Lecture №13

Fundamental Analysis of the Foreign Exchange Market

As it was mentioned earlier, the prediction of market behavior is based on two main branches of analysis - fundamental and technical. In our previous lectures we looked at technical analysis and now it's time to get acquainted with the basics of the fundamental analysis.

A few indicators of the economy actively affect the course of movement of currencies. The other indicators do not have a direct, immediate impact on this movement; they are more important to economists and other markets. They indirectly confirm (or refute) the supposed or known trends in the economy which cannot otherwise be determined on the Forex market and therefore they are simply absorbed by the market in its usual fluctuations. Fundamental analysis examines the economic situations in certain countries and the world in general and their influence on each other. It looks at many different reasons and economic indicators, both sudden and reported well in advance by various governmental, non-governmental and academic organizations from influential countries.

Any information which directly or indirectly may influence the economy can be regarded as fundamental. It all can be divided into 4 main categories - economic factors, financial factors, political events, and crises.

1. Economic factors (indicators) are different from the rest because their released data is known in advance, at least for the majority of the largest economies.

2. Political factors are much diversified. Some of them are previously known, such as presidential elections; for example, a sharp change of government form will be a shock for all markets, regardless which methods of analysis are used - fundamental or technical.

3. Financial factors often remain to be unpredictable and therefore they have a strong impact on state of the Forex market. The most demonstrative example is the trend of interest rates by the Central Banks of the largest economies in the world, for example, the U.S. Federal Reserve Bank (Federal Reserve). No one knows exactly what the trend of interest rates will be like, but even assumptions about it will have an intense impact on the market. Two-three weeks prior to the meeting of the Federal Reserve heads (FOMC - Federal Open Market Committee), who gather together in Washington for their meeting every 1.5 months, the market behaves very nervously. If a change of the interest rate happens suddenly, the market becomes "nervous" which leads to sharp changes of the exchange rate.

4. Crises can have a strong impact on the market, depending on their predictability. This is why the crisis in the Persian Gulf had a limited effect on the Forex market. But sometimes even speculative comments in officials' speeches lead to a sharp change of the course, as it was during the speech of the British Prime Minister Tony Blair concerning the Euro taking over instead of the pound in 2001.

Indicators of fundamental analysis

Economic indicators are an important element of fundamental analysis. The dates of their publication are known beforehand. In the US they are published monthly except for the GDR (Gross Domestic Product) and GDPD (Gross Domestic Product Deflator), which are published quarterly. Indicators which are published weekly usually do not influence the work on the Forex market and there is no point in considering them. Knowledge of the economic indicators' date of publication is of the utmost importance for traders but it is easy to receive it now – information about the dates as well as analysis of these indicators' influence regularly appear in the news of all brokerage companies which offer Internet trading, and in many other resources on the Internet.

The economy of the US comes up to about 20% of the global economy, so it influences the Forex market the most. With this in mind, we shall examine the economic indicators of the USA and you can estimate the indicators of other countries on the same principle by taking into account their influence on the global economy. All economic indicators consist of two parts; the first part is the figures for last month, and the second part – the updated information for the previous one.

The *Gross National Product (GNP)* is the most important economic indicator. It is calculated by formula:

$$GNP = C+I+G+T,$$

Where Consumer Expenditures, which depend on personal income, and Consumer Confidence, which depends on psychological factors, the result of which is the decision whether to spend or save money; I stands for investments; G stands for Government spending, which influences different economic indicators and the country's economy as a whole; T is the Trade balance of the country (Exports (minus) Imports).

The GNP is published quarterly and shows the total amount of goods and services provided by American companies in the USA and abroad for a given period of time. When the GNP is growing compared to forecasts, the US Dollar course is rising against other currencies and vice versa.

The *Gross Domestic Product (GDP)* reflects the value of all goods and services produced on the territory of the USA by local and international companies. In relating to the US economy, the difference between the GDP and GNP is small. However, this index is more popular abroad than in the USA. It is published in the United States of America only for making comparisons with other economies easier.

Inflation Indices are indicators showing the distribution of the trend of price rising for goods and services. Traders closely follow the inflation processes development in the country because the main weapon of the Central Bank in the fight against inflation is interest rate hiking, which increases the value of the local currency. Moreover, the inflation level lowers the interest rate to its real objective value which along with the real data of GDP/GNP is the most objective tool of comparison of different countries' economies when traders and fund managers search for the best conditions for money-making.

