market. It has been mentioned before **why a company chooses to be listed** however, I would highlight one thing from the set of considerations: **for MONEY**!

However, listing has a "price", issuers are required to keep market participants informed continuously. Information obligations include so-called regular and extraordinary information. Regular disclosures generally require quarterly or semi-annual reporting on the Company's periodic performance. The scope of extraordinary disclosures is difficult to define, but it is customary to specify that any information that may affect the price of a particular security must be disclosed.

It is also the responsibility of the issuers to monitor the news in the media concerning them and to react to them if necessary (if they can influence the exchange rate).

Issuers managing stock and investor relations are required to designate the person / organization responsible for this task (this is called Investor Relation) and make that information public.

In the case of the BSE, issuers are required to publish their disclosures on the dedicated page of the HNB, on the BSE website and on their own website.

In addition to information requirements, listed issuers also pay an annual fee to the stock exchange.

STOCK EXCHANGE INVESTORS

Investors are the ones who bring savings – theirs or others' - to the market in hopes that the amount invested will bring them a return. Investors are categorized in several ways, so we can speak about:

Institutional investors:

Institutional investors are basically putting the money of others on the market with the aim of providing an appropriate return on the assets they manage. They are important players in the markets, as they hold a significant amount of money and thus provide a significant part of the stock market turnover. They tend to think longer-term and like to capitalize on the long-term movements of the stock market.

Institutional investors should disclose their investment policy and how they can meet their obligations (repayments, disbursements).

Institutional investors include:

- Fund managers (investment funds)

- Insurance companies (life insurance)

- Funds (Voluntary and Private Pensions)

- Credit institutions

- Investment firms

Institutional investors carry out the following core activities in the money and capital markets:

• collect savings, mainly from households;

• during fundraising they offer "Packages” with different device groups, (securities, money market instruments, real estate, foreign exchange, derivatives, and commodities) i.e. they offer investment services;

• they are professional investors in the primary and secondary stock and bond markets, foreign stock exchanges, the credit market and the derivatives market

Accordingly, they fulfil the following functions as capital market intermediaries:

• by creating packages of different assets, they are serving the needs of investors with different risk appetites;

• they create an appropriate maturity structure for investors;

• reduce risk through diversification ("atomisation of risk");

• reduce investment-related costs (e.g. contracting, information flow, transaction costs);

• they make a reserve future payments;

Let us look at the different types of funds:

Mutual funds raise capital (sell investment units) for a pre-announced purpose (e.g. purchase of various foreign equities).

This objective defines the type of investment fund. The two main groups of investment funds are real estate investment funds - this is less interesting for our book - and securities investment funds.

- A **real estate investment** fund raises accumulated wealth through real estate investments thus, the investment period is longer due to the volume of investments.

- A **securities investment fund** on the other hand, invests assets in securities of different types of maturities and rates.

• **Money market funds,** including liquidity funds, which mainly buy bank deposits and short-term government securities and traditional investment funds, which usually hold one-year government bonds in their portfolios.

• **Bond funds** are funds that primarily invest in debt securities - government bonds and corporate bonds. They can be distinguished by the fact that their portfolios tend to contain short- or long-term securities.

• **Equity funds primarily** have exposure to shares. An equity fund's risk profile refers to the average amount of shares it holds relative to its total assets: if it does it "only significantly" it is called a stock overweight fund, if it does it completely, it is called a pure equity fund.

• **Mixed funds** hold stocks and bonds and money market investments to varying degrees. Within mixed funds we can distinguish the following:

- cautious (conservative),

- balanced,

- dynamic fundamentals,

which represent ever-increasing risks through different asset combinations.

• **Special funds** are created around a special purpose construction: either Guaranteed funds, which provide guarantees for the protection of invested capital, on the contrary, of high-risk ones, e.g. they execute derivative contracts.

When grouping funds, it should also be mentioned that funds may be **open-end or closed-end funds**.

Units of open-end investment funds are marketed by the fund manager on an ongoing basis, and it keeps buying them back, so if an investor wants access to their savings, the fund manager is required to repurchase the units at the published rate. Units are bought and sold at the exchange rate calculated daily by the Custodian, that is, one business day you can buy and sell units at the same rate. The fund's exchange rate depends on the assets it contains, so on the investment policy, on the composition of the portfolio and the skill of the fund manager, according to current market conditions.

Units of open-end investment funds usually have a par value of HUF 1, which allows you to invest any amount and withdraw any amount you like. This way, any small investment will "work" from the first minute to the last.

Closed-end investment certificates are issued for a predetermined term (1-5 years). Units of closed-end investment funds are not redeemed by the fund manager during the term, and after the subscription period has expired, it will not issue new units. **Investors only receive their investment at maturity.**

About private investors:

Individuals and private investors can appear in several roles on the stock exchanges. Some people make lasting, long-term investments, hold securities for years in their portfolios and trust that prices are rising. Some people believe in dividend paying papers and they prefer the companies that guarantee to their investors regularly, evaluable large yield dividend payment.

15-20 issuers have paid dividends at the BSE in recent years and dividend yield was between 1.75% and 7.5%, that is, providing evaluable return compared to other products, available on the market, e.g. to government securities investments. (Dividend yield is usually determined by the price at the date of the dividend payment and the dividend paid.)

HNB – SUPERVISION

The world of stock exchanges is one of the most regulated markets in the world. Laws, stock exchange regulations ensure transparent trading, which extends to all players in the market and its participant, including private investors, transactions and information use.

In Hungary, regulation is based on the Act CXX of 2001 on the Capital Market and the supervision is provided and guaranteed by the National Bank of Hungary under the Central Bank Act.

The following is an excerpt from the relevant information on the HNB's website:

HNB's SUPERVISORY AND CONSUMER PROTECTION MANDATE:

"The National Bank of Hungary (HNB) under the Central Bank Act exercises continuous supervision organizations and persons subject to financial sector laws.

This includes prudential, i.e. business due diligence, market surveillance and consumer protection tools, both off-site and on-site, ***- monitors the activities of money and capital market institutions, funds, insurers, and institutions that make up the financial infrastructure (regulated market, clearing house, CSD), if necessary, takes action.***

The purpose of supervision is to identify and manage risks in a timely manner so as not to jeopardize system stability and confidence in the financial intermediary system. The HNB incorporates the information obtained from the ongoing supervision into the risk assessment. Risk and institution valuation data determine the type and intensity of supervisory treatment of a given financial institution and the timing and focus of further investigations.

The HNB controls activities of financial institutions regarding hindering and ***prevention of money laundering and funding terrorism*** *and also performs IT supervision. Where immediate action is required, it shall carry out target or thematic investigations.*

The central bank is committed to financial ***consumer protection****, or to screen out the unauthorized, financial providers, the ones, operating without license or announcement at the market surveillance field as well. The HNB acts to promote the rights of consumers who use financial services and directs service providers towards responsible, fair conduct. It identifies adverse effects on consumers as quickly as possible, and focuses on exploring and eliminating their causes, thus preventing their recurrence. In the HNB's consumer protection investigations, system level consumer disorders are put into the attention centre.*

It is a ***Financial Arbitration Board (FAB),*** *operating alongside the HNB, it is a professional independent, alternative settlement forum. FAB provides a faster and cheaper solution than legal proceedings in disputes between consumers and the financial service provider with whom they have a contractual relationship, requiring material, civil legal process."*

The HNB provides the monitoring, authorization and market monitoring functions.

Under the latter, according to information on the HNB's website:

„HNB's Market Surveillance activities filter out unauthorized service providers and individuals entering the market, thereby ensuring the protection of clients and guaranteeing financial stability and the safe operation of legal market operators.

The area of market surveillance ensures the functioning and integrity of the capital market in accordance with the law and promotes the maintenance of confidence in the capital market. In addition to monitoring stock exchange transactions, it supervises issuers and authorizes the securities they are publicly traded, and also supervises investment firms, investment funds, and acts against companies that carry out activities without authorization or without notification. Its main objective is to protect investors by ensuring the integrity of the capital market. "
The HNB's regulatory role and the related system of money and capital market regulation will be discussed in detail in Module 4 of the book.

IPF

The IPF or Investor Protection Fund, which started operating in 1997, is a relatively rarely mentioned but is a very important player in the domestic capital market.

IPF is the organization, which in the final case undertakes the commitment, instead of a service provider that went bankrupt or is under liquidation for those, who are members of the organization. It is important, that authorized investment service providers are required to have IPF membership.

The amount of compensation that can be paid by IPF is EUR 100,000 (approximately HUF 33 million).

The main source of IPF's assets, the amount available for compensation, is the actual payments made by members. Members pay a one-time membership fee and an annual fee to IPF.

If the amount available would not be sufficient for the compensation, the IPF's Board of Directors may order extraordinary payments from its members or decide to borrow.

DATA VENDORS

In order to trade effectively on the stock market, we need information, a lot of information. In the Internet age we can obtain this information from countless sources.

In the early days of the major news agencies, horse riders, as well as 'telegraphers', even pigeons were employed to deliver the news as quickly as possible.

Providing stock market news, but most importantly stock quotes, trading data to investors in the case of almost every stock exchange is a service, providing very important and significant income.

According to statistics, 30-40% of stock exchange earnings come from trading data, especially real time data. Stock exchange rates usually include royalties, fixed connection fees and monthly traffic fees (per user number).

Almost all exchanges provide delayed data, usually 15 minutes late, and end-of-day data, as well as stock indexes.

The stock exchanges provide this information through specialized official data providers (vendors), distributors, to users / end users, be they institutional or private investors, analysts, newspapers, web portals etc. These intermediary channels seek to collect fees from the end users for the stock exchange and to provide their services on a contractual and fee paying basis.

The stock exchanges, including the BSE concludes a contract with vendors and on that basis, vendors will continue to contract with users. For example, it is common practice for brokerage firms to provide information to clients through vendor subscriptions. Brokerage firms that offer online trading on the market integrate real-time data into trading systems in different packages. Thus, for example, you can trade based on the best bid-ask prices or the best 5-to-20 price ranges / bids that better represent the depth of the market.

The list of vendors is quite extensive, including major news agencies, analytics firms, large investment banks and, of course, many brokerage firms that provide online trading services.

A list of current vendors is available on the website of stock exchanges, including the BSE, the followings are some of the names from the current list:

- Bloomberg
- Thomson Reuters
- Dow Jones
- Portfolio Teletrader
- RND Solutions

CLEARING HOUSE

A further chapter of the book will deal in detail with the clearing house and clearing deals, concluded on the stock market. At the same time, in connection with the introduction of the listed companies, here is a brief definition of the clearing house, an organization, known as the KELER or KELER group in Hungary.

In Hungary, a **clearing house** is a **specialized credit institution** providing services related to clearing and settlement of money and capital market transactions.

KELER as a clearing house executes stock exchange transactions, and as a **central depository gives rise to securities**, issued in Hungary and **maintains central securities accounts.** KELER CCP guarantees the execution of stock exchange transactions.

The clearing house shall require its clients to provide financial security in the manner and to the extent specified in its by-laws. Clients' financial assets, held at a clearing house or central securities depository (KELER Zrt.) serve as bond for the fulfilment of transactions, concluded by them.

FORMS OF STOCK EXCHANGE TRADING

Following the introduction of stock market players, let us move on to a much more exciting and, in many ways, more tangible topic of stock market trading.

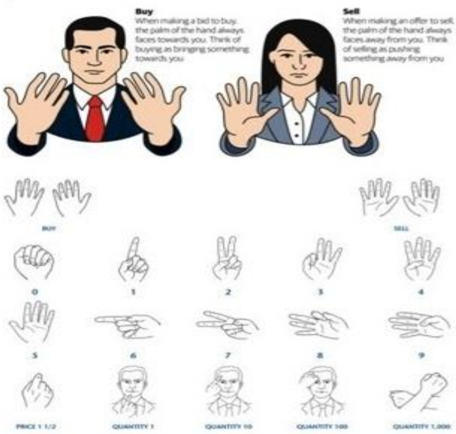
Due to the level of infrastructure at the time when stock exchanges were launched only so-called **'open auction'** (loud quotes) trading was operating.

Stock history shows that in the early days there was no stock exchange building, no stock exchange room, for example, brokers made deals in a cafe around the founding of the New York "stock exchange". The story of the London Stock Exchange is very similar, the first official "stock exchange" building was formed only long after its foundation, until then in London also a café provided home for trading.

With the advancement of technology, since the 1990s, stock exchanges have increasingly switched to electronic trading systems, ending the traditional stock exchange trading.

OPEN SHOW TRADE

Until the 1990s, open-end trading on the stock exchanges was almost dominant. **The brokers (exchange room traders) made and accepted their offerings out loud, which is how they concluded the deals in the trading room.** In many cases, especially on highly traded exchanges and commodities, besides the open call, special hand signals were also used to facilitate the conclusion of the deal. As an example, the outward-facing palm indicated the intention to sell, palm toward the body indicated the intention to buy, while the number of fingers indicated the amount, and months of completion was also indicated with the use of hands.



Hand signals used in stock exchange trading

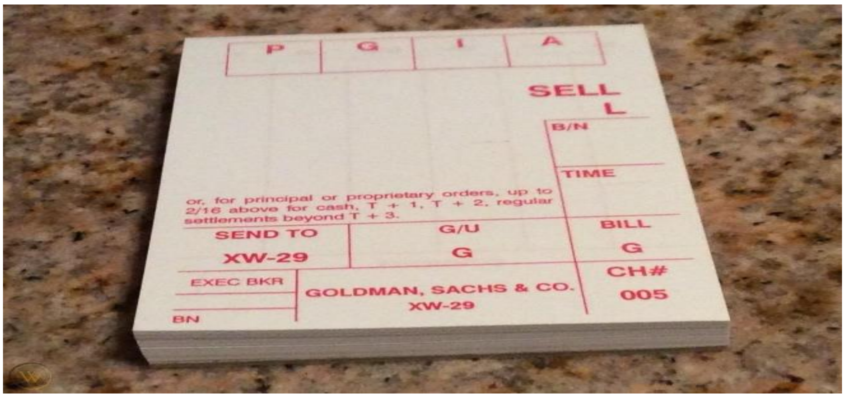
Open auction trading on the stock exchange, also known as parquet, took place at a designated place for trading certain products, known as "pit". Most of the pits were circular or octagonal recessed or protruding parts of the stock exchange floor, where sometimes brokers were up to hundreds, they did their offers and deals shouting, which was incomprehensible and incoherent for the outsider, inexperienced observers (I just note, that although it seems that chaos reigns on the parquet, orders were 95% to 98% safe, with minimal error).

To illustrate the above, here is a photo of a "pit" on the New York Stock Exchange.

Pit on the New York Stock Exchange; source: Wall Street Journal

On most stock exchanges, brokerage firms' employees wore colourful coats and company identifiers that displayed their colours and emblems, which helped to differentiate and identify them.

To record concluded deals, they filled out a form, so called dealing slip, where the main data of the transactions were recorded, the quantity sold or purchased, the price, the partner of the transaction. During the trading day and at the end of the trading day, these "slips" helped to record daily circulation and prepare it for settlement.



"Slip" used in sales orders; Source: Worthpoint

In open auction trading, there were many players besides the "fighting" traders in the pit. Such was, for example the "runner", who provided the information between the pit and the stock exchange / box of that brokerage firm, in English "boot", that is, orders and the "confirmation" of executed orders. In the boot, people from a given company communicated with their city offices by telephone, they accepted the orders, confirmed the accomplishments and gave information about the mood of the market, perceptible buying or selling power and, in many cases, the activity of each actor / brokerage firm.

In addition to the traders, of course, significant number of stock market employees were working continuously during each trading day. the so-called managers had significant importance, who also supervised the regularity of the trade and made decisions in disputes. Their work was supported by the development of sophisticated tools such as video and audio recording technology.

Other important players were the “fasteners” who fixed current bids and bindings on computers, which then got into the stock market, the so-called vendors’ (data vendors) systems, that is how the stock exchange events were made known to the world.

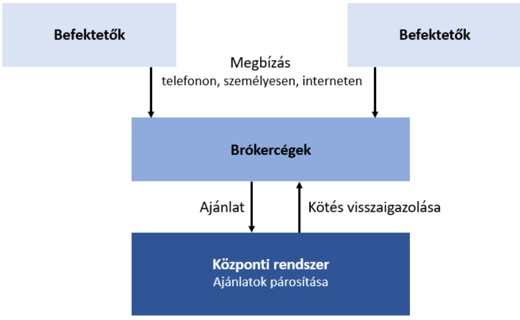
Of course, with the advancement of technology, the open loud announcement has evolved, and increasingly modern tools have been used to support trading and its participants. For example, PDA Machines known by many people, regarding restaurant orders (waiter to kitchen communication) were ideal helpers in communication between the boot and the pit, to make it faster and more accurate.

This technical development has led many stock exchanges around the world from traditional open auction to the world of e-commerce.

ELECTRONIC TRADING

With the advancement of technology, it has become possible to replace open auction trading with electronic trading. Like at the BSE, there have been several exchanges around the world where this process has taken place in many stages, with open calls and e-support, but there were places where the transition to using the new solution happened rapidly and directly as a "big jump".

The following schematic diagram illustrates the structure and players of e-commerce:



Investors (Befektetők)		Investors (Befektetők)
	Order By phone, personally, internet (Megbízás telefonon, személyesen, interneten)	
	Brokerage firms (Brókercégek)	
Offer (Ajánlat)		Transaction Confirmation (Kötés visszaigazolása)
	Central system (Központi rendszer) Matching of offers (Ajánlatok párosítása)	

Investors place orders to brokers over the phone, in person or over the Internet, who place orders at the "terminals" of the stock exchange trading system, which are executed in the central system of the stock exchange. Among the offers in the central order book, the system pairs and immediately sends confirmation of the concluded deal to the brokerage firms involved in the transaction, who can inform their clients accordingly.

At the end of the day, the transactions concluded are transmitted electronically to the clearing house, so that the deals can be settled and purchased securities could appear on the client accounts, while the crediting of the purchase price could also be completed to the cash accounts of the sellers.

The trading system provides vendors with real-time quotes / quotes book data, real-time index values, and end-of-day closing prices.

On the BSE the changeover took place in 1998 and they switched from the open auction, used till that time, to electronic tele-commerce. The MMTS (Multi Market Trading System) was launched, serving the stock market and government securities. Shortly afterwards, in 1999, the derivative trading system MMTS II was introduced, and as a result, the stock market became empty, brokers disappeared from the parquet floor, and interested investors disappeared from the visitor space next to the stock market.

The transition to e-commerce has reduced costs and enabled more efficient, faster trading.

STOCK EXCHANGE CLEARING, CLEARING HOUSE

INTRODUCTION

A rarely mentioned, often neglected element of capital market infrastructure is the clearing house, without which the functioning of capital markets would be much less secure.

Clearing systems and clearing houses have been developed to enhance the security of settlements.

If we enter into a securities transaction if we were involved in it as a seller, we would like to receive money representing the value of the security sold. If we are on the buyer side of such a transaction, we expect to obtain the securities underlying the transaction so that we can exercise the rights in relation to it (e.g. voting, dividends). If the capital market infrastructure did not exist, or we would not want to use it, then we can talk about a transaction between two individuals or companies, where we have to organize ourselves, solve money and securities exchange, taking all the risks. Nowadays with advanced capital market infrastructures and regulations we have almost no realistic chance of doing so - just think that the securities no longer exist in physical (print) form, only in dematerialized way - as an electronic signal.

For example, in the case of stock exchange transactions, the stock exchange must have either its own department or a contract partner to settle the stock exchange transactions. Just as we are not involved ourselves in stock market trading, we use an intermediary (investment service provider, broker), so settlement is also done through intermediaries, called clearing members, the scope of which is determined by the clearing house rules. It is worth pointing out here that it is not necessary for every broker to be a clearing member. In the case of major international stock exchanges companies, organizations appear frequently specialized in settlement services, who undertake - of course for money and on a contractual basis – the settlement of the accounts of those brokers, who either do not want to be direct members of the clearing system or cannot meet the requirements of the particular clearing house.

Over the years and decades, quite different structures and operating methods have evolved in the area of settlement. Today we find solutions where the clearing services are provided by the stock exchange itself and not by an independent institution. This was the case, for example, with the Budapest Stock Exchange, where from the time the stock exchange was established until the fall of 199,3 a division of the BSE cleared the stock market trades.

Specialization also developed in many cases, this is how for example "clearing houses" were created, also clearing commodity futures, or option market transactions, such as the Option Clearing Corporation (OCC) of Chicago, established in 1973, which is the largest institutions in the world nowadays guaranteeing derivative stock clearings and settlements.

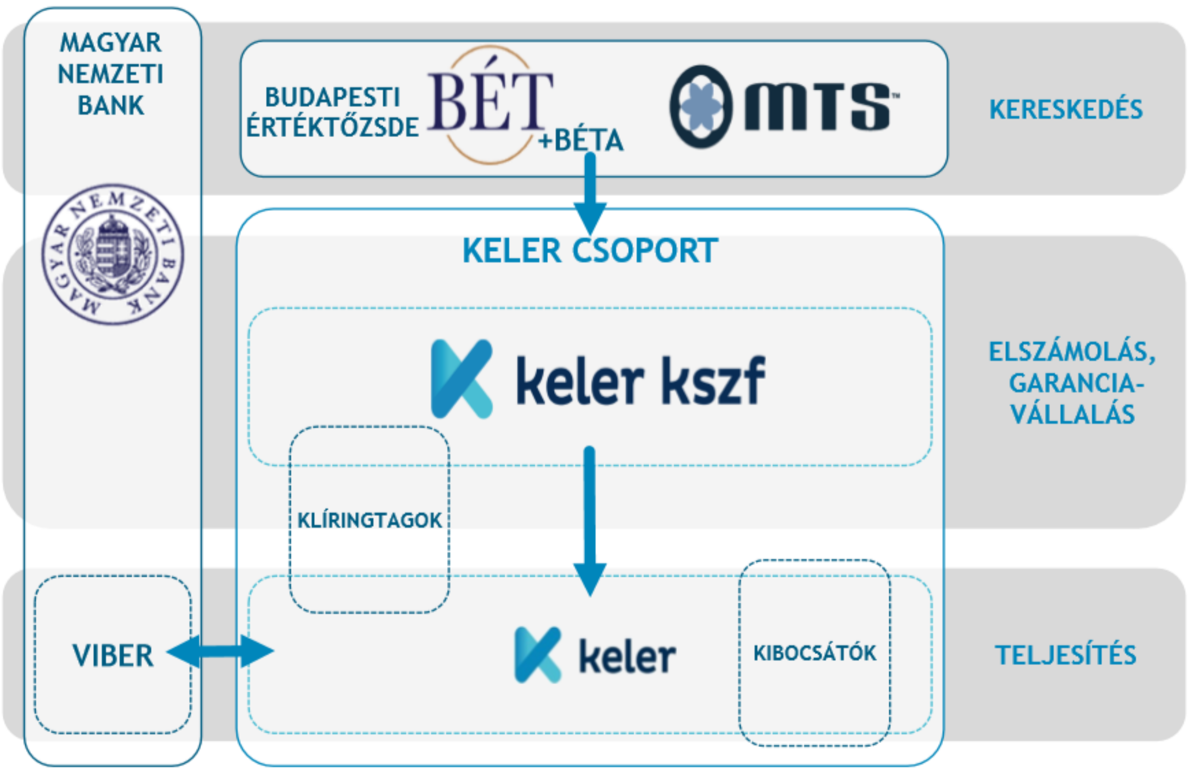
In Hungary, in the history of the capital market, since 1990 the KELER, and later the KELER group (KELER + KELER CCP) has been playing a decisive role in the accounts- and the depository activities.

The functioning of the clearing and settlement system will be presented through the example of the KELER group, whereas this example is also suitable in international comparison thus, we can get to the heart of the settlement function through this example.

CAPITAL MARKET INFRASTRUCTURE FROM THE POINT OF VIEW OF THE CLEARING HOUSE

The following figure shows the Hungarian capital market infrastructure and in it the location of the clearing house, the depository and the organization, guaranteeing the performance of the cleared transactions (CCP - Central Contracting Party).

HUNGARIAN NATIONAL BANK	BUDAPEST STOCK EXCHANGE (BSE) +BETA MTS		TRADING
	KELER GROUP		SETTLEMENT, TAKING GUARANTEE
VIBER	Keler CCP		EXECUTION
	CLEARINGMEMBERS		
	Keler	ISSUERS	



source: KELER

Figure 1: Post-trading infrastructure

But let's take a quick look at the figure and clarify what players we can meet in this "infrastructure" and what activities, services will appear.

TRADING - MARKETS

This means the markets cleared by the clearing house, primarily the Budapest Stock Exchange, but KELER also provides services mainly to energy exchanges and markets, among them, the natural gas transactions of the Romanian commodity exchange are also settled here. Since the fall of 2019, the new Kazakh stock exchange, Astana International Exchange (AIX) has also become a partner of KELER.

As included in the introduction, there are many variations of clearing houses, which are basically determined by the clearing markets. It was typical, for example that individual commodity markets had their own clearing houses, but in the last few decades significant concentrations were already observed in this area and more and more clearing houses have been created, which have cleared more products, markets.

KELER GROUP (KELER and KELER CCP)

Instead of the usual definitions, here is the definition of "Wikipedia" ABOUT the KELER group: Pursuant to Act CXX of 2001 on the Capital Market and Act CXII of 1996 on Credit Institutions and Financial Enterprises, KELER Central Depository Ltd. is an Acting Clearing House:

KELER Ltd. manages the cash and securities accounts of Hungarian brokerage firms on the principle of multilateral netting. The settlement time is five (T + 5) days per share and two (T + 2) days for government securities. (T = transaction) At the stock market transactions - immediate and derivative - KELER CCP Central Contracting Party Ltd. as a Central Counterparty (CCP) entering the deal take over potential risks due to the default of the parties and warrants regarding both parties the execution of the stock exchange transaction.

In addition, the company has a central depository function. Thus, KELER Ltd. performs the central securities registration and central securities account keeping. In addition, KELER Ltd. issues securities codes (ISIN code), and the issue of a document of securities issued abroad, the purpose of which is foreign or domestic marketing.

The company is a key institution for the operation of the Hungarian money and capital market infrastructure. It is majority owned by the National Bank of Hungary and minority owned by the Budapest Stock Exchange. Due to its strategic importance, the HNB's core tasks include the continuous "inspection" of KELER Ltd. for the smooth operation of the system.

It is important to specify that the T + 5 settlement cycle in the Wikipedia definition, by now has been significantly shortened and in the stock market T + 2 is the settlement time.

The main activities of KELER and KELER CCP are summarized in the following table:

source: Website of the Hungarian Banking Association:

KELER	KELER CCP

Issuer services **Depositary and securities account management services** **Deposit management** **Investment units (WARP)** **Credit institutional services** **Treasury services** **Code issuing** **Market reports (TR)**	**Clearing service** **Operation of clearing member system** **Central counterparty service** **Risk management** **Guarantee** **Operation of Guarantee system**

CLEARING MEMBERS

In a broader sense, members of settlement systems - whether they are cash flow, securities market, commodity exchange, etc. - are called clearing members. The operator of the settlement system, the player, assuming guarantee in the settlement system defines the membership terms. The membership system is the first line of protection and risk management that serves to provide the security not only of the guarantor, but the entire settlement system.

The following is a brief description of the KELER CCP clearing member system.

KELER CCP as a central counterparty performs accounting and guarantee services only to Clearing Members who are in a contractual relationship with it and to energy market sub-clearing members.

Participants in the clearing membership system:

• general clearing member - who clears himself and his contracted partner;

• individual clearing member - clearing only for themselves and their clients;

• individually segregated client (sub-clearing member, principal);

• sub-clearing member - is not a direct clearing member, working through a general clearing member;

• principal - is not a direct participant in the system;

• settlement agent (compliance officer)

• reserve clearing member

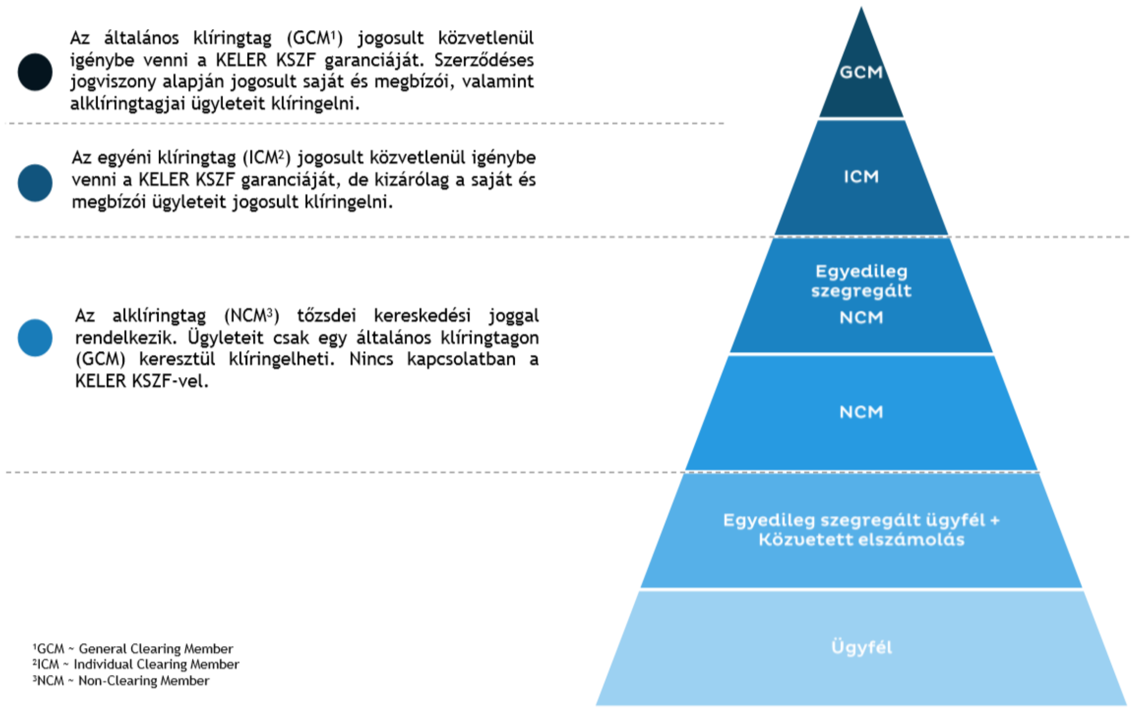
• gas market clearing member

• energy market sub-clearing member

The primary line of defence of the risk management system is the members of the clearing membership system themselves, therefore, the membership criteria system is determined by the risks of the members and the market segment, it depends on the type of clearing membership and the specific risks of the relevant market. During the development of the terms and conditions, KELER CCP sets the same conditions for the participants in the markets with the same risk profile.

An essential prerequisite for participating in a clearing membership scheme is the required supervisory approval, as well as the fulfilment and controllability of the required capital requirement.

Participants in the clearing membership system can acquire clearing rights to participate in the settlement once the membership conditions have been met, whereby they continuously meet the required collateral, assurance and performance obligations stipulated.



source: KELER

Figure 2: The multilevel clearing membership system

The general clearing member (GCM)1 has been able to make direct use of the Keler CCP Warranty. On a contractual basis it is entitled to clear its own and principals', as well as of its clearing members' transactions.	GCM

The individual clearing member (ICM)2 is entitled to use the Keler Warranty directly, but only to clearing his own and principals' transactions.	ICM
The non-clearing member (NCM)3 has a stock exchange trading right. It can only clear its transactions through a general clearing member (GCM). It has no connection with Keler CCP.	ORIGINALLY SEGREGATED NCM
	NCM
	ORIGINALLY SEGREGATED CLIENT + INDIRECT CLEARING
	CLIENT

1 GCM - General Clearing Member

2 ICM - Individual Clearing Member

3 NCM - Non- Clearing Member

ISSUERS

In the field of securities, the key partners for KELER are the issuers of securities, whether government securities, equities or even corporate bonds. As a central depository, KELER is in contact not only with the stock exchange, but with all securities issued in physical form.

HNB

In the case of KELER, the HNB is an important player in several respects. On the one hand, it is the owner directly, but through the BSE it is also has indirect ownership in the KELER group. Like other players in the capital market, HNB performs supervisory tasks in the case of KELER. As it is revealed in connection with the introduction of payment systems, the Hungarian payment system, operated by HNB, has also close business / service relationship with KELER.

PAYMENT SYSTEMS – GIRO, RTGSS

GIRO

Simplified, the GIRO (Interbank Clearing System) performs transfers between banks and credit institutions, usually in large numbers but small amounts. This system and service is essential for the operation of the economy and it is a basic requirement that it shall work with 100% safety, without interruption.

In Hungary, GIRO operates two services, the so-called IG-1, whereby interbank settlements take place overnight.

The other operational mode is IG-2, which has been running day-to-day credit transfers, providing hourly billing for both corporate and private client transfers since September 2015.

RTGSS (Real-time Gross Settlement System)

RTGSS (Real-time Gross Settlement System) has been a domestic payment system operated by the HNB since 3 September 1999.

RTGSS is used to settle high-value urgent payments, which are permanent and irrevocable upon automatic, real-time payment. The members concerned shall be notified immediately after payment. Within the system it uses the SWIFT system for messaging.

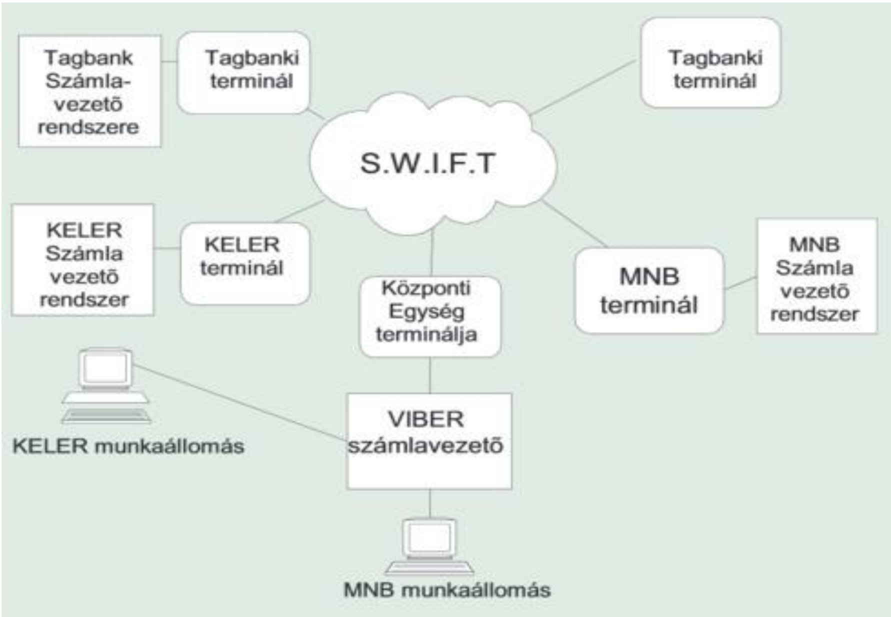
SWIFT - Society for Worldwide Interbank Financial Telecommunication - is an international electronic communication system with standardized messages in which its members carry out interbank messages and make payments.

Payments are made subject to sufficient coverage. As collateral in addition to the positive balance of the cash account and the security - this is where KELER is connected, who keeps the securities accounts and performs collateral testing - a free intraday credit line is provided by the HNB.

Structure of RTGSS

<table>
<tr><td>Member bank account management system (Tagbank számlavezető rendszere)</td><td>Member bank terminal (Tagbanki terminal)</td><td rowspan="2">S. W. I. F. T</td><td colspan="2">Member bank terminal (Tagbanki terminal)</td></tr>
<tr><td>KELER account management system (KELER számlavezető rendszer)</td><td>KELER terminal (KELER terminal)</td><td></td><td></td></tr>
<tr><td></td><td></td><td>Central Unit terminal (Központi egység terminálja)</td><td>HNB terminal (MNB terminal)</td><td>HNB account management system (MNB Számlavezető rendszer)</td></tr>
<tr><td>KELER work station</td><td></td><td></td><td></td><td></td></tr>
</table>

(KELER munkaállomás)				
		RTGSS account management (VIBER számlavezető)		
		HNB work station (MNB munkaállomás)		



source - HNB

CLEARING HOUSE FUNCTIONS AND SERVICES

The securities market has undergone major changes in recent decades. Previously, securities were ornate, often reaching the level of artistic creation. As the trading of securities expanded and became more and more international, and with technical / IT development in parallel, production and movement of physical securities have become more and more difficult and especially expensive. In this situation, first **appeared immobilization, when no longer the securities themselves, but the certificates issued thereon - in many cases already in electronic form - changed hands and embodied the subject of deals.**

From this point on, dematerialisation was only a leap, when securities and account balances have existed only as electronic signals. (Similar to bank account money.)

In the Hungarian market, in the 1990s, legislators decided to apply printed securities and only later have been introduced dematerialized securities. So, in the early 90s KELER yet was forced to operate a huge depository, where tons of stocks, bonds were on the shelves, and shares, securities as a clearing of stock exchange turnover were shipped in-and out daily.

DEPOSIT MANAGEMENT

One of the main tasks of central securities depositories, such as KELER, is the registration of securities. In the dematerialized world, the CSD is responsible for origination, registration of electronic securities, existing as signs, up-to-date management of their stock. All of this is done by it, by managing the securities accounts of those investment service providers, issuers, who are contractually related to it.

In addition to the dematerialized world, there are physically existing securities, their management, safekeeping, as well as registration of securities in accounts and related transaction management are also provided by KELER.

