MACROECONOMIC INDICATORS

Macroeconomic Indicators

Market Interest Rates

Nominal Interest Rate

*It is the interest rate that contains risk.

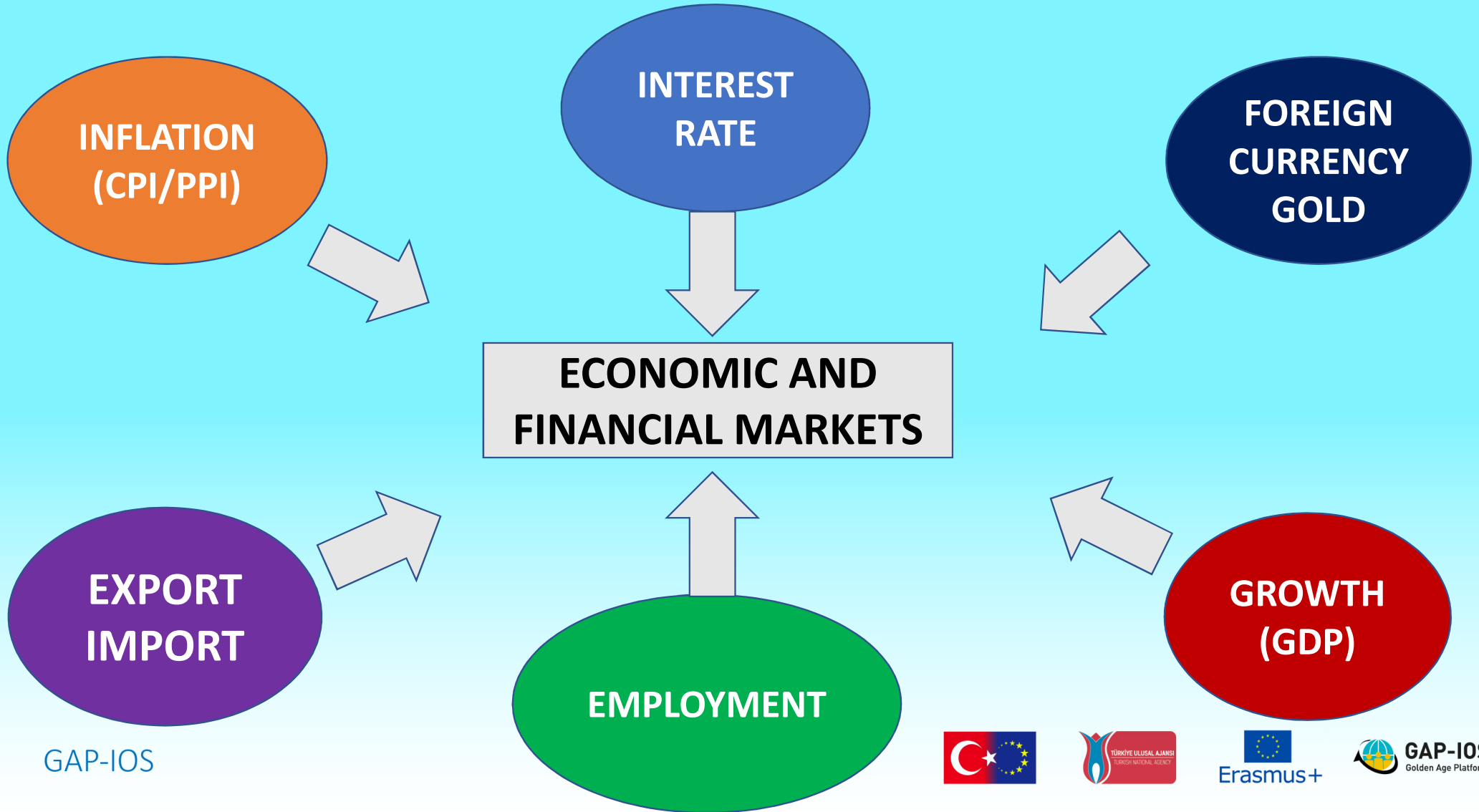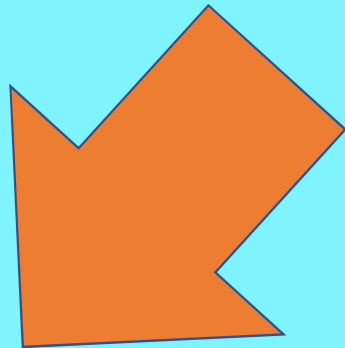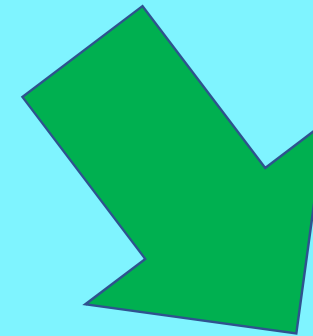*It is the interest rare offered in the markets.

