



**“ BANK OF ALBANIA
MONETARY POLICY INSTRUMENTS”**

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INTRODUCTION

The monetary policy drafting and implementation is the main duty of the Bank of Albania, and, undoubtedly, it is the activity that draws more attention to the public. The monetary policy is oriented to meeting the target of inflation control. But, the concrete work performed by the Bank of Albania about inflation control is unclear to public at large.

Is the Bank of Albania able to really impact on the price level in economy? If yes, what concrete instruments does it use to control inflation? How are these instruments related to inflation target? Which are the concrete details of their functioning? These are the main questions, which this lecture is going to answer.

The lecture starts with a brief description of inflation impact on economy, then goes on with the importance of its control by the central bank. It continues with a presentation of theoretical monetary policy framework and finally it deals largely with the role of monetary instruments in implementing monetary instruments.

I. CENTRAL BANK AND INFLATION

The economic literature of the last decades converges in one point: **the most important contribution that a central bank may render to economic development of a country is the reaching and maintaining of price stability.** This consideration, largely based on the economic experience of the recent periods, is due to the constant concentration of central bank's work on the controlling of inflation. Most of central banks in the world have the price stability as their main target. Even the Bank of Albania, being the central bank of the Republic of Albania, shares the same concern and the same target with other central banks. According to Law No. 8269, Date 23.11.1997 "On the Bank of Albania", *"the primary objective of the Bank of Albania is to achieve and maintain price stability¹".*

Before analyzing the function of monetary instruments and their role in fulfilling the primary Bank of Albania target, first I would deem as reasonable to treat, sparing the details, the effects of inflation on economy.

I.1 WHY SHOULD INFLATION BE FOUGHT?

It is certified that economies have a better performance of economic growth, employment rise and living standards improvement when inflation is low. The studies on the link between productivity and inflation have indicated that the higher the inflation, the lower the economic growth in real terms is.

Precisely the negative link between inflation and economic growth rates has enabled the central banks (with few exceptions) to make the low inflation the main goal of their monetary policy.

¹ The Bank of Albania has other objectives as well. Referring once more to the law "On the Bank of Albania" we notice the even the following objectives: "In compliance with its primary objective and based on the domestic banking market, it shall encourage and support the development of the foreign exchange system and regime, domestic financial market, Payment system, and assists in the improvement of monetary and lending conditions, supporting the country's economic development and stability. The other Bank of Albania objectives, conditioned by its main objective, must encourage the maintaining of liquidity, solvency and the normal functioning of the banking system, on the basis of market principles. **But, the law is in determining the priorities of objectives: The main Bank of Albania objective is to control inflation level.** All other objectives mentioned above are conditioned by the meeting of the primary objective.

"The target of our work in Federal Reserve is to reduce inflation to that point that it does not constitute a factor in economic decision-making any longer. If we are successful, the allocation of resources will be closer to the optimum, providing positive consequences on the economic growth and the standard of living"

Gary H. Stern
President, Federal Reserve Bank of Minneapolis

A question that naturally needs an answer is: Why low inflation is favorable for economic growth? In the end, the statistical link does not certify the causality! The link between economic growth and inflation may be accidental or the causality may be on the reverse, that is the economic growth may be the one that provokes low inflation. This is really a difficult question and, so far there is no theory to explain this link clearly and without ambiguities. **However, the economic reasoning suggests that there are, at least, two channels through which the inflation influences the real economy progress:**

- Unlike high inflation, the low inflation results in a better allocation of resources, since the signals sent by the determining-price process may be interpreted more easily and accurately;
- Low inflation impacts on financial stability.

A. ALLOCATION OF RESOURCES

Relative prices represent the main factor that orients the allocation of resources.