CENTRAL SECURITIES REGISTRATION

As part of the central securities registration activity, KELER registers the following:

- details of securities produced in domestic dematerialized form,

- in respect of domestically produced, printed securities, the information made available to the issuer,

- data, relating to ISINs,

- a list of the securities which have been foreclosed and revoked.

As required by law all issuers are required to report immediately the change in securities series, and the issuer data for KELER, which is the appointed organization to issue ISIN IDs (see later). These changes include but are not limited to, for example to the:

- change of the name and address of issuer;
- change in the face value;
- conversion of the securities series;
- termination of the securities;

It is important to mention the **function of KELER** in relation to **securities registration, whereby it registers foreclosed and revoked securities. These are completed on the basis of orders made by notaries, notifications to KELER, and it continuously publishes this information on its website.**

ISSUER SERVICES

In the framework of the Issuer Services, KELER participates in certain corporate events in relation to the securities it manages. About corporate events reported by issuers, KELER publishes information for market players on KID (communication system), or its website.

These corporate events may include:

- Stock book management
    - Non-payment events
        I. Ownership Mapping
        II. Organization of general assemblies
    - Payment event
        I. disposition of payment
        II. paying agent activity

Stock bookkeeping and shareholder matching should be highlighted from the above list, as both activities are extremely important for issuers and investors.

STOCK BOOK MANAGEMENT

Stock bookkeeping is a statutory requirement for public limited companies, which gives an accurate picture of the company's current owners. This can be done by the company itself or it can have another player commissioned for this purpose, e.g. KELER, who performs this task for a remuneration.

KELER's stock book management services include:

• continuous maintenance of the stock book, keeping records of owners and derivations in accordance with any limitations specified in the articles of association (Articles of Association),

• processing of owner mapping data,

• registration of non-marketable (disabled, void shares),

• keeping contact with notaries, custodians and account managers,

• issue of an excerpt from the share register for the shareholders,

• creation of ownership structure,

• historical management of the stock book data, data retrieval capability, keeping track of changes in the stock book,

• forwarding mail to shareholders,

• providing client support.

KELER provides the above services for both dematerialized and physical securities, either in the case of stock market related, or of non-listed companies.

OWNERSHIP MATCHING

It is important for both the issuer and the investors to know who the owners of the company are. This up-to-date information will be made available to issuers through ownership matching.

In the case of ownership matching, the following services arise on KELER's side in connection with corporate events:

- General Assembly (yearly ordinary or extraordinary)
- Stock book update
- Customized stock book registration, requested by Client
- Retrospective Ownership Matching (upon request of issuer or Supervisory Inst.)

An important case of shareholder matching is when an issuer wants to see the exact book of stocks without a corporate event, it wants to update it with owner changes that have happened since the previous event. In these cases, KELER will request from the account managers - in a specified format and with data content - information on the owners of the relevant share and summing them up prepare a stock book showing the current ownership situation.

GENERAL ASSEMBLYASSEMBLY ORGANIZATION

On the basis of the agreement, KELER will provide the issuers with general assembly organization services *as follows*:

Conducting the General assembly

- Providing registration and voting facilities.

- Converting the stock book data into the voting system.

- Registration of shareholders, i.e. verification of the identity of shareholders and their representatives as well verification of authorization shareholder representatives. Control of shareholders' voting rights.

- Preparation of the attendance list of the general assembly and filling it in at the general assembly.

- Voting at the General assembly, displaying polls on the monitor on the Presidential desk, as well as through a screen or TV monitor for shareholders.

- Organization of projection technology at the general assembly to present any reports or presentations.

- Creating an ownership structure.

- Historical management of the data in the book of stocks, i.e. the possibility of retrieving the data and following the "movements" related to the book of stocks.

- Mailing to shareholders.

- Providing client support.

PAYMENT RELATED EVENTS

These services typically arise related to corporate events - dividend payments:

- payment disposition - determination of the amount of dividend payable per shareholder;

- paying agent activity - execution of a dividend payment on the basis of the issuer's mandate;

When it comes to paying dividends, it is important to clarify that KELER basically is in connection with brokerage firms, depositaries and makes payments to them. Dividends are forwarded to the owners of the shares, based on information available to brokers, custodians and their transfers.

CODE ISSUE (ISIN, LEI)

International regulations and growing securities trading have made it essential that the securities and key information linked to securities shall be available in standardized, regulated form.

An important player in international code publishing is ANNA - Association of National Numbering Agency - an organization bringing together national banks, depositories, data providers, stock exchanges in 120 countries.

Currently, the following international identifiers are available through KELER.

ISIN identifier	CFI code	FISN code	LEI identifier
Az ISIN (International Securities Identification Number = international securities code). This identifier is a unique code that allows the unique identification of securities, which is a mandatory formal element of a security. The ISIN codes issued by KELER, together with the basic data of the securities, can be queried on the KELER website.	A CFI (Classification of Financial Instruments = Financial Instrument Classification) code is used to define financial instruments based on a single set of codes, which is primarily used by market participants in their reporting.	A FISN (Short Name of Financial Instrument) the code is for determination of unified information regarding financial instruments.	A LEI (Legal Entity Identifier) The code is a unique identifier for the clear identification of OTC derivative institutions. The issued LEI codes can be retrieved globally at the following website: https://www.gleif.org/en

CREDIT INSTITUTE SERVICES (KELER- SPECIALIZED CREDIT INSTITUTE)

In the services of KELER it is of determinative importance that it can provide credit institution services (complying with Hungarian and international regulations for credit institutions), since this is done in one organization e.g. in the case of securities settlement, the movement of money and securities accounts.

Note: In securities markets, the principle of DVP (Delivery versus Payment) is one of the greatest securities in settlements. Cash and securities accounts are kept in one organization and a transaction takes place only, if the buyer has the necessary money and the seller has the required security. This will be verified by the clearing house, prior to the transaction and it completes the settlement - exchange of money and securities - only in the case, if everything is completely available.

KELER as a credit institution has direct membership in the Hungarian payment systems and it has access to foreign exchange payment systems through its account keeping banks.

The following transactions can be executed on the payment accounts:

• transactions concluded Current accounts, stock exchange,• over-the-counter securities transactions, payment orders, initiated for the purpose of settling accounts,• related to issue of securities-, • payment, based on securities-, • investment services, • payment based on an obligation in a security or related service, and • services provided to an organized market defined by law… ...

In other words, KELER can only execute transactions for a specific purpose (for example, brokerage firms cannot pay their utility bills from a cash account held in KELER) this is why it is called specialized credit institution.

The credit institution services of KELER can be summarized as follows:

• Bank account management

• Foreign exchange transactions

• Forint transactions

• Conversion

• Collateral Management

• Financial settlement of markets guaranteed by KELER CCP

THE CENTRAL GUARANTOR – KELER CCP

CCP – CENTRAL COUNTERPARTY

What does this magic abbreviation, CCP mean? In stock exchange trading, brokers enter into transactions with their clients. Due to the nature of stock exchange trading, they do not have the option of choosing the partner with whom they enter into the transaction. Several solutions have been developed over time to reduce the counterparty risk, associated with trading. The first element is that the stock exchanges themselves "pick" who can trade. After a successful deal, the transactions move to the clearing house, where also selected membership, clearing members take part in the settlement process. But **to further enhance security, a central "guarantor" role has been created, which is provided by clearing houses.**

Initially, this function appeared primarily in derivative / derivative contracts (futures, options), later, however, it spread also to spot stock markets.

Undertaking central guarantee means that the security of your business is ensured by a third actor, the clearing house, which is independent from the dealers, and it enters into fulfilment, in case any of the dealers would fail to fulfil its obligations.

A very interesting part of the process is when a stock exchange transaction concluded by two brokers (seller - buyer) transforms into two transactions and the clearing house enters. **In this event known as "bailout", the buyer of the seller broker will be the clearing house and at the same time, the clearing house also becomes the buyer broker's seller. With this legal act, the performance risks are undertaken by the clearing house and it carries out the obligations of the defaulting party.** For example, if the selling broker does not deliver / provide the securities, they will be bought or lend by the clearing house, in order to complete the transaction.

SETTLEMENT MODELS

There are several models, often parallel models, in the money and securities settlement systems:

- Gross settlement

- Net settlement

    ▪ bilateral netting
    ▪ multilateral netting

With regard to payment systems - the risks involved can also be transferred to securities settlement systems -basically the risks and the solutions chosen to manage them constitute the choice between gross or net settlement model. In addition to risks, costs and the extent of liquidity required also play a role.

Net systems are more likely to require intervention by the system operator, since the default of a member of the scheme could spread to all participants depending on the level of netting. In the case of gross schemes, this risk exists only for the two actors involved, thus, the system operator is also exposed to less risk. At the same time, it is easy to see (as the examples will prove) that there is a need for more liquidity in the gross systems, which also entails additional costs.

It is also important to note that in netting systems clearing (positioning) and settlement (financial settlement, payment) are separated in time, because the accounts are collected at a particular time, they create a net position, they determine the amounts to be paid, then at a specific time members of the settlement system fulfil their obligations. This can happen once a day, but in many cases, multiple cycles can be applied within a day.

GROSS PRINCIPLE ACCOUNTING

Gross principle settlement is based on the fact that items are offset against each other between two players without considering any other items. This is the basis for the already described RTGSS payment settlement system.

In the case of securities, a brief example illustrates this settlement.

Transaction # 1. Broker "A" sells 10 MOL shares at a price of HUF 20,000 per share to "B".
Transaction # 2. "B" sells 100 shares of OTP at a price of HUF 8,000 per share to "A".

In this system, the shares and the two consideration amounts are exchanged as part of the transaction, that is, "B" transfers HUF 200,000 for 10 MOL and "A" also transfers HUF 800,000 for 100 OTP shares. The system does not "net", but moves HUF 1 million with total transaction costs, however, moving HUF 600,000 between the two players would be enough for settlement.

NET PRINCIPLE SETTLEMENT

Based on the above example, in a net principle settlement system, the transaction could be settled between the actors by moving less money. Of course, netting can be extended to settled securities. This is how we get to bilateral netting. **If we increase the number of players and include actors, "A", "B", "C", then we can talk about multilateral netting.**

BILATERAL NETTING

In the example above, if the system is operated on a netting basis, **although there is no netting amount on the securities side,** since the parties traded in two different stocks, **the money side** already has a significant **netting amount** that can be "matched".

Why should pay “B” to “A” HUF 200,000 as buying price, when they still need to get HUF 800,000 for OTP shares sold. In other words, the money-feet can be easily matched, and netted and only HUF 600,000 will need to be moved.

MULTILATERAL NETTING

If we add another twist to the system and model real life situations, we will find ourselves facing a situation that in a payment or stock exchange system there are not only one or two players, but 40-50 or even 100. For example, this could be the accounting of stock market trades, where a large number of brokers, thousands or tens of thousands of clients, execute orders on a trading day. In other words, it is common for securities to be traded and bought, often with the same partner.

Positions are formed on the basis of data, provided by the stock exchange after the close of the stock exchange. Data provided by the stock exchange can no longer be modified. The stock exchange submits the data for settlement on a 'segregated' or 'principal' basis, segregated. In stock exchange trading, brokers already provide information, regarding the fact that they are concluding the transaction on their own account or on behalf of a client. Brokers have a legal obligation to manage both securities and money separately - segregated - on a client / own basis.

This is where multilateral netting enters, where KELER calculates, based on the stock market quotes regarding the given day, the difference between each clearing member’s selling and buying positions per security for that day, that is, the net worth. (E.g. Brokerage Company “A” for 100 OTPs sold and 50 OTPs bought will have 50 net sales positions.) It then calculates the net financial position in the same way.

The settlement shall be calculated based on the following principles:

• rolling (there is daily clearing and not just at the end of the month, for example),

• T + 2 days in the Share Section, in the Debt Securities Section with a T + 1-day settlement cycle,

• multilateral netting happens based on the principle: (each clearing member has a net buy or sell position per paper or foreign currency) (T denotes the trade date; days are business days).

The basis of payment is the principle of delivery versus payment (DVP), whereby cash and securities settlement are interdependent, if one is not met, the other is not fulfilled either.

In multinet clearing spot transactions KELER CCP undertakes performance guarantee after multilateral netting.

General rules of performance:

> • The Net Seller of T-Day Securities is required to ensure, no later than 2:00 pm on Settlement Day, that the amount of securities required for the execution of T-Day Transactions is available on the segregated exchange securities settlement sub-accounts.

• T-day multinet net buyer must provide no later than 14.00 hours on SD day, that the forint and foreign currency coverage required to complete transactions on the SD Day shall be available segregated in their bank accounts.

• Starting at 08:00 (from the beginning of real time processing) on KELER SD day the clearing member withdraws the amount of securities required for SD daily settlement by launching a high priority debit item and the stock exchange securities settlement accounts, opened for each non-clearing member and credit it to the KELER CCP stock exchange technical sub-account for settlement.

Fulfilment of transactions with multinet settlement:

The Clearing Member will get information regarding performance obligations, related to the execution of multinet settlement transactions from the notice, sent by KELER CCP or a listing confirmation. In view of the DVP principle of settlement, interested clearing members shall only have access to the securities due to them or the credited money, if the deal has been compensated (financial or securities settlement).

After collecting the cash and securities collateral required for performance, KELER will carry out the required loads, credits, regarding the technical securities account of KELER CCP and the clearing member's securities accounts, as well as in the technical account of KELER CCP - and the clearing member accounts. The credit on the account, securities and financial deliverables are final and irrevocable.

Regarding the above, the final deadline for multinet settlement is 14:00, if, however, all members have previously had the necessary securities and / or cash in their technical accounts, then the fulfilment may occur sooner.

KELER CCP shall notify the clearing members of the completion of the multinet through a separate message via KID.

If the settlement cannot be completed, KELER will start default processes, the use of the warranty items may begin.

GUARANTEE SYSTEM

Clearing houses, thus guarantee systems operated by KELER, are always multilevel and they go from the individual clearing members' obligations through collective forms to the final performers, that is, to the Central Guarantor's obligations.

Let us see how this is built in the case of KELER:

The first line of defence is Clearing Membership (mentioned earlier) - where they set capital requirements for participants (e.g. 2 billion HUF for a general Clearing Member), they are formulated as ongoing capital adequacy requirements. Of course, the clearing member must have the necessary permissions and comply with applicable policies on an ongoing basis.

The second line is the **system of individual guarantees,** provided by the Clearing Members.

STRUCTURE AND ELEMENTS OF THE GUARANTEE SYSTEM

- **basic financial coverage** - KELER CCP sets a fixed amount per market, which the clearing member must put in his/her account and maintain it on a continuous basis,

- **basic collateral** - also a fixed amount guarantee item, which is intended to cover the usual daily price movement risk of a given product, determined on the basis of open positions, which have not yet been settled,

- **additional financial cover** - will be requested, if a particular clearing member maintains excessive positions in a given period, which means increased risk.

PRICE DIFFERENCE ACCOUNTING

- **price difference** - in order to avoid the accumulation of risks during the clearing cycle, KELER shall request a guarantee, corresponding to the extent of the daily price change (if negative). This evaluation is called "mark-to-market".

GUARANTEE FUNDS

The next level of the guarantee system is **collective guarantees**. For these warranty items the participants in the given clearing cycle pay in, in order that in the event of a default, amounts beyond individual safeguards shall also be available to ensure the settlement.

In the Hungarian market, KELER operates two guarantee funds, one for spot (stock market) settlement, TEA - Stock Exchange Settlement Fund, and, in the case of derivative / derivative markets, the KGA Collective Guarantee Fund.

Payment to the Guarantee Fund is determined on the basis of stress tests performed by the CCP, measuring the risks under current market conditions.

SESF

SESF *is defined by KELER as:*

The SESF (Stock Exchange Settlement Fund) is a jointly owned fund, set up to support the spot market. Its purpose is to reduce the risk of delays or omissions in clearing members' transactions with each other, as collateral for a cash guarantee bail. The SESF contribution also serves as a security for KELER CCP to the extent of its claims against the Clearing Members.

CGF - COLLECTIVE GUARANTEE FUND

The following definition is used to define CGF:

The CGF (Collective Guarantee Fund) is a mutual fund, set up to enhance security in the derivatives market. Its purpose is to reduce the loss, resulting from the late or non-settlement of payment obligations, arising from the settlement of futures and options contracts as collateral for a comprehensive guarantee. The CGF contribution and the recoverable amount shall also serve as a security for KELER CCP to the extent of its claims against the Clearing Members.
These two funds can only be used if the individual collateral of a defaulting member no longer covers costs and / or losses incurred.

Finally, according to the order in which the warranty items are used, we also have to talk about, what would happen if the above warranties were not sufficient.

This is the stage when the CPP is forced to rely on its own assets and capital to cover the resulting losses.

A SHORT KELER HISTORY

Finally, to close this topic, let us review how KELER has evolved since its foundation in 1993:

FROM THE FOUNDATION TO THIS DAY

12 October 1993 - KELER was founded
With the assistance of the two stock exchanges (BSE + BCE) and the HNB, it was established with a starting capital of HUF 500 million.

1994. Taking over the settlement of the Budapest Commodity Exchange
Settlement of agricultural contracts in commodity exchanges, including the problem of handling physical shipments.

1995. Start of the Budapest Stock Exchange futures accounting
In addition to earlier exclusively spot securities products, derivative products appeared on the BSE.

1995. SPAN® system
Taking over and implementation a portfolio-based margin system, developed by the Chicago Mercantille Exchange

1997. Launch of Client Communication System (CCS)
The communication system of KELER towards the clients. With its support, clients can send orders to KELER, follow their completion process, based on status information, and can download individual account information (statements and balances) from KELER's accounting systems.

2001. Launch of a new derivative system
An IT development, which replaced the previous solution, to support the settlement of derivative market transactions.

2002. The T + 5-day settlement cycle is shortened to T + 3 in stock market settlement.

2002. Introduction of CCP services in the spot market. Before that, KELER provided guarantee only in case of derivative transactions settlement.

2006. Gold Physical Delivery Contract and BUX-ETF Settlement begins. As the markets evolved, new products appeared, for which KELER ensured the settlement.

2007. Extension of real-time risk management to the BSE spot market.

2008. KELER CCP Ltd. is established, which takes over the guarantee. With this the KELER group was formed and the risk was removed from the National Depository.

2010. Settlement of gas balancing market, launch of electricity market sub-clearing member services.

2011 transformation into Ltd., the electricity derivatives market and the BSE market starts. The BSE market: In the market, operating with market makers, you can trade with foreign equities, ETFs on a forint basis.

2012. Launch of MTS Hungary Settlement - Electronic trading system for Hungarian government securities introduced by DMC.

2013 Launch of CEEGEX (Central European Gas Exchange)
Market participants can access the day-ahead, monthly and quarterly long-term physical delivery products on CEEGEX. The physical settlement of the trade takes place at the Hungarian Gas Balancing Point (GBP). The transmission is guaranteed by the Natural Gas Transmission Company (FGSZ Ltd.), while settlement of transactions is provided by KELER CCP Ltd.

2014. Introduction of a T + 2-day cycle for stock market settlement (further down from T + 3).

2014. Obtaining an EMIR license - EU regulation regarding derivative transactions and the operation of institutions acting as central guarantor (CCP), to reduce risks. KELER complied with this regulation and received the EMIR license.

2016. The signing of the BRM contract - Agreement with Romanian Commodity Exchange about serving the local gas exchange, according to which, KELER provides clearing services.

2017. CEEGEX settlement in euro

2018 Accounting of BSE Xtend Market, created for medium-sized companies guaranteed settlement, similarly to the main markets of the BSE.

2018. Beginning of AIX collaboration
AIX, the new Kazakh Stock Exchange (Astana International Exchange) has entered into an agreement with KELER, according to which, KELER will provide full range of clearing, settlement services for stock market members.

LEGAL AND PRUDENTIAL REQUIREMENTS

REGULATORY FUNDS

INTRODUCTION

The capital market, along with the financial services, insurance and cash funds sectors, is part of the financial intermediary system. This is the economic sector, where **the investor - that is, the person who, pursuant to the contract concluded at the capital market, does the following: risks his money, assets or a part of it, which are placed in this way under the effects of the capital market, regulated market, or the stock exchange. Risk is therefore a fundamental feature** of capital market investment: **the investor has to take into account that they may suffer a loss instead of the expected return.**

There are many ways to reduce risk, but precisely because in this segment of the economy everyone, including the client, but also the service provider, takes risks, these risks can add up, increase in power, and can have a significant impact on the economy of a country, an economic region, or, as we saw in 2008, even on the world economy. Because in the modern world, the economies of individual states are not independent, the efficiency of economy - and, indirectly, the peaceful coexistence of nations and the avoidance of wars are also ensured by a better regulated economic cooperation. Considering the potential impact of capital market crisis (domino effect), and in order to ensure that the capital market is fair, transparent and works effectively, the task of the state is, to clearly lay down rules of good conduct both in internal regulation and in external economic relations, and to put in place a proper system of sanctions against those who break the rules. The state does this by formulating (regulation) and enforcement (supervision, justice) of the expectations.

It is not the purpose of capital market regulation to unnecessarily restrict the activity of fair market participants, nor is it to create a barrier to innovations. At the same time, regulators need to pay attention to what are the market products, market issuers service or investor behaviours which violate market transparency and ultimately cause harm to the community. In some cases, these losses affect only a handful of investors or service providers, but for events of greater significance the need for state intervention also arises, which will ultimately be to the detriment of taxpayers - all of us. The purpose of the regulation is to define the "playing field" where capital market rules are applied, and a clear statement of "rules of the game": with what products, who, pursuant what rules, what deals you can do and what penalties are to be applied in case of violating the rules.

Modernization, technological advances and digitalisation also present new opportunities and challenges: new potential investment products (e.g. bitcoin), new technologies (blockchain) and new forms of financing (e.g. community funding / crowdfunding) also appear, taking into consideration of which, in order to protect investors, regulation must also react as quickly as possible, at the same time also having the common good in mind. The aim here is therefore not the restriction either, but proper, proportionate and reasonable investor protection.

Regulation is nothing more than establishing a specific order of living conditions, according to the expectations of the given community at any given time. **Regulation is basically embodied in legislation.** There are many definitions of the term law: **"law" can mean law, but also the legitimacy**, that a certain person has the opportunity regarding action within the limits of substantive law. **A law is a rule of conduct (norm), the formation of which is related to the state, is generally obligatory in society, and its enforcement is ultimately carried out by state organs.**

The two groups of laws are substantive and procedural rules. Substantive law is the law that defines the rights and obligations of market participants (entities), which are governed by procedural law.

STRUCTURE OF THE CAPITAL MARKET REGULATION

CONTRACTS, PRIVATE RELATIONS - PRIVATE LAW

In order to see the focus of capital market regulation, we need to consider what products, behaviors (living conditions), institutions are that make up the capital market. Such products are typically securities, financial instruments, purchase and sale of which, (investment on the investor side, trade or brokerage on the provider side), issue (raising funds or involving funds on the issuer's side, investing on the investor's side) is traded on a regulated market, that is, on the stock market, and other, less regulated markets, such as multilateral trading facilities (MTFs) or organized trading systems (OTFs), of course, together with the clearing and settlement of transactions concluded. Similarly, capital market behavior is if somebody in a public stock company gaining a decisive influence, and it is also able to make decisions contrary to the interests of the small shareholders (acquisition of influence in a public limited company), or if someone is using information that is not available to other players (insider information).

As can be seen from the above, in the capital market, like in any other market, some commodity - here the financial instrument - changes hands, typically for money. These transactions are sale, commission and swap ones, which, however, are characteristic not only of the capital market but of almost every aspect of life. Because of all this, these rules are contained in private law rather than in capital market regulations. Private law regulates private life. It is characterized by involving the relationships of actors assigned to each other it is the area of autonomous individual action and civil society self-movement. Private life relationships are co-relationships, characterized by equality between the parties, autonomy of will, conflicts of interest between the parties and balancing of interests.

First of all, it is important to know with whom we enter into economic relations in the capital market. One of the main areas of **private law regulation, the right of individuals** provides an answer to questions who can sign a contract, who can take commitment, who can become the owner of a right: who is a natural person (man) and **from what age (18 years old, age of discretion) he/she has got legal capacity- that is to say, it is able to conclude contracts himself/herself and to make any other legal statement, provided that its capacity to act is not restricted by law or by a court order regarding custody.**

However, most economic activities require more people to be associated in some way. To this end, they may set up business associations in the form of a legally independent entity. This **legal entity, which shall have legal capacity and be subject to the rights and obligations of a legal person, shall have its own name, registered office, assets separate from its members, management or representation, while its liabilities are, as a rule, settled by its own assets.** General rules on legal persons, and the regulations by individual law, applicable to named legal entities belong to the field of private law.

It belongs to a further area of private law, what is ownership right and what is ownership (that is, something I own or something is at me), and other limited rights in rem (including, in particular, liens, or the bail that secures the debit of financial means but also includes usage rights such as usufruct).

The third part of private law, which essentially determines the capital market, is **obligation law, which also regulates contracts. The obligation is the one to perform the service and the right to demand the performance of the service. Obligations may be directed at giving, doing, refraining from something, or any other conduct.** It is important that **the regulation of obligations is so called dispositive control: the parties deviate from the rules governing the rights and obligations of the parties by mutual consent, unless the law prohibits such derogation**.

The obligation typically arises from a contract. **The agreement is a mutual and unanimous statement of the parties, from which the obligation to perform the service arises and the right to claim the service.** Private law is characterized by **contractual freedom**: the parties are free to conclude a contract and they are free to choose the other contracting party, and they are free to determine the content of the contract. The law of obligations gives answers e.g. the question of how to make a claim through another person (representation), what is the legal effect of the passage of time on the obligations (limitation), how the contract is created, how it is terminated, what it is valid for and what are the consequences. **It is also important to control who has what right, and the liability for failure to perform any obligation under the contract**, i.e. in case **of breach of contract.** This is not a capital market specific issue either, so its rules can be found in the general rules of private law.
The law of obligations not only contains general rules but also names typical life relationships in their general form. Thus, private law regulates the general rules of the capital market in a major sale and purchase transaction, the commission contract and the exchange one.

The obligation may come not only from the contract but also from a unilateral declaration, in particular from a security. Since securities are the most basic commodity on the capital market, its concept is also covered by private law: **a security is a unilateral legal statement, which is as a paper form document, or is created as otherwise prescribed by law, fixed, recorded and transmitted as a set of data (dematerialized securities) embodies the right contained therein, in a way, that to exercise that right, to make provisions to the security is only possible by the security, by being in possession of the security.** The regulation of certain securities and other financial instruments is also a matter of private law.

APPEARANCE AND TRANSACTIONS IN THE CAPITAL MARKET, CAPITAL MARKET RULES

There are life conditions that are specific to the capital market. Some of these behaviors need to be regulated in order to function properly. However, there are also behaviors that disrupt the healthy functioning of the market: in this respect, it should be made clear that these are unsolicited or explicitly prohibited behaviors and appropriate sanctions should be envisaged against the perpetrators of these behaviors. Capital market rules primarily focus on the first group, including those of a private and administrative nature.

The first question from a capital market point of view is what the products are in which **investing is considered a capital market transaction. A financial asset is typically a security** and such are also derivatives. It is important that **money is not a financial asset**, money is a special good.

Since capital market regulation is a regulation of a sector of the financial intermediary system, it contains rules for the "endpoints", that is, the savers (investors) and issuers insofar as their behavior affects the life of the players of financial intermediary system, that is, the life, wealth and behavior of other actors in the capital market. On this basis, **the most important area of capital market regulation is the regulation of the players of the capital market intermediary system, the investment firms.** In view of the economic significant risks of their activities, it is essential, that their establishment, operation, the transactions they can enter into, their management, their internal regulation, the preparedness of their staff, the technology they use, controlled with sufficient depth and detail.

Information is most influential on the trading and price of securities. Therefore, transparency of information is essential. **In order to provide investors with transparency in their securities, another area of regulation of the capital market is the issue of securities.** The subject matter of the regulation is who the issuer of the securities is, as well as the procedure for the issue of the securities and the provision of information. **It is important that the issuer, which undertakes to fulfill the obligations contained in the security on its own behalf,** ensures providing to capital market players true, full and uniform information regarding itself and the security. The regulation therefore covers the issuer's obligation to provide regular and extraordinary information to the market.

The regulation also requires the issuer to disclose inside information, and until the inside information becomes public, in the meantime, no one should be able to abuse it, that is, insider trading is prohibited. In addition, the purpose of the regulation is to prevent market manipulation.

Public limited companies are characterized by a fragmented ownership structure: there are many minority shareholders in a classic public limited company, who make their decisions in proportion to their contribution to share capital, at the general assembly. **However, if the influence of a person or group becomes determinant in the operation of a public limited company, they have the opportunity to manage the public limited company according to their personal interest,** possibly against the will of the minority shareholders, even making the position of small shareholders impossible. **Regulating the acquisition** of influence in a public company limited by shares ("company acquisitions") **serves to address such situations**. If someone is either buying shares or any other way gets into a situation to determine the continued operation of the public limited company, that is, **it has a decisive influence on more than 33% of the votes available at the general assembly, it shall make a public takeover bid to the other voting shareholders.** Obviously, a mandatory takeover bid can only work in the order and under the responsibility defined by law.

In many cases, clear regulation does not provide sufficient protection for the average knowledgeable **"small investor", when he / she suffers damage, if the securities or money registered by the service provider are missing and the investment firm is liquidated.** A guarantee scheme is therefore needed to compensate investors in such cases: In Hungary, this is the **Investor Protection Fund (IPF)** which within the limits set by capital market regulation, from fees paid by authorized investment firms, as a separate legal entity, **provides limited compensation** for "small investors".

Capital market life demands that rules be enforced not only through contractual discipline, but also through regulatory intervention. This is basically served by the **administrative law, which - as a part of public law - regulates public relations in the public interest in order to fulfil the functions of the state and local governments.** The task of public law is to establish, maintain and regulate public authority. The public relations of life are characterized by subordination: the authority exercising public authority has additional rights over the subordinate, whereas obligations are generally settled regardless of the will of those obliged. In public law, there is in principle a public interest identity, and there is also the possibility of direct coercion. **Legislation in public law is imperative, that is, mandatory or prohibitive legislation.**

The role of public law in the capital market is to enable certain players in the financial intermediary system to enter, the activities they can perform, in fact, because of their economic importance, some capital market transactions also need to be monitored. One type of it is the authorization and supervision of the entry of professional players in the capital market sector: all the actors and their significant owners, their leaders, who wish to participate professionally in the capital market mediation system, and all the activities they can do, shall be authorized and supervised. Supervision ensures that the entrant to the market is able to provide investors with the services it has been authorized, that is, they have the right knowledge to do that, with the necessary personal, material - technical and regulatory conditions, and it is also capable of acting in a way that does not hinder the operation of the market, but helps the healthy market, for the benefit of the investor community.
Since from the point of view of the operation of the market the **regulated market, i.e. the stock exchange** or other partly regulated markets, such as the Multilateral Trading System (MTF) and the Organized Trading System (OTF) are such institutions, the proper functioning of which is **in the interests of the economy as a whole, it is important that there is control over who owns and operates such markets.** Therefore, to operate them, a supervisory license is also required. **The central clearing house and the CCP that is, the activities of capital market institutions which provide clearing and settlement** is also **subject to authorization and supervision.**

In addition to licensing, an important task is to ensure the regularity of further operations, which is also ensured by administrative rules by requiring supervision. **The capital market is supervised by a dedicated body: in Hungary,** today **it is the National Bank of Hungary (HNB), which supervises the financial intermediary system.** In order to ensure effective supervision, **official means are available for supervision**: in addition to licensing, **it may conduct inspection procedures, appoint a commissioner for supervision, authorize consumer protection inspections and even initiate market surveillance proceedings.** If it experiences any kind of abuse, it has the opportunity to apply measures and sanctions. **It can prohibit unlawful activities, impose certain behaviors, suspend the pursuit of an authorized activity, and impose fines.**

In Hungary, the HNB **through the Financial Arbitration Board in the frame of out of court procedures** sorts out **disputes between the consumer and the investment firm, arising from the establishment and performance of a legal relationship concerning the use of investment services.**

PROHIBITED CONDUCT - CRIMINAL LAW

The social interest in the security of the functioning of the capital market requires that the state should prohibit behaviors that jeopardize it by all means at its disposal and protect the capital market. The legal instrument available for this is criminal law. Therefore, behaviors that fundamentally endanger the capital market are considered a crime, and the perpetrators are punished by criminal sanctions. **Criminal law is the branch of law that defines anti-community, undesirable behaviors that are dangerous to society and therefore which, if certified, result in the perpetrator being held criminally responsible, and if guilty (will-full or negligent) he/she is punished (execution of punishment).**

Since the capital market is inseparable from other life-relationships, of course, there are protected in the capital market, for example: privacy rights, the right to property, intellectual property, data or information systems, and here too, crimes against property (fraud, embezzlement, theft, etc.) can occur.

At the same time, there are behaviors that are specifically targeted at the capital market and fall within the scope of crimes affecting the order of business. This is **unauthorized financial activity**, which is committed by those who perform investment services without permission, investment fund management, stock market-, central depository or central counterparty related activities. **Insider trading** is also **a crime**: entering into a transaction or ordering a financial instrument with insider information, using insider information, or soliciting others to enter into or modify a transaction relating to a financial instrument that is subject to insider information. Likewise, **it is a criminal offense for unauthorized disclosure of inside information** by anyone who discloses inside information to an unauthorized person or persons in order to gain an unlawful advantage or cause an undue disadvantage.

Considering that securities secrets - that is, information about the client, the investment manager, the stock exchange, the CSD, the CCP and the investment firm, the client's identity, data, financial position, business, investment activities, management, ownership, business relationships or information about its contracts with its provider, its account balance, and its turnover is considered a top secret business secret, everyone who owns it is obliged to keep it without any time limit. The person who breaks the security secret also commits a crime (violation of economic secrecy).

The capital market can be an attractive place for those who engage in financial activities in connection with a criminal offense, or use a capital market service to conceal the origin of the thing, or frustrate criminal proceedings against the offender or existing law regarding the thing, conceal or disguise the changes that have taken place or location of things. This is **money laundering, which is also severely punished by criminal law.**

CLAIM AND LAW ENFORCEMENT - PROCEDURAL RIGHTS

The legislation described above is essentially a substantive law that is enforced by procedural law. Of course, other procedural rules are needed if, in a private law dispute, the contract holder intends to enforce the contract voluntarily, fulfilment of obligation undertaken in securities and it is different if the state wishes in the case of conduct condemned by the general judgment of society to enforce his criminal power and prevention, both in a general and individual sense. So, the above so-called different procedural rules are applied according to the delimitation of the law (private law, capital market regulation, administrative law, criminal law).

The enforcement of rules of private law is essentially ensured by the rules of civil law procedure. The route of general demand validation is the judicial one, taking into consideration the fact, that today also exist alternative forms of dispute resolution (arbitration, conciliation, mediation, etc.).

The enforcement of administrative rules is guaranteed by the administrative procedural law. **The administrative forums are the administrative bodies, and in the capital market it is the HNB** in its oversight function of the financial intermediary system, which **applies** general administrative procedure taking into account the specificities of financial markets with certain differences. There is no administrative appeal against HNB decisions, but these are, as a general rule, subject to judicial review.

The application of criminal law is guaranteed by criminal procedural law through the activities of **law enforcement agencies** (police, prosecutors) in the capital market, and **criminal judgments can be handed down by the courts.**

LEGISLATION

RELATIONSHIP BETWEEN LEGISLATION, THE LEGAL HIERARCHY

The law is the set of standards of behaviors, appearing as required by bodies, endowed legislative power (e.g. Parliament, Government, local governments) having specified form and denomination. Legislation (sources of law) are built on one another and form a system whose structure is characterized by different hierarchical levels. The hierarchy of sources of law means a legal order of values. This ensures consistency in regulation. **The hierarchy of sources of law is characterized by the subordination relationship, that is, the lower level legislation cannot be in conflict with the higher-level legislation.** The ranking of sources of law is adapted to the situation of the issuing body.

Following the accession of the Republic of Hungary to the European Union (EU) on 1 May 2004, not only national legislation but also Community law **determine our legal order. Thus, two levels of law are distinguished: community law and national law**, which, however, cannot be considered independent of one another.

Hungary has transferred part of the state's legislative sovereignty to the EU upon accession, i.e. by concluding the Accession Treaties (Treaties) undertook that in the framework of ensuring free flow of the single market, capital, labor, goods and services, submits to the rules of EU, created in collaboration with Hungary. The Treaties are the starting point for EU law, and all EU action is based on the Treaties. These are binding agreements concluded between EU countries: they set out the objectives of the EU and the rules governing the institutions and decision-making of the EU and set the framework for relations between the EU and its Member States.

EU legislation is based on the principles and objectives set out in the Treaties. These include EU directives, regulations, decisions, recommendations and opinions. The importance of the **regulations** is that they will be automatically and uniformly applied **in all EU Member States once they enter into force, they are binding in all Member States.** They are published in all EU languages and do not require translation or transposition. **Directives**, on the other hand, are **not directly applicable standards**. In order to achieve the objectives of this Directive, Member States should ensure to make the provisions of the directive part of national law (known as the transposition or harmonization process). The **delegated legal act** shall be binding, with which the European Commission (Commission) supplements or amends non-essential elements of EU legislative acts, e.g. to regulate an area in detail. The **implementing act** is also binding, whereby the Commission ensures, under the supervision of specialized committees of representatives of EU countries, that EU legislation is uniformly applied in all Member States. **EU decisions** are also binding acts however they apply only to one or more EU countries, businesses or individuals. And the **recommendation** allows the EU institutions to put forward their views, to propose measures, without imposing any legal obligation on the addressees of the recommendation.
The **opinion** is similar to the recommendation: it does not impose any legal obligation on its addressees and also serves that the EU institutions take sides on a particular topic.