Real Interest Rate

*It is the interest rate that doesn't contain risk.

*It is the net rate of return earned by the investor.

The Relationship Between Interest Rate - Return

Nominal interest rate

- The rate offered for the time deposit account that the investor wishes to open at the bank will be the **nominal interest rate**.

- The return here **will not be a net return**.

INVESTOR
(DEPOSITOR)

CASH FLOW
(100.000TL – 1 Year)

BANK

NOMINAL RETURN
OF INTEREST (%15)
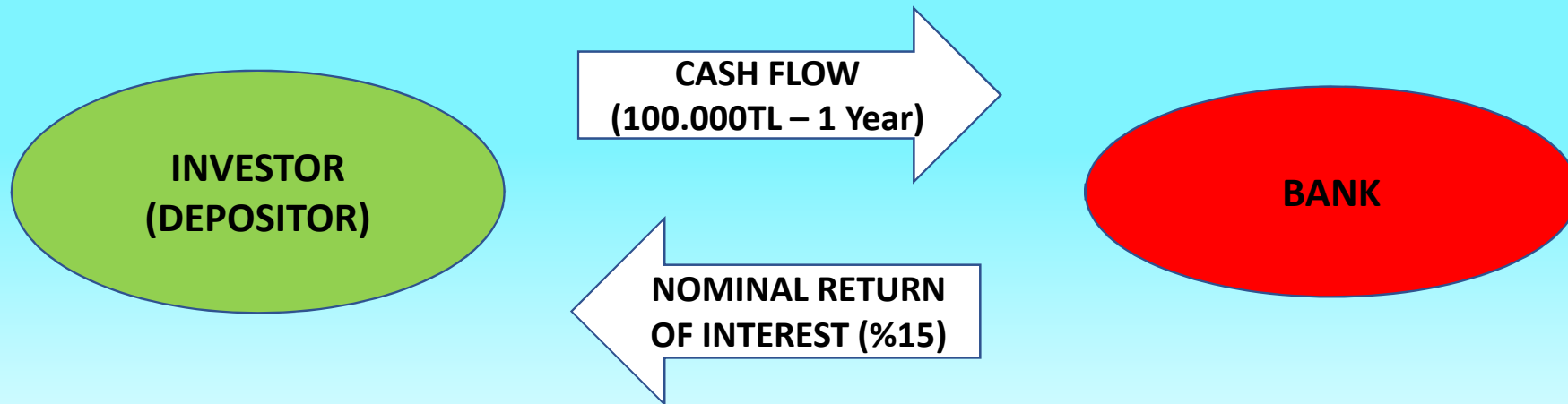
Return on interest that the invester will get:
100.000 * 0.15 = 15.000TL
(IS IT NET RETURN???)

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The Relationship Between Interest Rate - Return

Interest return obtained by the investor:
100.000 * 0.15 = 15.000TL
(IS IT NET RETURN???)