- A change in the relative prices, that results from an increase/ decrease in the demand for a certain product, should shift the economic resources from the activity in which the prices have dropped (relatively) to the activity in which prices are raised. Meanwhile, the rise of general price level, the inflation, should not change the allocation of resources in such way. **But, in an inflationary environment, it is difficult for economic agents to distinguish a change in relative prices from the general price level rise, that is from inflation.** Such a conclusion is drawn frequently in the cases when inflation is high. Furthermore, high inflation frequently means even a variable inflation, which increases the insecurity even more. **As a result of it, the resources would be directed to faulty uses during inflationary periods.**
- **Except what mentioned above, inflation may constitute a problem in estimating real interest rate.** Real interest rate (nominal interest rate

corrected with inflation) is the relative price of the present goods to the goods to be produced in the future. Real interest rate leads the decisions of individuals for consumption or for saving and the decisions of firms for investments. It is not given obviously as a market price but is calculated from individuals by subtracting or adding the expected inflation from/to nominal interest rate. When inflation is variable, the task to determine real interest rate becomes even more difficult. **The inappropriate allocation or management of resources under such conditions would impact adversely on the economic growth and the standards of living, since the resources are not put in the best usage possible.**

- Without a general indexing, inflation may result in unforeseen transfers of property. **If the taxation system is not indexed with the price change, inflation may lessen the incentive for investments and work². Also, inflation impacts on the reallocating of resources, from the class with fixed income (employees, pensioners) to those with income indexed with inflation (producers and merchants).**

All these effects are less sensitive when inflation is constantly low. The more successful a central bank is in decreasing inflation, the more economy approaches to the optimal use or management of resources, which would impact directly on the economic growth and on the raising of the standard of living.

B. FINANCIAL STABILITY

The second reason why inflation hinders the economic growth is that it impacts on financial stability. A low inflation economy is less likely to experience underlined oscillations in assets' prices and in the expectations on such prices. The problems related to bad evaluation of assets' prices and their forecasts are not very different from the confusion on changes in relative and general prices described above. Investors and lenders may misinterpret the signals taken from prices and may draw wrong conclusions. Under these circumstances, the financial sources are not used properly. The financial stability is indispensable for a sound economy.

² It is known that the most widespread form of taxing system is the progressive one, meaning that the classes of population having highest income must pay higher taxes in relation to their income. For example, concerning the monthly income up to 10.000 Lek, 10% is the tax paid, concerning income over 10.000 Lek, 12% is the tax paid. If we assume that due to inflation effects (supposing 10% inflation rate) your income is increased from 9.500 Lek to 10.450 Lek, you will not pay 10% tax any longer, but 12%. To avoid such reduction of the real income, the taxing system is recommended to be indexed with the inflation, that is the taxation classes change upon inflation change.

- **Decisions on lending, which determine the use of financial sources may be closer to the optimal level in a low inflation economy.** This conclusion derives from the idea that bankers and their customers do usually perform a better work for evaluating the business performance in a climate of relatively stable price;
- **Financial stability increases the ability of an economy to smooth possible shocks:** increase of electrical energy prices, sharp technological changes, unforeseen developments in the economies of partner trading countries and so on. Such events bring about misuse of resources but a sound financial system may absorb such shocks, without allowing them to damage the economic activity. Under such circumstances, the real growth would be impacted less than under the conditions when the financial sector would extend and widespread the shock effects. Furthermore, it is likely that the shock effects and the proper reactions be identifiable easier in a non-inflationary environment.

I.2 WHY SHOULD INFLATION BE ACCEPTED?

Notwithstanding the above display and the consensus reached on negative consequences of inflation on economic activity in the long run, the practice indicates that no central bank has a 0 inflation rate as its target. Technically it is stated that price stability target is translated into a positive inflation target, in low levels but not 0. In the following, we would briefly present some reasons why low inflation should be accepted in economy:

- As it was stated above, inflation presents a general rise of price level in economy. But, economy is under constant movement: the consumers' sales change, whereas the technological innovations introduce new products into the market or reduce production cost. All these factors are a source of changes in relative prices of goods in economy, which has as a consequence the reorientation of resources in economy towards more profitable products. **The relative price movement exerts pressure on price level rise**, for a simple reason: the prices have a certain resistance to decrease not to rise. Normally, you may see a price trebled, but it is difficult to find an example of reducing the price in one third. **If monetary policy would be oriented towards a zero inflation level, it would hinder the relative price movement and the restructuring of economy in accordance with the new reality.** This movement is larger in a developing economy. Therefore, the developing countries, one of which is Albania, accept higher inflation targets than the developed countries.