In **national legislation** in modern legal systems in the **first place** there are **laws created by the highest representative body, that is parliament**, then come the **regulations**, issued by the various **administrative and governmental** bodies, while the life of the local community is governed by municipal regulations. In the **domestic** legislation’s subordination, superiority hierarchical relations, at the **top of the hierarchy** is the **Fundamental Law (Constitution**), **which is formed by Parliament**. Also, **Parliament passes laws**. The government is the general body of the executive power, its tasks and powers extend to all which is not expressly referred to by law in another body. Acting within the scope of its responsibilities, the **Government makes a decree** (government decree) on a subject not regulated by law or **on the basis of a mandate given by law**. The members of the government are the prime minister and the ministers. A **member of the Government, based on authority, granted to him by law or government decree, acting in his capacity, issues decrees**. For the exercise of local public authority, the local government (representative body) may, by law, make regulations for the settlement of local social relations not regulated by law or on the basis of a mandate given by law.

When assessing the domestic legislative hierarchy, it should be borne in mind that **EU law takes precedence over domestic law**, thus, domestic law cannot be contrary to EU law or, if it is, EU law prevails.

THE IMPORTANCE - PRIORITY OF EUROPEAN REGULATION

The **EU** provides **four principles of freedom**:

- **free movement of goods:** no quantitative restrictions or similar measures may be imposed on imports between Member States;
- **free movement of capital:** restrictions on the movement of capital of all natural and legal persons are prohibited within the EU;
- **freedom to provide services:** providers in the EU are treated in the same way as local providers in any Member State;
- **free movement of persons**: every EU citizen can move freely across the borders of the EU, settle anywhere and work freely;

As you can see, one of the four freedoms of the EU, is the free movement of capital. On this basis, the EU seeks to unify the capital market and, within that framework, to regulate uniformly. Thanks to this, most of the capital market standards are now either directly applicable EU regulations or – transposed with the help of the domestic legislator- directives containing uniform EU guidelines.

One of the cornerstones of EU regulation is the **Markets of Financial Instruments Directive (MiFID II Directive),** which, with the transposition by the Member States in January 2018, would seek to create such a regulation, which will make **financial markets more efficient, flexible and transparent, while strengthening investor protection. The aim of the MiFID II. Directive** - together with the directly applicable MIFIR Regulation (Regulation of the European Parliament and of the Council on markets in financial instruments) -is **to establish a legal framework for investment firms and regulated markets**. Based on the experience of the financial crisis, to enforce certain requirements, there had to be created such a single set of rules, which is binding on all institutions, helps avoid potential regulatory arbitrage, provides greater legal certainty and less complex regulation. The aim was also to break down the remaining barriers to trade and elimination of distortions of competition, resulting from differences between national laws.

Collective investment management institutions are gaining ground in countries with advanced capital markets, which allows you to invest even in a smaller amount - by pooling investments – the possibility of risk sharing, diversification, and expert management of investments as economically as possible. As a result, collective investment management is also regulated at EU level: the EU created guidelines on **alternative investment fund managers (AIFMD) and UCITS (UCITS Directive).**

Rules on issuers of securities and of securities issued to the public concerning information services are also an essential part of EU regulation**.** The EU direct regulation **(the Prospectus Regulation)** introduced a new procedure for public trading in securities since summer 2019, regulating the information needed for listing (Leaflet) and marketing, the order of registration. The purpose of the regulation is to make access to resources easier and cheaper for smaller businesses, introduce simpler and more flexible regulation for all types of issuers and provide better information for investors by, requiring that the disclosure of summaries, key information for small investors shall be more understandable and easier to handle. Information provision covers the entire life cycle of a security from the start of the business.

A directive and regulation also address **market abuse (MAD II./MAR regulation**). The aim of the regulation is to ensure the integrity of the European financial markets and to increase investor confidence by threatened with criminal sanctions throughout the EU the perpetrators of the most serious market abuse, persons carrying out insider trading, unauthorized disclosure of inside information and perpetrators of market manipulation. The regulation, which has been in force since 2016 provides a common regulatory framework for market abuse, thus, define the prohibited and permissible behaviors in a uniform manner. A further aim is to strengthen cooperation between EU national financial authorities, ensuring uniform law enforcement of the same framework across the EU.

Securitization ("securitization decree") has been re-regulated since 1 January 2019, which helps to mobilize receivables and gives investors a more colorful investment opportunity in the form of securities.

Of course, regulations and directives are supplemented by lower implementing acts of the Commission, compliance with which is in the interest and duty of all market participants. Furthermore, **as the interpretation of uniform EU standards by Member States may raise further questions, European Securities and Markets Authority (ESMA)** provides the opportunity, that based on the answers to their questions, market participants should adapt their behavior to the requirements of the supervisory authority (Q&A).

European legislation on capital market services is available in all official EU languages, including Hungarian on the EURLEX portal (eur-lex.europa.eu).
DOMESTIC RULES - HUNGARY

Private law and capital market relations are governed by domestic law, particularly in the context of international law, in particular EU law.

Hungarian law (law, government decree or ministerial decree) regulates, whether a financial instrument is a security or not, as well as each of the typical securities and their characteristics. However, it is important to know that based on the open securities concept **created by Civil Code, not only are the assets designated by each legislation considered as**

securities, (e.g. bonds, units, shares), but also other financial instruments that meet the general requirements for securities.

The transposition of EU directives in Hungary was basically in the form of a law, **thus, investment firms and the activities they carry out are regulated by law**. This regulates the investment services and the terms and conditions under which they are provided, rules for the creation, operation and dissolution of investment firms and rules for carrying out investment service activities, starting with informing clients the conclusion of contracts and obligations relating to the registration of contracts, and by regulating the performance of the contract, to the special rules applicable to each special investment service. This Act disposes regarding **special service providers that operate a Multilateral Trading Facility (MTF) or an OTF**. This Act covers matters relating to the authorization, registration, data management and supervision of investment firms, the powers and sphere of action of the supervisory authorities in this field.

The **Capital Market Act contains** the basic rules applicable to other capital market institutions. This Act contains a set of rules for the issue of securities, to supplement the rules of the Prospectus Decree, thus, on the one hand, when a **securities issue is considered to be public**, on the other hand, the obligations incumbent on the issuer in connection with the public offer of the security, and thirdly, what procedure the investor should consider in such a situation. Although the admission of securities to a regulated market is not, in principle, a regulatory issue, but to be dealt with by the stock exchange, the framework is also laid down by law. This law regulates the rules for acquiring influence in a public limited company and this law also lays down the rules governing the establishment, services and operation of other Core Capital Markets Institutions, the Stock Exchange, the Central Depository, the Central Counterparty and the Investor Protection Fund (BEVA).

Hungary complied by creation of independent law with EU guidelines about **collective investment management, regulating investment fund managers and regulating investment funds, about collective investment forms and their managers**.

The rules for enforcing the laws take the form of a government decree or decree, issued by the Minister for Finance. For example, **government regulations regulate** certain securities, such as **bonds, treasury bills**, but also specific accounting rules or certain internal procedures such as complaints procedure or management rules, while **ministerial decrees regulate** e.g. **information requirements, training requirements**, but also domestic rules for certain securities, such as bills of exchange or checks. The **Governor of the National Bank of Hungary is also an eligible legal norm, issuing the HNB decree**, creating rules which are to be applied in case of technical operation, implementing, regarding basically institutions belonging to certain financial sector, so e.g. on electronic communication with supervisors, relevant professional requirements, regarding provision of information to clients, natural people from the side of investment businesses, information obligations, technical data, related to the securities account.

INTERNATIONAL BRANCHES

When reviewing the regulatory framework governing the capital market, we must not forget that **Hungary is a party to many international conventions,** which, in fulfillment of its contractual obligations also requires a legal obligation in Hungary, which serve the transparency of the economy not only of Hungary but indirectly of the other states that are in connection with each other. These include double taxation avoidance conventions, but such are agreements regarding the prevention of money laundering and tax evasion, and occasionally the transfer of client data.

LICENCE REQUIREMENTS

In view of the complexity of the market and the risks involved, the market is subject to State supervision. The means of doing this is, on the one hand, that market players who carry out activities of great importance or have special expertise in the capital market may only carry out this activity with the permission of the supervisory authority, and on the other hand for those capital market transactions, which may affect a significant number of average investors is also required supervisory approval.

AUTHORIZATION OF MARKET SERVICES

Special security and expertise are required before you can invest as a service provider. In order to ensure this, **those providing the investment or related activities as a service must be authorized by the HNB.** Services that are subject to licensing for the above reason are **investment services activities**, if is carried out in the context of a regular economic activity, in respect of a financial instrument (or, in older words an investment instrument), and the activity is

(a) acceptance and transmission of orders,

(b) execution of an order on behalf of a client: entering into an agreement to buy or sell a financial instrument on behalf of the client,

(c) own - account trading: purchase and exchange of a financial asset for its own asset,

(d) portfolio management: an activity whereby the client's assets are invested and managed in financial instruments for the benefit of the client under predetermined conditions, on behalf of the client, providing that the client bears directly the risk and reward of the financial instrument he/she has acquired, that is to say, the loss and profit,

(e) investment advice: providing personalized advice related to a financial instrument transaction. It does not include the disclosure of facts, data, circumstances, studies, reports, analyzes, and placing advertisements, obligatory prior and subsequent information required by law provided to the client by the investment firm,

(f) placement of financial instrument: the placing on the public or in private, and offering for sale, of a financial instrument, an undertaking to purchase the asset (a security or other financial instrument) (underwriting guarantee), [(i) recording the security on its own account, or an undertaking to purchase or (ii) to avoid failure of the subscription or purchase **commitments** regarding recording the amount of securities contracted, and their purchase],

(g) placement of a financial instrument without a commitment (subscription guarantee) to purchase the asset (financial asset),

(h) Operation of **MTF** (Multilateral Trading Facility): operating such a trading system which combines the intentions of third parties to buy and sell financial assets in a non-discriminatory manner that results in a contract, and (**i) Operation** of **OTF** (organized trading system): operating a multilateral system that is not a regulated market or MTF, and in which multiple third party bonds, structured finance instruments, allowances and the intention to buy and sell derivative products within the system in a way that results in a contract.

It qualifies as an ancillary service and is subject to authorization in the same way in the framework of regular economic activity, regarding a financial instrument (in older words: investment vehicle)

(a) **safekeeping** and administration of financial instruments as well as the maintenance of related client accounts: [taking over financial instrument for safekeeping, recording and issuing on behalf of owner] this includes the so-called keeping a securities custody account (an account kept for a client and taken over from a client for safekeeping), and client account management [limited purpose account for client funds management, which is solely an investment service, ancillary service provided by the account manager, or intended to services regarding the conduct of transactions during commodity exchange],

(b) custody: the custody of a financial instrument, the collection of interest, dividends, returns or repayments and providing other related services, including services related to the management of collateral and the related securities account [records of dematerialized securities and rights attached to them in favor of the security holder], in the case of printed securities, the keeping of such records and the keeping of a client account, except for keeping the central securities account,

(c) investment loan granting: a loan for the purchase of a financial instrument if the lender is involved in the execution of the transaction,

(d) advisory and services on capital structure, business strategy and related issues, mergers and acquisitions,

(e) trading in currency and foreign exchange related to investment services activities,

(f) investment analysis and financial analysis: investment advice for a financial instrument or its issuer as defined in the Capital Markets Act, excluding investment advice,

(g) service, related to underwriting guarantee

(h) the following derivative contracts, activities, providing investment services or additional service, related to the asset, underlying the following derivatives transactions [transactions whose value depends on the value of the underlying financial instrument as a commodity and is traded independently]:

(**i) commodity related options,** futures contracts, swaps, forward rate agreements and any other derivative instruments that must be settled in cash, or cash at the option of one of the parties to the transaction not including the expiry of the due date or any other cause of termination,

(j) **commodity related options, futures, swaps,** and any other derivative instruments that may be physically settled provided that they are traded on a **regulated market or MTF,**
(ii) commodity related options, stock exchange related and over-the-counter (OTC) futures, swaps, other than financial derivatives, other than those covered by points (ii), and any other derivative contract that may be settled by physical delivery, and is not for commercial purposes, if it is settled through a recognized clearing house or is subject to a periodic obligation to make additional payments,

(k) options futures, swaps, interest rate futures or any other derivative contract, instrument, related to climate, weather variables, freight rates, air pollutant or greenhouse gas emissions, inflation rates or other official economic statistics, which must be settled in cash or which, at the option of one of the parties to the transaction, may be settled in cash, not including the case where the termination is due to default,

(l) derivative transaction, asset, related to other right, obligation, index, measure, which has the characteristics of one of the other derivatives, including being traded on a regulated market or MTF, recognized and executed through a recognized clearing house, or regular supplementary contribution obligation applies to it, and other specified derivatives transaction (e.g. telecommunication bandwidth, storage capacity related).

The above services **shall be considered investment services only if they are performed regarding a financial instrument,** therefore, it is important to know what a financial instrument is. Financial instrument in particular is

(a) transferable securities, including securities issued by the form of collective investment, i.e. under the same terms and conditions as the clients, a form of investment, created and operated in not separated treatment, aimed at providing clients with portfolio management services, or as members of it clients should use this service indirectly,

(b) a money market instrument, that is a series of non-securitized money-market instruments that are traded on a money market,
(c) except the above any options, securities, foreign exchange, interest rate or yield, commodity, share issue trading or other derivative instrument, financial index or financial instrument, stock exchange futures, swaps, OTC interest rate agreements, and any other derivative transactions, which can be executed by physical delivery or settled by cash, credit derivative transactions, the financial agreement regarding the difference, an option related to climate, weather variables or official economic statistics, stock exchange futures, swaps, over-the-counter interest rate futures or any other derivative contract that may be settled in cash.

Financial instruments therefore include some commodity futures, options and other derivatives, as well as specific derivative transactions those, for example, related to climate variables, changes in economic statistics.

If one wishes to do any or all of the above, his/her activity is **subject to a license provided that he/she carries it out as a regular economic activity.**

LICENCE REQUIREMENTS REGARDING MARKET PLAYERS

Anyone wishing to do any of the above must be licensed. As an investor, you should only use the services of a market participant who is authorized by the HNB. Authorized service providers under the authorization procedure certify for supervision, that they have the appropriate expertise, their management and risk management systems are adequate and ensure the organizational, regulatory, personal, material, technical and IT conditions of their activities. The investment services activity is exclusive: such activity must, as a main rule, exclusively be carried out only by an investment firm, and the investment firm may only provide related services in addition to the investment service business.

Since **collective investment management (investment fund management)** is also a service for a wide range of average investors, which basically reaches investors by buying a special security, an investment unit, it is important that buying the investment unit, the money entrusted to the investment manager, the investment fund manager, investment management is executed according to the investment policy chosen by the investor. It is therefore essential that **collective investment managers (investment fund managers) are also authorized.** Investment fund management activities are also exclusive: such activity shall, as a general rule, be done by the investment fund manager and the investment manager may only provide related services beyond this activity.

Brokerage (broking) activity is not an independent investment service and is therefore not subject to special authorization, it is a **regulated activity.**

Capital Market institutions that ensure concentration of supply and demand are naturally regulated and authorized ones. These include, in particular, the **stock exchange, the establishment and operation of which is subject to authorization. Stock market activity is the conduct of an organized, standardized trading of a commodity product.** The activity is exclusive: a stock exchange activity may be performed only by a stock exchange and the stock exchange may only provide services that assists or related to that activity.

The capital market's secure service is ensured, if a basic service, such as a central securities settlement system, that clears through a central partner according to common rules and a single set of rules between 3 or more participants or the creation of a computerized (dematerialized) security, also operates under strict supervision and licensing. This activity is performed by the CSD. In Hungary, a CSD may operate as a specialized credit institution with a minimum subscribed capital of HUF 2 billion. It basically provides its services to professional market players such as stock exchanges, investment firms, credit institutions, investment fund managers, securities issuers, the state, investor protection systems, as a rule, it has no direct relationship with investors.

In order to prevent stock market transactions from failing for any reason, a market participant must ensure the execution of the concluded transactions: this is the central contracting party (CCP). A CCP is a legal entity that replaces clients covered by contracts in one or more financial markets, i.e. acting as buyer to all sellers and as seller to all buyers. Due to the guarantee nature of its activities, this activity is also subject to licensing in Hungary.

Given the single European market, capital market companies providing services in Hungary do not need to be licensed by the Hungarian authorities. If the supervisory authority of any EU Member State authorizes the provision of a capital market service in that Member State, the licensed service provider may, after a simple notification procedure, provide this service either as a cross-border service or through a branch, in any other EU Member State, so in the case of foreign permission, in Hungary, in the case of a Hungarian permit in any other Member State (this permit is called a single European passport).

The HNB website (www.mnb.hu) provides up-to-date information on in which areas of the financial sector who are the market participants, who are licensed either by the Hungarian authorities or by other European authorities and are entitled to provide capital market services in Hungary, on the other hand, the HNB will also, where appropriate, publish a notice on risky investments, and activities that are not supervised by the HNB (e.g. investment gold or carbon credits). One of the legal risks of unauthorized services is that, in the absence of authorization, the activity of the service provider is not controlled, there is no supervisory authority for its activities, thus, in the event of a problem, there is no one to turn to, and since the service is generally governed by foreign law, the regulatory background to the activity is unknown. Of course, such investment also involves economic risks, since, precisely for the sake of circumvention, they do not ascertain whether the investment is appropriate to the investor's knowledge, risk-bearing capacity and financial position, the provider does not provide regular, clear, unambiguous, understandable information, this prevents the investor from being aware of the disadvantages and risks, and in general the costs and charges are not disclosed.

In the case of the above regulated market players not only the establishment or the pursuit of certain activities is subject to authorization**, but acquisition of decisive influence is also subject to license.** Also, the **supervision authority checks, in the framework authorization process**, whether those, who control the activities of a given company, **have the appropriate skills, professional abilities, competences, experience, expertise and business reputation.**

The activities of the Investor Protection Fund (IPF) are so special that it has been created by law in Hungary to meet EU requirements. Any investment firm that obtains client assets in the course of its investment service (secured activities) is required to join IPF as a condition of its approval. IPF has a special legal status that is not comparable to any other legal entity. **Its task is payment of partial compensation for investors in the event of liquidation of an IPF member for assets not disclosed to the client by an IPF member.** This shall be limited to a maximum of EUR 100,000 per person and per IPF member, as applicable by regulations, it is 100% up to HUF 1 million, IPF pays compensation after 90% of the part, which is over HUF 1 million.

AUTHORIZED TRANSACTIONS

A large part of capital market transactions also provide, opportunities for average-educated and knowledgeable individuals to invest. Because in these cases, investors are not in a position to employ an expert to assess the legal, economic, market, political risks of the investment, the procedure to be followed for each transaction is strictly regulated by law, taking into consideration such an investor, and supervision directly verifies compliance with these rules during each transaction. To this end, these priority transactions are also subject to the permission of the HNB. Such transactions include the public offering of securities (including admission to trading on a regulated market) and the acquisition of influence in a public limited company.

If an issued in a series security's, lower or upper limit- i.e. a security which embodies the underlying legal relationship into several equal parts-is accessible to 'anyone', regardless of the investors or their rating, it is important for the issuer to disclose to potential investors any such information, which allow them to assess all the risks of the investment and to make responsible investment decisions. The basic document for this basic information service is the so-called prospectus, which is required to be produced by the person who offers the securities to the market publicly (typically the issuer). The issuer (or its investment firm) is obliged to get authorization to publish the prospectus. **Securities may only be publicly traded subject to authorization,** in accordance with the procedures and responsibilities required by law.

Authorization is issued by the supervisory authority in Hungary, but securities may be publicly traded in Hungary even if the prospectus has been authorized by the supervisory authority of another EU Member State, and about this Supervision has been informed (Single European passport).

A public limited liability company is characterized by the fact that, due to the typically fragmented ownership structure, many small shareholders do not attend the general assembly, do not exercise the voting rights conferred by the share, so among the shareholders present at the general assembly even a smaller percentage of the share capital than the basic capital can have a significant influence on the general assembly. This is recognized by the regulation when, in the event that a market participant (or a group) wishes to acquire more than 33% influence in a publicly traded company, it is made to them obligatory, to make a mandatory public offer to the remaining shareholders with voting rights (acquisition of influence in a public limited company). In order for the minority shareholder to be able to decide whether to sell his share to influence acquirer during the procedure of gaining influence it must also have adequate information on the one hand regarding the specific purchase offer itself, on the other hand, about the influencer and his business plans regarding the target company. To this end, the so-called influencer must make a mandatory purchase offer, which must also be approved. Acquisition of influence can only be carried out on the basis of a public purchase offer approved by the supervisory authority.

INTERNAL RULES OF PROCEDURE

Investment firms, as part of the financial intermediary system, link the savings and resources of the economy, the various entities. By **investing primarily with investors' money for the benefit of investors and basically keeping the assets of their clients, investment firms** take, of course, much more risk than other firms. Consequently, in the course of their services it is not enough for them to comply with the rules generally applicable to business organizations, but special regulations are also needed to promote the safe operation of investment firms. They need to provide effective risk management to take the risk and keep the risks already taken manageable. A prerequisite for this is the conscious investment entrepreneurship.

Accordingly, investment firms should observe the **following principles in their operations:**

(a) the principle of profitability (rentability): they must operate profitably and be able to pay dividends to their owners,

(b) the principle of liquidity: the investment firm must be solvent in the short term,

(c) the principle of solvency: the value of the assets of the investment firm must exceed the value of its liabilities, i.e. it must have a positive equity in order to meet its liabilities in the long term.

Because the 3 expectations can never be met at once, as they stretch each other's boundaries, addressing this dilemma, in order that investment firms can manage clients' assets with sufficient security, they **must strive keeping in mind the principle of security. This means that the risk of the activity must be kept low.** Because profitability is something owners expect from running a business, enforcement of the principles of solvency and liquidity is the task of regulation, through the so-called prudential rules.

The term prudent (Latin) means predictable, conscious, knowledgeable about something. In financial legislation **it means proper operation that is independent, careful, prudent and reliable.** In order to comply with these principles, the legislation prescribes **different operating rules, so called prudential rules.**

INVESTMENT ENTERPRISES

For professional capital market players, that is, for those, who provide investment and investment management and capital market operations as a service to clients, it is not enough to apply the relevant legislation schematically in order to function properly, rather, they must develop **internal policies and regulations that ensure the proper functioning of the business in a unique way.**

The basis of safe operation is the development of a proper internal organization, compliance with capital requirements and appropriate risk management. To this end, the investment firm shall establish its organizational and operational rules, defining its bodies, responsibilities, subordinates, duties and competences, and work processes that are compliant with the law to serve clients. Although the framework is provided by law, the activities to be pursued, the specific business policies and the special needs make the internal organization and procedures of each investment firm and capital market institution unique.

The company is obliged to manage the outsourced and own resources entrusted to it in accordance with prudent operation regulations. It is required to do so in a manner that maintains its liquidity and solvency on an ongoing basis. The undertaking must at all times have adequate solvency margin in order to cover the risks of the activities which it undertakes in order to meet its current solvency and obligations, however, it must also ensure that its liquidity is maintained at all times.

The enterprise in the framework of risk management ensures appropriate risk measurement, creating and operation of appropriate limit systems, the establishment of a risk reporting system and has a recovery plan commensurate with the scale of the activity performed, the nature and risks of the business model used, to avoid potential insolvency and the potential impact on the financial markets resulting from the merger with the financial intermediary system.

In order to ensure the integrity **of its employees, the company should also regulate employee benefits (remuneration)** to all persons whose activities have a material effect on the risk profile of the company. This should be consistent with effective and efficient risk management and should not encourage you to take risks that exceed the risk limits. **Performance evaluation should be based on long-term performance.** The integrity of the staff is also ensured by the requirements of senior executives and employees regarding their own transactions, and the regulation of conflicts of interest.

There are also special rules for winding up an investment firm. For this, the Metropolitan Court has exclusive jurisdiction and the Supervisory Authority may **initiate winding up by the Financial Stability and Liquidation Non-Profit Corporation (PSFN),** and making the issuance of client assets (money, securities) is the primary goal.

STOCK EXCHANGE, CENTRAL SECURITIES DEPOSITORY AND CENTRAL CONTRACTING PARTY

Internal regulations also play an important role in the operation of the stock exchange, CSD and CCP. Due to the historical development of regulation, Hungary has a long tradition of **self-regulation of the stock exchange.**

On this basis, the stock exchange shall, within the limits set by law, determine the rules governing its activities, and the rights and obligations of stock exchange traders and issuers. The procedures, systems and solutions applied by the Exchange ensure compliance with the requirements of law and the rules of the Exchange, thus, consistency, gradual monitoring and verifiability. Based on stock exchange regulations the stock exchange to manage and reduce operational risks apply appropriate systems and solutions, in the general interest of the market, the activities of the stock exchange, trading and information on them are transparent and verifiable, thereby creating a level playing field, fair treatment and objective market protection for investors.

Accordingly, the terms and conditions of acquisition and termination of the right to trade on the stock exchange shall be determined pursuant the rules of the stock exchange, the introduction of a stock exchange product, transition and the order of hits withdrawal, rules for stock exchange trading, the way in which exchange rates and other stock exchange information are disclosed, data provision, fees payable to the stock exchange, sanctions applied by the stock exchange, the sanctions that may be imposed by the stock exchange and the order of remedies. The rules of the stock exchange must comply with the requirement of equal treatment for each stock exchange trader or issuer.

The validity of stock exchange regulations generally requires supervisory approval. The stock exchange publishes **its regulations** on the website operated by the Supervisory Authority (www.kozzetetelek.hu) and on its own website (www.bet.hu). The rules of the stock exchange can be challenged in court - by the trader, the issuer, the investor - if it is contrary to the law.

T**he CSD must also comply with certain statutory organizational requirements**, so it shall have a reliable management system, which includes a clear organizational structure, well-defined, transparent and consistent responsibilities, effective procedures for identifying, managing, monitoring and reporting risks, as well as appropriate remuneration policies and internal control mechanisms, including sound administrative and accounting procedures, similarly to investment firms. The CSD must also maintain appropriate conflict resolution procedures to avoid potential conflicts of interests between itself and those using its services.
It applies to both CSDs and CCPs, to conduct its activities in accordance with regulations approved by the HNB.

Both the CSD and the CCP are subject to strict conflict of interest rules. Both institutions have the possibility to process and transfer personal data necessary for the performance of their tasks, whereas, of course, both institutions are required to comply with the rules of basic confidentiality, i.e. business, banking, payment and securities secrecy, and the legal provisions prohibiting insider dealing and market manipulation. As the eventual dissolution of both institutions will affect the functioning of the entire capital market, it is justified that their rules of termination at certain points deviate from the general rules: thus, the regulation excludes from the scope of liquidation assets all client assets and collateral held by the CCP. In addition, if the client's assets are not recoverable in the case of a CCP, the liquidation proceeding must primarily satisfy the claims of those clients.

CONTRACTING AND PERFORMANCE PROCESS

Beyond its internal regulation, it is important for **investment firms** to have a proper contractual relationship with clients. This is done, on the one hand, by the application of contractual terms which are in accordance with the intention of the parties and the law, and that a procedure is in place that protects investors before, during and after the conclusion of the contract and even thereafter.

Because an investor can only make informed investment decisions, the investment firm has a continuing obligation to **provide continuously information to the client** and get information from him/her both prior to the conclusion of the contract and during the performance of the contract. Investment firms shall disclose information objectively and fairly, thereby avoiding misleading-or causing misunderstanding situations. **When informing the client - including investment analysis and advertising - clear, unambiguous, balanced and accurate information should be provided.** This includes providing the client with basic information about the investment firm itself, owned by the client or due to them asset's management rules, information about the financial instrument, knowledge regarding the contracted transaction, including public information about the transaction, as well as the risk of the transaction, as well as the venues of execution, not least the costs and fees associated with the transaction, which is charged to the client. The information shall be provided in a timely manner so that the client has sufficient time to understand the information, contained in the provided information, to make an inform-based decision.

In the first phase of disclosure, **client rating** is required, as this may result in differentiation of the investment firm's information obligations to the client. Because if the client is so called **residential one**- is not a professional client – they should be given the most complete information possible, regarding the name of the investment firm and its authorized activity, and, where an agent is employed, information on the essential elements of the conflict of interest and enforcement rules, and information on the management of the financial instrument. For the **professional client** (such as investment firms, credit institutions, financial firms, insurance companies, stock exchanges, organizations whose main activity is investment business, etc.) there is no longer needed detailed information and tests, while an **acceptable partner** is one that the investment firm can treat as substantially equal to itself.

When an investment firm performs investment advice or portfolio management activities, prior to the conclusion of the contract or the execution of the order a so-called aptitude test is obligatory to evaluate, whether or not the service offered in connection with this activity is suitable for the purposes of the investment stated by the client, whether the level of risk is commensurate with the client's financial capacity, and whether the client has the appropriate experience and knowledge to understand and evaluate the risks, or he/she has not. If the aptitude test is negative, contracting shall be denied**. For other investment services activities the investment firm in the context of different content information obligations, so-called compliance test, requests a statement from the client, regarding their knowledge and experience of the substance of the transaction and the characteristics of the financial instrument, in particular its risks**, in order to judge to really provide the client with the service related to the right deal or instrument.

The execution of orders and the fulfillment of contracts shall be in accordance with the execution policy of the company. At the request of the client, the investment firm shall confirm also in writing the correct execution.

Upon completion of the contract, the firm shall promptly inform the client in writing or on a durable medium of information relating to the execution of the order, and, at the client's request, also provides information on the current status of the client's orders. The firm reports on the assets owned by the clients at least annually and also makes them available to the client.

BUSINESS RULES

The contractual system for capital market providers generally consists of two parts: the specific individual contract signed by the parties and, by reference to the contract, the service provider's Rules of business.

Given that the general terms and conditions for services provided by service providers are the same for most clients, **service providers apply terms and conditions, also known as business terms,** which are developed unilaterally by the service provider without the intervention of the client, and which becomes a part of the contract with the client by reference to the individual contract with the client. Just because the client is not involved in drafting the General Terms and Conditions (Terms of Business), and its terms and conditions are determined unilaterally by the service provider, both the general rules of civil law and the special rules of the capital market ensure, that the general terms and conditions of the investment firm not be detrimental to the client or not include a unilateral clause.

On the one hand, the code of conduct for capital market providers states, who is the provider with whom the client will enter into a contract and how the client will be contacted. In addition, the most important rules relating to the conclusion, performance, modification and termination of this Agreement, they indicate the provisions, which refer to the situation where a business closes down, whether in the event of the transfer of the client portfolio or the suspension, restriction or revocation of the license. If the investment firm maintains a securities account or a client account, in its terms of business it defines the detailed conditions for opening an account, as well as the frequency and method of notifying clients of the credit, charge, and balance. If the business accepts an order from a client by phone or other electronic device, the rules of business shall regulate the detailed rules thereof, along with access rights to voice recording. The terms and conditions shall specify the frequency and manner of notifying, informing the client and the related cost implications thereof.

The terms of business shall not limit or exclude the liability of the business for performance of the contract, nor shall it preclude the client from requesting information on the execution of the order he has placed and the balance of his business account other than in accordance with the terms and conditions of business.

The business is required to publish its business policy in the client flow space, and, if an e-commerce service is provided, it makes it permanently and easily accessible to its clients electronically, providing the client with its storage and retrieval.

In the terms and conditions of business, the business is specifically required to alert the client to the requirements of the anti-money laundering legislation, and the law applicable to any dispute between the company and the client.

In order for the client to be properly prepared for any future transaction and be able to find out about the legal terms of the contract, the contract forms are attached to the Terms of Business.

The Annex to the Code of Conduct also includes the scope of outsourced activities and the list of outsourced activities, list of intermediaries employed by the undertaking, and the price list, used by the business. The business code shall also include specification of business hours, the Complaint Management Policy, the Enforcement Policy and the Conflict of Interest Policy.

COMPLAINT HANDLING

Client service is ensured by the fact, that there is a need to have proper feedback on the services, and potential client complaints should be appropriately dealt with in accordance with the published Complaints Management Policy.

To this end, the business is required to ensure, that the client may make an oral or written complaint about the conduct, act or omission of the service provider. All complaints must be answered and complaints handling procedures must be kept for proper control.

INDIVIDUAL CONTRACTS

The individual contract shall include the identification, contact details and signatures of the parties and, of course, the specific terms and conditions of the particular service.

The investment firm concludes an individual contract for the investment services it provides. Forms for individual contracts are included in the appendix to the Terms of Business, however, the investment firm may derogate from both the general terms of the contracts and the schedule of charges in the specific circumstances of each case, of course within the legal framework.

INTRODUCTION – THE TASKS OF THE HNB IN HUNGARY

On 1 October 2013, the Hungarian Financial Supervisory Authority (HFSA) ceased to exist, and its tasks were taken over by the HNB, largely unchanged in this respect. **The purpose of the regulation** was to integrate the functions of the HFSA supervising and controlling the financial intermediary system into the tasks and powers of the HNB and its organizational system, monitoring and controlling systemic risks to the stability of the financial system as a whole, that is, **ensuring effective coordination between macro-prudential supervision and micro-prudential supervision to monitor specific risks**. A change has been made to this end by the addition of the Financial Stability Board (PST) to the former HNB body, i.e. the Monetary Council, the Executive Board and the Supervisory Board. The Executive Board of the HNB is also responsible for directing the implementation of PST decisions within the strategic framework defined by the Monetary Council.

The HNB's toolbox has therefore been supplemented with the supervision and oversight of the financial intermediary system in relation to more effective macro-prudential enforcement. As a result, **HNB oversees the money, capital and insurance markets, as well as the consumer protection and market supervision functions of the financial markets.** There is also an out-of-court settlement system for the financial sector, the Financial Arbitration Board, in connection with the HNB.

The HNB shall oversee the financial intermediation system to ensure the smooth, transparent and efficient operation of the financial intermediation system, promoting the prudent operation of market participants, careful supervision of exercising law by the owners, identifying undesirable business and economic risks to individual financial organizations and their sectors, reducing or eliminating existing risks, and to protect the interests of clients in order to strengthen public confidence in the financial intermediary system.

As a supervisory authority, the HNB is primarily responsible for the supervision of financial services, the capital market, the insurance market and the cash market, as well as the organizations and persons operating there, whereas, in order to prevent and put a stop to money laundering and terrorist financing, supervisory tasks also fall within the remit of the HNB.

As part of its oversight activities, the HNB reviews applications for permits and other submissions, maintains records, and controls the operation and activities of individuals and organizations within its area of competence in the financial markets, information, compliance with the law and the enforcement of the decisions it makes, oversees the functioning of financial markets, and shall conduct market surveillance proceedings in the event of suspected unauthorized or undeclared activity, insider trading or market interference.

The task for the HNB can only be determined by law and it shall be consistent with the statutory tasks and responsibilities of the Central Bank. It may engage in other activities only without jeopardizing its primary purpose and essential functions.

The general rules of administrative procedure and the rules of procedure of the relevant sectored (in this case, capital market) legislation shall apply to the official proceedings of the HNB.

THE HNB AS REGULATOR

The HNB performs its basic tasks in accordance with the sector-specific legal acts defined in the Act on the National Bank of Hungary and applicable to the operating framework of the financial institution system.

The Governor of the HNB is entitled to make a legal norm or decree.

In addition to the legislation affecting the activities of the credit, insurance, fund and capital market sectors supervised by the HNB, such supervisory tools are also required, which assist supervised institutions in the interpretation and application of legislation, provide guidance on the interpretation and application of legislation. To this end, **the HNB has a number of supervisory regulatory tools at its disposal, which are non-binding, but their application is examined and evaluated by the HNB. These are typically recommendations, executive circulars, methodological manuals, sample codes, sample briefings and briefings.**

The recommendations are issued by the Financial Stability Board. The Recommendation is a non-binding instrument of law enforcement, and a tool for transposing the guidelines and recommendations of the European Supervisory Authorities. The recommendations are intended to increase the predictability of law enforcement, promoting uniform application of the relevant EU and national legislation, description of the principles and methods recommended by the HNB. Addressees of recommendations are the institutions, market participants supervised by the HNB. The HNB examines and evaluates compliance with the recommendations, acting in its supervisory capacity.

The HNB, acting as the supervisory authority, addresses directors of supervised institutions directly in executive circulars. The purpose of a management circular is to raise awareness of complying with a specific partial rule for a specific, personalized leadership circle. The HNB examines and assesses compliance with the requirements set out in the executive circular. Its addressees are the institutional circle supervised by the HNB and the leaders of the organizations involved in the topic.

In carrying out its supervisory and consumer protection duties, the HNB complies with the EU and national regulations prescribed for supervisory authorities, and regarding the supervised institutions and market participants they also require that they shall comply with the laws and regulations applicable to them. To this end, it carries out supervision and control activities, for which it draws up and publishes methodological manuals. The purpose of publishing methodological manuals is, that the HNB shall disclose its methods and procedures for each of its monitoring tasks, thereby communicating its expectations to the supervised entities in a transparent manner. At the same time, manuals also help supervised institutions to interpret and comply with regulatory, supervisory requirements.

Acting as supervisory authority, the HNB also issues model regulations to supervised institutions and service providers. These model rules are of primary assistance, but they also convey minimum requirements for the supervised institutions to develop their own rules. Institutions may incorporate the model rules in their internal rules, but they must always be supplemented by institutional specifics.

The model leaflets provide information to help service providers' clients be better prepared, and they are recommended to be handed over to consumers by the institutions.