NO

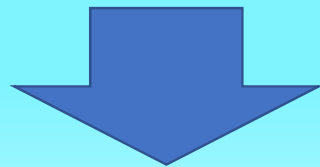**Tax (The Effect of Stoppage 15 %):**
15.000 TL * 0.15 = 2.250 TL
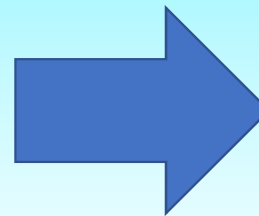
Interest return to be obtained after stoppage:
15.000 TL − 2.250 TL = 12.750 TL

When the inflation rate is 5 %

Nominal (VS) Rate of Return:
12.750 TL / 100.000 TL = **12.75%**

Net Return:
12.75% - 5% = **7.75 %**

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Inflation Rate

CPI

PPI
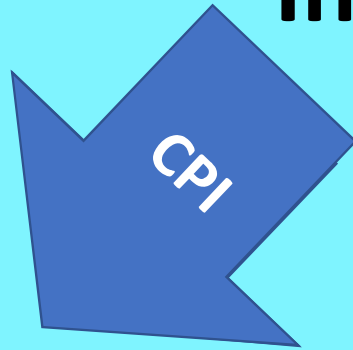
Consumer Price Index

*The level / rate of increase in the prices of products / services.

*It is calculated over the product and service basket formed and is announced by TURKSTAT .

*For ex: If the price of a product or service was 100 TL last year and 120 TL a year later, the inflation effect here can be expressed as 20%.

Producer Price Index

*It reveals the change in the producer costs of the products/services produced and sold.

*The increase in PPI starts to be reflected in CPI rates after a certain period of time.

*For ex: If the production cost of a product or service produced was 50 TL last year and 75 TL this year, the inflation effect here can be expressed as 50%.

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Gross Domestic Product (GDP)

*Gross domestic product (GDP) is the monetary value of all goods and services produced in a year. The calculation method is as:

.

GDP = Consumption + Investment + Public Spending + (Export - Import)

*The important point here is that not every economic activity is included in the calculation, only ***activities that increase the national income of the country*** are taken into account.

.

*GDP is not a direct reflection wealth level or income distrubution suitability, ***it just looks at whether total income or output is increasing***.

*The data can be obtained from TURKSTAT (www.tuik.gov.tr).

The Level of Employment

*It is one of the important indicators that reveal the strength and performance level of the country's economy.

*It is expected that the economic growth process will result in an increase in the employment level and a decrease in the unemployment rate.

*The data can be obtained from TURKSTAT (www.tuik.gov.tr).

Balance of Trade (Export / Import)

*Trade balance is the difference between the value of a country's exports and the value of its imports for a given period, and the duration is usually taken as 1 month and 1 year.

*If the ***difference is positive***, it means that the country's exports are greater than its imports, and this is called a trade surplus.

*If the ***difference is negative***, it means that the country's imports are more than its exports, and it is called the foreign trade deficit.

*The data can be obtained from Republic of Turkey - Ministry of Trade ((www.ticaret.gov.tr).

FINANCIAL PLANNING AND BUDGETING

GAP-IOS
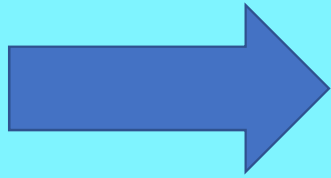
Financial Planning and Budgeting

- Financial planning is the process of revealing the cash surplus or shortfall within a certain maturity period based on the expected cash inflows and cash outflows, and evaluating the excess funds or making decisions for the elimination of the fund deficiency.

- As can be understood from the definition, there are two basic elements in the financial planning process: **expected cash inflow** and **expected cash outflow**. While some of the elements that make up the cash inflow and outflow are **fixed**, a larger part is **variable** in nature.