- The discussion on negative inflation effects must be put into a comparative background. **So, deflation (the opposite of inflation or the reduction of the overall price level) is more damaging to economy than to inflation.** Under a situation when prices drop day in day out, the decisions for consumption would decline, expecting lower and more favorable prices. Also deflation increases the real borrowing cost, and therefore, the decisions of companies for investments. The decline of consumption and investments would undoubtedly bring about an economic activity slow-down. **Thus, if the central bank intended a 0 inflation, it would undertake the risk of deflationary situations.**

- **It is frequently said that inflation disguises the qualitative aspect of goods and services.** The need to be competitive or merely the accumulation of experience in respective areas enables companies to supply ever more qualified products in the market. But the qualified change is not totally reflected in product prices. For example, though a mobile phone may have the same price in the market, its technology, functions and quality are much higher today than two years ago. **From this viewpoint, we may state that the tolerating of a low inflation level is “the price” that the society should pay to guarantee the existence of economic incentive for technological innovations.**

Finally, we can state that while negative inflation effects are already known and are largely accepted, no central bank equalizes the price stability with the maintaining of 0 inflation. Practically, developed countries³ target an inflation of around 2 per cent. Concerning developing countries, the inflation-targeted band is larger. In Eastern Europe, Albania included, the inflation target fluctuates generally around 3-5 per cent band.

³ Here, we would mention U.S.A., Countries of Western Europe, Canada, Australia, New Zealand, Japan, etc.

II. MONETARY INSTRUMENTS AND MONETARY POLICY

So far we have already made clear that low inflation may have obvious impacts over the growth and economic development, through its effect on the use of real resources and financial stability.

One of the few points, upon which many macro-economists agree is that **inflation is first of all and mostly a monetary phenomenon**. It occurs due to the creation, over a long-term period, of money at such a magnitude as to exceed the production of goods and services in economy. Furthermore, it is reached the consensus that money supply is determined by the central bank in the long run. In this way, **with an appropriate policy, the central bank may manage to maintain low inflation rates in the long run**. In the broad sense, the central bank must have the responsibility to grow money, in compliance with the low inflation levels. If the central bank achieves such a thing, the country will have many economic benefits.

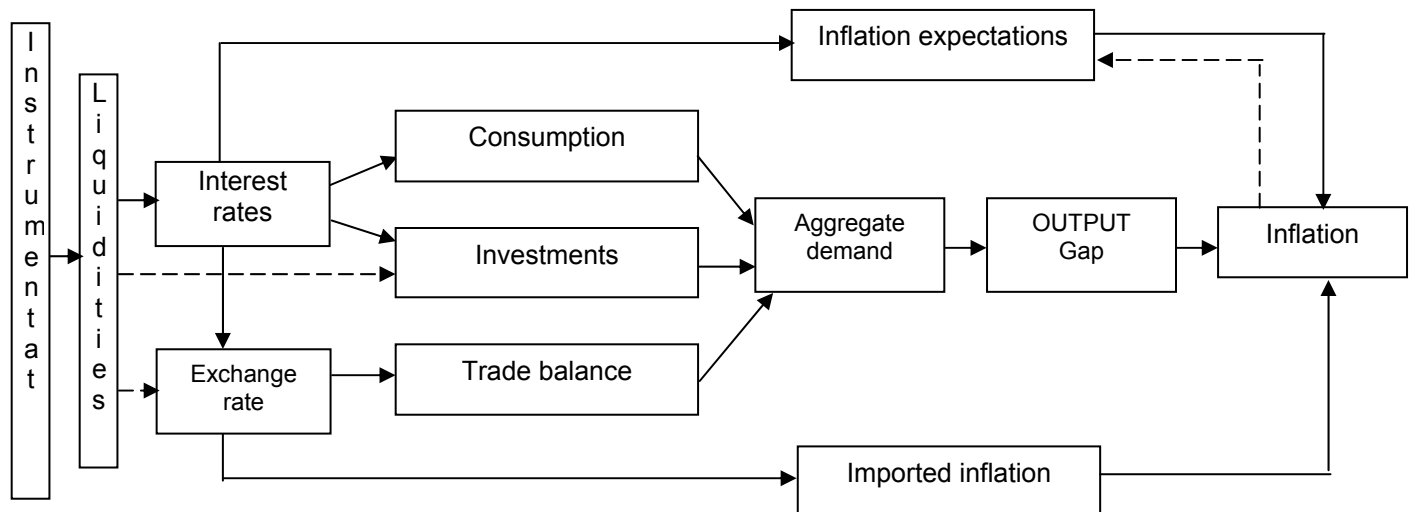
The right and obligation to control money creation in the long run, permits underlined fluctuations in the short run mobility of money. In the past the monetary aggregates were used to connect the short-term period to the long term one. Though the impact of monetary aggregates on the price level in economy is not put into question, the strength and coherence of this relationship are smoothed. The short-term relation between money and economy has been weakening.