The *Producer Price Index (PPI)* has been investigated since the 20th century and considers the average wholesale price changes for the raw products and utilities at all production stages. For this index information from the majority of branches of the economy including production, extraction of raw materials, and the agricultural sector is processed. In general, raw materials and goods produced only in the USA are taken into consideration. The most important groups of goods include whole foods – 24%, fuel – 7%, vehicles – 7%, clothes – 6%. The PPI is published monthly.

Consumer Price Index (CPI) examines the average changes of retail prices at the special consumer basket which includes the same goods and services constantly. It includes data about whole food prices – 19% of the index, house value – 38%, fuel – 8%, vehicles – 7%, and clothes, transportation charges and medical services which people pay for daily. It also includes imported goods. It is published monthly. Both the PPI and CPI help to measure the inflationary activity of the economy.

The *Commodity Research Bureau's Futures Index (CRB Index)* consists of equated futures prices for 21 types of commodities: precious metals (gold, silver, platinum), industrial commodities (oil, gasoline, diesel fuel, wood, cuprum, cotton), crops (corn, wheat, soybean, bean cake, soya oil), live cattle and meat (livestock, pork), imports (coffee, cocoa, sugar), and misc. (orange juice). In spite of the fact that 13 out of 21 positions refer to the whole foods which determine the real situation of the headline inflation, this index has been rather popular during last 20 years among the professionals of Forex.

The *Journal of Commerce Industrial Price Index (JoC)* consists of the prices of 18 industrial goods being processed at the first stages of industrial production, building and electric power production. This indicator is more accurate because it is projected to show inflationary changes before other inflationary indicators.

The *Balance-of-Payments* consists of all international commercial and financial transactions of one country. Analysts evaluate the real importance of this index by keeping an eye on the big picture of a country's economy from the point of view of its competitive ability. It is derived from the quantity of natural resources of an industrial base, the proficiency level of the labor force on the employment market and the labor costs market. However, this index is used merely by traders who work at the intraday operations.

Merchandise Trade Balance consists of the difference between the exports and imports of a given country. It is one of the most important economic indicators. It includes 6 categories of goods:

1. Whole goods
2. Raw materials and industrial semi-raw materials
3. Consumer commodities
4. Vehicles
5. Large industrial goods
6. All other commodities

If this index is greatly different from the forecasting one, then it can influence the US Dollar – if the deficit is greater than the forecasting one, the US Dollar is falling; if it is smaller, the dollar is rising.

The *USA-Japan Merchandise Trade Balance* stipulates that when the deficit rises in trading with Japan, the US Dollar usually falls.

Indicators of Industrial Production

Industrial production is composed of the output of all the production, process plants and mines. From the fundamental point of view this indicator is very important; it reflects the real strength of an economy and through that - the strength of a concrete currency, so the higher index – the stronger the US Dollar. The indicator is published monthly.

Capacity Utilization is the correlation between the total industrial output and the existent production capacities. The standard ratio for a good economy is 81.5%. If this index is in these bounds, if affects the forex market. However, if this index reaches 85% and more, then it indicates that industrial production is "heated," i.e. the economy is working at full capacity. This forebodes the beginning of a probable inflation which can lead the Central

Bank to increase the interest rate in order to fight inflation.

National Association of the Purchasing Managers Index (NAPM) is deduced by the inquiry of 250 managers from the major industrial enterprises to see how, in comparison with the last inquiry, the quantity of new orders of their production, total output, total volume of hire, quantity of produced goods stored in the warehouse, and delivery speed of goods to the wholesaler have changed. If this index is less than 45-50%, it shows an aggravating position of a country. It is the first of the established indicators still in use today. It is not perfect because it is based upon psychology more than facts; it also does not include the state of California, which is quite important. Moreover, an increase of industrial production does not always mean an increase of customer demand. Some of the changes are sometimes used to forecast short-term fluctuations on the market.

The *Factory Goods Orders* is the total amount of orders for the durable, nondurable and disposable goods, i.e. for whole foods, light, simple industrial goods and accessory products, and tools. It has a weak impact on the prices on the Forex market.

The *Durable Goods Orders* indicator takes into account orders for goods with a usage period longer than 3 years. Such commodities are divided into four major categories – hardware (including jewelry), mechanisms and goods propelled by a mechanical drive, mechanisms and goods powered by an electric drive, and transfer mechanisms and goods. This indicator divides orders in military and non-military. It is very important for Forex traders, because durable goods cost more and an increase of their sales indicates a growing consumers' sentiment in their future and an increasing possibility of spending money. So positive digits of this indicator lead to the US Dollar (or the currency of any country releasing such indicators) rate appreciation.