Information sheets issued by the HNB - in fulfillment of obligations arising from EU membership and other obligations under the HNB Act - summarize the most relevant information about a specific question or range of questions. The addressees of the prospectuses are primarily institutions and market participants supervised by the HNB. Their aim is to gather regulatory tools related to each topic to facilitate compliance and to provide a detailed understanding of a more complex set of issues.

In addition to domestic legislation and supervisory regulatory instruments, the HNB's regulatory role is to monitor EU legislation, given that EU regulations are directly applicable in all Member States, including Hungary (as opposed to EU Directives which need to be transposed at national level once adopted). In this respect, the regulation containing the new prudential requirements for credit institutions and investment firms and the related implementing rules should be highlighted.

ABOUT THE AUTHORIZATION PROCEDURE IN GENERAL

HNB issues licenses at the request of its clients. During the licensing process, the client must, in addition to the general administrative procedure rules, comply with the conditions specified in the specific sectored legislation governing the particular activity.

The issue of clear time limits for the administration of supervisory procedures is a matter of major importance for all market participants. This is, as a general rule, 30 days from the submission of the complete application. However, the time limit for the special procedure differs from this deadline in many cases: thus, in the case of the procedure of obtaining, terminating the authorization of the formation, merger, division, dissolution, the administrative period is 3 months, in the procedure for authorizing transfers of stock, the administrative time limit is 2 months, while the HNB has less than 20 working days to approve the prospectus in the marketing process. However, the above time-limits may be extended once, where justified, by a maximum of the time allowed for the proceedings. Alternatively, if the client has submitted an incomplete application, the supervisor will, once, within 30 days, request the applicant to remedy the deficiency. If the application (and its attachments) do not meet the legal requirements, the HNB shall, within 30 days of the receipt of the complete application, invite the Client to complete or amend the application or its annex, with an appropriate deadline, and in the event of non-performance or inadequate execution, the merits of the application will be assessed on the basis of the available information.

If the directly applicable EU act, applicable to the procedure falling within the scope of supervision, it sets a different deadline, unlike the above, it must be applied.

As a general rule, applicants must declare that they have communicated to the HNB all relevant facts and information required for the issue of a permit. The HNB will consider the documents, data and information related to the application and available to it, and, if necessary, by means of on-the-spot checks, makes sure that the issue of a license is not in breach of law.

In the proceedings before the HNB, it is not possible to modify the application, except for the rectification of the application and the procedures for obtaining the license of incorporation, merger, demerger and registration.

At the end of its licensing procedure, the HNB will, in accordance with the general rules, take a decision.

AUTHORIZATION OF CARRYING OUT ACTIVITIES

Service activities in the financial markets are activities of particular risk and should be carried out only by those having appropriate supervisor license. In the capital market accordingly, you must be authorized to carry out any investment service or ancillary activity (see Regulatory Funds). Although the brokerage (agent) is not subject to authorization on its own, however, if one wants to act as an intermediary, it is essential to make sure that the service provider, giving an order to him/her, has permission from the supervisor.

The activity is licensed in Hungary by the HNB, which acts at its discretion in the area of financial supervision. The authorization granted by the HNB to provide investment services enables the business, to do this activity not only in Hungary but in any EU Member State, following a simple notification procedure (the so-called single European passport).

In order that the person, who wants to do the licensed activity does not get lost in the thick of the law, HNB on its website, broken down by the markets it oversees, assists start-up investment firms with authorization guides, but also assists the start-up of investment fund managers and commodity service providers.

If you want to carry out investment service activities, you need to set up an investment firm. The investment firm's activities are exclusive, that is to say, with statutory exception, it may carry out investment service activities only and all investment service activities are subject to authorization. So, though for the establishment of an investment services company no foundation permit is required, and thus the process of establishing a company can be conducted without permission, the activity to be licensed may be commenced only after the license has been issued by the HNB.

The investment firm may operate as a public limited company or as a branch of a foreign investment firm in Hungary. The initial capital requirement depends on whether the business will be entitled to manage the client's financial assets and cash, and what kind of activity it wants to do. If it does not wish to obtain authorization to manage a client's financial assets and funds, so the minimum initial capital requirement is EUR 50,000, if it wishes to become eligible for that, it must provide a starting capital of at least EUR 125,000, while trading and portfolio management activities require a minimum initial capital of EUR 730,000. The initial capital must be available at the time of application for the license and must be executed in cash.

The application for authorization shall specify which financial instruments the applicant intends to carry out as investment or ancillary activities as determined by the applicant, and, of course, the activity to be licensed must also be specified. In connection with the activity performed, general terms and conditions, business terms and conditions shall be prepared and submitted to the supervisor in order to present the terms and conditions of the services to be provided to clients. In addition, of course, the HNB needs to justify that the business to be founded is not only complies in contractual relationships with clients, but also with applicable legal provisions in its internal regulations, thus, it must demonstrate to the supervisor the existence and regularity of the statutory and regulatory policies required for the conduct of business operations, and internal audit, risk management, compliance and complaint management functions.

In order for the supervisor to judge, whether they are going to pursue an economic activity regarding which they are applying for a permit, and whether they are aware of profitability expectations, the applicant must present to the supervisor a provisional accounting plan for the first 3 financial years. This includes balance sheet plans, preliminary income statements or profit and loss statements, the assumptions used to make them. They should be prepared taking into account the expected number and type of clients, the expected volume of transactions, expected assets under management, and capital and liquidity requirements.

The operation of an investment firm depends fundamentally on the security of its systems for monitoring its activities. Because of this - beyond verifying that other material and technical conditions have been met - the applicant investment firm must have such an IT system, the conformity of which is certified by a certification body. You may use only an IT system that ensures that components are locked and prevents unauthorized access, and that meets the general information security lock-in requirements.

The information to be provided to the supervisor should cover not only the headquarters of the business but also its branches and affiliated agents.

AUTHORIZATION OF OWNERS AND MANAGERS

Considering that the owners and shareholders of the company greatly influence the operation of the company, the HNB also wants to make sure that the ownership structure and shareholders of the investment firm applying for the authorization do not jeopardize either the specific undertaking or,- taking into account the domino effect - usually the functioning of financial markets.

To this end, persons having direct or indirect influence over the investment firm should be identified, in the case of shareholders who are members of a group, the group itself must also be disclosed to the supervisory body, in addition, their good business reputation and their likely positive impact on the investment firm must be demonstrated.

In the case of the formation of an investment firm, or at any time during the course of an activity, **when a shareholder or a person acquires a controlling interest, i.e. has a direct or indirect holding in the undertaking representing at least 10% of the capital or of the voting rights, or allows to exercise significant influence over the management of the business, this requires prior supervisory approval**. In determining the degree of influence, voting rights shall be calculated on the basis of each share, to which the voting rights of the enterprise are connected, as stipulated in the basic rules of the business. In determining the extent of influence, votes associated with a particular person or group, to be aggregated (e.g. in the case of coordinated practices, temporary transfer of voting rights, exercise of voting rights on a beneficial basis, etc.).

The influencer is expected not to compromise the independent, reliable and prudent ownership of the business, the business of the influencer, the nature of its relationships or the structure of its shareholding with other companies should not hinder the work of the supervisor, have a good business reputation and, in the case of a natural person, be legally established and regarding crime issues, have no criminal record.

The supervisory board will decide on the intention to acquire influence within 60 working days. It basically guides in its decision that after the acquisition of influence (acquisition of shares) the fulfillment of the provisions of the law can be ensured. Supervision shall refuse to acquire or increase a qualifying influence if it does not see it as assured.

An applicant for authorization as an investment firm must also demonstrate to the supervisory authority the persons who effectively direct the business of the company (senior executives, senior positions), including the proposed organizational structure of the company, education, professional experience, experience and good business reputation of senior executives. **As the senior manager of an investment firm can be appointed, whose identity has been notified to the Supervisory Authority prior to the intended date of election or appointment, with a view to obtaining prior authorization, and permission was granted by the Supervisory Authority.**

The issue of placing securities on the market is of particular importance to investors, whereas it is essential, therefore, for supervisory authorities to check that securities are admitted to the market only under procedures and conditions, which provides statutory investor protection.

Under the rules in force, securities may be traded either with or without prospectus (in other words, this distinction is called public and private placement). Rules for the issuance of securities have been uniform throughout the EU since summer 2019, thus, securities can be publicly traded in any EU Member State under the same rules. Member States may lay down different rules for non-public (private) marketing.

The public offering of securities is typically subject to authorization, while private placement is usually not subject to supervisory approval.

Public offering is a process that provides the average investor with complete protection and information, for this reason, the securities may only be marketed without information (in private) only in cases specified by law. For example, if they are only offered to qualified investors, or if bidding applies to less than 150 persons per Member State, or for securities with a face value of at least EUR 100,000 or the bid is for investors, who acquire securities worth at least EUR 100,000, or if the total consideration of the securities at EU level is less than EUR 1,000,000 within 12 months.

Unless the specific circumstances justifying the private placement of the securities arise, the **securities shall be publicly marketed, with the prospectus and with the permission of the supervisory authorities.** Prospectus is the basic document that is prepared by the issuer or the person offering the securities to the market and discloses to investors all information relating to both the issuer and the securities that may affect the value or price of the security. The mandatory content of the prospectus is contained in EU legislation, and its implementing regulations, using schemes and modules, exhaustively determine the information, which the issuer must share with investors. The prospectus should contain all information that is related to the issuer and or guarantor of the security, its market, economic, financial, legal situation and its expected conformation, and securities rights necessary to make an informed judgment from the side of the investor. The information, data grouping, statements, analysis contained in the prospectus and the announcement about it and the securities must be realistic, correct and capable of achieving the above purpose. The prospectus and the announcement shall not contain misleading information, clustering or analysis which may be misleading, and may not conceal any fact that jeopardizes the achievement of the above purpose. As a general rule, the prospectus shall consist of 3 parts: the summary, including key information, the registration document, containing information on the issuer, and the securities register, which summarizes the content of the securities to be issued and the procedural rules for their issue.

The issuer (tenderer) must employ an investment firm for the public offering of the security.

The prospectus is usually drafted by the issuer with the assistance of the investment firm that is required. Regarding each part of the prospectus the responsibility is taken by someone (typically the issuer or the investment firm). The responsible persons should be clearly identified in the prospectus, and the regulations also require that they declare that, to the best of their knowledge, the information in the prospectus is factual, and there is nothing in the prospectus that could affect the conclusions that can be drawn from it.

The Supervisory Authority shall verify the information submitted to it for approval, both in form and its content: it shall examine, on the one hand, whether it contains all the information required by law and, on the other hand, whether it contains the relevant information.

The oversight period for issuers that have not even admitted a security to the regulated market shall be 20 business days, otherwise, 10 working days from the date of submission of the complete application.

The prospectus does not require supervisory approval if it has been authorized by the competent supervisory authority of another EU Member State and it certifies to the supervisor that the prospectus complies with EU rules.

The supervisory approval of the prospectus is valid for 12 months. This is the time limit within which, being in possession of the prospectus, the securities may be publicly traded. With the permission of the HNB, the securities may be marketed not only in Hungary but also in other EU Member States, if the HNB certifies to the competent supervisory authority of another EU Member State that the prospectus complies with EU rules.

It is good to know that there is no need for supervision permission and information **in case of registration of a security in a multilateral trading facility (MTF),** if the total issue value of the securities to be registered does not exceed EUR 5 million within 12 months or an equivalent amount, or the series of securities to be registered is listed on a regulated market or a stock exchange registered in an OECD member country. In such a case, as a condition for the registration of the securities series, the issuer or the person requesting the registration of the securities with the MTF shall prepare an information document with the content determined by the market operator and approved by it. The issuer shall be subject to a notification obligation within 15 days of the closure of the marketing process. In this case, the HNB may verify that the placing on the market complied with the above conditions.

AUTHORIZATION OF IMPACT ACQUISITION

It is easy to see that exercising influence over a public limited company is very different from exercising influence in a private limited company. The private limited company has few members and the members actively and regularly exercise their membership rights, consequently, the proportion of ownership for which we can talk about decisive influence is typically above 75%, but at least above 50%. This is not true regarding publicly owned limited liability companies: in a publicly owned limited liability company with a fragmented ownership structure small shareholders typically do not exercise their membership rights, so they do not go to the general assembly, they do not exercise their voting rights, etc., thus, a relatively minority shareholder or group of active shareholders may acquire decisive influence in the management of the company, selection of management bodies, definition of scope of activities, etc. Therefore, in the case of public limited companies, as a main rule acquisition of an influence in excess of 33% is considered to be a decisive influence over which the legislation imposes a specific requirement. Given that with such influence, the acquirer may even accept decisions that are contrary to the interests of the minority shareholders, fair and, ensuring the functioning of the capital market provision, is that, in such a case, the acquirer of the **influence is required to make a public bid to the other voting shareholders in order to exceed the 33% threshold.**

The rules governing the acquisition of influence shall apply to the acquisition of influence on shares listed on a regulated market that are publicly traded in Hungary and on public companies incorporated in Hungary.

In determining the degree of influence, account shall be taken of the cases, when a shareholder, or a group of individuals, is able to take control of a public limited company. Thus, not only the shareholdings of the shareholder should be taken into account in terms of the degree of influence, but also the exercise of voting rights by a third party in its own name but for the benefit of the shareholder, or based on share, given as collateral, the voting rights of the collateral taker, and add up voting rights of the persons, acting in a synchronized way.

The bidder must employ an investment firm to conduct the influence acquisition process.

Because the small shareholder in this case too only with proper information can decide whether to accept the influence acquirer's buyer bid, the law imposes an extensive information obligation on the influence acquirer. Thus, the influence acquirer must make a so called mandatory public bid. The purchase offer contains such basic information, like who the bidder is, what influence he has had in the company so far, how much is the monetary value of the consideration offered for the shares and the means by which the influencer intends to perform it (in cash or in securities), how long the purchase offer lasts, how to accept it, who the investment firm is, where to view related documents, how the shares are divided between shareholders in the case of a joint offer, what is the bidder's relationship with the target company, how the influencer intends to employ the employees of the target company, and if the influencer reaches 75% influence, as a result, due to possible expired rights, as a result of the so called breakthrough rule what amount of compensation it offers and how it wants to pay it, and acquiring influence of more than 90%, the so-called declaration on the application of the exclusion rules, that is, whether it wants to exercise the purchase right, regarding also shares not transferred to it during the bidding process. It also includes maintaining of the right to withdraw from the purchase offer influencer statement in case that the proceedings do not result in the acquisition of an influence in excess of 50%.

The minimum purchase price to be specified in the purchase offer is specified by law: this is the average, or occasionally over-the-counter (OTC) market-weighted average of the past 180 days, however, any special circumstances (such as the illiquid market or ongoing pre-emptive buying by the influencer) must also be taken into consideration when pricing. The proposed purchase price must be covered by the influencer the influencer must prove its existence in the oversight procedure. The influencer cannot define the purchase offer in a way, that regarding shareholders regarding the statement of acceptance violates the requirement of equal treatment.

If the influencer is a business organization, in case of the purchase offer, must draw up a report on its economic activity, and all influencers in case of successful influence acquisition, an operational plan, in addition, every influencer is required to draw up an action plan for successful acquisitions in which it informs the shareholders targeted by the takeover bid of the prospective operation of the public limited company. The bidder and the investment firm used by him shall be responsible in writing for the accuracy of the report on the economic activity of the bidder. This means that the report contains real-world data and statements and does not conceal facts and information, which is important regarding the tenderer and purchase offer. The tenderer and the investment firm shall be jointly and severally liable for any damage caused by the misleading content of the economic activity report or the omission of information.

This provision of information to shareholders is essential for the retail investor, so there is also a need for supervisory controls to verify these documents, so the **bid must be approved by the supervision.**

Once the purchase offer has been submitted for approval to the supervisor, it must be sent at the same time to the board of directors of the target company, and initiate its immediate publication, in order to ensure that all market participants are properly informed about the offer, along with the rules on insider information.

The supervisory board will decide on the approval of the purchase offer within 10 working days of the submission of a complete application. Having the approval of the supervisor (or if the supervisor has not made a decision within the legal time limit), the results of the supervisory procedure and the offer to buy must be initiated a publication of the outcome of the monitoring procedure and the purchase offer, indicating start and end days of the deadline for making the declaration of acceptance.

INSPECTION

ABOUT THE INSPECTION PROCEDURE IN GENERAL

The HNB's control powers are to uphold the HNB Act, the laws and regulations governing the operation and activities of the person and organization under the jurisdiction of the HNB, and the decree of the Governor of the HNB, and monitoring the implementation of HNB regulatory decisions.

Verification shall include (a) verification of regulatory reporting data and (b) official control by the HNB (this verification process). HNB does not conduct any verification procedure at the client's request.

The HNB continuously monitors the data resulting from the provision of data.

During the official control procedure, the HNB conducts comprehensive inspections, targeted inspections, thematic inspections, extraordinary targeted inspections and follow-up. Frequency of inspections is determined by legal requirements. Extraordinary targeted investigation may occur in case of serious market abuse thus, this type of procedure allows the HNB to respond more quickly.

The HNB may conduct both off-site and on-site procedures, as well as conduct a pilot transaction. During the on-site inspection, it can open a closed area, building or room, if justified, even against the will of the occupants (with the approval of the prosecutor). In certain cases, the HNB is entitled to intervene in advance.

The HNB's direct control is facilitated by the fact that the person appointed by the President of the HNB is authorized to electronically monitor the stock exchange, to attend meetings of the board of directors, general assembly, board of directors and bodies exercising the powers of the supreme body of organizations within its competence.

The inspector may enter the premises necessary for the inspection, examine the control related document, media, object, workflow, from the client, request information or a statement from any person present at the inspection site, or make a trial transaction. **In order to clarify the facts, any person or entity shall also provide the HNB with the necessary information in writing, and send the documents related to the subject matter of the audit to the HNB.**

If the HNB does not detect a violation of law as a result of its inspection, it will terminate the procedure.

The HNB records its findings during the verification process in a review report over a relatively long period (6-9 months) and informs the person or organization under review who may submit written comments to it. Upon receipt of the comment, the HNB shall make a decision to terminate the investigation on the basis of the investigation report, other available evidence and officially known and well-known facts.

HNB PRUDENTIAL INSPECTION PROCEDURE

So, the verification process is a part of the HNB's supervisory activities, which is implemented by monitoring and analysis of all data from the reporting, all documents handed over to him, information, and officially known information.

The HNB for prudential inspections, that is, for business integrity checks prepares an annual plan, which it publishes as required by law. It shall contain - subject to an annual breakdown - the subject matter and criteria of the audits, check period, schedule, available tools, and the range of organizations audited, with an indication of the type of institution.

The HNB Micro-prudential and Consumer Protection Area has identified the following key aspects for the audit plan for 2019:

(a) recent supervisory experience,

(b) the supervisory tasks deriving from the decisions, recommendations and work plans of the European Supervisory Authorities and Bodies;

(c) the macro-prudential risks identified,

(d) new supervisory tasks related to the appearance and amendment of Hungarian legislation.

In 2019, the HNB will review internal and external audit controls to assist in the detection of fraud and fraudulence across the financial sector, ensuring the quality of the data services and the risk of money laundering and terrorist financing.

In the capital market, besides enforcing the law, it has been a key supervisory task for many years to check the availability of client receivables. Here, the HNB puts a strong emphasis on verifying client asset management standards. Risk of conflicts of interest between investment service providers and clients is also a priority because of the commission accepted in the framework of the distribution activity. And, of course, it is still essential to monitor the implementation of a European regulatory framework (the so-called MiFID II), as well as the market vulnerability and liquidity risks of investment funds and preventing the proliferation of unauthorized fundraising activities.

Given the challenges of EU rules that have come into effect in recent years, both in terms of market and supervision, which in many areas create new expectations for the market player, HNB provides professional support to meet these requirements, and also monitors compliance with regulatory measures. An important task of consumer protection is to analyze and control the adequacy of information provided to the population by financial institutions and the application of consumer protection rules. HNB also emphasizes action against unwanted financial products.

THE CONSUMER PROTECTION PROCEDURE

The HNB ensures effective action in the event of individual financial consumer protection violations through the consumer protection procedure. The dispute which relates to the conclusion of individual contracts, their validity, effects and termination does not belong

at the same time to consumer protection proceedings, in which the court or the Financial Arbitration Board (PBT) acts.

Consumer protection proceedings are initiated upon request or ex officio. In the course of the procedure, the HNB checks whether the service provider (investment firm) has complied with the requirements of the Act on Prohibition of Unfair Commercial Practices against Consumers, the Law on Economic Advertising and the Law on Electronic Commerce and the Information Society Services Act (so-called consumer protection provisions), and obligations related to financial consumer litigation (this is a consumer protection procedure).

Consumer protection rules use a special set of concepts. Under this

(a) consumer: any natural person who is acting for purposes which are outside his or her self-employment and economic activity,

(b) "service contract": any contract under which a person or organization under the jurisdiction of the HNB provides or undertakes to provide a service to a consumer, and the consumer pays or undertakes to pay for the service,

(c) "online service contract" means a service contract under which a person or organization under the jurisdiction of the HNB, or its intermediary, offers a service through a website or other electronic means, and the consumer initiates using the service through that website or other electronic means.

The consumer may only initiate consumer protection proceedings after: having previously submitted a complaint regarding the service or procedure of the person or organization through the Service Provider's identifiable and published contact details - personally, by telephone, mail, fax, through an IT system operated for this purpose however, his/her complaint has not been answered or the complaint has not been properly investigated, or the HNB from the service provider's response assumes other circumstances that violate consumer rights.

The consumer protection procedure may not be initiated more than 5 years after the infringement. The time limit for dealing with the application in consumer protection proceedings is 3 months.

The HNB shall have the power to prohibit the continuation of the unlawful conduct for a period up to the date of the decision and to order the cessation of the infringement, where there is an overriding need to protect the legal or economic interests of consumers. If the HNB finds a violation of consumer protection provisions or the one regarding a decision made during a consumer protection inspection, subject to the requirement of proportionality, you can apply various legal consequences from calling for the necessary measures and legislation to be observed, elimination of shortcomings identified, orders the cessation of the infringement, prohibits the continuation of the unlawful conduct, obliges the infringer to eliminate the errors and omissions discovered, until the fact, that it can condition or prohibit the conduct of the infringing activity or the provision of services until the legal status is restored, and may even impose a large consumer protection fine.

In addition, it may provide other legislation, containing consumer protection provisions for additional legal consequences, having regard to the number of consumers affected by the infringement, the extent to which their interests are harmed and the extent of the infringement. The HNB imposes a consumer protection fine in all cases where the infringement affects a wide range of consumers.

MARKET SUPERVISION PROCEDURE

The HNB has the authority to protect financial markets and to maintain confidence in financial markets regarding such organizations and individuals in the case of which arises, that they engage in any financial activity that is subject to a license, without permission or notification (this is a market surveillance procedure).

In particular, HNB shall initiate market surveillance proceedings if it detects unauthorized or unannounced stock exchange, commodity service, investment fund management, investment service activities, ancillary services, brokerage, insider trading or market influencing, market abuse, furthermore, within this scope, it monitors compliance with disclosure and disclosure requirements for insider, corporate acquisition (influence) rules, and regulations for limiting unsecured transactions.

In order to restore confidence in the financial markets, the HNB also received a mandate which will make the search for evidence of infringement more effective: this is on-the-spot research. HNB against the will of the owner or proprietor or the will of the persons present at the scene or, in their absence, may conduct on-site investigation at any location, where there can be evidence to clarify the facts, in this context it is possible to open a closed area, building, room, and the HNB may also request the assistance of the police (subject to prior judicial authorization, subject to appropriate warranty rules). The HNB is entitled to investigate certain securities, client or payment accounts not only with the investigated company but also with the person responsible for or directly related to the investigated activity, or to involve that person in the proceedings.

HNB in the market surveillance procedure can also order temporary assurance measure even if it is justified by protecting the interests of the clients of person or organization, carrying out unauthorized activity.

If an unauthorized activity is identified, the HNB will prohibit the activity, and initiates criminal proceedings if it considers that the activity is a criminal offense and may take action. In the case of non-reported activities, the HNB shall prohibit such activities and take action. In all cases, the HNB is entitled to impose even a very large amount of market surveillance fine. If, in the case of a company, a private individual has substantially contributed to the conduct giving rise to the market surveillance procedure, a market surveillance fine may be imposed on that person as well.

The HNB in the case of activity carried out without permission or without notification if it is necessary for the protection of the legal or economic interests of clients of the person or organization carrying out the activity without authorization or without notification, publishes the basic information on its decision on its website, such as the first-and family name and address of the infringing natural person, the name and registered office of the infringing legal entity or the entity without legal personality, and the operative part of the decision (that is, the decision on the merits) thereby disclosing all relevant information about the infringer.

BALANCE QUERY

The Hungarian capital market abuse of 2015 (especially the so-called Quaestor case) highlighted the problem that if the client is only informed of the balance of his assets held by the investment firm he is using, it cannot be ruled out in the event of the abuse of the business, it cannot be ruled out that the client will be informed too late if the service provider sends him a false notification.

As investment firms are also obliged to report to the HNB on a continuous basis, in which they report the balance of the clients' securities accounts, it is important to make sure that the investment firm informs its clients about the same information as it reports to the HNB. This **is done by the online securities query system introduced by the HNB, which application allows the client to verify that the information in the invoice notice received from the investment firm matches the information sent by the service provider to the HNB (ISLA).** The application is available to any securities account, securities custody account and client account holder.

A securities account is a register, where the investment firm list securities owned by the client and held by the investment firm, while the investment firm keeps the client's money in the client account. Undertakings keeping securities accounts are required by law to send each month to HNB the balance of the accounts they hold, and a list of the securities held in the accounts. The reports do not include the names of the clients, and institutions provide anonymous data to the HNB. The service providers, at the client's request, will send the client's secret login code and the monthly changing password any time, but at least once a year. This will allow the account holder client to view the details of the account electronically using the online balance requester operated by the HNB. This allows the client to compare the excerpt sent by the service provider with the data reported by the service provider to the HNB.

Options and futures do not appear in the statement.

If a client experiences a discrepancy between the data sent to him and that reported to the HNB, he/she has the option to send a signal to the HNB via the web interface, but they need to contact that provider to resolve the specific issue, and must file a complaint according to the complaint handling rules.

ALTERNATIVE DISPUTE SETTLEMENT - CONCILIATION

If a client has a dispute with an investment firm, there are several forums to resolve it. One of them is for the alternative dispute resolution, the **Financial Arbitration Board** (FAB) for consumers. FAB provides a quicker and less costly solution than legal proceedings, to settle disputes which may give rise to substantive civil proceedings. The FAB is a professionally independent body operated by the HNB. In Hungary, FAB performs the tasks set out in the founding document of the European Network of Alternative Dispute Resolution Forums (FIN-Net).

FAB has the power and jurisdiction to resolve, inter alia, out-of-court dispute settlements related to the establishment and performance of a legal relationship between a consumer and an investment firm.

It is essential that the commencement of the proceedings interrupts the limitation period.

The commencement of the FAB procedure is subject to the condition that the consumer uses a service supervised by the HNB, such as an investment service in the capital market, and attempt to resolve the dispute directly with the person or organization involved in the consumer dispute (typically the investment firm of the other party to the dispute) before submitting the application, or make an unsuccessful claim for fairness with this organization.

The request to the FAB must be submitted using the standard form (except for the fairness claim). The form shall be made available to the consumer by the supplier. However, it is not possible to initiate proceedings if the dispute has been either mediated, litigated or "settled", there may have been proceedings before the FAB for the same right from the same factual basis.

As a general rule, acting councils are made up of three members, consisting of the president of the council and two other members. In the case of financial consumer disputes not exceeding HUF 50,000, and in the case of financial consumer disputes which contain a simple judgment and which contain a fairness claim, 1 body member shall act. The procedure takes place with the personal appearance of the parties, but the President of the Board of Trustees may, in the light of the circumstances, initiate the written procedure, with the need to obtain the consent of both parties in order not to be heard. If the parties before the hearing do not agree with carrying out of the written procedure, however, either of the parties will not appear at the hearing, the proceeding panel may, after the hearing has taken place, conduct the proceedings in writing without the prior consent of the parties.

During the procedure, the FAB Acting Council attempts to reach an agreement between the service provider and its client. Failing this, it shall either make a binding decision or make a recommendation. These decisions are not open to appeal by law but can be overturned by the court.

The FAB's remit and jurisdiction also extends to the equity process. An equity case is one in which the applicant from the service provider requests a discount or relief, regarding his/her personal, financial circumstances. FAB also mediates requests between the service provider and the applicant in the case of fairness requests. In the absence of agreement, the case shall be closed by a decision terminating the case.

PUBLIC INTEREST LAWSUIT

The HNB may file a lawsuit (public interest lawsuit) to enforce the civil claims of consumers, against those, whose activities contravene the provisions of the laws governing the operation of financial organizations and the laws enacted to enforce them, or those of financial consumer protection legislation, furthermore, whose activities arise in connection with the Civil Code the use of an unfair terms and conditions, provided that the infringing activity affects a wide range of consumers, which can be determined by the circumstances of the infringement. In addition to its other public interest law enforcement powers, the HNB based on the provisions of the Civil Code, can make a public interest claim regarding the statement of invalidity of unfair terms and conditions, becoming part of the contract between the consumer and the financial institution. After 3 years from the date of the infringement, there is no possibility for bringing an action in public interest failure to meet the deadline will result in forfeiture. The Act extends the jurisdiction of the HNB to enforce claims for damages to consumers or personal injury.

If, in respect of the consumers affected by the infringement, the legal basis for the claim and the amount of the damages, grievance fee and other claims specified in the claim can be clearly established, irrespective of the individual circumstances of each individual consumer affected, the HNB may request that the court order the person or entity under its supervisory authority to comply with such a claim. Otherwise, it may ask the court to establish the infringement with effect for all consumers identified in the application.

If the court found the infringement to have effect for all consumers identified in the action, the consumer affected by the infringement in an action for damages brought against him by a person or organization under the supervision of the HNB (typically an investment firm in the capital market), of the conditions of the claim for damages specified in the Civil Code to be proved by the plaintiff, is only required to prove the amount of the damage and the causal link between the infringement and the damage.

HANDLING OF PUBLIC NOTIFICATIONS

Given the importance of public interest announcements in the money and capital markets, the law also lays down provisions for the protection of announcers of public interest.

So, **for supervision regarding a person (organization) supervised by the HNB anyone can report a malfunction.**

The Administration will investigate the public interest filing within 15 days of receipt, and, if the irregularity contained therein is likely, it initiates appropriate proceedings. It shall inform the party who made the notification regarding the initiation or non-initiation of the proceeding and the reasons for it.

Reports of infringements are handled by separate staff at the supervision, who provide information on infringement procedures, receiving and following up reports on infringements, and keep in contact with the declarer if he or she has revealed his or her identity.

Supervision on a separate section of its website, in an easily accessible way publishes communication channels (telephone numbers, secure postal and electronic contact) for the receipt and follow-up of reports regarding infringement and for contacting designated staff, procedures for reporting infringement, rules on the confidentiality of notifications and procedures for the protection of employed persons;

Although notifications are handled confidentially in some exceptional cases, in particular where disclosure is a necessary and proportionate legal obligation, data cannot be kept confidential.

The supervisory authority shall designate independent and irrespective communication channels for the receipt and follow-up of infringement reports, which are safe and confidential.

The supervisory authority shall keep records of all notifications of infringement. It confirms immediately the written notification of the infringement, unless the person who made notification has explicitly requested not to do so, or, if supervision reasonably assumes, that confirmation of the written notification would jeopardize the protection of the identity of the person making the notification.

Supervision ensures the protection of personal data throughout the procedure.

STOCK EXCHANGE (BSE)

INTRODUCTION

Stock exchange activity is the conduct of an organized, standardized trading of a commodity product (a financial instrument and commodity traded on a stock exchange). Only stock exchanges may engage in stock exchange activities.

The Hungarian stock exchange started operating in 1861 in Pest. For 80 years it was one of Europe's leading stock exchanges until 1948. It was re-established in 1990 under the name of the Budapest Stock Exchange (BSE) with 41 founding members and a single introduced share. At that time, it was self-regulated and self-governing as a special legal entity in the privatization of Hungary following the change of regime. In the early nineties, it played an important role in the privatization of many leading Hungarian joint stock companies.

The operating conditions, organization, regulation and function of the BSE have also changed significantly over the years. The stock exchange room open auction trading was replaced in the second half of the nineties by the distance trading system, and since the late 1990s, this has become exclusive with the introduction of the multi market trading system (MMTS). The spot market was followed in the mid-1990s by the futures and options derivatives market. The mid-2000s saw the integration of the BSE and the Budapest Commodity Exchange, hence, commodity trading has since also been conducted on the BSE. In 2011, the BSE launched its alternative trading platform called the BSE Market where the securities of large European companies can be traded. In 2017, the BSE opened the Xtend market for trading of shares of domestic small and medium-sized companies, which gives public limited companies the opportunity to learn about the benefits and obligations of public trading and subsequently successfully address investors in a public offering. In 2019, the BSE created a new market called BSE XBond for companies planning bond issues, which allows companies to enter the public market on facilitated terms.

With the re-regulation of the legal background of the stock exchange (following the entry into force of the Capital Market Act), the BSE has been operating as a private limited company since 2002 (BSE Ltd.). There have also been significant changes in its ownership structure: initially, the investment firms that acted as traders were the owners of the stock exchange, and then, in the first half of the 2000s, strong Austrian banks, and Wiener Börse AG and Österreichische Kontrollbank AG acquired majority ownership in the stock exchange. In 2015, the Hungarian National Bank became the qualified majority owner of the BSE.

Settlement and accounting of transactions executed on the stock exchange shall be performed by the central securities depository (KELER Ltd.) and the central counterparty (KELER CCP Ltd.).

ORGANIZATION, OWNERSHIP AND ACTIVITIES OF THE BSE

DEFINITION OF THE STOCK EXCHANGE, ITS ACTIVITIES AND CONDITIONS OF ESTABLISHMENT

Stock exchange activity is therefore the commercial conduct of organized, standardized trading of a stock market product. Only the stock exchange may perform stock exchange activities, in Hungary the Budapest Stock Exchange (BSE).

The stock exchange may be established as a joint stock company or a branch with dematerialized shares. In the case of commodity-based transactions, foreign exchange and futures interest rate transactions, the minimum paid-up share capital (grant capital) is HUF 150 million, while in the case of other exchange traded products at least HUF 500 million.

The establishment of the stock exchange and the operation of the stock exchange are subject to supervisory approval. Supervision may grant an activity license for a commodity or for commodities jointly. Unauthorized listing activity is a criminal offense.

The stock exchange is limited to listing activities, ancillary activities supporting the listing activities, operating an MTF and extending the activities that the exchange can carry out to increase the presence of SMEs in the capital market, in line with initiatives in European and regional markets, operating platforms to facilitate the raising of business capital on the capital market, that is, it may carry out sub-markets specializing in the needs of SMEs, such as private equity platform and so-called sub-markets, operate a crowd-funding platform. Complementary activities in support of stock exchange activities, in particular in the fields of education, information technology, publishing and distribution, data provision, and professional advisory services to issuers for the admission of securities to the stock exchange.

Authorization for listing is conditional on non-discriminatory access to the trading system and all personal, material and security conditions necessary for the operation of the listing, the clearing of the stock exchange trading and its stable, reliable operation are presumed, has regulations approved by the supervisory authority and adequate liability insurance in case of damage. A stock exchange licensed to trade in any financial instrument is recorded by supervision body as a regulated market.

Only such a person who obtains a qualifying (more than 33%) influence as a member of a stock exchange, who is unbiased, be able to manage and influence the sound, stable and non-competitive operation of the stock exchange in the general interest of the market, both professionally and financially, and against whom there is no statutory exclusion. The articles of association of a stock exchange operating as a private limited company may prescribe the highest level of voting rights that can be exercised by a single shareholder. **Anyone who acquires a share of 33, 50, 66, 75 or 100% of the stock exchange or reaches (100%) is required to apply for supervisory approval.** The HNB is currently the dominant owner of the BSE.

STOCK EXCHANGE REGULATION

The Stock Exchange shall, within the statutory framework, determine the general rules governing its activities, and the rights and obligations of stock exchange traders and issuers. The procedures, systems and solutions used by the Exchange ensure compliance with the requirements of law and the Exchange Rules, including consistency, continuous monitoring, and verifiability.

The stock exchange regulations shall be interpreted in accordance with Hungarian and EU law. During the interpretation of the Code it is necessary to act in accordance with generally accepted principles of interpretation of the law and with professional rules and practices. The provisions of this policy are binding and may only be derogated in the cases specified in the policy. Unregulated matters shall be governed by the laws in force at any given time. It is a requirement that all subjects of the Code must exercise their rights and obligations arising from the Code in good faith and trustily and shall cooperate in the exercise of the rights arising from the Code. The rights and obligations arising from the Code shall be exercised and fulfilled by all parties concerned in the general interest of the market, and abuse of rights under the policy is prohibited.

The Board of Directors has the exclusive right to adopt and amend the regulations of the stock exchange. Before the adoption or amendment of the rules of exchange and rules and procedures for the suspension of trading the board of directors shall seek the opinion of the dealers and, where the rules on sanctions and remedies of the stock exchange apply to the securities, the issuers of the securities admitted to stock exchange or their professional organization.

Stock exchange policies ensure the risks associated with the operation of the stock exchange, and in the general interest of the market transparency and verifiability of stock exchange activities, trading and information about all these, thereby creating a level playing field for traders, equal treatment and objective market protection for investors.