Therefore, **the optimal time horizon, in which the monetary policy should operate is the mid-term period**. The central banks show little importance to the interpretation of short-term movements and the reactions to them. **An important consequence of the long-term viewpoint of central banks is the need for their real independence**. The economic policies of the Government have frequently proved to be policies limited by mandate of the government. The assurance of macroeconomic stability and inflation control require long-term policies, beyond political considerations. The concept of central bank's independence from politics has found academic and practical consensus all over the world.

II.1 TRANSMISSION MECHANISM

In order to make a successful intervention, the central bank should clearly know the way to transmit its monetary policy in economy. The transmission mechanism includes the channels, through which the monetary policy instruments impact on the real economic activity and fulfill the inflation target. Speaking in general, the transmission mechanism may be summarized in the following scheme:

Figure 1. Monetary policy transmission mechanism⁴



Referring to the above scheme, we may briefly analyse the functioning of transmission mechanism.

1. The implementation of monetary policy starts with its instruments. The central bank is able to control accurately only the use of such instruments. Moving from the left to the right of the scheme, the monetary policy impact becomes weaker.
2. The monetary policy instruments define the liquidity level in the interbank market and impact on the nominal interest rate of interbank market⁵. Also, the liquidity level exerts impact even on the exchange rate.

⁴ The breaking lines present the links, whose strength is regarded as having a secondary impact on the transmission mechanism. This scheme may be regarded only as an orienting scheme, to structure the following discussion. It is not claimed to be a complete scheme of all possible links of transmission mechanism.

⁵ The way how the monetary policy instruments impact on the interbank market interest rates will be clarified in the following.

3. The impact of nominal interest rates, in a short-term period, is transformed into a change of real interest rate. The change of real rates influences the aggregate demand level in economy. In particular, the real interest rates impact on its both component elements:

- Consumption. The level of interest rates impacts on the decisions of individuals for consumption/ investment. The increase of interest rate raises savings in economy, by reducing consumption, and vice versa. A second channel through which the interest rates impact on consumption is the so-called wealth effect. The reduction of interest rates raises the value of financial assets of the individuals, increasing their property and raising their consumption.
- Investments. The decrease/increase of real interest rate decreases/increases the real borrowing cost, impacting on the level of investments in economy. But there are also two other ways, with which the change in interest rates impacts on investments level. (a) Narrow credit channel: decrease of interest rates presupposes liquidity growth, which means more funds available to economy, and vice versa. (b) Broad credit channel: decrease of interest rates brings about increase of the value of financial assets, which means that the level of collateral available to them is raised, hence even the possibility to obtain loans.

4. The change in interest rates impacts on the expectations of economic agents on inflation. Such expectations are a very important input in the mechanism of price setting, especially for those economies that function on the basis of long-term salary contracts. The change of interest rates signals to the public on the central bank policy in terms of inflation. The level of public confidence in the central bank makes possible that it reacts by modifying inflationary expectations, yet without the appearance of the real effects of interest rate change. The more reliable the monetary policy is and the more credible the central bank is, the stronger this channel is and the easier the inflation control is.

5. The interest rate change impacts on the exchange rate level⁶. The mechanism through which this impact is made possible is the so - called UIP - Uncovered Interest Rate Parity⁷. According to it, the currencies that have

⁶ The effects described in footnote 4 and 5 form the one called interest rate channel.

⁷ Though recently the literature putting in question the effects of this mechanism is being increased, these studies remain merely in the form of empirical ascertainties, meaning that the effect of this mechanism

relatively high interest rates are expected to appreciate, and vice versa, the currencies that have relatively low interest rates are expected to depreciate. In developed countries this is realized through the international capital mobility. In Albania, though international short-term capital inflows are lacking, this effect is realized through the considerable quantity of foreign currency that exists in economy. More concretely, during 2003, the difference of interest rates between Lek and foreign currency has continuously exerted pressure on Lek appreciation.