Construction Data is information about housing. It is the most important economic indicator and it is included in the GDP. Starting from the post-war period, it is housing that helps the USA to come out of recessions in recent times. It consists of 3 categories:

1. Building licenses and the building of new houses;
2. The sales of new and already existent one-family houses;
3. Building expenses.

This indicator is cyclic and very sensitive to the interest rate of the Central Bank. A number of new houses' sales around 1.5 – 2 million per month shows that the economy is strong, but when this number decreases to 1 million per month, it is said that the economy is in recession. It is usually used for assessing the big picture of the economic situation in the country.

Employment Indicators are indexes of the unemployment rate. They are of the utmost importance for the analysis of the situation in the economy in general, and as components of other economic indicators such as the GNP and GDP.

The *Unemployment Rate* is given in percentage terms. It consists of 2 separate parts:

a) The Business Firms (Establishments) Survey which also consists of the following indicators:

1. Payroll;
2. Workweek;
3. Hourly earnings;
4. Total hours of employment in the non-farming sector.

b) The Household Survey which consists of:

1. Unemployment rate in percentages;
2. The overall labor force;
3. Number of people employed.

For traders working on the forex market, indicators which are published monthly are important, because they show where the economy is strong and what position of the business cycle it has – whether it is on the side of growth or on the side of recession. Among indicators appreciating the situation on the labor market, the unemployment rate improves last of all. If the unemployment rate is decreasing, then the US Dollar position will probably consolidate, and vice versa.

Consumer Spending Indicators.

Retail Sales is something very important for traders because it indicates the force of consumer demand and consumer confidence in the future which have vicarious impact on the strength of a currency. If the consumer has enough income or credit for purchase, this can lead to a situation where more goods and services will be produced and imported. This indicator has a seasonal nature; the most important months for traders are September, when purchases are made for children at school, and December – the month of Christmas purchases. The higher this indicator, the stronger the US Dollar is.

Consumer Sentiment is an inquiry of house owners, created for the clarification of tendencies the individual intentions of the middle class for spending money. It is made by two organizations – Michigan University and the National Family Opinion for the Conference Board. It has some popularity among traders.

Auto Sales is the number of automobile sales. Despite the importance for the economy in general, it is rarely used for forecasting on the Forex market.

Leading Indicators is a composite indicator and consists of the following economic indicators:

- Average workweek of production workers in manufacturing;
- Average weekly claims for state unemployment;
- New orders for consumer goods and materials;
- Vendor Performance (companies receiving slower deliveries from suppliers);
- Contracts and orders for plants and equipment;
- New building permits issued;
- Change in manufacturers' unfilled orders, durable goods;
- Change in sensitive materials’ prices;
- Index of stock prices (Dow, NASDAQ, S&P500, Russell 2000 etc.);
- Money supply, adjusted for inflation;
- Index of consumer expectations.

These indicators are developed to determine the economic development for the next six to nine months. However, this indicator is not that valuable for Forex traders.

Market Analysis by Financial, Social, and Political Factors

Financial factors

Financial factors, generally Interest Rates of the Central Bank, have a great impact on the rates of exchange. Many analysts consider this index as the main one in the estimation of one currency’s “value” against another currency. It does not mean that if this percentage rate increases the rate of national currency will grow automatically; merely the probability of it is increasing, but other factors also play role in trading and they will be considered below.

Financial factors are the main ones in fundamental analysis. Changes in state monetary and taxation policy are made to achieve positive results in the country’s economy and they certainly are reflected in exchange rates. Sometimes it is necessary for the government to get involved in international affairs to execute different obligations which the US or the European Economic Community incur globally. Financial factors serve as leverage in such interferences. The major structure controlling such leverage is the Central Bank of a country – in the USA it is the Federal Reserve Bank, or Fed. The US Federal Reserve Bank plays the major part in price determination for the US Dollar against other currencies. We will consider below in details how the Federal Reserve Bank sets its monetary policy, what it is aimed at and what leverage it uses.

Federal Reserve

The Fed has a huge influence on the economy of the country via the "key interest rates," i.e. the percentage which the Fed allocates funds to the commercial banks for their reserves and at which they lend these reserves to other banks for a day. Such a percentage is called an *overnight federal funds rate*. Through this percentage the Federal Reserve is able to influence the slowdown or acceleration of the economy growth rate and the decrease of the inflation processes.