The rules and regulations of the Exchange shall specify, inter alia, the terms and conditions of stock exchange trading, the sanctions to be applied by the stock exchange, the remedies, the rules of stock exchange trading, the terms and procedures for listing and delisting of the listed product, the way in which exchange rates and other stock exchange information are disclosed, the content and manner of providing data, rules for dealing with conflicts of interest and the fees charged by the exchange to the users of the service. The stock exchange rules maintain the requirement of equal treatment for each stock exchange trader or issuer.

The validity of stock exchange regulations requires, in principle, supervisory approval.

The Exchange shall publish its regulations and any amendments thereto on the website operated by the Authority (www.kozzetetelek.hu) and on its own website (www.bet.hu) after approval by the Supervisory Authority. The rules of the stock exchange - by the trader, the issuer, the investor - can be challenged in court, if it is contrary to the provisions of the Capital Market Act or other legislation.

Based on the regulations, the decision on individual cases is made by the BSE CEO. Against individual decisions of the BSE CEO, with a 15-day appeal period, the person to whom the decision contains a provision shall be entitled to appeal to the Management Board. There is no further appeal regarding the decision of the Board of Directors within the BSE.

DISCLOSURE RULES

The stock exchange is obliged to ensure the publicity of stock exchange information in order to inform traders and investors. Supervision can provide release from this obligation on the stock exchange, where justified by the market model or the type and size of orders under relevant Union rules. The supervisory authority may also allow for deferred publication of the details of transactions in stock exchanges for the same reason. This authorization is subject to the submission by the Exchange to the Supervisory Board of its rules on deferred publication, and publish the rules on its website.

The stock exchange is entitled to request consideration for the transfer of stock data within the time specified in its stock exchange policy, but not more than 20 minutes in such a way, so that the price charged for the information does not prevent access to the listing data (requirement for disclosure on a reasonable commercial basis). After the time specified in the policy, the stock exchange data can be freely used by anyone.

The stock exchange is required to report to the supervisor and simultaneously disclose basic information regarding its activities and operations, so e.g. the commencement of stock exchange activities; ordering a trading holiday; the names (company names) of its shareholders, or their ownership interests; convocation of the General assembly and resolutions adopted by the General assembly; the audited annual report approved by the General assembly and the auditor's report.

When a stock exchange transaction is concluded, the trading system makes different information available to the members, such as the listing product or ISIN, the quantity, the price, and the buyer and seller.

Official listing place of the BSE is its website (www.bet.com), as a single electronic and secure data transmission and storage system, which is considered a place for official appearances. Both BSE and the person required to disclose comply with the disclosure obligation through the website. Accordingly, the BSE regulations appear on the website, resolutions of the General assembly, resolutions of the Board of Directors, which establish rights and obligations for either the issuers or the section members, delayed stock data other than stock quotes, stock exchange information, execution venue and financial instrument information, price information, on which orders have been executed in relation to that financial instrument, costs (enforcement fees, access to market data, use of terminals, settlement fees, equalization fees, fees paid to enforcement participants), number of orders received and transactions executed, number of appointed market makers, in the case of venue with a continuous auction bid book and an execution that operates a continuous quote-driven trading system, the best buy and sell prices and relevant volumes, the depth of the offer book, regarding three price increases, the average presence of quotes in particular, and communication for publication, required to be published by the person according to the BSE rules.

The BSE will display the stock exchange information on the website outside the quotes, 15 minutes after the stock exchange data were generated. Publication is done in such a way that the data is accessible to anyone however they may be used only under the conditions and to the extent permitted by the BSE or by law. For the sake of transparency, the BSE should disclose pre- and post-trade data as close to real time as possible and they must continue to be published during trading hours. The BSE guarantees this obligation on fair terms and on a non-discriminatory basis through its official vendors. BSE for investment firms also provides direct access in addition to access outside of distributors, also provides direct access to the mechanisms used to disclose pre-trade and post-trade data.

Regarding the content and presentation of the data provided the responsibility is taken by the person who is to publish it.

The main means of investor protection is adequate information: by ensuring market transparency for all market participants, that is, the issuer discloses each and all information about it and that of its listed, put into circulation financial instruments that affects the value, return, and price development of the investment, all investment firms involved in the transaction provide the investor with the mandatory information required by law, and a well-prepared and careful investor will be able to make an informed and responsible investment decision.

There is also an institutionalized form of investor protection, the Investor Protection Fund (IPF). (www.bva.hu)

IPF provides cash compensation of up to € 100,000, which is one of the highest amounts in Europe (provides full indemnity up to HUF 1 million, with a down-payment of 10% above this amount). This amount is provided by IPF members. Investment firms carrying out so-called insured activities are required to become members of IPF. The secured activities are the following investment services and additional activities: receiving and forwarding orders, executing orders for the benefit of the client, own account trading, portfolio management for financial instruments, safekeeping and administration of financial instruments, and related client account and custody management, and the management of the related securities account, in the case of printed securities, keeping records thereof and keeping a client account.

Domestic investor protection therefore extends to securities and client accounts maintained by IPF members. Foreign service providers are not covered by BEVA protection, these service providers are subject to the security rules of their home country, according to which the level of compensation and the detailed rules may differ significantly from the Hungarian system. Services provided by unlicensed firms are also not covered by IPF. Commodity service providers are not required to be members of IPF however, they can also join IPF voluntarily. A commodity service provider that is not a member of IPF, shall be required to prominently state in its terms of business and in the client account contract that the investor's claims are not covered by BEVA's protection.

The insurance provided by IPF essentially protects the average investor, thus by the protection are not covered particularly claims of the state-,a budgetary authority-,a 100% state-owned business entity-, a local government-, an institutional investor-, an investment firm-,a member or commodity service provider-,a financial institution, and any company or natural person directly or indirectly owning or voting 5% or more of the Fund's indemnifying member and its controlled company, and in the case of a natural person owner the claim of its close relative, and the claims of foreign obverse of the above. Insurance provided by IPF does not cover claims arising out of such transaction, in the case of which it has been established by a final judgment of the court, that the source of the investment came from crime, and cash claims arising from such transactions, which is not denominated in euro or legal money of an EU or OECD member state.

IPF pays the investor if the service provider is unable to provide the investor with the assets recorded in the account he maintains, that is, it provides limited compensation in the event, if any member of IPF is unable to meet its clients' claims arising out of the insured's business. IPF's indemnification obligation arises when a member of IPF is subject to winding-up proceedings or is ordered by a court to be liquidated. IPF announces investors about the possibility of claiming, its start time and way on its own-and the Supervisory Website.

The IPF procedure starts at the investor's request, which must be submitted within one year from the first day of claim filing, determined by IPF. Later, IPF will review the investor's claim for compensation no later than 90 days after submitting the application and shall pay the compensation within 90 days after its determination.

BSE-MARKETS AND TRADERS

The BSE operates the spot market, the derivatives market, the commodity market and the BSE market, with Xtend and Xbond acting as separate platforms.

The BSE has the following sections by product group:

- indices (BUX, BUMIX, CETOP, BMBX),
- equities section,
- debt securities section,
- derivative section,
- commodities market,
- BETA market.

BSE SECURITIES SECTIONS

Share market

Of course, the share section is primarily for trading shares, but also investment units and structured products fall into this category.

A share is a membership right bearing security issued by a public limited company. The stock market provides an efficient source of funds for both domestic and internal companies, and provides investors with an appropriate market, and it provides an appropriate market for investors seeking it. And with that, that the issuers with a public marketing authorization issued by a single European authority obtain a so called uniform European passport, registration on the BSE has also been simplified for all EU companies.

At the BSE, shares can be listed in three categories:

1. **Premium Category:** Both the size of the series to be introduced, the ownership and the specific duration of operation are all expectations. This category includes more liquid shares, having wider range of investors.

2. **Standard Category:** This is the appropriate category for mid-cap and small-cap companies that are looking for a public transaction when they first appear.

3. Category "T": The "technical" category is a classification of the former BSE category. According to main regulation, no new introduction to this category should be made however, issuers that were previously classified in this category may remain in that category if they do not apply for their reclassification.

Investment units are collective investment securities issued by an investment fund, which represent property and other rights. The BSE also offers the possibility of secondary trading of publicly traded shares in the equity section both to closed end (that is, issuing non-redeemable shares), and open-end (i.e. the issuer of redeemable shares) investment funds. In the case of closed-end investment funds, secondary market liquidity is provided by stock exchange listing, whereas for open-end funds this may be an alternative to over-the-counter trading.

The BUX ETF is an investment unit, issued by an open-end public equity fund managed by OTP Fund Management Company. The purpose of the fund is to provide a simple and cost-effective investment opportunity in the domestic stock market benchmark index, into the BUX share basket. The investment units are marketed through a stock exchange order. The fund is recommended to investors who take significant risks for a minimum holding period of 5 years. The BUX ETF, as a product traded in the Equity section, combines the speed and flexibility of buying individual shares with the broad risk-sharing and low cost of mutual funds. By purchasing this asset, the investor can trade the BUX index tracked by the issuing investment fund in a cost-effective, index-tracking manner, which ensures transparency, risk sharing and market coverage. At the same time, stock market trading provides liquidity and continuous trading.

Certificates are special instruments issued by banks and can be created for any financial instrument or any combination of these. **The certificate as a security entitles the holder to claim against the issuer: the investor acquires the right, at the predetermined due date, depending on the value of the basic product, to enforce money or other receivables against the issuer.** Both the market and products covered by the security and the strategy embodied in each type of certificate can be varied.

The BSE Equities section also includes compensation notes. The indemnity note is the nominal value of a claim on the State securities, the output of which - and its most intensive use - was linked to the change of regime and privatization.

Debt paper section

The debt securities section trades government securities, mortgage bonds and corporate bonds.

The stock exchange provides a secondary market for securities, embodying sovereign debt. The State Debt Management Centre (SDMC) acts as an agent of the State in the issuance of government securities, and the majority of government securities issued in HUF, i.e. government bonds and treasury bills, are listed on the BSE.

Mortgage credit institutions (mortgage banks) are entitled to finance their mortgage lending activities in addition to the bond, issuing mortgage bonds, i.e. securities, which are indirectly secured by real estate mortgages. The stock market product range also includes floating rate and fixed rate mortgage bonds.

Issuers that meet higher quality standards can secure their funding through this section's bond issue. The BSE has fixed, and floating rate bonds issued by large companies and financial institutions.

OTHER SECTIONS

Indices

To signal capital market processes the BSE calculates both domestic and regional indices and mortgage bond indices. Domestic stock indices concentrate the changes in the prices of shares quoted on the BSE in one metric: BUX is the BSE's highest capitalization index, while BUMIX is a medium and low capitalization index of the BSE.

Stock market trends in Central Europe are tracked by the BSE's regional Blue-Chip index, CETOP, which is showing the performance of Central European equities, having the highest capital value.

Mortgage bond indices provide information on the performance of forint mortgage bonds introduced on the BSE, to help pricing mortgage bonds and evaluating the performance of such portfolios.

Derivative section

Derivative section products:

– - futures products,

– - BUX futures quotation,

– - Optional products.

The futures market, through leverage, provides an opportunity for an investor to move a high value position with a small equity investment. Through the transactions conducted here, an extremely high return but high-risk position can be created as well as portfolio risk reduction. The BSE's ever-changing futures product range offers stock index-based futures, both individual equity-based futures and foreign exchange-based futures. Stock futures are standardized, the BSE defines the parameters of the futures contracts that may be entered into for each commodity (maturities, contract unit and how to complete it). BSE's leading index-based derivative, in the case of futures BUX, market makers support trading by keeping buying and selling offers, thereby increasing liquidity and reducing the implicit cost of trading.

Option products

On the one hand, the option market provides an opportunity for the investor to apply an investment strategy, in which, while maintaining the possibility of profit, it reduces the risk and extent of the loss. However, since option products are leveraged products, with a small capital investment high value portfolio can be moved, so they are also capable of creating highly speculative, high-risk positions, with any investment strategy, whether in upward or downward or stagnant market conditions.

The product structure is variable, including stock index options, custom stock options and currency options are also available. Stock options are standardized, the BSE defines parameters (type: buy, sell), nature of options (American, i.e. enforceable on time, or European, i.e. enforceable on deadline), the maturities, the strike price, the possible value of the strike price and the way of execution, specific to each basic product.

Commodity section

As the BSE's activities include commodity trading**, the BSE also operates on the spot and futures markets.**

In the spot market you can trade grain products. In the case of spot grain transactions, the contracting parties agree individually on certain parameters, typically those relating to quality control and delivery. Execution shall be affected by physical delivery.

In addition to the spot market, there is also a futures market for the futures trading of standardized cereals and industrial oilseeds. The product list determines which expires can be traded in advance.

For the most traded futures products (wheat, sunflower seeds and maize) options transactions may also be concluded. The basic product of options is a futures contract with the same maturity, so, when the option is exercised, the futures position for that product opens. All grain options are American style, meaning they can be exercised at any time until the maturity date.

<u>BSEa Market</u>

The BSE created a market for trading in foreign equities and ETFs. The financial instruments available here are identical to securities traded on foreign markets. Trading takes place in forint liquidity is provided by market makers. Although it is a trading of foreign securities, market opening, trading and settlement rules are the same as those of the BSE Equity Section, and the exchange gains realized here are taxed in the same way as the exchange gains on the stock market.

MTFS, OPERATED BY THE BSE

The activities of the BSE include not only stock exchange activities but also operates multilateral trading facilities, so-called MFTs as well. At present, such is the market for XTend and XBond.

<u>XTend</u>

XTend is a multilateral trading platform (MTF) operated by the BSE. Its purpose is to assist private limited companies with public access to the capital market, with lower fees, simpler terms and special support tools, thereby contributing to the gradual acclimatization of these enterprises to the obligations of listing. Public limited companies that are not yet fully prepared to enter the regulated market but are ready to learn and gradually prepare for it, can use the BSE XTend as an entry point and then move on to the direction of the BSE Standard category.

What distinguishes XTend from traditional stock exchanges is that, although it performs a similar function to stock exchanges, since here too the supply and demand, regarding shares meet, its level of regulation is lower than that of the stock exchanges. For example, the expectation regarding accounting and auditing has been simplified (it is not required to comply with International Standards on Auditing / IFRS), and it is possible to register shares on XTend without a public transaction. At the same time, it is less secure than regulated markets due to facilitations for issuers and smaller size limits. For this reason, the BSE applies several filters to strengthen investor protection: on the one hand it lays down in its rules the requirements for such undertakings and the information and documentation obligations, on the other hand, the issuer must have a so called nominated advisor (NOMAD /), who, on the one hand, assesses whether the business is suitable for public market presence, on the other hand, supports him in this process, and continuously monitors the operation and activity of the given company, having an independent responsibility for all this.

XBond

While XTend is an emerging stock market, the **BSE has created XBond as a new bond market, as an alternative trading platform for companies planning bond issues.**

XBond also operates as a multilateral trading platform, MTF which also provides easier administration and lower costs for issuers compared to a stock market presence. The documentation obligation has been simplified (preparation of a so-called Information Document with content defined by the BSE is sufficient instead of the information generally required on the public market for total issue, not exceeding EUR 5 million per year), and IFRS are not applicable to issuers here either. At the same time, it provides investor protection that the new market targets professional bond buyers with the mandatory requirement, that the minimum denomination of the securities to be registered is EUR 100,000 (or equivalent). For this reason, this product group reaches retail investors primarily through investment funds, mutual funds and insurers - that is, with the help of experts.

STOCK EXCHANGE TRADERS

From the owners of the stock exchange - the shareholders and members of BSE Ltd. it is necessary to distinguish those market participants, who use the services of the stock exchange, who trade on the stock market, that is, stock market traders, in common use, stock market members.

A stock exchange membership is a contract between a stock exchange and a prospective member wishing to trade on the stock exchange, authorizing them to trade in that stock section and to exercise the rights related to stock exchange membership. Membership of the Exchange shall not be transferable and the exercise of the rights attaching thereto shall not be even temporarily transferable.

Stock market trader (using the words above: stock exchange member) obviously can only be the person, who is otherwise entitled to the activity that he is doing on the stock exchange. Thus, anyone wishing to trade securities on the stock exchange must have a license to carry out investment service activity, entitled "Execution of Financial Instruments" or "Trading in Financial Instruments" issued by the HNB as a supervisory authority, to which investment firms are entitled in Hungary. **The members of the stock exchange are thus investment firms in the securities sector, i.e. the equity, debt securities and derivatives sections.** And if someone wants to trade in the commodity section, they must be licensed for commodity trading, also issued by the HNB as a supervisory authority. In addition, the member must comply with the terms and conditions of the stock exchange policies and undertake to comply with the terms and conditions of stock exchange regulations.

Bearing in mind that, apart from concluding a stock exchange transaction, it is also important to ensure its clearing, the stock exchange member for settlement must be a Clearing member, or they have to enter into a contract with a clearing member, become a non-clearing member and with the CCP as well. The stock exchange rules also grant stock market traders the right to choose their settlement system, provided that the interconnections between the systems and infrastructures selected ensure efficient and economic settlement of the transaction concerned, and the technical conditions for the settlement of a stock exchange transaction allow for the designation by that stock exchange trader, other than the system chosen by the stock exchange clearing system, the smooth and orderly functioning of financial markets.

The stock exchange is required to enter into a contract with the applicant if it meets the above conditions. The content of the trading right and the manner in which it is exercised shall be governed by the rules of the stock exchange, thus, the terms and conditions of the contract between the BSE and the Exchange Members are set out in the BSE Business Rules, so you will find here the Exchange Membership Rules, the Technical Connection Rules, the Trading Rules, the Disclosure Rules, the Conflicts of Interest Rules, and the Operational Risk Management Rules. The section: Entry and Exit Rules of the Terms of Business also contains provisions on the duties, rights and obligations of listing members with respect to listing and marketing.

The number of stock market traders cannot be limited.

Listing companies participate in the stock exchange trading through their salespersons with the appropriate knowledge and passing professional exam. The dealers are registered with the BSE, and in this process, they check that the listed trader has the appropriate business and professional conditions.

The stock exchange is entitled regarding stock market dealers request, collect information related to their activities on the stock exchange on-the-spot verification of data and records regarding the activities of stock exchange traders on the stock exchange, and their activities relating to stock exchange, on-the-spot checks of records, based on which he Exchange may also take action in the event of a breach of the Code, as specified in its Rules, and, if it notices a violation of law, it shall notify the Authority without delay.

The Exchange shall terminate the contract with the Exchange Trader if the Exchange Trader fails to fulfill its obligations after imposing a sanction.

STOCK EXCHANGE TRANSACTIONS AND STOCK EXCHANGE TRADING

A stock exchange transaction is a contract concluded by a stock exchange trader on a stock exchange product, to the extent and in the manner permitted by the stock exchange regulations.

A stock exchange transaction can be spot, futures or options. In the case of an outright transaction, they commit themselves to actually delivering the object of the transaction without specifying the manner and time of settlement, the obligation shall be executed in the manner and at the time specified in the stock exchange regulations. In a futures contract, the parties agree, that they will meet their obligations under the stock exchange transaction at a later date specified in the stock exchange regulations. The option deal can be a buy or sell option: with the buy option the obligor grants another person the right to purchase the listed product and the right holder may purchase the subject of the right of purchase by a unilateral declaration, while the put option obliges the obligor to buy the stock product against the right holder and the right holder obtains the right to sell the stock product through a unilateral statement. The option deal is also a combination of a buy and sell transactions.

The validity of the stock exchange transaction requires the recording of the details of the stock exchange transaction in the manner specified in the stock exchange regulations, as well as its registration and confirmation by the CSD and the CCP. Thus, a stock exchange transaction is executed on the terms and conditions of the exchange in accordance with the rules of the stock exchange by the registration and confirmation of the transaction by the CSD or the CCP. The obligation arising from the stock exchange transaction shall be performed by both the CSD or the CCP in the manner specified in the regulations.

A futures contract may be settled by the effective delivery of the object of the transaction, through a public warehouse ticket or by settlement in scriptural money. The performance rules may limit or exclude performance by the actual delivery of the subject matter of the contract.

The option agreement shall include the definition of the stock exchange product, the purchase price, the option fee and the duration (maturity date) of the option. The option may be exercised for a maximum period of 5 years from the date of the stock exchange transaction. The exercise of the option may be also subject to a fixed deadline, in this case, the cut-off date may not be farther than 5 years from the conclusion of the stock exchange transaction. An option for a period of more than 5 years or for a period of more than 5 years or for an indefinite period shall be null and void. The stock exchange regulations may specify the duration and the closing date of the option, which may be stipulated in certain stock exchange transactions.

In the course of trading, a transaction may be entered into in each section for any stock product listed on the stock exchange product list from the first day of trading. Trading in all sections of the stock exchange is done by electronic trading, with the fact that the rules for trading commodity products may be different for each section, instrument group and for each commodity.

In order to enter into a stock exchange transaction, it is necessary that both counterparties bid in the trading system electronically, and the transaction is generated by the trading system by matching the bid of the counterparties based on one of the transaction algorithms. The validity of the stock exchange transaction requires the recording of the details of the stock exchange transaction in the manner specified in the stock exchange regulations, as well as the registration and confirmation of the clearing house or the central counterparty.

SUSPENSION OF STOCK EXCHANGE TRADE

A person specified in the Stock Exchange Policy may suspend the listing of a specific stock product for up to 10 stock days, if further distribution does not ensure orderly, transparent and fair trading, if it is suspected that the issuer is in breach of the disclosure requirements, and accounting of stock exchange trading is not ensured. **In the event of suspension of the listing of the securities, the issuer shall be informed of the decision about suspension. Suspension beyond 3 trading days shall be subject to prior supervisory approval.**

The listing or full listing of a particular stock product group may be suspended by the person specified in the regulations of the stock exchange with immediate notice of supervision for a maximum of 1 stock exchange day, if maintaining the distribution jeopardizes the legitimate interests of investors, the equilibrium of the market or the functioning of the stock exchange.

The supervision may suspend stock exchange trading of a specific stock exchange product group or all stock exchange trading for a limited period, if the general financial, economic or political situation does not allow stock exchange turnover to be orderly and transparent, and thus prevent the continuity and fair trading of the stock exchange. Supervision suspends or deletes trading on a regulated market and MTF based in Hungary of such a financial instrument, whose trading has been suspended or withdrawn by the competent authority of another Member State, unless this would significantly harm the interests of investors or the orderly functioning of the internal market.

Supervision suspends or deletes trading on a regulated market and MTF based in Hungary, the trading of which has been suspended by the competent authority of another Member State, or which has been delisted from trading, unless it would significantly harm the interests of investors or the orderly functioning of the internal market.

The Exchange Board or the Supervisory Board may suspend the trading of a specific Exchange Product for up to 30 days, renewable twice, if the resale does not ensure orderly, transparent and fair exchange trading, endangers the level playing field, the legitimate interests of investors and the balance of the market, and if clearing of exchange trading is not provided. Suspension of more than 10 trading days of all stock exchange trading requires the approval of the Minister of Industry (currently the Minister of National Economy).

The Exchange or Supervisory Authority shall promptly notify the other Party of its decision to suspend or resume trading and shall make its decision public on the website operated by the Supervisory Authority and on its own website. In addition, the supervisory authorities shall notify the competent authorities of the other Member States and the European Securities and Markets Authority of the suspension or resumption of trading.

If the circumstance giving rise to the suspension ceases to exist, the party ordering the suspension shall immediately take steps to resume distribution. If the suspension was ordered by the stock exchange and unreasonably does not take action to restore marketing, the supervisory authority replaces the measure with a decision.

STOCK EXCHANGE ADMISSION AND TRADING, TRANSFER AND DELETE

The terms and procedures for listing, transition, and delisting of a listed product are set forth in the Stock Exchange Rules, which ensures fair and efficient trading of a financial instrument listed on a stock exchange, unrestricted transferability in the case of transferable securities listed on a stock exchange, and in the case of a derivative contract, its design allows for clear pricing and efficient accounting. The rules applicable to admission, transition and delisting are binding on the stock exchange, the officers and employees of the stock exchange, the members of each section, the issuers of each stock product, the applicants for the listing of each stock product, and sometimes the underlying securities issuer.

STOCK EXCHANGE INTRODUCTION (REGISTRATION, PRODUCT LISTING)

Getting listed is a big decision, a turning point in the life of an issuer. It can be justified by the need for financing, the issuer raising its share capital by listing, or to raise new funds through bond issuance, it may also be due to the need for expansion or to the desire of owners, for example in the face of the increasingly urgent need to change generations, to exit their current shares. However, for an issuer to enter the stock market, it must have the appropriate maturity, as it must be prepared to go public.

The terms and conditions of admission to the BSE are listed in the Exchange Rules and the BSE Business Rules, as Listing and Keeping in circulation Rules.

The issuer must first review whether its operational form is suitable for listing on a given security: the first thing needed to be done regarding a business association, operating in the form of an ltd. is, to transform itself into a private limited company (Ltd.), and, by publishing the form of operation, initiate the listing of the company as a publicly traded company (PLC). In addition, it must prepare for the reform of its internal control and management processes, ongoing reporting, investor information, and compliance with the BSE and supervision. The rules of the stock exchange as a prerequisite for the introduction and marketing of the listed product may require that the issuer has a good business reputation - that is, conditions that demonstrate the ability of the issuer's senior management to have sound, prudent management and a transparent business relationship.

For issuers meeting the admission criteria, the BSE will provide stock exchange registration for the relevant securities series in the appropriate category (In the Premium and Standard categories, by public transaction), and later continuous monitoring of the issuer. As part of its ongoing monitoring, the BSE provides administrative, consultancy services, carries out professional activities, regarding organizing and supervising the issuer. Investors expect immediate and complete information from the BSE, and from stock exchange registration, and require effective investor protection against abusive issuers. Of course, it is also in the interest of issuers to preserve investors and maintain their reputation, and avoid sudden reactions, price movements and so-called domino effect. To this end, the BSE has set up an extensive and effective set of instruments to protect and preserve investors to inform the market and keep issuers safe while maintaining their reputation. In addition, the BSE as a business needs to ensure that it operates profitably. The role of supervision in this is to ensure the prudent operation of the market and investor protection.

As the issuers meet two supervisors here, it is worth clarifying the division of tasks between the two institutions, the BSE and the HNB as financial supervisors:

- the HNB acts as the gatekeeper as a supervisor approves the prospectus required by law for public marketing, performs market surveillance tasks, performs official procedures, while

- the BSE will review the listing documentation during the listing process and monitors compliance with regulations and legislation.

Both bodies exercised constant control over listed issuers and both bodies, to varying degrees of jurisdiction and depth, have at their disposal a system of sanctions. Within this, the BSE's toolbar ranges from a warning, fine and reclassification (from Premium to Standard category) to delisting.

By the fact that the issuer applies for the listing of their securities, they accept the stock exchange rules and settlement rules as binding on themselves.

The terms of admission may vary from stock exchange section to section depending on the nature of the instruments traded in the section. For the listing of securities - in all securities sections usually required: information with a statutory content approved by the supervisory authority, to provide basic investor information, which contains all information concerning the securities and the issuer, which concerns the investors. For each stock market category, additional requirements may include a minimum price for the securities series to be listed and a minimum free float, and the BSE may determine the type of security (e.g., at present, only ordinary share series may be admitted to the Premium category). The listing – i.e. registration, listing on the BSE product list - is decided by the BSE CEO, on the basis of compliance with the terms of the regulations against the issuer. Trading in that security may then commence.

Theoretically, although with little practice, it is conceivable that the listing is initiated not by the issuer but by the owner of a larger amount of securities (e.g. in the case of an exit). In such a case, if the securities are listed on the stock exchange without the consent of the issuer, the issuer shall not be obliged to provide stock exchange data, the stock exchange merely informs the issuer of the fact that the securities it issues are traded on that stock exchange.

KEEPING IN CIRCULATION, RECLASSIFICATION

Keeping in circulation

Admission and Trading Rules require the disclosure of extensive information on issuers as a prerequisite for listing on the stock exchange in order to provide investors with an equal opportunity.

Accordingly, following the admission, the issuer is subject to a number of marketing obligations. The most important requirement is **transparency requirement: the issuer shall ensure that all investors receive the same relevant information as is necessary to reasonably assess the issuer's securities admitted to trading on a regulated market.** To this end, the issuer is required to develop and apply internal procedures that adequately ensure the regularity (financial statements and other regular disclosures, corporate governance report, general assembly and dividend information, etc.), extraordinary and other disclosures.

Reclassification

The issuer may request that its shares be reclassified from T or Standard to Premium category. This is subject to a reasonable period of prior operation as required by the policy for the Premium category, compliance with category criteria, and public transaction.

Shares admitted to the Premium Class in some cases may be reclassified to the Standard Class. This could be due, for example, to the non-execution of a public transaction, or if a given series of shares does not meet the criteria for the Premium class in two consecutive review periods, or if the issuer is subject to bankruptcy proceedings. However, the regulations also provide for the possibility of a downgrading of the share as a result of a sanction imposed by the BSE.

TRANSFER OF THE SHARE, DELETE OF STOCK EXCHANGE PRODUCT

The Listing Rules contain the conditions and procedure for the listing and delisting of the listed share.

A transfer is the cessation of trading of a share admitted to trading on a regulated market provided that the share is traded on another regulated market. The listing of shares in the product list is subject to notice by the issuer, if it contains the securities details (name and ISIN), the intended date of the transfer, the issuer's decision on the transfer, the availability of the regulated market on which the share is traded. Where the stock market- based on the website of the European Securities and Markets Authority (ESMA) or other official list of securities admitted to trading on regulated markets states, that the relevant share is indeed traded on another regulated market, the CEO will decide on the transfer.

A delisting is the elimination of a share listed on a regulated market on all regulated markets. The listing of a stock series is also subject to notice from the issuer, which contains the security details (name and ISIN) and the intended date of the delisting, as well as the issuer's delisting decision. The stock exchange CEO decides on the last trading day and the day of delisting and deletes the stock series from the product list.

The series of shares will be cancelled through transfer, deregistration, so-called Exceptional procedure (if the shares of a public limited company listed on the stock exchange are wholly owned by a shareholder), automatic delisting of shares (if, under the rules on the acquisition of public interest in public limited companies, an investor who has made a public bid to acquire shares not yet owned by him has exercised his option to purchase shares under public law, that is, the so-called displacement procedure), termination of the issuer without or with successor in title, or failure to comply with the conditions for admission to trading specified in the listing decision.

The BSE may delist a listed product that does not comply with the BSE Code, unless the deletion would significantly harm the interests of investors or the functioning of market regulation. Delisting from a product list typically occurs when the security is of fixed duration and expires, or the issuer repurchases the entire security series prior to maturity, or if the securities series is converted, if the issuer ceases or, in the case of a structured product, the basic product ceases, or if there is no clearing of the stock exchange transactions in the securities. If the issuer decides to terminate without legal successor, or if liquidation proceedings are initiated against the issuer, the issuer shall request the delisting of the securities from the BSE.

Securities are deleted by delisting from the product list.

TRADE IN EXCHANGE PRODUCTS

INTRODUCTION

The stock exchange is a regulated market that concentrates demand and supply in space and time. Within the framework of regulation, of course it is also defined, that the offers made by each operator how get listed and how they find each other, by the help of what trading model. The demand and supply sides for each product will be built in 2019 using a book-building system, which, on the one hand, is an effective way to match offers, on the other hand, it provides a clear picture of the supply and demand side of a given product and its liquidity. It is variable, what role does a bid book get at a market. In a high-traffic and active market such as the US, the order book plays a modest role beyond its basic function. It collects and displays offers from market participants, but given the fact, that a product may have per second several offers and bindings, it may or may not be embedded in the trading strategy with moderate efficiency. In contrast, in a much slower market with lower turnover, such as the BSE, the order book can play a central role in within one day trader trading.

There may be a product on the market that does not have enough liquidity to be traded on it, this is when the market maker comes into the picture, who undertakes to provide liquidity for the product most of the trading time. In this chapter, besides the book-building system, the activity of market maker is introduced.

TRADING MODELS

In the 2019 Budapest Stock Exchange spot market, three trading models were used to trade various products. Of these, the Continuous Auctions model is the most used, most of the shares quoted on the BSE are traded in this model. For different structured products (e.g. certificates) a Continuous Auction Model is used. Last but not least it is treasury shares are traded in the Auction Model.

CONTINUOUS TRADE WITH AUCTIONS

The majority of BSE products are traded in this five-step model. The first phase is the **preparation phase between 8:15 and 8:30.** At that time, the BSE system is already accepting bids, but the order book is not yet visible to market participants. The **opening auction begins at 8:30,** when the offer books for each stock are already visible, but the **deal cannot be completed yet.** Offers can be withdrawn at any point of the section until the end of the section **until 9:00**. At the end of the opening auction, an opening price will be formed based on the bids have been entered. This is the price at which most offers could be matched. **Continuous trading takes place between 9am and 5pm, when operators are free to place and withdraw bids, and bids that can match with one another are instantly bonded. The continuous trading, which ends at 5:00 pm, is followed by a closing auction, similar to the opening auction until 5:05 pm. Once again, you can enter bids, which will ultimately determine the closing price. The final phase of the model is the closing phase, which lasts until 17:20.** In this case, you can still make offers on different products, but they will only be visible in the order book in the next day's preparation phase.

In the trading model, there may be a special **period of volatility** during continuous trading. **We enter the volatility phase if the price of a product moves significantly as a result of a trade.** This is followed by a short volatility **phase of 2-3 minutes**, which is essentially a mini auction embedded into continuous trading. Its function is to **enable market participants to react to a sudden shift.** So, in the 2-3-minute volatility phase you cannot make a bond, but you can freely place and withdraw bids, until an equilibrium price is formed at the end of the stage and the continuous trading continues.

THE CONTINUOUS AUCTION MODEL, THE AUCTION MODEL

The continuous auction model is used exclusively for **trading certificates / warrants on the BSE. Between 8:30 and 9:00, there is a preparation phase** when bids are freely placed. **From**

9:00 am, there will be successive auctions with the presence of a market maker in the continuous auction phase. An important feature of this model is that the auction cannot close at this stage without the presence of a market maker. **The auctions will continue without interruption until 5:00 pm, when the closing time until 5:20 pm begins.** The offers you submitted during this interval can be seen in the order book only in the preparation phase of the next day's trading.

The auction model is used in the narrowest sense and **is used exclusively for the BSE separated shares. Securities in this category may be bound four times on each trading day in half-hour auctions.** The first auction will take place between 8:30 and 9:00 when the market opens. This is followed by the second and third auctions of the day between 11:00 and 11:30, then between 14:00 and 14:30, finally, between 4:35 pm and 5:05 pm, the fourth and final time will come to conclude deals.

THE OFFERING BOOK

The basis of the book-building system is the offer book, where orders and offers placed by the market participants on the product are placed. **The book tells you what price level and how much you can sell or buy from a product at a given moment.** In a market with low turnover, such as the Budapest Stock Exchange, one of the critical tools for intraday trading is the offer book and the quotes that appear in it.

STRUCTURE OF THE ORDER BOOK

An order book always consists of a buyer and seller page. By default, as you can see in the OTP book below, the idea is that buy bids are on the **left page of the book, while on the right you will find the seller's bids. The best offer is always listed on the top line,** i.e. **the highest priced on the buy side and the lowest one on the seller side.** So which offer is the best is defined from the other page's point of view, the highest price on the client page is the best, because a seller can sell there at the best price, while on the seller's page the lowest price is the best, since a buyer is trying to buy a share at the lowest possible price.

Below the best offers are all the other offers in the line-up, market players who place them would like to buy or sell at a different price than what is currently available. So on the buy page we will find bids that are getting lower and lower, while on the seller page, market players are pushing up their shares for sale to a higher and higher level, hoping, that they will be able to conclude the desired transaction at a more favourable exchange rate.

The minimum deviation that a stock price can move, and the distance at which they can follow each other is known as a price step. In the OTP book, as shown in the figure it is clear that the price range for OTP shares step gap is 10 forints, this is the minimum interval that should occur between consecutive bids. The price range is determined by the Budapest Stock Exchange, taking into account the exchange rate and liquidity of the product. Of course, we may find such a price level where there is no current offer (for example, for the OTP book below there are no offers at the moment for HUF 12,730). A toothed-out order book with many gaps reveals that the product has low liquidity.

The order book may contain two additional information in addition to the exchange rate and the quantity to be linked to it. Beside the quantity-determining columns is shown the information, regarding the fact, from how many different offers are made up a given quantity of a given price level. 1,099 shares offered for sale shown in the OTP book below, HUF 12760, consists of 4 different offers. The outermost column will show our own offer if we have one.

Given the above, let us imagine that we would like to buy 5,000 OTP shares immediately, at the current market rate. Looking at the sellers' page of the offer book below, we can see that we get 2,875 pieces for HUF 12,780, another 139 pieces we get for HUF 12,790 and the rest 1986 pieces for HUF 12,800. With this, we managed to acquire 5,000 OTP shares, and the exchange rate jumped to HUF 12,800 at the moment of closing, so for the price where our demand could be satisfied by the supply at that moment.

Figure 34: OTP Order Book

OTP Order book17-HUF 12760.0							
S…	*V…*	*V Guantity*	*V Exchange rate*	*E Exchange rate*	*E Guantity*	*E…*	*S…*
	-/4	1099	12760	12780	2875	-/8	
	-/2	1532	12750	12790	139	-/2	
	-/4	788	12740	12800	2123	-/4	
	-/2	1037	12720	12810	1415	-/6	
	-/2	1507	12710	12820	3445	-/6	

	-/1	351	12700	12830	5808	-/7	
	-/2	31	12690	12840	4644	-/9	
	-/5	1813	12680	12850	5631	-/12	
	-/1	2000	12670	12870	385	-/3	
	-/1	35	12660	12880	627	-/5	

INDICATIVE PRICE

Be it in any trading model, we can follow the price at each **auction phase** with the help of indicative price. Until the **auction closes, the indicative price will indicate the current equilibrium price if the auction would close.** With the help of this compass we can follow, that during the auctions in the often chaotic, not clear structure order book either the demand side or the supply side prevails.