6. The exchange rate impact on inflation forms the one called exchange rate channel. This channel may be divided into three parts:

- The exchange rate change impacts on imported inflation level⁸. Imported inflation means the inflation that comes into the economy due to the consumption in economy of imported goods. It is understandable that a depreciation of Lek would increase their price, and as a consequence it would increase even the imported inflation. The Albanian economy is an economy with a small productive base, and therefore much exposed to this channel.
- The exchange rate impacts on the competitiveness of the exports of a country, the trade balance of trade (net exports) and aggregate demand⁹.
- The exchange rate exerts a psychological impact in determining the prices in economy¹⁰. In this way, it impacts on inflationary expectations and on real inflation.

7. The change of consumption, investments and the balance of trade impact on the aggregate demand level. This illustrates a very important fact. In fact, the monetary policy is an instrument for controlling the aggregate demand in economy. But, what is more important for inflation and that finally determines its level is the output-gap or the difference between the actual product and potential product¹¹. If this difference is positive, the aggregate demand exerts pressure on

remains present, but it is lessened by a number of factors such as the expectations of economic agents and the frequently speculative nature of foreign exchange markets.

⁸ In literature this effect is known as *exchange rate pas-through*. Its impact is considered as short-term and very significant in the transition economies. Empirical studies in Albania indicate that Lek depreciation raises inflation within a one-month period.

⁹ This impact is very low on the Albanian economy, since exports consist mainly of raw materials or goods with the orderer's material.

¹⁰ This channel is not shown in the above transmission mechanism scheme.

¹¹ The potential output is a theoretical concept. It shows the level of GDP under the conditions of full employment. A 0 unemployment level is not regarded as a full employment. In fact, it is accepted in the economy that there should exist a level of unemployment, reflecting the economy change and restructuring.

inflation. If this difference is negative, the domestic economic activity level is not a source for inflationary pressures.

The transmission mechanism is very important in compilation and implementation of monetary policy. It describes the way how monetary policy functions in all its aspects, starting from monetary policy instruments to their impact on inflation. Meanwhile, given the transmission mechanism, the compilation of monetary policy pursues the reverse path, that is it starts from inflation targeting to the defining of an overall monetary policy framework and to the using of monetary policy instruments for their fulfillment.

II.2 OVERALL MONETARY POLICY FRAMEWORK

The monetary policy is established and made concrete through the intermediate and operational objectives and the framework of its instruments.

The monetary policy operates in economy with a certain delay¹². This delay is conditioned by the transmitting of monetary policy decisions in the financial markets and by the reaction of markets and economy to them. The less developed the financial markets are, and the weaker their relation with the real sector activity of economy, the longer is this time frame. Therefore, the central bank should react to expected inflation developments and not current inflation performance, because the latter one is beyond the probability of its impact. This obliges the central banks to develop the instruments and procedures that allow it to react in advance on expected inflation developments. **The central banks use other indicators to assess the need for monetary policy intervention and its effectiveness. These indicators are known as intermediate objectives and operational objectives.**

The intermediate objective¹³ realizes the link between inflation target and an indicator, which may be used as an early signal of its level. Ideally, the intermediate objectives should meet two prerequisites: (i) they should have a

The so-called NAIRU (*Non Accelerating-Inflation Rate of Unemployment*) is used as a level of employment under the conditions of potential output.

¹² Various studies have indicated that the time space during which the monetary policy impact appears as complete varies from 6 to 24 months.

¹³ The intermediate objective is often known as a nominal anchor, since it is announced and serves to orient the expectations of economic agents.

strong and stable relation with the final objective and (ii) the intermediate objectives must be under the bank's control.

However, the intermediate targets may not be under the complete control of authorities either. Furthermore, time delays do exist, making the control of monetary authorities on the level of intermediate objectives. In consequence there **emerges the need to identify the operational objectives, which establish a link between a central bank's instruments and its intermediate objectives**. As a rule, the performance of operational objectives may be monitored at very short frequencies, usually daily or weekly. The operational objectives may be divided into two large groups:

- Quantitative targets, which aim at controlling the banking system liquidity level or the level of another monetary aggregate that is under the complete control of the central bank; and,
- Qualitative targets, such as interest rates in the interbank market.

The intermediate and operational objectives change according to the monetary policy regime applied. Further on, we shall treat the main regimes of monetary policy suggested by the world practice, their implications on defining the intermediate and operational objectives, the Bank of Albania monetary policy regime and the framework of its objectives.