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Financial Planning and Budgeting

The financial planning and budgeting process consists of **two main parts**:

Cash Inflow: It covers the expected revenues to be obtained within the scope of the process and the maturity period. For example; it is the planning of activities that will provide monthly cash inflows within a one-year budgeting.

Cash Outflow: It covers the expected expenses that will create an outflow within the scope of the process and within the considered maturity. For example; it is the planning of activities that will provide monthly cash outflow within a one-year budgeting.

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Financial Planning and Budgeting

- When the main parts of the financial planning and budgeting process are completed, the cash balance, which expresses a summary structure, is reached.

A **positive cash balance** indicates that cash inflows are greater than cash outflows in the relevant time period (for example, January). In this case, there is no need for additional financing to be provided from outside and the excess cash can be transferred to the following time period (for example, February).

A **negative cash balance** indicates that cash inflows are less than cash outflows in the relevant time period (for example, January). In this case, additional financing is needed, which needs to be provided from outside.

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Financial Planning and Budgeting

EXAMPLE:

- Regarding the financial planning and budgeting process of 2021, the data for the first part of the year (six months) are presented below.

	Income	Expenses		Income	Expenses
January	10.000 TL	8.000 TL	**February**	15.000 TL	23.000 TL
March	17.000 TL	21.000 TL	**April**	22.000 TL	16.000 TL
May	13.000 TL	10.000 TL	**June**	14.000 TL	17.000 TL

Minimum monthly cash requirement is **6.000 TL**.

The initial cash amount at the beginning of the period (transferred from 2020) is **4.000 TL**.

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Financial Planning and Budgeting

SOLUTION:

	January	**February**	**March**
Beginning (a)	4.000	6.000	2.000 (-)
Cash Inflow (b)	10.000	15.000	17.000
Cash Outflow (c)	8.000 (-)	23.000 (-)	21.000 (-)
Cash Balance (a+b-c)	6.000	2.000 (-)	6.000 (-)
Additional Financing (d)	-	8.000	12.000
Cash Balance (a+b-c+d)	6.000	6.000	6.000

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Financial Planning and Budgeting

(CONTINUED)

	April	May	June
Initial (a)	6.000 (-)	0	3.000
Cash Inflow (b)	22.000	13.000	14.000
Cash Outflow (c)	16.000 (-)	10.000 (-)	17.000 (-)
Cash Balance (a+b-c)	0	3.000	0
Additional Financing (d)	6.000	3.000	6.000
Cash Balance (a+b-c+d)	6.000	6.000	6.000

Digital Literacy

FINANCIAL RETURN

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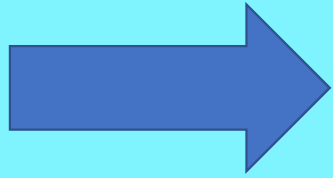
Financial Return

An investor assesses the *surplus of resources (savings> spending)* he has on a certain period basis with different investment instruments or instruments.

There are *two basic elements* under the motivation to invest.

The first is that the investor wants to increase/multiply the resource he holds.