Foreign investors are very prominent in the trading of blue chips listed on the Budapest Stock Exchange, due to the periodic low liquidity of the market, large amounts of institutional investors in shares such as OTP or MOL, are often closed in the closing auction phase. It is unprecedented for a closing auction to attract so many securities to be bound, as in the total free phase during the day. In this case, there may be a significant shift from the last exchange rate of the free period, so it is worth paying close attention to closing auction stages in this market, where the indicative price may indicate current short-term sentiment in a sleeping market before the closing price is determined.

METHOD OF GIVING OFFERS, TYPES OF OFFERS

Our offerings for different stock products can take many forms depending on our intent. Among the parameters to be determined, the type and validity of the offer are those which essentially determine how the offer will behave after submission.

MARKET-PRICE OFFER

One of the two most commonly used bid types is the market bid. In this case **you do not need to enter the exchange rate, our order will be fulfilled at the best price currently available in the market.** However, it is important to know that the total quantity is fulfilled only if the number of pieces that you want to bind from the product is available on the counter page. **If there is a smaller number of counter-offers in the order book, than the amount you want to bid on the market then your offer is only partially-, or totally not satisfied, depending on the validity you specify.**

Let us suppose you want to buy 5,000 MOL shares using a market price quote. In the order book we find the best seller offer for 3,000 for a total of 2,500 pieces. In this case, our market price order can be formed in two ways. If you enter the offer with *"now part"* validity, the quantity that can be fulfilled at the best price level will be met, so 2,500 shares will be bought, the rest will be revoked. In contrast, if we gave the order with "now all" validity, then the entire offer will be cancelled and no MOL shares will be bound. *“Now All”* and *“Now Part”* Validations are only applicable when placing a market offer, and as the example above shows, for a *"now all"* offer, a bond is only created, if the total quantity finds a pair on the counter page, whereas in the *"now part"* there is definitely a bond, and the part of the quantity that has not found a pair is withdrawn by itself.

LIMIT-PRICE OFFER

Another commonly used bid type is the limit priced bid. Contrary to the market price order, here **we have to specify, besides the number of pieces, the exchange rate at which the offer will be quoted. Therefore, a limit order is used primarily if you do not want to buy or sell the product at the current market price. Instead, we set a different exchange rate for our offer to be included in the order book. When the exchange rate reaches the level we specify, and on the counter-page signs up supply or demand, then the offer we previously provided, can be concluded.**

For example, let us say we bought 2000 MOL shares earlier. We would like to close the position at HUF 3050, but the current best bid is on the market at HUF 3010. Hoping the exchange rate will continue to rise, we can place a sell order at a limit price of HUF 3050. If, in the future, demand pushes up the exchange rate to HUF 3050 level, and our offer will find a counter page there, then our 2000 MOL shares will be sold.

MARKET TO LIMIT OFFER

A less commonly used, but available from most investment service providers, is Market to Limit. The name reveals the fact clearly, it is exactly what the Market to Limit order suggests. **The offer starts with a market order, however, the part of the quantity that cannot bind at the best price is not withdrawn (as in the case of a market price order) but becomes a limit order and remains in the order book.** So, the rest of the offer can be bound, unless cancelled or expired.

The example this time is Richter, where we would like to buy 1,000 at a price of HUF 5,000. At the moment, we find the best seller offer for HUF 5,000, but only 500 of them appear in the book at this value. So, 500 pieces of our Market to Limit order are executed immediately, and the remaining 500 remain in the book as the best bid.

STOP LIMIT AND STOP MARKET OFFERS

One of the central elements of the risk management tool in stock trading is stop offers. You can use them to determine a stop level, where our position is automatically closed if the exchange rate moves in a way that is unfavourable to us. So the stop offer ensures that our losses are no greater than a predetermined level.

For stop limit bidding, two important parameters are required. **One is the activation price and the other is the limit price** (similar to a field limit order). **The activation price is the level at which the sales order will be triggered** and will be included in the order book as a limit price quote at the specified limit price. Let us suppose we bought MOL shares for HUF 3,000, with the expectation that the price would rise shortly and that we could make a profit. If we use the risk-return ratio as we learned in the chapter on risk management, then along the way we can set a stop level alongside our expected target price. In this example, let's expect our target price to be HUF 31,000 (here we would close the position with a profit), and by that we can put our stop level at HUF 2,950, (with a HUF 50 maximum loss in addition to our expected profit of HUF 100). We also need to add a limit price to the activation price. This will be the rate at which the actual sale bid is entered.

In the case of a Stop Market Order, you only need to enter the activation price where the offer is triggered. When this value is reached, a market price sale order will be activated immediately, our position will then be matched by the system with the best available bid. Of course, as with a field market offer, it is also true here, that only that quantity can be fulfilled, which immediately finds a pair on the opposite side and the rest is withdrawn.

In the scenarios outlined so far, we have always used a stop bid to close a position, but with a stop offer we can also take a position at a predetermined price level using a buy stop. In this example, we do not have a MOL share this time, but we believe, that if the exchange rate can cross the HUF 3,000 value, there will be significant potential for further increases. In such a situation, you can place a buy stop limit or buy stop market offer with an activation price above HUF 3,000. If we do so and the security will indeed successfully break through the HUF 3,000 level and reach our activation price later, then our offer is activated, and we automatically enter the buying position.

ICEBERG OFFER

Iceberg is a special offer where you need to enter two different quantities when making your offer. One is the total volume, so the total number of shares you want to sell, the other is the visible quantity that appears in the order book at the selected price level. The iceberg analogy perfectly illustrates the working principle of the offer. The visible amount is the part of the offer that hangs over the surface of the water, and the full amount is what is underwater. Each time the peak of the iceberg melts, the amount under the water decreases, and the iceberg keeps getting smaller and comes higher. **The offer allows us to place an extremely large offer in the order book and it increases our chances of completing the order at the original target price level.**

Imagine a stock that offers an average of 4-5,000-piece quotes in its order book at various price levels. If such a book comes out with a 100,000-piece bid, it immediately signals to market participants that demand for the shares has increased significantly. This fact alone can generate additional demand, which reduces the likelihood that the 100,000-piece bid will be met at the original target price level. In such a situation, the Iceberg offer is applicable, where the total quantity will be 100,000 pieces, but the visible amount will only be 5,000. Until the total quantity is exhausted, the price of 5,000 units will be displayed in the order book.

VALIDITY OF OFFERS

We can associate different validations with different bid types. Closely related to the market offer are the **“now part”** and **“now all”** bids (see: **Market price offer**). If we use a non-market order, we may still apply a **daily order**, which **will be withdrawn at the end of the given**

trading day if it is not fulfilled. In addition, we can specify our order with the **value effective until revoked-or with one until a specific date. The former will remain a live offer until it is executed or withdrawn for any reason. The latter will either be executed by the due date or will be revoked if we reach the time specified when the offer was made.**

MARKET MAKER, MARKET MAKER SYSTEM

The products of the Budapest Stock Exchange are traded primarily in the book-building system, which is already detailed or, in the so-called bid-driven system. However, for some products, the market maker must provide continuous liquidity in order to make that product tradable. **Therefore, the role of the market maker is primarily to provide sufficient liquidity** at all times, so to put bids on the buy and sell page as well, thus giving traders the opportunity to trade also an otherwise illiquid product. Brokerage firms with stock exchange memberships are primarily suitable for market making. Between the market maker and the BSE, it is defined, how much of the trading time liquidity is provided by the market maker, regarding what amount, and how much spread.

Marked Product in 2019, all securities traded on the BSE in the Budapest Stock Exchange, the December BUX deadline, the BUX ETF and the certificates.

On the BSEa market, equities traded on foreign stock exchanges can be traded in HUF, but due to the low liquidity the presence of a market maker is required. In addition to providing buy and sell offers, the market maker is also responsible for monitoring the price of shares traded on the BSE market. For example, BMW shares listed on the German stock exchange can also be traded in HUF currency on the BSEa market. Movements in the stock's original market should also be followed by the market maker on the BSEa market, you must quote the price accordingly on both the sales and the buy side.

You may wonder why it is worth quoting prices for different products. Not only is it a resource-intensive activity, it can even be risky. **For market makers, compensation is the spread between the buy and sell offers.** For an example, imagine a product where a market maker provides liquidity and is constantly on the buy and sell page. The price of an imaginary product is HUF 1,000. The market maker holds a HUF 50 spread in both directions, so he puts a buy offer at HUF 950 and a sell offer at HUF 1,050. There is a difference of about 10 percent between the buy and sell offer. If the market maker continuously quotes at this rate, he will make significant profits. The example above is polarized, since such a spread is rare in market making products, but a 3-4 percent difference can already exist between the best buy and sell.

The quotation system carries additional risk in the case of certificates traded on the BSE, worth calculating when trading these products. Certificates are structured products that follow the price of some underlying product, the market maker thus quotes the price in accordance with the formulation of the underlying product. As mentioned, when trading models were introduced, in the continuous auction model a deal can only be concluded, if the market maker is present and provides liquidity. However, there may be times when there is no quotation on a certificate for a short period of time. Considering that these products are heavily leveraged, it can cause serious losses, if the market maker is not present for 10-15 minutes and therefore a position cannot be closed, while the underlying product moves significantly during this period.

So, products with market making have drawbacks and pitfalls that you should be aware of before trading with them. **However, it is also possible to trade instruments through market**

makers that would otherwise not be able to meet market needs due to the low liquidity and number of transactions.

There are also so-called market maker bidding systems, where, unlike the book-building system, only the market maker can be included in the "book", his buy and sell offers can be matched only by clients. Some market making systems may include more than one market maker.

CHARACTERISTICS OF THE SHARE TRADING

INTRODUCTION

There are thousands of ways to invest our savings and assets in the 21st century, and there are so many financial assets we can invest in. At a time of low interest rates in 2019, we will find that people are more willing to put their savings on the stock market, where they expect higher returns in exchange for higher risk.

However, risk does not only come from a financial instrument, we will significantly reduce our chances of achieving the wanted very much yield if we do not have the basic knowledge of stock market trading. But the stock market is not a theoretical genre, while knowing the products, trading platforms and rules we can save a lot of money, paid to be more sophisticated, but our trading habits, risk tolerance, and discipline essential to success will only be revealed if we truly enter the market. "Investor Self-Knowledge" is thus an important element of the stock market presence, therefore, it is important to maintain the gradual principle at the beginning of our careers, taking first place in low-risk, low-activity products. This kind of real trading experience is not replaced by transactions in a demo environment.

In the previous chapter, we got to know the technical details of trading, in this chapter we get to know the basic concepts of stock trading, and a brief introduction to trading strategies that help you decide how and why to buy, hold or close stock positions.

BASIC TERMS

For a successful equity market presence it shall be stated, that it depends a great deal on whether we can create a customized, working rule or strategy for ourselves, if necessary whether we can adapt it to the changing nature of the market, and, finally, can we be disciplined about the rules we set up. However, before discussing these strategies, it is important to be aware of the meaning of the basic concepts associated with them.

SHARE INDICES

Stock market indices are baskets of different equities that represent the performance of a market segment, region or industry. Hungary's stock market index is BUX. This basket of 15 members in 2019 shows the performance of the 15 largest companies listed on the Budapest Stock Exchange. Each member has a different weight in the basket. Equities with higher market capitalization carry more weight. In the case of BUX, the four large papers (OTP, MOL, Richter and Magyar Telekom) make up 93% of the index, among these, OTP stands out at nearly 39 percent weight. According to this, the performance of these four papers, and OTP in the first place, will primarily influence the movement of the index.

The indices of the world's leading stock markets also serve as a benchmark. As a result, the performance of an individual stock, but especially an investment fund, is often measured against the performance of the **S&P 500 index, which includes the 500 largest US companies,** as a point of reference. The Asian region's main index is J**apan's NIKKEI 225,** while Europe's primary stock market index is the German DAX 30. Given that the US stock market is currently the world's leading market, we need to know two more key indices in this region, on the one hand, the **Dow Jones Industrial Index (DOW 30)** and, on the other hand, the **NASDAQ 100, which brings together technology companies.**

In addition to separate country indices, there are many ways to index stocks. We can meet industry indexes, indexes of small and mid-cap companies (this is BUMIX in Hungary) or emerging and advanced market indices. The most important emerging stock market index is the MSCI index. Getting listed in an index can often have a positive effect on the price of a stock, but in any case, on its liquidity. The reason is that if a major international equity fund wants to get exposure against emerging market equities, it simply purchases the items in the above mentioned MSCI index basket. Therefore, if a stock can be listed on the MSCI index, then it automatically brings with it an institutional presence in the paper, significantly increasing its liquidity.

Share	ISIN code	Quantity quoted on the stock exchange	Free float	Weighting factor	Closing price (HUF)	Counter (HUF)	Weight in the basket (%)

Részvény	ISIN kód	Tőzsdére bev. menny.	Közkézhányad	Súlyozási tényező	Záróár (Ft)	Számláló (Ft)	Súly a kosárban (%)
4IG	HU0000167788	94 000 000	0,3821	1,000000	912	32 756 668 800,00	1,06
ANY	HU0000093257	14 794 650	0,7120	1,000000	1 300	13 693 928 040,00	0,45
APPENINN	HU0000102132	47 371 419	0,4245	1,000000	444,5	8 938 524 893,96	0,29
AUTOWALLIS	HU0000164504	270 261 400	0,1443	1,000000	107,5	4 192 362 402,15	0,14
BIF	HU0000167986	287 024 440	0,2510	1,000000	306	22 045 199 138,64	0,72
CIGPANNONIA	HU0000170162	94 428 260	0,4983	1,000000	298	14 021 973 383,48	0,46
GRAPHISOFT PARK SE	HU0000083696	10 631 674	0,5686	1,000000	4 710	28 472 749 929,44	0,93
MAGYAR TELEKOM	HU0000073507	1 042 742 543	0,4079	1,000000	437	185 871 256 597,60	6,04
MOL	HU0000153937	819 424 824	0,5953	0,604690	2 940	867 211 675 078,40	28,18
OPUS	HU0000110226	701 646 050	0,3142	1,000000	393,6	86 771 949 554,98	2,82
OTP BANK	HU0000061726	280 000 010	0,7383	0,450208	12 820	1 193 142 040 561,65	38,77
PANNERGY	HU0000089867	21 054 655	0,5696	1,000000	750	8 994 548 616,00	0,29
RICHTER GEDEON	HU0000123096	186 374 860	0,7475	0,862104	5 000	600 520 989 741,58	19,51
TAKAREK	HU0000078175	66 000 010	0,0993	1,000000	600	3 932 280 595,80	0,13
WABERERS	HU0000120720	17 693 734	0,2801	1,000000	1 345	6 665 840 031,62	0,22

Figure 33: Composition of the BUX basket on September 27, 2019; source: BSE

SHARE TRADING AND LIQUIDITY

In the case of several investment assets may arise the issue of liquidity. Equities as financial assets are usually classified in the liquid category, nevertheless, we have to take into account the liquidity of the individual shares, or lack thereof as a risk factor. As we have already read in the risk section of the first module, Liquidity is how quickly and efficiently we can buy or sell a share. **Ideally, with enough liquidity, a significant amount of shares can be bought and sold quickly and efficiently (in a narrow price range).** In high-turnover markets such as New York and major European exchanges, this problem is less common, especially with blue chip papers. However, if we are looking around in small and mid-cap stocks on the Budapest Stock Exchange, then we often come across low liquidity papers. For such products, always adjust the size of the position you want to capture to the liquidity of the paper.

The easiest way to do this is to look at the average daily turnover of the outstanding stock over the past 30 days. Instead of stock price, it is worth considering the number of shares that are traded on average daily, since exchange rate changes affect the turnover based on the exchange rate value. So, for example, if a stock is worth $ 50 today and one day changes hands 1,000 shares in the value of $ 50,000, a month later this stock rises to $ 100 and also on average 1,000 change hands, then sales doubled at exchange rate, but the paper did not get any more liquid! So, if you want to get a picture of liquidity, it is worth relying on the average number of shares traded per day.

An alternative way to measure current liquidity is to look at the known already order book. Typical of a liquid share offer book, that there is no big difference between the best buy and sell page, offers tend to follow each other closely and there are larger quantities at each price level, allowing a larger number of shares to change hands. Of course, in theory, even if a book is packed full of offered stuff, however, no transaction is made. Therefore, it is definitely worth also taking into consideration the average daily turnover mentioned above, but as an indication we can also rely on the picture shown by the order book.

TRADE DIRECTIONS, LONG AND SHORT POSITIONS

One of the irrefutable claims of stock trading or any trading activity is that if we want to make a profit, we have to buy it cheaply and give it expensive. However, the order is interchangeable, in 2019, there are a number of schemes in place that allow us to sell a stock that we do not own, and then buy it back at a cheaper rate, making a profit. In this way, the thesis of cheap buying and expensive selling is not compromised, it only changes to the point where we first sold and then bought.

Position direction can be distinguished between long (buy) and short (sell) positions. When taking a long position, we speculate that the price of the purchased stock will increase, and we can sell the stock high by putting the difference between the buy and sell prices in the pocket. The position can be held for a day or five years, but value investing investors are those who only use long positions, and they usually buy a stock with the intention of keeping it for a long time, hence the name long.

In the case of a short position, on the other hand, a sale transaction is initiated, and profits will be realized when the exchange rate falls. You may be wondering how to sell a stock that we do not own. In the spot market, this can be done by borrowing securities. Our investment service provider will lend us a share until the position is closed. We sell the loan (share), thus opening the short position. In order to make a profit, the price has to fall, which allows us to buy back the stock at a lower price. If we speculated well and the exchange rate really fell, we realized the difference here as a profit, and the shares are returned to the lender, who is typically the investment service provider.

For the sake of full understanding, let us illustrate a specific example of short position trading. Suppose that our speculation is on the Banana stock, which is currently trading at HUF 100. Banana stock has reached this level after a massive rise, we believe that a correction movement can be expected from here, so the exchange rate will fall. From your investment provider 5,000 Banana Shares will be borrowed by us under a security loan and we will sell it on the market at HUF 100 exchange rate. With this deal HUF 500,000 has entered our account and it will be allocated. Our calculations work, the exchange rate really starts to fall in the next few days, and we decide to close the position at HUF 80, so we buy back 5,000 shares sold on the market. At an exchange rate of HUF 80, this will mean a transaction value of HUF 400,000. The repurchased shares are returned to the investment service provider, and we put into our pocket the difference between the sale and purchase positions at HUF 100,000. This way we can win even if the stock price weakens. Of course, due to the need to borrow securities to open a short position, the cost of a short transaction is also higher. Although the above example did not take into account the costs, it is worth always knowing how much the cost factor erodes our returns.

Finally, it is worth talking about the significantly different risks of long and short positions. Of the two, the long position has a significantly lower risk. This is due to maximizing our exchange rate risk, as the price of a stock cannot fall below zero. However, for short positions, the downside to us is if the exchange rate rises. On a theoretical level, the rising limit may be the starry sky, and the paper may rise well above 100 percent. In a sufficiently extreme market situation or, for example, in the case of illiquid but highly volatile paper, there may be a real risk of losing more than our capital.

In short, the short position is suitable for making gains even when exchange rates fall. Long-term market participants rarely use short positions, short selling is one of the pillars of short-term trading strategies.

THE PROCESS OF GETTING TO THE MARKET

Many people make the mistake that with measurable experience and moderate background knowledge they want to conquer the world of stock trading immediately in hope of generating significant returns in a short period of time. Starting from this position is quite difficult to "survive" in a stock market, so it is worth accepting that, like most things, stock trading does not “work” by itself, it also requires a significant investment of time and energy.

An inexperienced “virgin” stock market presence, no matter how strange it may sound, **must start without positions. Watching the market more regularly can be a useful lesson in itself, supplemented by reading various analytical content now available for free.** In addition to online content, many retail providers educate their clients on online trading information for free, and in many cases, **we can get to know how different platforms work on demo interface of trading systems.**

Based on the above, if you already have a basic understanding of the market and how online trading works, then you **should start with low capital to start real trading.** These small positions are **not recommended for daytime trading or day trade.**

If we are able to make transactions with smaller positions comfortably and even successfully, then we shall raise our capital, but daily trading is not even a priority at this level. However, it is worthwhile to find out what additional products, constructions are available to us and how they work. This may be a leveraged product or a short selling arrangement. These concepts are also discussed later in this chapter.

Finally, once we are confident in entering into fully covered equity transactions, and properly apply our trading rules, then it is advisable to enter the market with more capital, even in day-to-day trading, using leverage where appropriate.

TRADING VS. INVESTMENT

In the stock market participants with a variety of habits exist next to each other. Behind the offerings in a stock's offer book may be an active day trader with 20 trades per minute or a long-term buy-and-hold investor. There are a lot of differences between the two extremes, and while there is no need to classify ourselves in an explicit category, nevertheless, it is worth aligning our trading and investment habits with the goals we want to achieve.

In many cases, a trader with a high daily trading volume will aim to quickly raise capital at much higher risk. If we do this kind of trading, we aim to take advantage of both directions of exchange rate movements. This means that we also want to make a profit from a rise in the exchange rate (long position) and from a fall in the exchange rate (short position). It is also clear from positions taken in the short term that the trader is not interested in the value of the company, the shares of which he/she sells and buys. In contrast, **from the market mood, they should be able to interpret well emotions reflected in short-term exchange rate movements, as in the short term, within a day, these are the ones that move the exchange rates.** It follows that a trader relies primarily on the methods of technical analysis, when taking a position, they monitor the signals given by the exchange chart. To be successful with a short-term strategy, we need a high degree of discipline, well-designed risk management and significant experience.

Significant differences from the above can be found regarding a market participant with a classical investment mentality. **Longer positions are much more typical,** and the goal is not to ride every wave of the chart with active trading, **but to find companies, which have significant appreciation potential or stable cash-generating potential at their exchange rates, which gives us a steady flow of cash in the form of dividend payments.** While in active trading, technical analysis is used to find the ideal points for entering and closing a position, **whereas in the world of long-term investment, by and large a toolbox of fundamental analysis will help us.** This method looks for the true intrinsic value of a company, with the correct definition of which you can decide, the potential of an investment. In addition, the long-term investor only works with long positions, in the rarest of cases, they take a position in speculating on a fall in the exchange rate. Since it is not their goal to ride every wave and take a long-term position, it is therefore much less exposed to volatile periods with large exchange rate fluctuations. In percentage terms, the target return is less than that of a short-term trader, thus, leverage is not typical of this type of market presence.

All in all, while the active “trader” turning a smaller capital wants to achieve a higher return quickly, in the meantime, the long-term "investor" builds on existing, larger assets, avoiding extreme risks.

TRADING STRATEGIES

We can use trading strategies to achieve our target return. Over the decades, many short, medium, and long-term strategies have emerged that address the major issues that arise in the field of transaction. A typical trading strategy takes into account the time period traded, it defines the required risk tolerance and, in many cases, identifies the products that can be used to implement the strategy. In addition, it insists on a set of rules, disciplined adherence, which is key to the successful implementation of the strategy. All in all, a well-chosen, well-executed trading strategy can make a significant contribution to our stock market success, some of these strategies are briefly described below.

SWING TRADING

Exchange rate movements are characterized by a tendency to relax, adjust and consolidate after rising or falling waves. These rising, falling, or just sideways movements often alternate within a trend, thus, within a rising trend, a stock spends a significant amount of time diminishing, that is, correcting rising movements. **The swing trader is trying to take advantage** of such **short-term movements while rising, taking a buy (long) position while decreasing, a sale (short) one.**

The strategy **requires a very active market presence and continuous management of positions.** Given that we are trying to take advantage of short-term movements in both directions, graph analysis will help us determine the various entry and exit points. It significantly increases your chances if you choose stocks whose movements are monitored for a while and are familiar with its graph.

Adequate risk management is crucial for swing trading. This is primarily the **active use of the stop offers** that we have already learned in the previous chapter. Given that we want to profit from small movements, we cannot afford to get stuck in a failed position, since this way we can erase the results of our disciplined trading for weeks, months. It is a natural consequence of frequent positioning that we do not always get the successful idea and miss the right entry point. In this case, a properly placed stop offer guarantees that even if the exchange rate is unfavourable to us, we will only suffer a minimal loss. Last but not least, we also have to take into account the higher costs that result from the fact that we often open and close different positions.

MOMENTUM BASED TRADE

Less active than swing trading, but still focusing on the short term, is momentum trading. While the swing trader is looking for an opportunity every day in the market, meanwhile the moment-thinking trader is waiting for the right moment. It thinks, it does not always have to be in a position, it is enough to take advantage of opportunities that will most likely lead to success. **The momentum we sell may be technical,** so here we can use the method of graph analysis, but some kind of market news, gossip can be the basis, which can induce substantive movements in an otherwise speculative stock price.

The position taken on the basis of the moment can also be classified primarily in the short-term category, but in some cases, positions held for weeks can be imagined. Due to the fact that the momentum trader moves into position less often, it may also be appropriate to include a larger position or even leverage. As the size of the position increases, so does our risk, so it is important to be aware of the liquidity of the traded stock. So, before determining the size of the position it is worth assessing, how quickly and efficiently we can sell a significant quantity in the market if we decide to close our position. Keeping track of our position is also important in the moment trading, because market sentiment can change surprisingly fast, what we need to sense, then reduce or close the position prematurely, related to all this. This can be helped by a non-traditional stop order, the so-called trailing stop. It allows the originally set stop level to follow the rising exchange rate, keeping a certain distance from the market price, so if the momentum changes suddenly, it closes the position.

In summary, in the case of momentum trading, **special emphasis is placedon the preparation of** a rock-solid **plan before taking up a position.** We need to determine at what point, where we take the position and how we close it. If we can stick to this and have a good eye for identifying market moments, then this strategy can be an effective tool in our hands.

TREND BASED TRADE

One step longer term strategy is a way to follow trends. While trends can also be extremely short-lived**, trend-following traders are primarily looking for medium to long-term movements. The best way to determine whether an exchange rate is up or down is through graph analysis, so similarly to swing trading and momentum trading, corporate fundamentals have a moderate place here.**

An upward trend is alive and well, as long as we are steadily getting successively higher bottoms and peaks. Unlike swing trading, corrective movements within the trend are irrelevant here. The long position is held by a trend-tracking investor, until the trend line between the bottoms falls. The stronger, the longer-term is a trend, the less attention a position needs. It can indicate the fatigue of the trend, if the exchange rate can no longer climb dynamically to higher peaks, instead, it is spending more and more time near the trend line. The position is closed when the trend line falls.

The longer-term nature of the trend-tracking strategy also implies lower risks than swing or momentum trading, which is much more active. Stop orders have no prominent role either, typically, you do not need extremely fast reactions to follow a medium to long term trend. Instead, there is a greater emphasis on knowing the selected stock. How sensitive is it to turbulent stock market periods? Is it prone to extreme movements? Is it sufficiently liquid, has it a high turnover, so that a larger position can be easily cut down? If we are aware of these factors, we are more likely to succeed in following trends.

BUY AND HOLD STRATEGY

The strategies listed so far, all fall into the active category and require a continuous market presence. For those who do not want to deal with their investments on a day-to-day basis, a passive strategy is needed, which minimizes the time and energy of the investor. A typical example of this category is the buy and hold strategy. The term is somewhat cumulative, **but most commonly refers to a value-based investment called Warren Buffett in the buy and hold strategy.**

The method against active trading strategies ignores the signals in the stock chart, relying entirely on a fundamental analysis of the company. The corporate valuation toolkit is used to examine the targeted investment target. The goal is to find companies that can be bought at a better price than their fair value. So, the value-based buy and hold investor is looking for when the market is wrong, where the price is wrong, and builds a portfolio of equities that are priced below established fair value. The potential for returns is that the market corrects the error over time and prices the paper at the right value. Of course, if the preferred stock has growth potential, it may increase its value over time. In light of this, the perfect combination for a value-based buy and hold investor is, if they find an investment that is cheaper than its fair value, at a discount price and has potential for future growth.

Passive strategies require different risk management methods, at least the focus is put elsewhere in defining these. The focus shifts off from stop offers, trade-related costs, and the focus is on diversification, that is, the appropriate sharing of the elements that make up our portfolio.

LEVERAGED TRADING

Leveraged trading is a common player in active trading tools. Its main **attraction is that only a fraction of the size of the position you want to add should be available in our account.** If the leverage ratio is five times, we can take up a position of 500,000 with a margin requirement of HUF100,000. Accordingly, the gross result on the transaction is multiplied by a factor of five, be it profit or loss. The use of leverage is therefore extremely risky, requiring rigorous risk management, discipline and trading experience.

Leverage can have two uses. On the one hand, we can take extremely high risks by stretching the amount of cover available in our account, leveraging the maximum leverage to take a position. In this case, there is an exponential increase in potential yield, but also in the potential for loss. This form of leverage ignores money management methods in every sense, **a bad outcome position could result in a significant loss of our capital.** However, **leverage can also be used to better distribute, for example, a moderate amount of capital when needed.** Let us say you have a position that you have the full amount of cover in your account to fill. However, taking a position this way would take up most of our free money, and at the moment we see another opportunity in the market that we want to take advantage of. In such cases, we may use leverage to take up only a small amount of our available collateral, thus leaving for us free money to spend on other positions.

In order to trade leverage on the stock market, you need someone, who finances the transaction, provides the necessary excess capital or even the securities (in the case of short) by an investment service provider under an investment loan agreement or security loan agreement. Given the resources got from the service provider, we also **have to pay much higher costs for such a transaction. Higher commissions** also add an additional expense item, which is the interest charged by the provider on an investment loan. **The longer the position is (the interest rate), the greater is the extent of this, therefore the time factor is emphasized in the case of such position.**

Let's say we buy 300 shares of a HUF 100,000 stock from our HUF 300,000 capital, because in the next week or so, we give a high probability of a rise in the exchange rate and want to increase our returns by leverage. For the purpose of this example, let us determine what the costs of this transaction are compared to a normal, non-leveraged transaction. In the case of a normal transaction, we expect a commission of 0.3 percent per transaction. In the case of leverage, the same commission should be 0.4 percent plus 12 percent annual interest. However, the stock purchased does not rise within a week, but we have to wait a full month for the move to occur, the exchange rate will increase by 3 percent from the value at the time the position was taken, from HUF 1,000 to HUF 1,030. In the case of a normal transaction, our buying commission would be HUF 900 (300,000 * 0.003) and our selling commission would be HUF 927 (309,000 * 0,003). Thus, from the gross profit of HUF 9000, we would have a commission of HUF 1827 on this transaction. In case of leveraged position, our purchase commission was HUF 1,200 (300,000 * 0.004), our sales commission was HUF 1,236 (309,000 * 0.004), and for the position held for one month we had to pay 1% interest on the investment loan used, which is HUF 3,000. So, after deducting your costs, the HUF 9,000 gross profit will stay at HUF 3,564, of which the brutal item is interest, that we had to pay for keeping the position relatively long. So when using leverage, it is worth considering a short-term position in an average trading situation.

Significantly greater risk than costs is the significant movement of the exchange rate in a negative leverage position in excess of our capital. For a fivefold leverage, a 20 percent shift in the negative would mean the loss of our total capital, a larger shift may also result in a loss for the party financing the transaction. In order to prevent this from happening, **investment service providers will set a liquidation level that will automatically force our position to be liquidated. To avoid this, investment service providers will issue a margin call to us if we get close to liquidation, this allows us to place additional funds in our account or to close some or all of the position.**

TECHNICAL ANALYSIS OF SHARES

TECHNICAL VS. FUNDAMENTAL ANALYSIS

(eternal but non-existent struggle)

A typical narrative when comparing technical and fundamental analysis is that whoever uses one rejects the other. It is a highly polarized point of view and generally does not stand still. Although trading and investment strategies based on technical or fundamental funds exist, we should not consider them as mutually exclusive methods, on the contrary! In the market, the sharpest weapon in the hands of an investor is information. According to a sober peasant mind, the more we are able to examine an idea we are entering the market, the better our chances of success. To make consistent money in the long run.

But what is technical and fundamental analysis? The difference is relatively easy to see if you imagine that you want to essentially make a diagnosis about a particular stock. If we choose to make our diagnosis with fundamental analysis then the patient being examined, in this case a company, whose stock we would buy is placed on the operating table, will be opened by us, and examined internally. Are each bodies of the company functioning properly? Are there any risks that could potentially lead to the deterioration of the company and thus its operation? In order to do this, we need to know exactly which organ to examine, and what method leads to good results. Fundamentally examining a company's stock is therefore not an easy task. It requires substantial background knowledge, we also need to be aware of the details of how the company operates internally moreover, it is also a good idea to measure the health of similar companies, essentially the industry as a whole. It follows from the above that for a retail investor who has limited time to deal with investment procedure, a fundamental analysis is not necessarily a viable option.

What, on the other hand, is the investor doing, who wants to make an investment and trading decision with the help of technical analysis? Instead of taking a scalpel in his/her hands, simply looks at the stock of the company in question, represented by a graph. When a ruthless hump comes out of his/her head, he/she pauses for a moment and recalls what happened three times before, when a similar hump emerged from a stock chart. If the condition of the stock for which this visible symptom subsequently deteriorated significantly, we can assume that this is the likely scenario again. The hump that led to the conclusion that is visible to anyone does not require an in-depth, complicated examination of the company itself.

The above analogy is, of course, simplistic, but it represents the essential difference between the two methods. Based on this, one of the great advantages of technical analysis is that the use of a basic but functional toolkit is relatively easy to learn, it is not necessary to think in the micro and macro context of the economy when considering an investment opportunity.

So technical analysis does nothing but look for previously occurring phenomena, shapes, formations on the chart, then examine them using the toolbar available. The conclusion drawn from these can hold up because the masses are present on the market, just like a hundred years ago, and while much has changed in trading over a hundred years, people's emotions, the psychology of the mass, produce exactly the same results.

In addition, the approach that technical analysis is now so widespread that it acts as a kind of self-fulfilling prophecy is also valid. Along with the popular method, many people are already searching for the same phenomena on a graph, and when they find them, most of them react the same way. This is also part of the truth, but it is an argument for, rather than an argument against using technical analysis, at least as a supplement to fundamental analysis.

DOES TECHNICAL ANALYSIS HAVE RIGHT TO ITS OWN EXISTENCE IN 2019?

The method of examining graphs and determining future exchange rate movements in this way is by no means new. The most widely used Japanese candlestick chart dates back to the 18th century. The image of capital markets has changed a great deal since the 1700s, but one thing has remained unchanged. It is no different than the eternal truth that the market and the trading of the products being there is determined by the desires, fears and greed of the market players. In a word, it is psychology. This is an inevitable aspect of markets in the 21st century, and graphs are perfect imprints of the emotions mentioned above, so if we can read them, we have more tools in our hands to succeed in the market.

What is more, in the new millennium, the capital market is easily accessible to anyone, thanks to the widespread use of online trading solutions. In this respect, not only does technical analysis still exist today, but it may never have been so much! In the near future, there is no drastic change seen in the capital markets, that would blow up the basic paradigms of trading, the proliferation of artificial intelligence and the already popular algorithmic trading can turn capital markets upside down, regarding, as we know them today. However, for the time being, markets are not dominated by machines, but by mass psychology, the emotions of millions of investors. As long as this remains the case, technical analysis remains capable of effectively contributing, in the right hands, to a higher risk-free return.

BASIC INFORMATION ON TECHNICAL ANALYSIS

The toolbar for graph analysis is very broad, and is a fragment of what is discussed here, of countless shapes, indicators, and methods to approach a graph. However, there are basic concepts and notions that always return, without which one cannot write or interpret a technical analysis.

TREND AND CORRECTION

As with the economy, stock markets and the movement of individual shares in them are inherently cyclical. If you look at a stock chart, for example, you can see that there is a downward trend from time to time even in so-called upward movements, so-called adjustments and likewise, in a downward trend, there are smaller correction movements as the exchange rate rises against the mainstream.

An upward trend is when the exchange rate reaches higher peaks with these waves and then, during the course of the correction, creates higher bottoms. The trend line is obtained by connecting these ever-rising bottoms. The upward trend continues until the exchange rate breaks this trend line. In the case of a downward trend, the same is true, only here lower bottoms and also lower and lower peaks follow each other, and the trend line is obtained by connecting the peaks.

One of the most critical factors in securities trading is whether we can identify trends. Trend tracking is the foundation of many tech-based methods and strategies therefore, it is important that we recognize the emergence and break of the trend in time. The importance of the topic is well illustrated by the fact that several relevant theories have emerged in the early part of the 20th century, helping to orientate in a stock market trend. For example, the foundations of the Dow theory are points of alignment to this day. From the point of view of technical analysis, it should be noted that Dow's theory has recognized that we can examine at least 3 different trends at a time (primary, secondary, minor) and has identified the main phases that make up the primary trend. Charles Dow identified trends by creating two indexes, the Dow Jones Industrial Index (DJIA) and the Dow Jones Transportation Index (DJTA), the former is still of decisive importance. It placed the most important American companies in the indexes with different weights. In his theory, these stocks are moving in one direction, in the direction of the trend, at the current stage of the market cycle. The movement of the individual stock, which may be different, has no material effect on the trend of the index, since a diversified 30-member index smooths out these unique differences. According to Dow, in order to speak of a clear trend, we need to find a positive correlation in the movement of two indices. If their movement is separated, it indicates the approaching trend reversal. Although by the 21st century, this simple but brilliant methodology has been slightly exceeded by technical analysis, the Dow Jones

Industrial Index is still a key indicator, if you want to get a better picture of the American corporate sector, and also, of the health of the economy as a whole.