II.3 MAIN MONETARY POLICY REGIMES

The main monetary policy regimes are:

- Exchange rate targeting;
- Monetary targeting;
- Inflation targeting.

Exchange rate targeting¹⁴

In this regime, the central banks aim at controlling the exchange rate, considering the latter one as the main determinant of economic developments. The pegging of the national currency to a foreign currency (or a basket of foreign currencies)

¹⁴ Many regional countries such as, Bulgaria, Macedonia, Croatia, Bosnia, Baltic countries, etc pursue this strategy.

meets the price stability target¹⁵ and promotes trade exchanges, thus reducing the exchange rate insecurity.

Depending on the strength of the central bank's commitment to preserve the exchange rate, these regimes may move from managed to currency board exchange rate regimes, or to the adopting of a foreign currency.

Box 1. Possible variants of exchange rate targeting:

Managed floating -	The central bank aims at controlling the exchange rate fluctuations, but does not commit to any announced par value to the public.
Soft peg ¹⁶ -	The central bank is committed to maintain a fixed exchange rate by defining it in the form of a relatively significant band.
Hard peg -	Central bank is committed to maintain a fixed exchange rate, at a narrow band.
Currency board -	It is an extreme form of pegged exchange rate regime. It includes a solid mechanism of institutional commitments by means of which a central bank is committed to issue local currency only if the corresponding foreign currency quantity enters into its foreign exchange reserves, at a fixed rate.
Adoption of a foreign currency –	Practically a country gives up the sovereign right to issue national currency and a foreign currency becomes legal tender for all transactions carried out.

The maintaining of a fixed exchange rate requires from the central bank to be continuously present in the foreign exchange market, being ready to purchase

¹⁵ Generally, the exchange rate is pegged against a hard currency, such as American dollar or Euro. Upon the pegging of exchange rate against the foreign currency of another country, the inflation of that country is also imported. Euro and USD are featured by relatively low inflation rates, therefore even this monetary policy regime ensures price stability, though lacking the primary target declared by the central bank.

¹⁶ The exchange rate level and the tolerance band that accompanies it may change depending on time. In this case we have to do with *crawling peg*.

and sell foreign currency at fixed prices. From this viewpoint, this monetary policy regime does not require the setting of intermediate and operational objectives.

Monetary targeting¹⁷

The theoretical basis of this monetary policy regime is a monetary phenomenon. Given that, the central bank aims at controlling inflation by controlling the level of monetary assets in economy. The monetary policy target is the approximation of monetary supply to the economy demand for the real monetary assets.

Such regimes require the control of the level of monetary aggregates as their intermediate target. As a rule, the intermediate target is the increase of monetary supply. This monetary policy regime may accept both types of operational targets. Either the control of base money level or the control of interest rate level in the money market impact on money supply expansion. Both these variables may be controlled over by the monetary policy instruments.

Inflation targeting¹⁸

Inflation targeting is currently the most modern regime among the developed countries. From the conceptual viewpoint, the monetary policy decisions under this regime are based on inflation forecasting, using all the available information. The adopting of this regime requires detailed study of the transmission mechanism and its breaking down into an integrated model of equations. Inflation targeting is the most accurate regime of monetary policy, since it uses all the knowledge on the way the economy functions and the dynamics of inter-operations of its sectors.

The intermediate objective of this regime is inflation forecasting¹⁹, whereas the interbank market interest rates are used as operational objectives.

The Bank of Albania has applied the monetary targeting regime²⁰. To achieve its inflation target, the Bank of Albania has used the annual growth

¹⁷ This strategy is pursued by such countries as: GFR, USA, Czech, Rumania, Ex-Yugoslavia, etc. Recently it is being noticed a tendency to avoid this method.

¹⁸ This strategy is pursued by such countries as: New Zealand, Australia, Canada, Czech, Hungary, Turkey etc. The European Central Bank is thought to follow a very modified version of it.

¹⁹ The main function of the intermediate objective is the early assessment of monetary policy appropriateness, so as to provide the necessary time for it to react.

rate of money supply as its intermediate objective. It aims at ensuring an increase of the quantity of broad money, so as to adjust the demand for money with the supply and the real growth of economy with the inflation target. In case of discrepancy, inflation would be raised and and/or exchange rate would be depreciated (if the money supply exceeds the demand); or disinflation and/or exchange rate appreciation (if the demand exceeds the supply). The control on money growth to maintain price stability means that the Bank of Albania notices an important explanation of price level in monetary assets level.