The second is the desire to prevent erosion in the purchasing power of the resource in the face of existing market risks (inflation, etc.) and to ensure protection from these risks.
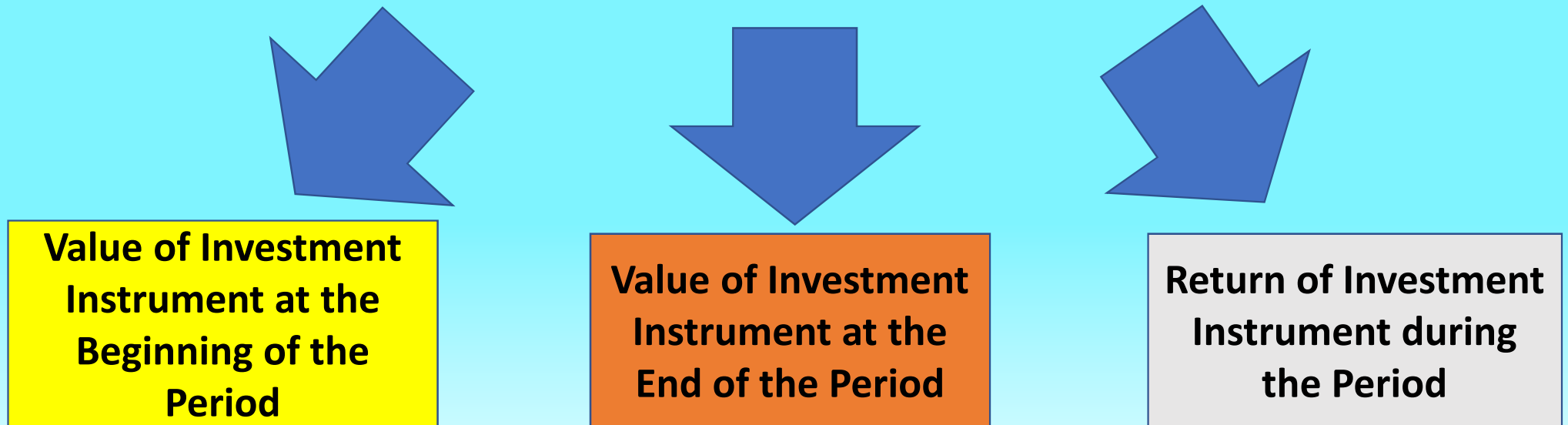
Financial Return

An investment period (3 years, 1 year, 6 months, 1 month, etc.) should be established first in order to utilize the resources available to the investors to provide returns.

Generally, the process of choosing the investment period as ***short or long term*** affects the ***risk expectation of the investor and the need for the funds in hand***.

The investment period is important in terms of measuring the return that the investor expects to obtain during the investment process, comparing the return performances of different investment instruments and making changes in the investment instruments they prefer when necessary.

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Financial Return

Investors need to focus on ***three key elements*** when calculating the return on an investment over a period of time:

Value of Investment Instrument at the Beginning of the Period	Value of Investment Instrument at the End of the Period	Return of Investment Instrument during the Period

Financial Return

Value of the Investment Instrument at the Beginning of the Period	Value of the Investment Instrument at the End of the Period	Return of the Investment Instrument During the Period

Value as of 01.01.2021

100.000 TL

Value as of 31.12.2021

145.000 TL

Return of the period:

$$\frac{(145.000 - 100.000)}{100.000}$$

= 45 % Return

Financial Return

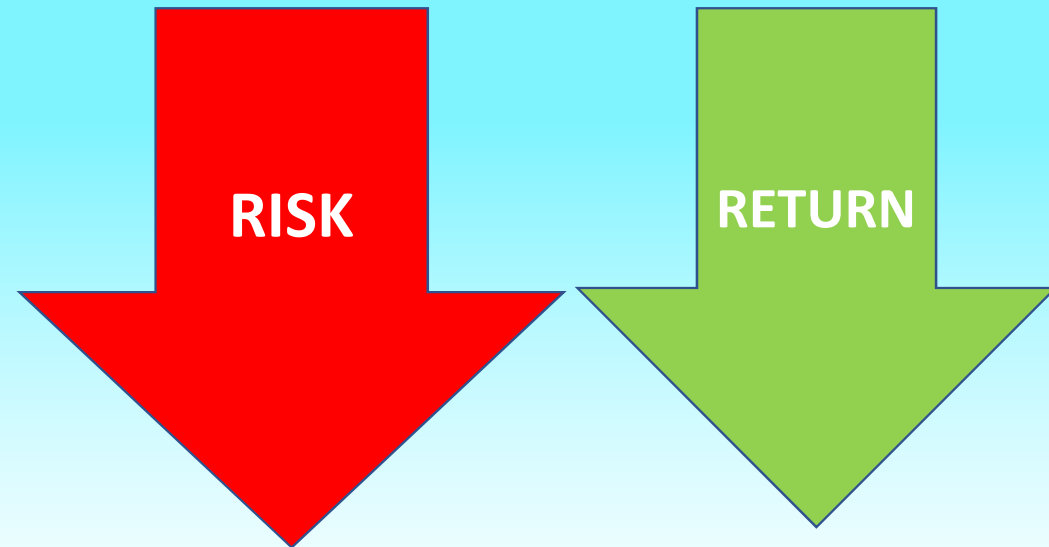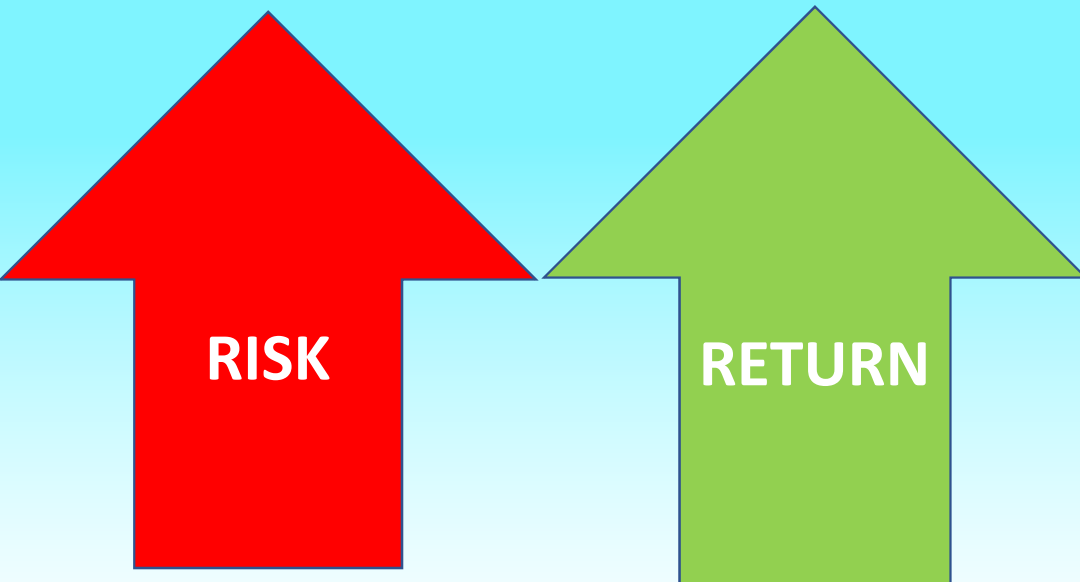| INVESTOR	EXCESS FUND →	INSTRUMENTS OF INVESTMENT *Deposit *Foreign Currency *Gold/Silver/Platinum *Common Stock *Bond *Commercial Paper *Treasury Bill *Investment Fund

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Financial Return

BASIC RULE
RISK AND RETURN ARE VERY CLOSE BROTHER !!!

RISK

RETURN

RISK

RETURN

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Financial Return

There are two basic calculations in interest calculations, **simple interest and compound interest**.

- In **simple interest calculations**, the investor reinvests the same investment amount in each investment period and does not include the previously earned return (interest) in the new investment cost. In other words, it **does not earn interest on interest**.

- In **compound interest calculations**, the investor includes the return (interest) he has earned in the previous period in each new investment period. In other words, it **earns interest on interest**.

Financial Return

Simple interest is calculated as follows:

Interest = Principal * Interest Rate * Investment Period

For example: The investor deposits 100,000 TL at a 12% interest rate for a 1-year period. According to the simple interest process, the amount of interest he will earn at the end of the period:

Interest = 100,000 * 0.12 * 1 = **12,000 TL**

Total Amount = 100,000 + **12,000 = 112,000TL** *(At the end of maturity)*

The investor will deposit **again 100,000 TL (without interest)** in the following period.