SUPPORT AND RESISTANCE

One of the most important topics in technical analysis is support and resistances. By definition, supports and resistors are exchange rates that are capable of holding or reversing the exchange rate several times in succession. In the case of supports, the demand side typically strengthens significantly, while in the case of resistances, the supply side's dominance prevents further growth. The more often the exchange rate turns from a support or resistance, the stronger the given level is. Of course, the development of support levels can also be strongly linked to market psychology, since what does support mean to a sober peasant-minded market player (e.g. Aunt Mari Kovács)? What does she see when she looks at the graph? She can see a price level where, if she had bought the stock in question the last two times, she could have sold it higher, as the exchange rate has always moved up from this level. That is why Aunt Mari, along with many of her companions who drew this conclusion the same way, will next buy the stock when it comes to support. It is not difficult to infer from this that it further enhances the level support character.

Resistance works on the same principle, but here we are talking about a level that reverses the rising price over and over again, so it stops the ascent. As a result, many sell their shares at a resistance, seeing that from here the price has flipped several times. The last important conclusion we can draw from this is that, in order to get a strong support for the exchange rate, very strong sales pressure is needed, that is, a massive strengthening of the supply side. In the same vein, to break out of resistance, the exchange rate must have a strong buying power, which is nothing more than a strengthening of the demand side.

In addition to the above, there is another important feature of supports and resistors. Once a support is broken, it develops to resistance easily, or when a resistance is broken, it functions as a support in most cases. This is also easily understood if we approach the issue from the perspective of the minds of market participants. So, Aunt Mary spotted a pivot on the chart from where the stock price had begun to rise several times, so she bought the stock at this magical level. This time, however, the support will not stand the strong vendor pressure and it will break. Aunt Mary - along with the others who bought the stock at the support - notices that her stock is worth less than she bought for. In many cases, it is typical behaviour to hold onto the position and not let go until the exchange rate returns to where purchase was made. If that happens - sooner or later, it usually happens - then Aunt Mary will happily hit the sell button and leave the position "in zero." Given that this is the typical market behaviour of the masses, a previously dropped support suddenly has a strong sales presence, so the level is already resisting…

At this point, probably the solution is clear regarding how will resistance become support. This time, Aunt Mary notices a level from which the share price has so far gone down, for example over the past year. Seeing this, she exits the position, but this time the resistance is breaking through and the stock is rising further. Seeing this, Aunt Mary and her associates promise that once the price returns to where it was sold, they will buy the paper. This is how the resistance will become support.

Therefore, as a market player, we have the task of thinking in the short or long term that we can properly position ourselves at key levels such as strong support or resistance. To do this, you may want to use a number of other elements from your toolbar. If we have examined the situation in several ways and have drawn the same conclusions from each of them, then it may be worthwhile to take a position. After that, in addition to technical analysis, it is also up to trading habits, discipline and position management to see if we can finally make a profit.

RESISTANCE
SUPPORT
SUPPORT

Figure 1: Support and resistance levels on the BUX graph

CIRCULATION

Whatever exchange rate movements we notice, it is always worth looking at what is happening in the context of turnover. The more trade is associated with something, the more importance we attach to it.

It is extremely important to consider trade when passing key levels, such as supports or resistors. It is extremely important to consider trade when passing key levels, such as supports or resistors. Crossing an important technical level is considered significant if it is accompanied by increased trade. If a resistance occurs at low trade, you are less likely to get reinforced and more likely to go wrong.

CONFIRMATION AND FALSE MOVEMENTS

These false breaks and false outbreaks occur from time to time and can trick many unsuspecting investors. **Market hecticness can occur when investors panic or in low-trade, uninteresting, indifferent market moods. At first glance, the exchange rate crosses an important level, but then it reverses and moves in the opposite direction to what is expected, a false shift (false breakout or false break).** In order not to fall into the trap of false breakdowns and outbursts, it is always worth waiting for a signal to be confirmed. Level breakthroughs need to arrive at high levels of turnover, or it is usually worth waiting for another trading day to close above or below the level (breakout). Of course, the amount of time we wait for confirmation also depends on the time frame. For example, if a multi-year support falls, it may be reasonable to wait longer before a break is significant.

Figure 2: An outburst on the OTP graph that becomes falsified and then confirmed

false breakthrough (fals kitörés)	reinforced breakthroughs (megerősített kitörés)
moderate turnover (mérsékelt forgalom)	significant turnover (jelentős forgalom)

RETURN TEST

In addition to the above-mentioned false breaks a common market phenomenon is the so-called return test. **After crossing important exchange rates, it is not uncommon for an initial move to return to the crossed level with a short-term movement before continuing in the direction of the original move.**

The phenomenon and its frequency can be explained by the fact that there are short- and long-term players in the market. A short-term trader speculating on breaking an important resistance level will realize his gains relatively soon after the resistance breaks, as that momentum was the reason, he picked up the position. The idea worked, in which case all disciplined short-term traders close the position and realize profits. This will temporarily overwhelm the supply side, which will result in the exchange rate touching again, retesting the recently broken level. In such cases, the previously resisting exchange rate is usually already supported, and by jumping upwards it can continue to rise. A back test is therefore also an excellent opportunity to enter into a buying position with a favourable risk-return ratio.

Chart 3: A typical return test on a Richter exchange rate after a break in a rate

back test starts, breakthrough, jumping upward

VOLATILITY

There are factors that reduce the efficiency or accuracy of technical analysis. It is typical of the cyclical nature of stock markets that long-term upturns are followed by rapid but sharp price drops. When stock market indices go up, we call it the bull market, a bear market that is largely hit by panic. **The bull market is characterized, for many years, relatively evenly, with moderate adjustments, exchange rates are rising higher. In this case, volatility is low, which means that there are no major fluctuations, and even strong market reactions only occasionally shake the mood.** In such a market environment and mood, target levels, correction levels can be more precisely defined, uncertainty is less, therefore the method of technical analysis can be used more efficiently. However, it is inevitable that happy stock market peacetime times will be replaced by periods when prices cannot materially rise higher and investors start to escape risky equity investments. In these cases, extreme reactions have a profoundly distorting effect on the graphs, especially in the shorter term. Taking this into account is paramount if we are to enter the market through technical analysis at a time when the market floods with uncertainty, fear and volatility.

Chart 4: The appearance of volatility is plotted on the S&P US stock index chart

Low volatility time period (Alacsony volatilitású időszak)	**High volatility time period (Magas volatilitású időszak)**

TECHNICAL ANALYSIS INSTRUMENTS

TYPES OF GRAPHIC DRAWING

BAR GRAPH

The easiest way to display exchange rate graphs is to use a line graph. But its simplicity also means that it contains minimal information about the capital market product depicted. A one-day resolution chart simply consists of connecting the closing prices of each day to form the chart. This gives us a very basic picture of the product under investigation, for example to identify trends, but the details and subtleties so much appreciated and observed by the technical analysis are lost. Therefore, it can be stated that the line graph, apart from giving a simple overview of the movement of the exchange rate, is not suitable for analysing an individual product with the help of technical analysis. However, the simplicity of the depiction becomes useful when we want to compare the performance of multiple products on a graph.

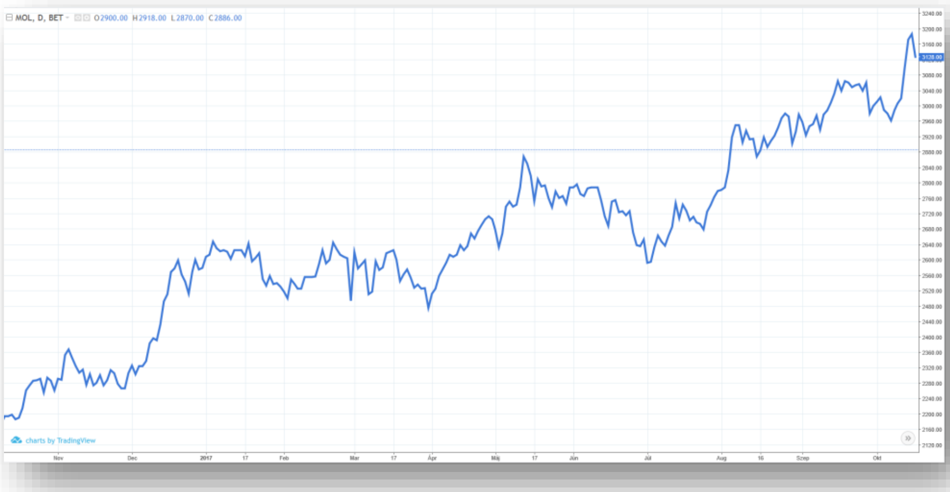


Figure 5: Line chart of MOL stock

OHLC GRAPHICON (BAR CHART)

The OHLC graph is named after the English letters open, high, low and close. This makes it easy to deduce what are the most important building blocks of this type of graph. **An OHLC graph is made up of vertical lines arranged side by side, called candles. In the case of a one-day resolution chart, a candle represents one day of the movement of a given product. A given candle shows four critical information for the chart examiner, the opening, closing, highs and lows for that day. On the left side of the candle we find the opening price and on the right side the closing price, which is indicated by a small horizontal line. The peak of the candle shows the highest value of a given period (for example, a day), while the bottom of the candle shows the lowest value of the given day.**

Figure 6: OHLC chart of Richter shares

Why is this extra information useful, for example, in comparison to a line graph? Based on the different values regarding a candle, shown by the OHLC graph we get a picture about the examined product, how the ratio of demand to supply developed during the time period (for example, on a specific day) and we can infer, for example, how strong the upward momentum in a rising period is, or you may notice that momentum is decreasing. For a technical analyst, this is so important information, which form the basis for further chart-based speculation.

JAPANESE CANDLESTICK CHART

Chart 7: Japanese candlestick chart of Magyar Telekom stock

Undoubtedly, the most widespread and popular charting method is the Japanese candlestick chart, at least as far as technical analysis of stock prices is concerned. **Like the classic OHLC chart, each candle is composed of opening, closing, highs and lows exchange rates, however, the candles have a "body" here, which makes it easier to interpret at first glance.** The body of candles also makes it easier for a single viewer to identify different formations, whose appearance often has a strong signal value to the technical analyst. Overall, though, OHLC and Japanese candlestick charts are both suitable to provide the necessary information, the choice between them is more a matter of habit or preference.

CANDLE INFORMATION

The essence of the technical analysis is to look for exchange rate movements and patterns that have been experienced in the past, which can be used to infer future exchange rate movements. Such patterns can also develop from candles, so their appearance should be

monitored. All that appears on the graph is a kind of imprint of market participants' fears, expectations, greed, in other words, their emotions. This is no different with the candle formations. The shrinkage of the candle bodies, the gap between the individual candles and the lack of wicks all reflect the market's feelings for the exchange rate and thus indicate how strong a moment is.

THE “LONELY” CANDLES

A single candle can be enough for one indication in many cases it deserves so much attention. As with any other technical signalling, here too is extremely important, to confirm expectations suggested by the appearing candle.

Doji candles are often found at the end of a rising or weakening wave, they typically predict a trend reversal, a change in the ratio of supply and demand, buyers and sellers. **The most important feature of a doji candle is that it has no body, meaning that the opening and closing prices are the same or very close to each other.**

A long legged doji marks the balance of buyers and sellers and can also be found at the end of rising and weakening waves. With its emergence, there is a possibility that a steady upward or downward reversal may occur. The long legged doji signal is really strong if it is followed by a confirmation candle, which confirms the suspicion of a turn. **The appearance of a gravestone (tombstone) doji at the end of ascending periods indicates that the moment is nearing its end.** The long upper wick of this type **of doji indicates that, although it was able to rise in price over a given period of time, the sellers' pressure eventually surpassed and failed to close above where we started.** The opposite is **the dragonfly doji, which may signal the end of a fall in the exchange rate. As opposed to the tombstone dojo, here the victory of the seller page is read from the candle.**

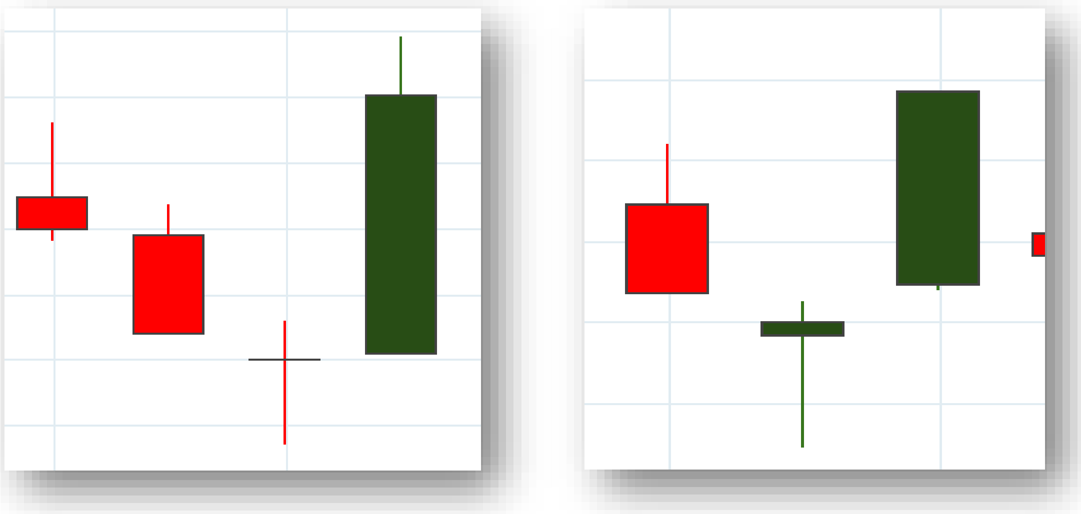


Figure 8: Long legged doji and dragonfly doji candle

A hammer candle is a typical and common indicator that predicts a fall in the exchange rate. It is paired with the shooting star, which assumes a turn, but with rising exchange rates movement. Here, the wicks of the candles also indicate that the power relation of the buyer and the seller have changed. For a hammer candle, the addition of a green candle body indicates that it has not only been able to return to the opening value but has also exceeded it. On the contrary, with the Shooting Star, after setting a new peak, the momentum runs out, then the price closes deeper, to get the red candle body.

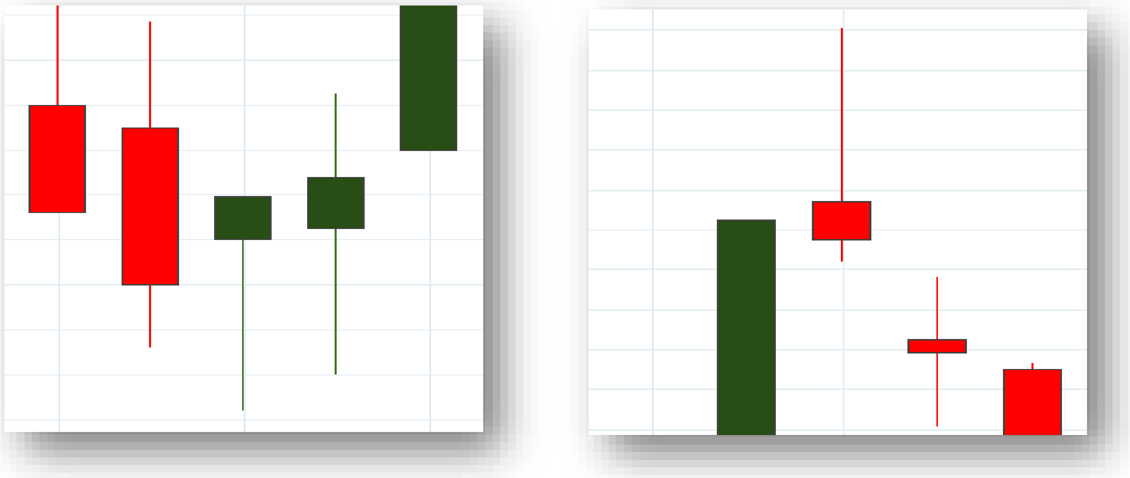


Figure 9: Hammer candle and shooting star candle

Based on the types of candles examined so far, the wicks of the candles can in most cases be said that a long upper wick means client repression, while a long lower wick indicates the sellers' backdrop (this rule of thumb can change the colour of the candle, as we experienced it regarding hanging man and inverted hammer candles).

Often, we can also see the lack of wicks on each candle, which also carries an important message. **Marubozu candles typically have only a body. If the candle is green, it shows a strong upward momentum for the time period being examined, as the exchange rate has not fallen deeper than the opening price and the candle has been closed at its maximum.**

If the colour of the candle is red, the opposite is true, so there is a strong downward momentum.

Figure 10: Bearish marubozu candle

MULTIPLE CANDLE FORMATIONS

The one-member candle types above are most commonly seen on a graph, however, the technical analysis toolkit also consists of candle formations consisting of different combinations of these. There are dozens of these in a chartist's toolbar the most common and most reliable shapes are worth knowing first of all.

The three white soldiers represent a strong change in direction following a currency fall. Three consecutive marubozu candles form this formation, showing a drastic gain on the buy side. Its counterpart in the opposite direction is three black ravens, which means three red marubozu candles according to the above, after a price increase.

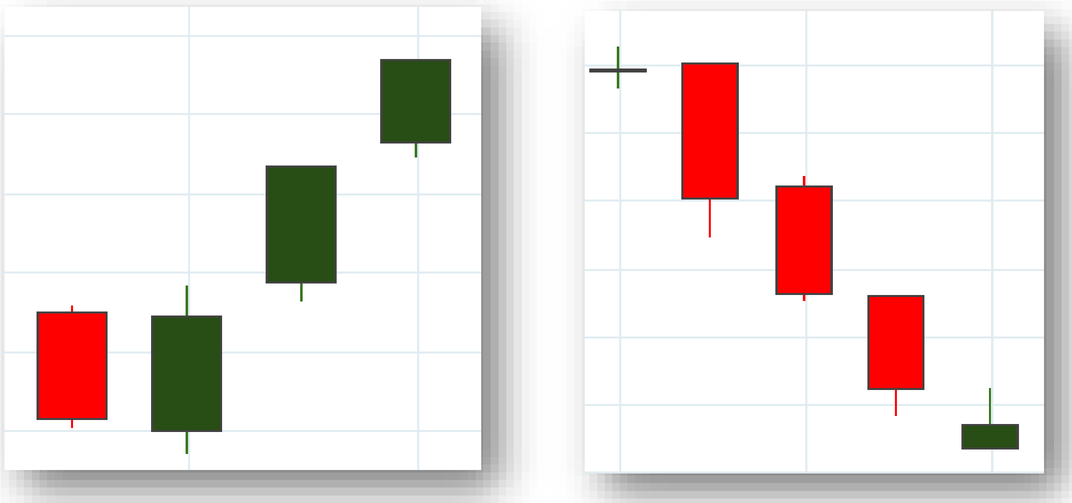


Figure 11: Three white soldiers and three black raven candle shapes

Engulfing candle shapes are a typical trend reversal signal. In an upward trend, the red candle that completely encapsulates the body of the last green candle forms this formation, clearly signalling the loss of momentum and buying power that had previously raised the exchange rate. Hugging candle shapes can also occur at the end of weakening trends if it covers the last red candle's the body, hugging by the next green candle in the row.

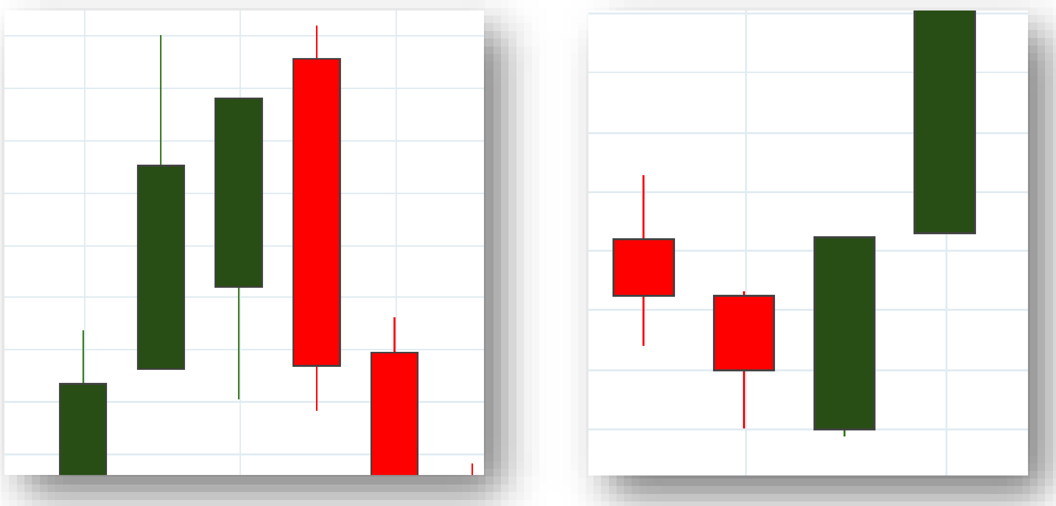


Figure 12: Bearish and bullish hugging candle shapes

Less common than the above, the **morning star and evening star are an easily recognizable and reliable pair of shapes. The essence of both formations is the same, but the former is an upward signal, while the latter is likely to be a reversal after an ascent. We get the whole shape from three candles, after a trend candle, we get another candle, slit upwards, which is already a candle pointing up to the trend, finally arrives as a quasi-reinforcement after another niche, a candle, opposite coloured with the previous direction**. Of the three, the middle candle is of key importance, signalling the uncertainty that arises, but equally significant is the reinforcement that completes the shape!

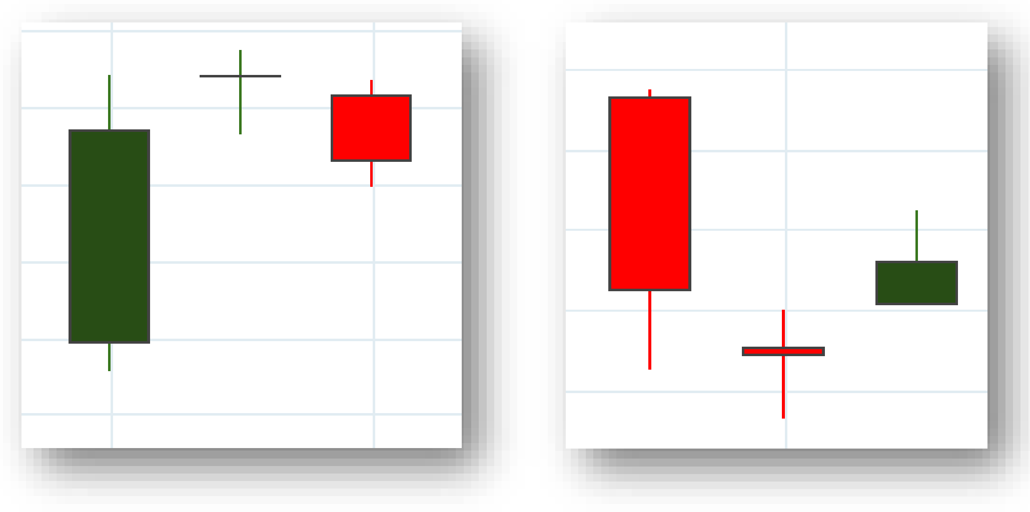


Figure 13: Evening star and morning star candle shapes

The dark cloud cover candle shape is a strong turn signal, which shows a sharp downward turn at the end of rising periods, a sudden surge of sellers over the buyer side. The essence of the shape is the higher opening price following the rising green candle, the subsequent fall, and the closing below the centre of the body of the first candle. The candles convey the message that while the opening seemed to have momentum for further upside, a sudden downward turn drove the exchange rate well below its previous closing price. If the round candle has short wicks, even stronger sales pressure from the shape can be seen. **The reflection of the dark cloud cover is the piercing candle formation, which shows an increasing buying intention, present on the graph.**

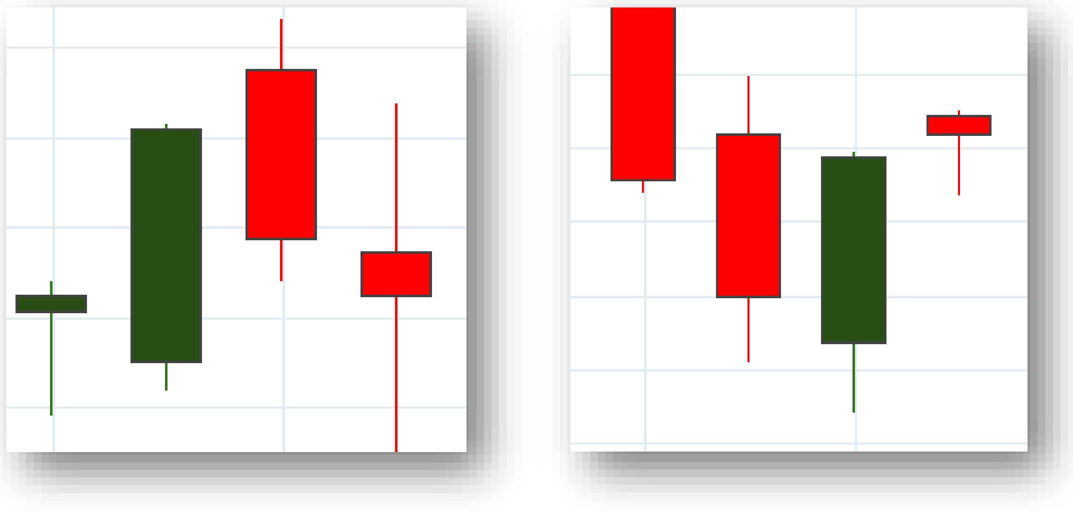


Figure 14: Dark cloud cover and piercing candle shapes

The **harami** is a candle formation, that occurs many times, but requires a lot of confirmation. Turning up is described as a bullish harami, and turning down is a bearish harami, indicating the expected direction to continue. In Hungarian, it is most commonly referred to as an internal candle, which better suggests the essence of the formation. **After a trend direction candle, we get an anti-trend candle whose body is completely covered by** the previous candle. In this way, it is actually the opposite of the hugging candle shape.

Figure 15: Bearish and bullish harami candle shapes

In any case, when it comes to trading based on technical analysis, a position can succeed in a high percentage, if we look at several factors at once using our toolbar. It is worth considering the above candle information when they appear on a graph as large red exclamation marks that alert us that at the moment it may be worth to continue the examination of the chart. So just because of the appearance of a candle shape, it is not worth going into a position, we shall look for additional affirmation signs to support our vision!

SHAPES

Like the candle information discussed above, the various shapes drawn by the movement in the exchange rate can be used to predict changes in the ratio of demand –supply, or to

help us determine entry and exit points in our trading or investment activities. The property of the latter goes beyond the functionality of the candle formations, since we can infer not only the expected direction of the exchange rate, but also how long the exchange rate may rise or fall if the technical idea is realized, this is called the target price. Another important difference is that while the candle formations are indicators that can only be used in the short term, the time span also plays an important role in the shapes. In fact, it is of paramount importance how long it takes to complete a shape. The longer it takes to get outlined, the more reliable it is, and the better to base your idea on it.

Typically, shapes are divided into two groups, called trend enhancers or trend reversers. However, this categorization is not eternal, and the interpretation may vary depending on, for example, at what stage of the trend the shape appears.

CHANNEL

One of the simplest shapes is the channel, depending on the direction of the trend, it can be ascending or descending. One branch of the funnel is the trend line itself, and the other is a rising trend, with rising peaks, and, in a downward trend, the so-called channel line obtained by connecting the soles. On the one hand, the channel is able to show the power or fatigue of the trend, on the other hand, it helps determine how much space is available in the event of a separation from the trend line, before the exchange rate falls or rises.

If the exchange rate in the channel is no longer able to reach the channel after it has separated from the trend line, it may indicate a weakening of the trend. The more the price adheres to the trend line, the higher the chance that the price will deviate from the shape and the trend line falls. This is obviously a movement against the trend of the channel. In the event that the exchange rate can break through the channel line, it is a very strong confirmation of the primary trend.

Figure 16: Rising channel on MTelekom chart

Channel line (Csatornavonal)	Trend line (Trendvonal)	Sticking to trend line (Tapadás a trendvonalra)

LANE

Exchange rates do not always follow a trend. We often find that a stock or index creates a domain for itself to spend months or even years moving sideways. This is when the lane is formed. **The shape does not indicate a clear direction, but it also suggests that investors are uncertain or uninterested.** However, a move from a trading lane is definitely indicative and is likely to indicate the expected direction of the continuation.

Figure 17: Banding, lasting several years at the BUX exchange rate

FLAG

A common feature of strong ascending or descending periods is the trend-setting flag shape, which is highly likely to indicate both the direction and expected target price. The shape itself is made up of two parts. The "pole" of the flag is a strong, powerful movement in the trend. And the correction, following a trend wave, depicts the "flag". After the corrective motion is complete, we look for an outburst from the shape toward the trend, which confirms that after the adjustment the exchange rate may continue to move towards the primary trend. Once the expected move has been made, the full extent of the flag "rod" is placed at the lowest point of the flag to determine the expected target price. In simplified terms, therefore, at least the same movement of the flag's lower point can be expected as the preceding trend –directed wave was. This way of measuring the target price reflects a more aggressive approach, in the case of a more conservative habitus the distance between two parallel lines of the flag’s 'flag' can be measured at the point of eruption.

Figure 18: Flag shape at Roku exchange rate

Rod (Zászlórúd)	Flag (Lobogó)	Conservative target price (Konzervatív célár)	Aggressive target price (Agresszív célár)

RISING/DECREASING TIRANGLE

There are many occurrences of various triangle shapes, of which the ascending and descending triangle pairs may have a trend reinforcing character, especially if we find it in a context similar to the flag, as part of a strong primary trend. However, the direction is finally indicated by the direction of the triangular motion.

In the case of an ascending triangle, the upper leg is formed by a horizontal resistor, and the lower leg is the line connecting the ever-higher bases. It indicates a positive upward sentiment, that equities, which are moving in a triangular price at ever higher levels, are being bought by investors during resistance, which will result in less and less space for the exchange rate in the shape. Breaking the resistance indicates that the next trend directed upward wave may start. All we have to do to determine the target price is to measure the distance between the two furthest points of the triangle to the breakpoint.

The declining triangle must be interpreted in the same way as its ascending counterpart, only in the opposite direction.

Figure 19: Ascending triangle on OTP graph

Upper leg of triangle (A háromszög felső szára)	Lower leg of triangle (A háromszög alsó szára)	Target price (Célár)

SYMMETRIC TRIANGLE

A separate type of triangle is the symmetric triangle. While rising or falling triangles are considered primarily as trend enhancers, meanwhile, the symmetric triangle indicates the uncertainty in the exchange rate, a transitional period after which then the movement from the shape shows the direction. So while, for example, in the case of a rising triangle is more likely that the exchange rate will move up, meanwhile it is harder to predict the direction in the case of the symmetrical triangle, if only the shape is considered. For this reason, it is even more true that it is only worth taking a position after moving from the triangle.

The shape itself is formed when we find ever higher bottoms but lower peaks at a given time. By connecting these bottoms and pics, we get the two legs of the triangle. We can determine the target price to the direction of the movement, coming from the shape, by measuring the distance between the outermost points of the two arms at the point of eruption.

Figure 20: Symmetric triangle on OTP graph

Upper leg of triangle (A háromszög felső szára)	Lower leg of triangle (A háromszög alsó szára)	Target price (Célár)

HEAD SHOULDER SHAPE/REVERSE HEAD SHOULDER SHAPE

The head-shoulder shape is statistically one of the most frequently reinforced and therefore one of the most reliable formations. In most cases, it has a trend reversing effect, so the head-shoulder shape is found at the end of ascending periods, while the reverse is found at the end of declining periods.

The shape itself is from a higher peak(head) following a local peak (left shoulder) and is made up of a subsequent lower peak (right shoulder). The inverse version is just the reflection of this, a third, higher bottom coming after a lower bottom. The key moment is always the right shoulder, which indicates that the momentum of the primary trend is diminishing. We still need a neckline for the shape selling breaking through it will strengthen the shape and launch the exchange rate in the opposite direction of the primary trend. Ideally, therefore, a significant break in the neckline is the entry point. To determine the target price, we measure the distance between the neckline and the "cranium", as shown in the figure below.

Left

Figure 21: Head-shoulder shape on the DAX graph

Left shoulder (Bal váll)	Head (Fej)	Neckline (Nyakvonal)	Right shoulder (Jobb váll)	Target price (Célár)

HANDLE CUP SHAPE

Like the head-to-shoulder shape, the handle cup usually predicts trend reversal, but is less common. Another similarity is that this formation is also based on a support, the so-called neckline. **The "cup" part of the shape describes a roughly U-shaped arc exchange rate movements, and the "handle" is a swift, faint downward turning from the resistance neckline.** The latter part of the shape may also be a smaller triangle or channel. Confirmation is obtained if, after the cup's handle has been formed, the neckline falls, thus breaking the exchange rate. To calculate the target price, measure the distance between the neckline and the U-shaped bottom on the neckline. Like the head-to-shoulder shape, the handle cup can also occur in an inverted position.

Figure 22: Handle cup reverses OTP chart after economic downturn

DOUBLE PEAK/DOUBLE BOTTOM

An easily identifiable and frequently appearing shape is the double peak or vice versa, the double bottom. However, at its frequency, it is statistically one of the rarest formations getting confirmation, in about 52 percent of the cases, there is no movement in the direction projected by the shape. It follows that in the case of double bottom and double peak shapes, you should wait for confirmation, so to wait the significant displacement from the shape before you move into position.

The two shapes are made up of two peaks or bottoms coming at the same level, and a neckline. Confirmation is obtained when this neckline is broken. To determine the target price, for a double bottom, measure the distance between the neckline and the peaks to the neckline, and

regarding the double bottom, do the same in the other direction.

Figure 23: Double peak shape on OTP graph

WEDGE SHAPE

A common occurrence on both short- and long-term charts is the rising or falling wedge. In most cases, the rising wedge indicates a negative continuation, while the appearance of a falling wedge suggests a rise in exchange rates after exiting the shape.

The wedges are formed when, for example in an upward trend, the higher bottoms and peaks come one after the other, but the peaks do not rise at the same rate as the bottoms. As a result, the trading range is getting narrower and then moving away from the shape. With peaks reaching increasingly moderate heights, investors are less willing to buy, profits are also realized sooner than they were earlier in the trend. If a break is made from an ascending wedge, the maximum distance between the two legs of the wedge is measured at the breaking point to obtain a target price calculated from the shape.

In rare cases, but of course it can also happen, that the exchange rate breaks out from the shape towards the trend. This is a renewed, powerful momentum in the direction of the trend.

		Target price (Célár)
	Higher leg of the wedge (Ék felső szára)	
	Lower leg of the wedge (Ék alsó szára)	

Figure 24: Trend reinforcement wedge on the BUX graph

INDICATORS

Based on what has been discussed so far, you no longer have trouble reading graphs, identifying supports, resistances, and trends, and the most important candle formations and exchange rate forms are also known. However, this toolbar can be further expanded to give you a more accurate view of the exchange rate of a product and thus develop a trading idea with greater confidence.

MOVING AVERAGES

All technical analysis and technical-based chart players are moving averages, which are used to sum up and express the exchange rate movements of the past, this will help to contextualize the current exchange rate. We also distinguish between different types of moving averages, the two most commonly used are simple (SMA) and exponential (EMA) moving averages. The former is calculated by simple averaging, so a 50-day moving average will be plotted on a one-day resolution graph. In contrast, the exponential moving average gives more weight to data, being closer to the current time. The difference in the calculation of the two moving averages results in the fact that the exponential moving average responds faster to exchange rate movements, while the simple does it in a slower way. However, this does not mean that one is better than the other. Which one we use may depend on your personal preference, your market situation or your trading strategy.

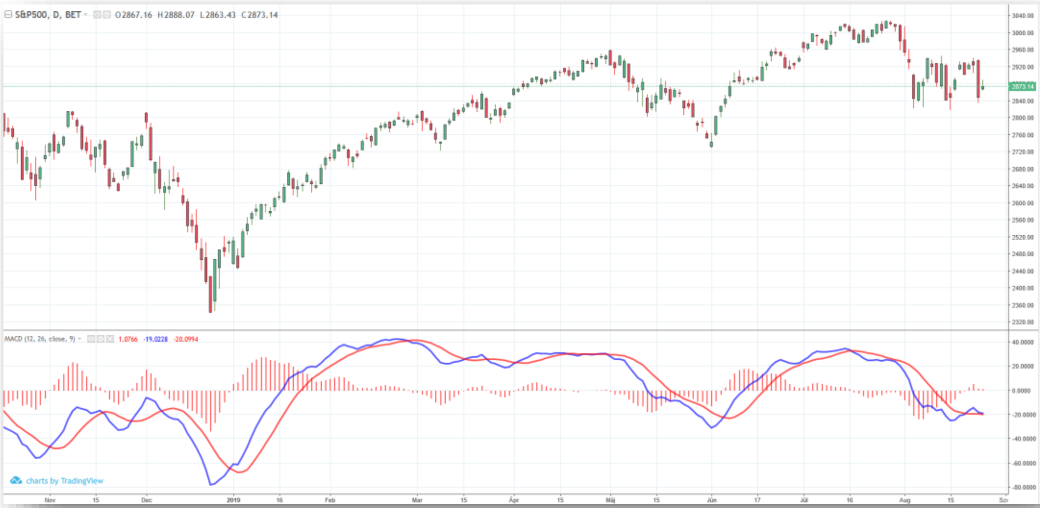
When using moving averages, we need to specify two parameters. On the one hand, from how many candles shall calculate an average the graph drawer, on the other hand, which value of the candles he should consider (this is usually always the closing value). The most popular setting is the 21, 50, 100 and 200 parametrisation. The moving average plotted on a one-day chart will give you an average closing price over the last 21, 50, 100, or 200 days. A shorter period (21 days) moving average is worth considering in the short term, the 50-day medium-term vision is most useful, while the moving averages of 100, 200 and longer are longer-term indicators. It also follows that the longer-term moving average is crossed or broken by the exchange rate, we need to give it more importance regarding the overall technical picture.