²⁰ Recently the Bank of Albania has disclosed its commitment for adoption of inflation targeting regime in a mid-term period.

III. BANK OF ALBANIA MONETARY POLICY INSTRUMENTS

Initially, the main Bank of Albania monetary policy instrument was the control on the minimum level of interest rates of state-owned banks and controls on banks' credit. These instruments are included in the group of direct instruments. They are, in fact, administrative measures that limit certain aspects of the financial market. As such, they are damaging and wherever the financial market development reaches such level, indirect monetary policy instruments substitute them.

The repurchase agreement and the reverse repurchase agreement (repo and reverse repo) are introduced in 2000, and became prevailing gradually. In September of 2000, the Bank of Albania eliminated the control of deposit interest rates, passing totally to indirect monetary policy instruments. The advantage of these instruments is that they operate in compliance with the logic of the market, without causing deformations on it. The central bank impacts on the financial market activity, being merely a participant in it²¹.

Box 2. Indirect instruments of monetary policy

For a relatively long period of time (1992-2000), the implementation of monetary policy employed to two main instruments, the credit limit and the obligatory percentage of term Lek deposit interests. These instruments were merely two administrative decisions of the Bank of Albania which consisted in the limited growth of credit balance by the commercial banks and in the obligation that the state-owned banks had to observe the minimum level of the interest rate for time deposits in Lek announced by the Bank of Albania.

Credit limit. The undeveloped banking system and the lack of a formal developed lending market made the Bank of Albania, starting from mid of 1992, to control the quantity of credit extended to the government sector, through applying credit limits in a particular way to every bank of the system. To ensure a kind of flexibility and to encourage banks to initiate simple forms of interbank transactions, the marketable limits were viewed as reasonable.

²¹ However, we should accept that the central bank is a privileged participant, given the quantity of funds available to it and the information extent.

The problems faced were numerous, especially with regards to the reporting and supervision of the observance of the limits extended. The new credit to the private sector started to grow at accelerated rates, and at end of 1993, it occupied approximately 11 per cent of total credit compared to 4 per cent it was a year ago. For many objective and subjective reasons, the observance of such limits became impossible in many cases, thus reducing the efficiency of this instrument.

The increased borrowing in the informal sector of economy reduced gradually the demand for loans from the banking system, while starting from May 1995, a new investment alternative was added to the banking system, treasury bills. Thus the role of credit limit declined significantly, especially after the crisis of 1997, when, either due to banking supervision rates or skepticism characterizing the banking system to private business in general, this instrument started to lose its meaning until 1999 when its application was abandoned definitely.

Interest percentage. Upon starting efforts for economy stabilization in mid of 1992, the according of a real percentage of changing deposits in Lek was deemed to be essential key in achieving success, especially for mobilizing the financial assets and investments. The first movement was the increase of the minimum percentage for time Lek deposits, from the low levels of 4 – 8 per cent to 22 – 32 per cent (respectively for 3- and 12-month deposits) The effect of such an increase was obvious during the three first years of transition. The restraining of money hemorrhage corresponded to an increase of deposits in the system, while inflation was restrained significantly by dropping constantly until reaching one-digit level at end of 1995. The period of 1996 – 1997, when pyramid schemes emerged, corresponds with a total collapse of the role of interest percentage and of the monetary policy of that time, until arriving to another period of a large increase of administrative percentage of interests on Lek time deposits. Developments evidenced in inflation over the period of 1999 – 2000 were unusual, and their consequence was a continuous smoothing of the conditions of monetary policy during the whole this period. In this way, we come to the third quarter of the 2000, when the bank's reaction was not following continuous reduction of administrative percentage by the Bank of Albania any longer.

Under these circumstances, the re-conceiving of the whole present operational framework was taken into account, and it was decided that the Bank of Albania

monetary policy be based only on the implementation of market instruments. The role of the core percentage in economy was given to repurchase agreement interest rate (repo), transactions that would be carried out in weekly auctions, that would be held by the Bank of Albania.

III.1 CURRENT MONETARY INSTRUMENTS

The framework of current Bank of Albania monetary instruments is designed according to that of the European Central Bank and is very similar to it. The framework of instruments is constituted of:

- Open market operations;
- Standing facilities of the Bank of Albania,
- Required reserve.