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Financial Return

***Compound interest*** is calculated as follows:

Interest = Principal * (1 + Interest Rate)

For example: The investor deposits 100,000 TL at a 12% interest rate for a 1-year period. According to the simple interest process, the amount of interest he will earn at the end of the period:

Interest = 100,000 * (1 + 0.12) = **112,000TL (Total amount including interest)**

The investor will deposit **112.000 TL (with interest)** in the following period.
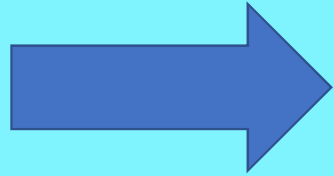
INVESTMENT PORTFOLIO

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Investment Portfolio

Investment portfolio is a pool created by savers, whose income is more than their expenses, to evaluate their investments, to **provide return** and to **protect from risk**.

In the investment portfolio, an investor tries to achieve **maximum return** level with **minimum risk** level by making investments on different instruments in the financial market.

In order to create a portfolio, the investor must invest in **at least two or more** investment instruments and include them in his portfolio.

Investment Portfolio

One of the most critical points in the process of creating an investment portfolio is the necessity of presenting the investor's risk perception clearly and accurately. If the investor's risk perception cannot be accurately measured, the **optimal risk-return balance** will not be achieved within the portfolio he will create.

After the risk perception of the investor is determined clearly and accurately, the most suitable investment instruments will be selected among the financial instruments traded in the financial market that are **most suitable for the risk perception** of the investor and thus the investor portfolio will be formed.

Investment Portfolio

**COMMON STOCK
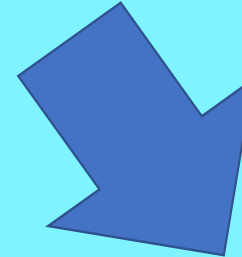PRIVATE SECTOR BOND
FORWARD MARKET
INSTRUMENTS
INVESTMENT FUNDS**

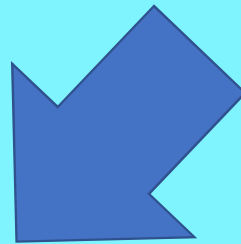**TREASURY BOND
MONEY MARKET FUND
TERM DEPOSIT
COMMERCIAL PAPER
PENSION FUNDS**

**INVESTMENT
INSTRUMENTS WITH
HIGH AND MEDIUM RISK**

**INVESTMENT
INSTRUMENTS WITH
NO RISK AND LOW RISK**

Investment Portfolio

RETURN OF AN INVESTMENT PORTFOLIO

RETURN OF EACH INVESTMENT INSTRUMENT IN THE PORTFOLIO WITHIN THE PERIOD

WEIGHT OF EACH INVESTMENT INSTRUMENT IN THE PORTFOLIO

Investment Portfolio

<table>
<tr><td colspan="2">**Investment instruments and their weights as of 01.01.2021:**</td></tr>
<tr><td>Gold</td><td>%30</td></tr>
<tr><td>FX</td><td>%45</td></tr>
<tr><td>Deposit (TL)</td><td>%25</td></tr>
</table>

<table>
<tr><td colspan="2">**Return of the investment instruments as of 31.12.2021:**</td></tr>
<tr><td>Gold</td><td>%75</td></tr>
<tr><td>FX</td><td>%55</td></tr>
<tr><td>Deposit (TL)</td><td>%17</td></tr>
</table>

RETURN OF THE PORTFOLIO

Gold : $0.30(\%30)*0.75(\%75) = 0.225$ (%22.5)

FX : $0.45(\%45)*0.55(\%55) = 0.2475$ (%24.75)

Deposit : $0.25(\%25)*0.17(\%17) = \underline{0.0425 (\%4.25)}$

Return of the Portfolio ➔ **= 0.515 (%51.5)**

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Partners