However, one moving average may not only be crossed by the exchange rate, it may happen that one moving average crosses another. Over the decades, the market has evolved to attribute the greatest importance to such crossings to the moving averages of 50 and 200 days. A phenomenon where the 50-day moving average crosses the 200-day one, moving from top to bottom, was called the death cross, and from the bottom up they are referred to as the "golden cross". The dramatic designation is no coincidence, and in the case of death cross, the general expectations that there will be a further significant fall in prices, and the opposite is true of the Golden Cross. This is true in a large percentage of cases, if for no other reason, because the announced phenomenon is being watched and responded by thousands and hundreds of thousands of investors.

So, in summary, what does a moving average help us with? Primarily by showing you that compared to a specific time in the past, how does market think e.g. about a share. If the exchange rate rises far from the 50-day moving average, we can conclude that the market has a positive view of the share, compared to the past 50 days, and we believe the trend at the latest until the price falls below this moving average. And if it comes down to it, we can reasonably infer that the market's perception of paper changed significantly over the medium term at current price levels.

21 Day SMA (21 napos SMA)		
	200 Day SMA (200 napos SMA)	Gold cross (Aranykereszt)
	50 Day SMA (50 napos SMA)	

Figure 25: Moving averages and a gold cross on the OTP chart



An indicator, based on the movement of moving averages, compared each other in the 1970s, MACD, created by Gerald Appel. It can also be used as a trend tracker or as a momentum indicator, but it is not worth interpreting this indicator in isolation without considering other aspects.

The indicator consists of three elements, a MACD line, a signal line and a histogram. We get MACD line as the difference of a short, an exponential moving average of a slightly longer period. In most cases, it is a 12-day and a 26-day moving average, their values are subtracted from each other by the graph drawer. The signal line is the 9-day exponential moving average, fitted to the MACD line. Finally, the histogram shows the difference between the two lines.

We receive a buy or sell signal in two cases on the one hand, if the MACD intersects the signal line, and, on the other hand, when the MACD intersects the zero level, which is called the centre line. A bottom-up cross is a bullish (buying) signal, while a top-down cross is a bearish (selling) signal.

The periods of the two lines can be modified as desired. Lowering the values gives you a much more agile, responsive indicator. This means that we receive signals more often, but they are less reliable. Increasing values has the opposite effect, so the indicator will move slower, which will cause us to receive the signal later, but it is more likely to be reliable. A slower MACD can work efficiently at a calmer, long-term one-way exchange rate, in a volatile market with high fluctuations, it may be worth lowering period values.

Figure 26: MACD indicator next to S & P500 graph – blue is MACD, red is signal

RSI – RELATIVE STRENGHT INDICATOR

The most widely used moment indicator is the RSI, developed by J. Welles Wilder in the 1970s. It is unsuitable for following trends, but with the help of it the turning, exhaustion

and strength of the moment can be determined effectively. The calculation principle behind the indicator compares the current price with past values. Three highlighted levels can be identified on a scale of one to one hundred. At or below the value of 30, a share is considered to be "over-sold". **As a rule of thumb, this means that the exchange rate has been under sellers' pressure for a long time and is expected to see an upward correction. The exchange rate is considered to be "overbought" to a value above 70, in which case a downward correction may be assumed after an upward trend.** The third important level is the centreline at the value of 50. In a strong uptrend, RSI can generally stay above the centreline, so if it falls below that, we can rightly suspect that the strong momentum is going to be weaker. The same can be said for strong downward trends. If the RSI has fallen below 50 for a long time and then moves away from it, it indicates an increase in the power of buying, thereby diminishing the bearish, negative momentum.

Based on the above, it may seem very easy to interpret RSI and trade based on its signals, however, in the case of this indicator it is also extremely important, so that we can interpret the current signals in context. When, in early 2015, the OTP stock price broke through the HUF 5,200 resistance after years of sideways movement, it went up for weeks so that RSI could not adjust below the oversold zone (value 70). In this situation, at such a bullish moment, we have to recognize that staying in the RSI oversold zone is not a sales signal.

Figure 27: RSI indicator next to OTP graph

FIBONACCI LEVELS

Fibonacci's famous 13th-century series has found its way also in the world of technical analysis, the so-called Fibonacci levels can be used to determine key exchange rates on a graph. The Fibonacci series itself is structured such, that the new element of the series is always the sum of the previous two elements: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, etc.…The given element of the sequence is approximately by 61.8 percent, or 1.618 times more than the one before it. This ratio was called by Fibonacci as ‘gold engraving’, and in addition to mathematics, it appears in nature as well as in the arts.

In the technical analysis, we use the following percentages to measure the expected levels of adjustment for some exchange rate movements:23,6%, 38,2%, 50%, 61,8%, 78,6%. The 50 percent Fibonacci level is the odd one out in the list, because it does not fit in the line, but given that the exchange rate often corrects particularly half of certain movements, this 50% level is also included in the indicator. The 78.6% level is the root of 61.8 and is thus connected to the line.

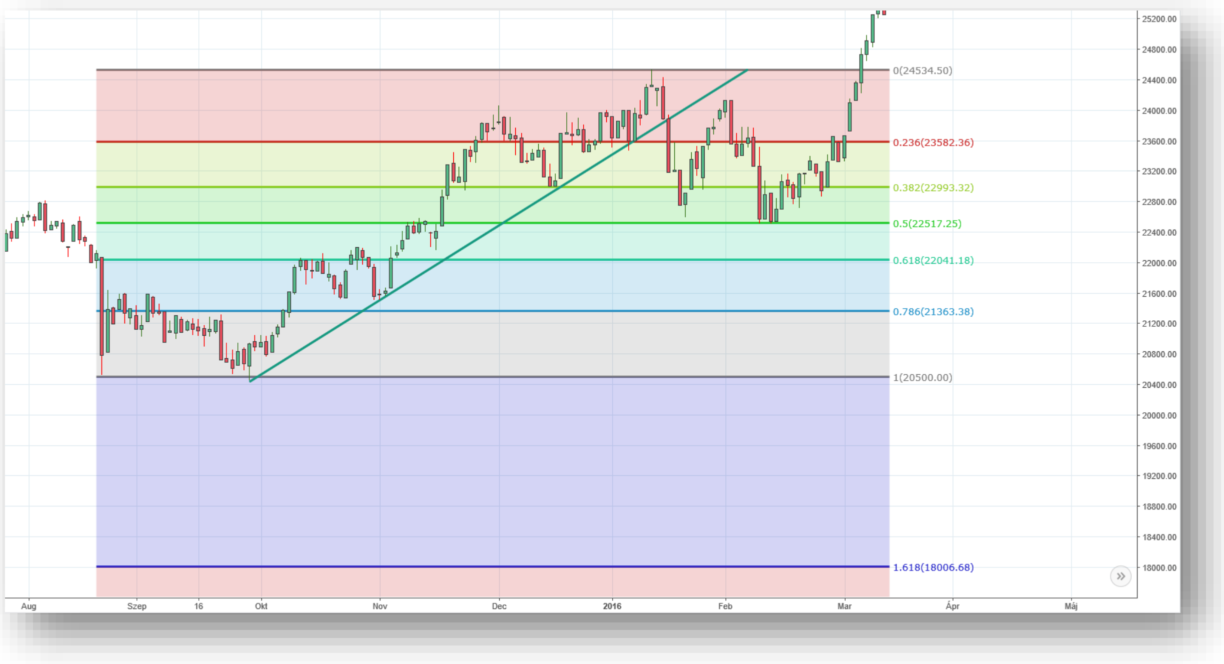
We get the 23.6% rate, if we divide one element of the Fibonacci sequence with another, which is three places above it. At 38.2% we do the same thing using an item, which is higher by two. The 61.8% ratio is the golden section itself, i.e. the distance between elements of the series.

Determination of correction levels with Fibonacci levels:

For example, to obtain Fibonacci levels at the end of an ascending period, all you have to do is to use the graph drawer to select the lowest and highest points of the ascending period. If you did it, the graph plotted the levels to look out for during the correction. The 23.6% correction level is the first in the line, which is the least significant. Adjustments are much more common at the 38.2, 50 and 61.8 percent levels. Movement correction of 78.6% is considered to be deeper than ideal, less common in healthy trends.

The chart below shows that the BUX index was able to rise from 20,500 points to 24,530 points before breaking the medium-term trend and starting correction. By plotting Fibonacci levels, you can see that it had corrected 50% of this range before it could continue ascent.

It is important to note that whenever we use technical analysis, we must consider market conditions. As with most tools used in technical analysis, Fibonacci levels are the safest to use under calm market conditions. In a highly volatile market with big swings, investors are overreacting in both directions in this case it is not surprising that exchange rate movements do not match Fibonacci levels, or other supports or resistances determined by other methods. These



distortions are always expected during turbulent market periods.

Figure 28: Selected Fibonacci correction levels on the BUX exchange rate graph

Determination of a target level after an outbreak with Fibonacci levels:

Functionality of Fibonacci levels does not end with correction levels. The indicator is also suitable for trying to determine, after a breakthrough in an important resistance level, what the expected target level will be until the exchange rate rises after the breakout. The most commonly used Fibonacci levels for this purpose are: 161.8%, 261.8%, 361.8% and 423.6%. Of these, the first level, 161.8%, is the most reliable, target level, most likely to be met.

For example, to get Fibonacci extensions after a resistance break, drag the Fibonacci levels from the top of the preceding rising wave to the lowest point of the wave (as opposed to determining correction levels). In the chart below, the OTP has strengthened from a minimum of HUF 7,720 to a resistance of HUF 9,400. The 61.8% Fibonacci extension drawn here points to approximately HUF 10,420, which the exchange rate reached within two months and then turned down for another correction. This example also shows that the designated target level often becomes resistance, because many players in the market are using the Fibonacci extension to determine an exit point from a previously taken position.

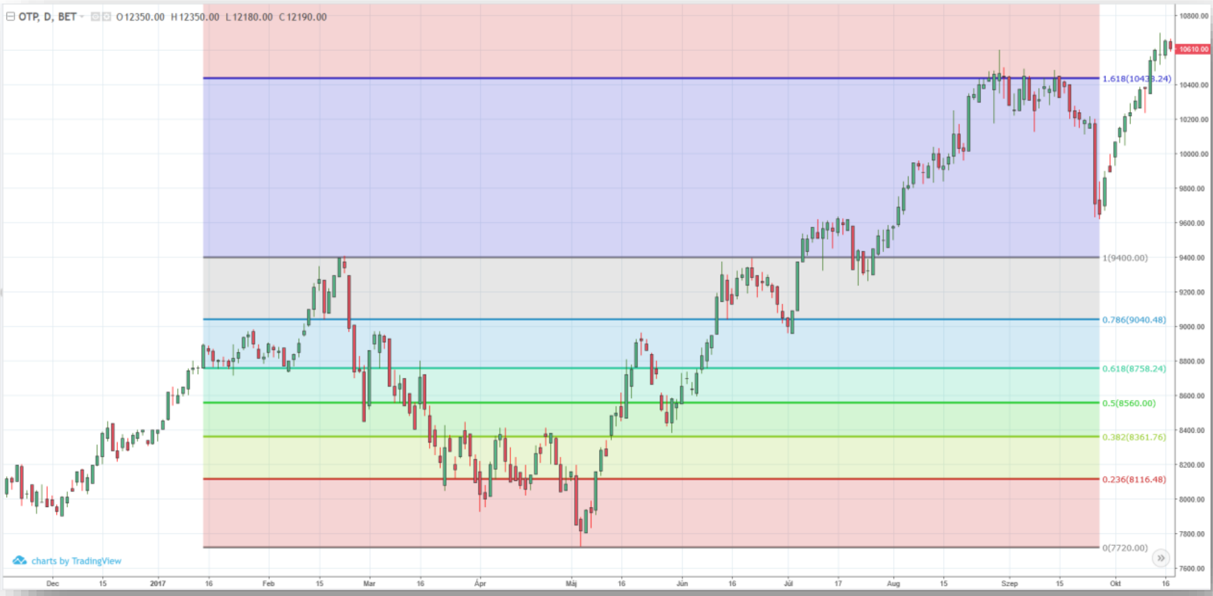


Figure 29: Target level defined by Fibonacci extension on OTP graph after an outbreak

FINAL THOUGHTS ON TECHNICAL ANALYSIS

Technical analysis as a trading aid in the right hands is worth a lot. However, the technical tools discussed here are just a cut out slice of what constitute now countless indicators, shapes and methods. However, technical analysis is now fully applicable with the amount of information provided here, but in addition to material knowledge, experience is of paramount importance. In the marketplace, we need to meet technical markers several times face-to-face in order to recognize them, put them into context, and then sell them correctly. Although the science of technical analysis may seem static, it actually becomes effective if it is always adapted to the current market sentiment and within it to the particular traded instrument. Always keep this in mind when approaching a trading opportunity with a technical approach.

FUNDAMENTAL ANALYSIS OF SHARES

WHAT IS FUNDAMENTAL ANALYSIS?

Compared to technical analysis, fundamental analysis of companies basically requires a different set of tools and knowledge. While it is irrelevant for a chartist, in what sector, industry operates the company, the graph of which he/she is looking, in the meantime, a fundamentalist analyst would like to get a comprehensive view of the industry as a whole, and then investigate the selected company compared to other actors within its framework. **Fundamental analysis has an explicit purpose: to determine the fair value of the company, thus, the value of the company stock at the time of the investigation, based on analyst calculations (and to some extent individual judgment), and how this value will change in the future, based on the data we know today.** Give special importance to the second half of the former definition whereas it is a fundamental feature of the stock market that the shares of companies listed there are predominantly priced, based on future expectations, under no circumstances can this factor be left out of the equation. Thus, the fundamental analyst seeks to determine whether the company under review is undervalued or overvalued in the past, present and future. In addition to the data and forecasts in company reports, accounts, you need to consider macroeconomic factors, which may influence the performance of the company (e.g. in case of strong export exposure, the development of the exchange rate of a relevant currency pair) besides the microeconomic factors.

WHAT DOES A COMPANY SUCCESSFUL?

It is in the best interest of the shareholders of a company, that the company is able to create value permanently, consistently. This requires **answering three basic questions** from management. On the one hand, it is necessary to determine **what the company is selling**, be it a product or a service. In addition, the target audience is also a key issue, **to whom the company is selling**. The third key question is **how it does** all this.

Based on the above basic questions, the basic activity of the company is outlined, with the aim of producing profit and gain. Of course, few businesses can be profitable immediately. Young companies often “burn money”, but if they do it with investments that help grow their business, then it can serve them well in the long run to make it profitable later.

In relation to the above, but also in the mature stages of a company, **how the company finances itself is an important issue.** Different businesses may have different capital requirements, but most of the time the company needs to get source from somewhere, this **can be from external or internal sources.**

An external source may be, for example, a bank loan or a bond issue. In the case of a loan, the company undertakes a repayment obligation (including interest). In the case of a share issue, no such obligation arises, however part of the company is taken over by new owners, which is not always the intention of the management. In addition, stock market listing also implies a number of information obligations for the issuer. If under these conditions the management does not want to raise funds listing, it also has the option of over the counter capital increase.

Thus, based on the above, we can see that external funding can be an obligation and a burden that the company does not necessarily want to take on if it can finance it from internal sources as well. Such an internal source could be operating cash flow, generated by the activity or selling certain assets of the company.

In addition to activity and **financing, image is an important factor in the success of a company.** For the fundamental analyst, although this is more difficult to quantify, it is nevertheless a significant component of a company's composition. Take the example of a stock market company that, over the years or even decades, has been able to build a strong brand image with which it has become an indispensable player in the industry. If the business goes wrong in the meantime, it is in trouble, just the brand name itself still represents significant value, so that is the built-up brand for which other companies would be willing to pay a significant premium in an acquisition in a certain situation.

An important element of success in corporate life also **is the existence of relationship capital.** Like a corporate image, it is not as easy to measure as the profit from core business. With the help of relationship capital, established cooperation, partnerships go through the life of a company, providing new business opportunities from time to time.

The cash flow from the activity, the sources of funding, the value represented by the image created and the relationship capital acquired are the primary resources, which management needs to organize and utilize with sufficient efficiency to serve the growth of the company. For listed companies, the market will judge the extent to which this has been achieved.

QUALITATIVE AND QUANTITATIVE FUNDAMENTAL FACTORS

The fundamentals of a company can be qualitative or quantitative. Quantitative factors can be easily quantified and measured. These are basically the "dry" data that the company communicates to the public and the various indicators that can be calculated from it. Quantitative values include income numbers, company balance sheet items, income statement, cash flow statement, etc.…Fundamental analysis also uses a number of indicators that can be classified as quantitative factors, as earnings per share (EPS), the P / E ratio comparing stock price to earnings or return on equity (ROE). All in all, quantitative fundamentals are intended to show the financial position and profitability of a company.

Qualitative factors are more difficult to express in the language of numbers, such as the business plan or management of a business. Subjectivity can also play a greater role in the evaluation of these elements, since two analysts may judge management competence differently.

There are many ways to determine fair value, but how do we decide if it is worth buying a stock once we have determined the fair value? What is the level of return at which an investment in a particular stock is justified?

CURRENT VALUE CALCULATION

In order to get an answer to the above question, we need to use the present value calculation. **The present value shows how much a future cash flow is worth today, at the moment of calculation**. To get this value, we first need the **amount of future cash flow**, be it from dividend payments or exchange gains. When considering a potential equity investment, we can use fundamental analysis to determine the extent of this future cash flow. If we determined that the preferred stock, which is currently available for purchase at the market for HUF 100, will reach HUF 126 in two years, then this HUF 126 per share value is the **future value** (FV). The **time factor** is also an important one, in this example we calculate over a period of two years. Finally, we need a so-called discount rate, which is used to discount the future price of HUF 126 to today's value. This is a return on an alternative investment that we can compare with the stock investment we are considering. In a basic case, it might be a good idea to consider the current risk-free return as a discount factor, because this is the return we would definitely get if we were to put our money in for interest. In our example, let this risk-free rate be 8% for one year and interest once a year (in the 2019 yield environment, this would be considered a very attractive risk-free rate yield). The formula for calculating the present value consists of these three parts and looks like this:

$$PV = \frac{FV}{(1+r)^t}$$

According to the example, in the language of numbers this means:

$$PV = \frac{126}{(1+0{,}08)^2}$$

The present value of the future cash amount of HUF 126 per share is HUF 108.02. Based on the present value calculation alone, our investment can be viewed positively over a two-year period at a stock price of HUF 100. An investment in a risk-free government bond would thus yield a total return of 16.65% over two years in comparison with 26 percent return on equity. The narrow 10% difference between the two also includes the equity risk premium, which we expect because we have chosen a much riskier investment than government bonds.

The present value calculation can, of course, be complicated, for example, by discounting a variable interest rate product, but knowing the basic application of the method, detailed above, is essential if you are to consider a potential investment.

BASIC TERMS

RESULT

Listed companies are required to disclose the results of their business from time to time. In major markets, this means that companies report quarterly to their shareholders and interested audiences**. This is when it becomes clear what the company was able to accomplish during the reporting period, to what extent it was able to grow, and whether it was able to generate profit or earning.**

Quarterly reports are often followed by violent reactions at the price of the papers involved. The benchmark is primarily based on analyst expectations, management forecasts and the company's performance in prior periods. If a company can show stronger numbers than these during the reporting season, then appreciation in the exchange rate is expected, since it has achieved better than expected performance. Accordingly, underperformance can also trigger a strong reaction, but in a negative direction.

The results of a company can be expressed in many forms. **In the case of EPS (Earnings per Share), after-tax profit is divided by the number of shares in the market to determine the earnings per share,** that is, how much profit per share was made. The company's own shares are not counted by EPS, so if a company starts buying back shares, it can artificially increase that value. Many indicators used in fundamental analysis are also based on the result (e.g. P / E rate) and will be discussed later.

GROWTH VS. DIVIDEND

When an investor gives in to buying a stock, he does so in the hope of earning a return, in addition get a return, exceeding the risk-free return, considering investing in a risky product. **In the case of equities, this yield can typically be realized in two main ways.** On the one hand, in the form of **dividends** paid by the issuer to its shareholders, on the other hand, in the event of a **rise in the price of shares**, in the form of a **gain**.

A company becomes a classic dividend payer at a more mature stage in its life, when its growth potential is already modest but it has a solid cash-generating capacity, so it can pay out the cash, generated by its business to its shareholders. These stocks are generally characterized by lower volatility of their exchange rates, there are no big swings in them, thus reducing the risk embedded in exchange rate movements. More importantly, we shall buy securities from issuers that have a stable cash-generating capacity even in periods of recession. The advantage of a well-composed dividend payer portfolio is that it provides us with a predictable cash flow at regular intervals.

A different approach is needed if we want to replenish our portfolio with stocks those with significant growth potential and are at an earlier stage in their lives. Most of these companies do not pay dividends or, if they do, they have negligible dividend yields. Instead, the free cash generated (if any) is reinvested to further expand activity and grow organically or even through acquisitions. Growth-based equities do not represent a continuous, predictable cash flow for us, in exchange for higher yields in the form of exchange gains.

A company that has no growth potential may also hold back dividend payments. For investors, this is not an attractive phenomenon and management needs a compelling reason if they just want to "sit on the money" and do not want to reinvest their free cash from activity in order to grow or pay dividends.

CASH FLOW

Cash flow statement is a critical component of a company's financial statements. By definition, **cash flow is the net flow of cash and cash equivalents in the course of an entity's activities.** If cash flow can be positive for the long term, it shows investors that the company can create value.

A company has operating cash flow, investment cash flow and financing cash flow. Operating cash flow is the cash flow from operating activities. This shows how effectively the core business of the company can generate money, that is why in most cases this is the most important part of a cash flow statement for an analyst. The operating cash flow of a well-functioning company is reassuring when it does not show significant fluctuations but demonstrates trendy, firm-footed performance.

Investment cash flow provides information about the cash flow associated with assets invested by the company. Unlike operating cash flow, fluctuations in values are not necessarily a cause for concern in this category in fact, negative cash flow from investing activities may also be justified if, for example, an active acquisition is typical for a particular period.

The third important category of cash flow statement is financing cash flow, which gives an insight into the company's capital structure. Incoming financing cash flow for example is the one coming from the issue of shares, and cash flow from bond issues or amounts originated from borrowing. In contrast, for example the dividend paid, repayment of interest paid to policyholders or instalments of loans must have a negative sign.

INDICATIVE NUMBERS

The indices used in fundamental analysis help both the analyst and the reader of the analysis to assess how the market is pricing a company stock. The different indicators can highlight different areas of performance of the company under investigation be it profit, revenue, or return on equity, but we can also compare pricing with the value of all the assets in the business book of the enterprise.

Which indicators we rely on or place more emphasis on depends on the industry and sector in which the company operates. In addition, it is important to consider at which stage of the development of the selected company is. For a younger company, being in its growth phase, it is worth using different metrics than in case of a mature company with stable cash flow and profitability.

P/E RATE

The most frequently cited indicator is the P / E rate, it is an excellent point of reference in all industries and is universally applicable. Using the P / E ratio, we compare the company's current market price to earnings per share, so we examine that compared to what have been achieved, where the market prices the stock. **The higher this number, the more optimistic the market is about the future of the company.** That means regarding companies with high growth potential we can find high P / E rates, technology companies in the growth path, for example, tend to run at high P / E rates, because the market is already pricing them with expectations for the future.

There are two main forms of P / E ratios. By default, the indicator compares the past performance with the exchange rate, but in the case of the above-mentioned companies which are in the growth phase the so-called **forward P / E rate** is also often applicable. This is **not based on past performance, but on expected future performance calculated by management and analysts.** For this reason, it is also possible for a company to close a previous financial year with a loss but with a positive forward P / E, if expectations for the next financial year are already profitable.

In the second half of 2019, the S&P 500 index, which includes the 500 largest US companies, has an average P / E of 22.37. This is moderately high, but it is dwarfed by the average P / E of 123 in 2009.

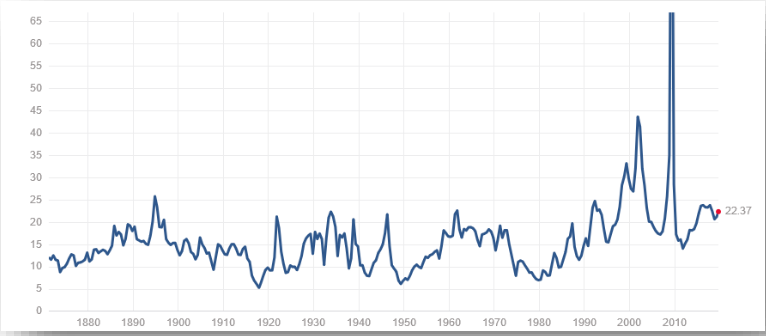


Figure 30: Average P / E of companies that make up the S&P 500 index. Source: www.multpl.com

P/S RATE

While at the P / E rate we compared the earnings of the company with the stock price, **in the case of the P / S rate we can estimate the price relative to the revenue.** Thus, the P / S value is obtained **by dividing the share price by the earnings per share.** Typically, analysts expect revenue for the past twelve months, or more rarely, for the preceding financial year. Like the P / E rate, here it is also possible to calculate a forward value, then we have to count on the revenue we have based on forecasts.

The P / S ratio is a useful indicator for companies that are not yet profitable but want to compare stock pricing to something. Of course, there is no guarantee that a company will ever be able to make a profit in the future. Also, for P / S, it is very important to differentiate between companies in different industries, since a car manufacturer will not be able to make as much profit as a streaming service provider. On paper, we should also be aware of companies in an industry if P / S is not applicable, a good example of which is Tesla. US automotive companies typically run at a single P / S rate, while Tesla approached the double one in September 2019. Based on this, the appropriate conclusion is not necessarily that Tesla is massively, five to ten times overpriced compared to its competitors, but that the company is not priced by the market as a car manufacturer, but rather as a technology company. In addition, Tesla is, of course, at a different stage in its life in 2019, than Ford or General Motors are.

Figure 31: Average P / S of companies that make up the S&P 500 index. Source: www.multpl.com

EBITDA AND EV/EBITDA

EBITDA is a measure of the profitability of a company. The name corresponds to the English acronym Earnings Before Interest, Taxes, Depreciation and Amortization. **Thus, EBITDA is the profit achieved by the company before deduction of interest paid, tax payable and before depreciation.** So, we can get an idea of how effectively a company can profit from its activities. For example, its application can be very useful if you want to compare the profitability of several companies in an industry with different capital structures. However, it is not suitable for providing a comprehensive picture of a company's financial position, as it does not reveal, for example, whether a firm is struggling with let us say, debt-threatening solvency. In conclusion, therefore, EBITDA is particularly well suited to assess profitability, but it omits important risks from the equation, so it is worth using a number of other profitability metrics.

With EBITDA we can use another popular indicator, the EV / EBITDA. The first element of the metric corresponds to the Enterprise Value. **The value of the company itself, total market capitalization with current and non-current liabilities, but without liquid funds.** The practical benefits of enterprise value, for example, arise when a company is acquired and can be used to determine the purchase price.

The sum of the two values shows the EV / EBITDA indicator, which as the P / E rate, measures profitability. An important difference, however, is that the former does not count on capital investments (Capex). Therefore, for companies where Capex is a significant business entity, the use of EV / EBITDA in itself may be misleading (e.g. telecommunication companies). It is therefore worth considering the P / E and EV / EBITDA ratios together. If both show a lower value than the estimated fair value, then it can be concluded with greater certainty that the stock is trading at a discounted price and is therefore a good investment.

FREE CASH FLOW AND P/FCF RATE

The free cash flow of a company is the cash that remains available for use when deducting the value of capital investments from operating cash flow. In many cases, free cash flow provides a more accurate picture of a company's profitability than after-tax profit. In the case of less capital intensive companies, after-tax profit and free cash flow will show similar values, there will not be such a striking difference. In **contrast, in capital-intensive companies**, where hundreds of millions of dollars of investment are needed, **free cash flow is often significantly different from after-tax profit**, much lower.

Free cash flow is also greatly influenced by what stage of a company's life cycle is. If the focus is still on growth, we will not find consistently increasing free cash flow, since the company will reinvest all available money into the business. At a mature stage in their lives, companies are much more likely to generate free cash flow and, for example, can continue to deal with dividends. These are the two primary uses regarding the extra money produced. Investors usually expect the management of a company to either pay dividends, or use it for growth purposes, from the free cash flow generated, or a mixture of the two.

In the fundamental analysis, we can also compare the free cash flow with the stock price, which is the P / FCF indicator. To get this value, you have to divide the share price by the free cash flow per share. As with P / E or EV / EBITDA, low values may indicate discount pricing.

ROE AND ROA INDICATORS

Return on equity (ROE) is nothing but proportionate return on equity, that is, it shows how much return a company can make relative to its equity and how effectively it can use its equity to generate a return. To obtain this value, we must divide the after-tax profit of the company with the equity. Equity is the assets of the company minus the value of the liabilities.

What is the expected return on equity for a company or what is considered outstanding is primarily determined by the industry in which the company operates. For example, regional banks typically generate a return on equity of around 10 percent, in the utilities sector, we typically see an average below 10 percent, while technology companies can show ROE of 20 percent or more.

It is obviously not advisable to measure it with a return on equity if the company has made a loss or has negative equity. It is also important to look at the reason why we find a sudden increase in ROE after two consecutive financial years. On the one hand, return on equity can increase if the company's after-tax profit increases, but we also get a higher value if we reduce our equity, for example, in the case of high borrowing. The latter is not necessarily a positive trend, so the rising ROE should be treated with caution. Similarly, a high ROE can be misleading if a company cannot generate profits in a consistent, sustainable manner. Quarterly to quarterly losses are recorded in the company's books as accrued losses, thus reducing equity. If the company then returns to profitability, the accumulated loss in its books will inflate the ROE, which can be misleading for a one-off viewer.

Return on Assets (ROA) measures similarly, but the important difference that distinguishes the ROE from comparing the company's after-tax profit to all assets is that it does not remove liabilities from the equation. This gives you a good overall picture of how effectively a company can make its total assets available, serve profit generation. Given that the ROA takes into account the funds raised by the company (e.g. credit), the higher the company's leverage and liabilities, the higher the ROE compared to the ROA.

P/BV RATE

For the P / S rate, which showed pricing, based on revenue generated, we have already met an indicator, which is applicable even if the company is unable to make a profit. **P / BV** is also such an indicator, **showing the book value per share of the company, so, how is the market prices, compared to equity.**

As with the other indices, it is true that different P / BV values can be considered ideal for different industries, but generally speaking, if a company's stock is trading below P / BV 1, so the market is willing to give for it less than its book value, it may be worth considering as a possible investment.

When considering book value pricing, it is worthwhile to be aware if there has been a material change in equity for some reason. This could include a newly completed acquisition, a large write-down, or a share buyback, all these events can distort the P / BV rate relative to the past. Another potential setback for the indicator is that we try to compare companies from different countries, where the accounting rules for financial statements may differ (for example, in Hungary, IFRS is prepared in 2019, and in the US, GAAP is used to compile financial statements). The differences that result are important to be aware of when using the P / BV rate.

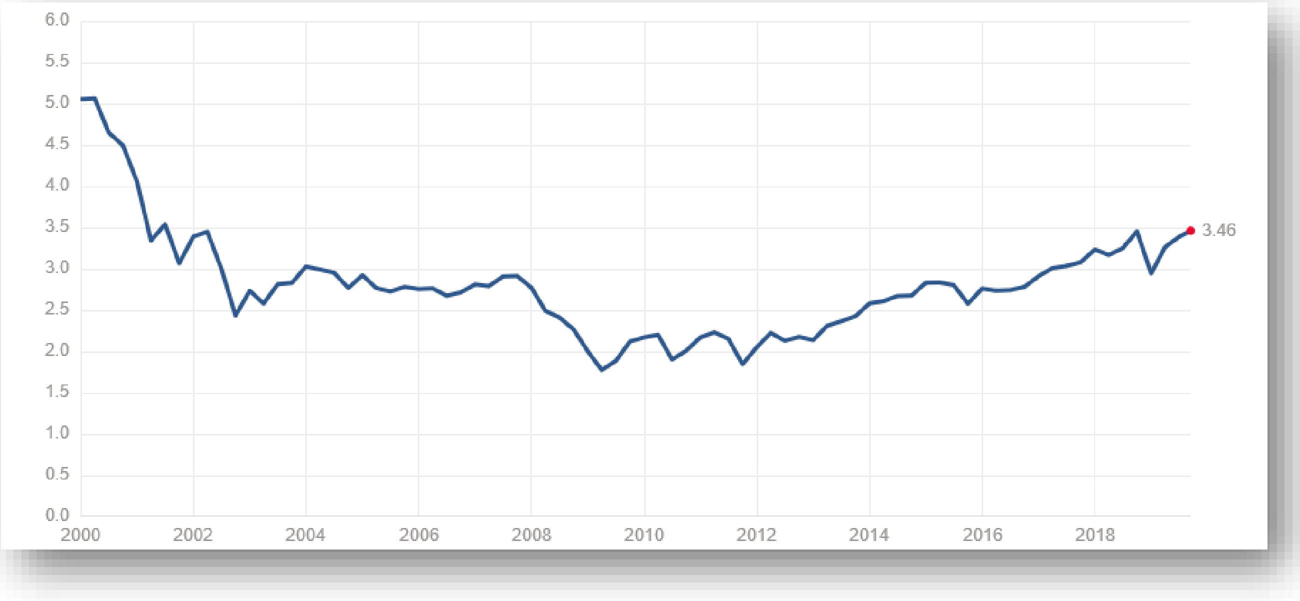


Figure 32: Average P / BV of companies that make up the S&P 500 index. Source: www.multpl.com

BUSINESS ASSESSMENT

We know the cornerstones of a company’s success, its metrics that measure its value and its pricing, and we know that in the future we will have to discount the cash flow from our investments to today's value. With this knowledge, we can try to evaluate companies in different ways. Typically, different valuation methods focus on either asset value or earning ability, but a combination of the two may also be used.

ASSESSMENT BY BALANCE SHEET

The valuation may be by balance sheet. We can determine the value of a company solely on the basis of its book value, i.e. taking into account its equity. The well-known P / BV indicator can help us if we are only interested in the book value and want to project it to a share. A stock that is well below its asset value (i.e., a P / BV of less than 1) may attract interest, since only the assets recorded in the company's books are worth more than the market is willing to give for them.

We can determine the value of a company on the balance sheet by determining the **liquidation value.** Here, we are essentially wondering at what price we could liquidate the company and sell its assets, including the cost of liquidation. This is mainly used when companies are being wound up.

Finally, we can calculate the **re-production value** to determine the value of the company. In this case, we are trying to quantify how much it would cost us to rebuild such a company, the value of which we want to determine. To do this, we need to quantify what the company's existing market share, human resources, assets, existing investments, etc. are worth…

Balance sheet valuation methods are primarily based on accounting considerations and do not in any way price future performance.

ASSESSMENT BY INDICATOR NUMBERS

If we want to determine, based on metrics that is already known **what is the value of the company,** can it be considered cheap or expensive, first of all **we need to find a similar company. As mentioned many times in the case of indicators, it is advisable to look for companies in the same sector or specialisation to serve as a basis for comparison.** Once we find the main rivals, then we have to look **at the differences we need to take into account. Different capital structure or size, market capitalization of companies** can make such a difference and can affect the interpretation of metrics**.** Finally, we **need to select from the indicators at our disposal those that are most applicable to the sector and the company under review.**

If we apply these filters properly and we find based on the most relevant indicators in the industry the preferred share is priced by the market, compared to the competitors, then it is more likely that there is an appreciation potential in the paper being tested.

Indicator based valuation may already carry future investor expectations if we work with forward rates.

ASSESSMENT BASED ON INCOME-PRODUCING CAPACITY

While pricing based on earning ability, we meet the market expectations of the company, primarily for the after-tax profit of one financial year. The existence of this fundamentally enables the company to have free cash, that it can use for its own growth or pay dividends to its shareholders. We need to balance the expected returns from having a profitable ability with the industry's risks to the company. All of these can be expressed using the most commonly used method of determining company value, based on earning ability, **discounted cash flow model,** what is expected to be produced and used by the company in the future (for investment, project, etc.), based on its available cash and discounted to its present value (present value).

FINAL THOUGHTS ON FUNDAMENTAL ANALYSIS

The biggest disadvantage of fundamental analysis over technical analysis is that it has a much higher learning curve, without prior training, interpreting the analysis can often be challenging. However, when used properly, we can highlight critical aspects of a company's finances, which must be taken into account when looking for value in the stock market.

It is therefore essential to apply for long-term value-based investments. Fortunately, thanks to the opportunities offered by the Internet, we now have access to analyses published by analytics houses for free. However, if you are a consumer of a fundamental analysis, consider that there are subjective elements to the analysis. An analyst can be biased in some way for a number of reasons, but if not, there are elements that inevitably give rise to subjectivity.

The best way to achieve the best results in our stock market presence is to apply fundamental analysis and technical analysis together. Frequently, the charts for a price often show gaps, cracks in the fundamentals earlier, than analysts report on them, however, in extreme market situations, we can rely more on fundamental analysis and identify investments that can yield returns even in a negative environment.