Let us consider now those financial factors which have the most impact on the exchange rate. They are money supply and interest rate.

The **money supply** consists of:

1. M1 - Notes and coins in circulation and in bank vaults;
2. M2 – funds in savings in bank accounts;
3. M3 – different banking financial instruments.

Information about the money supply is released in the US weekly on Thursdays.

Interest rates are the percentage at which the Central Bank allocates funds to commercial banks. This index is of the utmost importance for rate of exchange assessment. The whole fundamental analysis starts with the observation of interest rates. It is a rather complicated process and Central Banks usually reluctantly change it and only rarely (sometimes once in several years), but frequency directly depends on the economic situation in a country and in the world.

The main rule is that the higher the interest rate, the stronger the currency of a country. But in the rate of exchange there are always two currencies involved - that is why it is important to look at the ratio of interest rates of these countries, the *Interest Rate Differential*. It is also one of the main factors which traders of Forex keep an eye on. They ought to react to the change of this factor too, rather than only to the change of interest rates in a country.

Traders think of the interest rate in the same way as they treat other indicators – trading on the basis of rumors and estimates first, and then on the basis of real facts. So an expected and predicted change of interest rate that occurs during a meeting of the Central Bank leaders is often already devalued by the market and the situation remains stable.

If changes of the interest rate occurred because of political reasons and not economic ones, the market can go against the Central Bank, rested upon the fundamental analysis in its estimates. However, it is not only the change of interest rate that is important, but also how big the difference between the change and the anticipated magnitude is, and how this change will help the economy.

Social and Political Factors

Political events are the last category of fundamental factors which influence the global market of currency exchange. The ones known beforehand, such as presidential elections, are rather predictable and their influence is well-known. For instance, presidential elections in the USA lead to a short-term drop of the dollar. Elections in European countries influence in a different way. If socialist parties (which are not usually supported by business) come to power, the exchange rate of the currency most likely will temporally fall against the US Dollar. If parties or politics who are supported by businesses and associated with some hopes for economic recovery come power, the exchange rate of the currency rises.

That was before the euro; now the situation is that socialists are in the government of many European countries. The European Central Bank (ECB) is headed by Mario Draghi who has been encouraging growth by promoting inflation throughout the European Union. This came after years of huge pressure upon the European Central Bank by European politicians of different ranks asking it to make the interest rates lower.

Besides the predictable political events, there are many unexpected ones – military coups, wars, conflicts, murders of politicians, and other instances that cannot be foreseen. Usually financial instruments (which are called “safe heaven” for investors) are used. During the last ten years that “safe heaven” is found in the US Dollar and Swiss Franc – their rates surge forward against all other currencies because everybody starts buying them (it also concerns gold). Though these are not the only currencies that can be a “safe heaven” - sometimes the British pound sterling acts as one in similar situations. In case of an instability in South-East Asia sharply increasing for different reasons (for instance, threat of war from North Korea, or in the regions of the Middle East, where during war the supply of oil to the world market decreases drastically) the rate of the Japanese Yen slumps against the US Dollar.

If world oil price rises steeply, usually the rate of the British pound rises as well, because the British economy directly depends on its oil extraction in the North Sea. In general, if the prices on the commodity markets, i.e. at the different raw materials, rise, then the rates of the currencies of the counties whose economies depend strongly upon the export of these materials will also rise. These countries are Canada, Norway, and Finland, among others. The prices of raw materials are quoted in US Dollar, so when the price of raw materials rises, the US Dollar rate rises with it.

In all cases, as we discussed above, when military events are imminent where the US is involved, the exchange rates of the dollar and the Swiss Franc rise sharply against other currencies (but in the case of the war in Yugoslavia only the exchange rate of the dollar rose steeply).

Fundamental analysis takes into account a great number of different factors - it is a whole science on its own. However, factors clearly defined in fundamental analysis do not always influence the market instantly – sometimes days and even months can pass before the fundamental factors have an impact on the market. If by that time you cannot make your opinion regarding the situation on the market, then do not trade; wait until the market gives you more clear signals about the direction of its movement.

Test questions:

1. List the employment indicators.
2. Name the inflation indexes. What impact does the inflation index advance have on the market?
3. The USA trade balance deficit increased more than it was predicted, what will happen to the US Dollar?
4. What actions of the Central Banks have more impact on the exchange rate of the national currency?