III.1.1 OPEN MARKET OPERATIONS

Open market operations include:

- Repurchase and reverse repurchase agreements (repo and reverse repo²²);
- Outright transactions
- Bank of Albania interventions in the foreign exchange.

The function of these operations is the management of liquidity and interbank market interest rates. The repurchase agreement (known as Repo) is the main Bank of Albania instrument. It conveys even its monetary policy. The function of repo is double: (i) it is used for managing the liquidity level in the system and (ii) it serves as orienting for the levels of interest rates in economy.

Repurchase and reverse repurchase agreements

Repurchase and reverse repurchase agreements play primary role in transmitting the monetary policy. They aim at regulating the interest rate in the market, managing the market liquidity and transmitting banks' signals on monetary

²² Repo and repurchase agreement are equivalent terms. Repo is the abbreviation of repurchase offer (agreement).

policy to be pursued by the Bank of Albania. The open market operations are exclusiveness to the Bank of Albania. It determines the type of instrument to be used and the relevant prerequisites on executing it.

Before trying to comprehend how the central bank manages to control the liquidity level and the interbank market interest rate, let us see what does repo represent and how it is realized in practice.

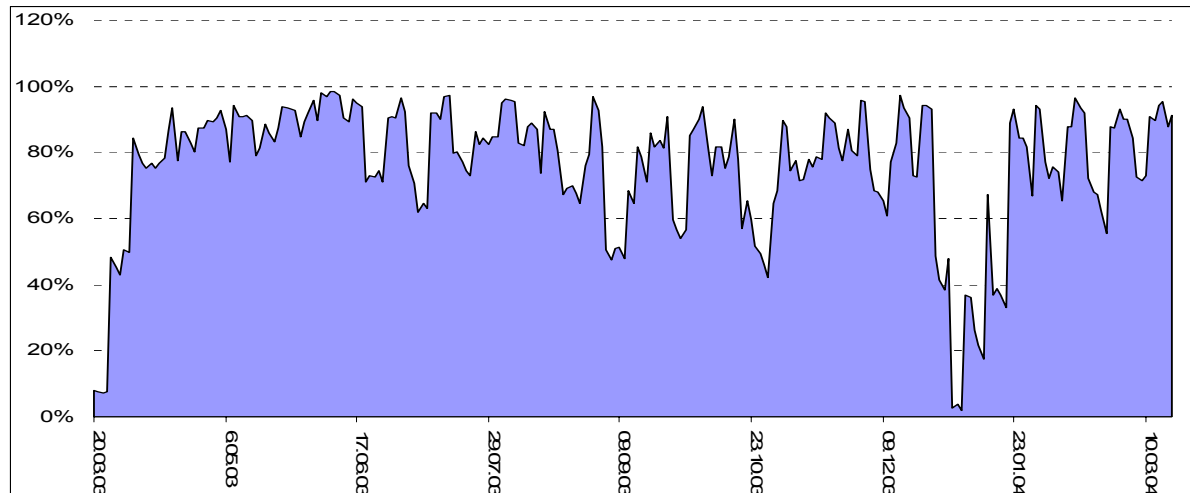
- **Instrument type**

Repurchase agreements are open market operations where the Bank of Albania sells securities to commercial banks and repurchases them on a pre-specified date following the terms of the agreement. The difference between the purchasing price and the selling price represents the interest that the Bank of Albania pays to commercial banks. Reverse repurchase agreements are open market operations where the Bank of Albania buys securities and sells them back on a pre-specified date following the terms of the agreement. In this case, the difference between the selling price and the purchasing price represents the interest that commercial banks pay to the Bank of Albania for the loan they obtain from it.

Two moments should be highlighted here:

- **Instrument's maturity term**, which in Albania is one week, one month or three months.
- **Instrument's interest rate**. The interest rate of weekly repo serves as core interest rate in economy. The repurchase agreements having a longer maturity serve as fine-tuning and structural instruments of market liquidity. Their interest rate signals the monetary policy stance.
- **Legal nature of instrument**. Treasury bills that are traded through (reverse) repurchase agreements have initially been purchased by the Bank of Albania or the commercial banks in the primary or secondary Treasury bill market.

Chart 1. Repo's weight in the Bank of Albania operations



According to their purpose, open market operations are divided into the following categories: primary market operations, fine-tuning operations and structural operations. The interest percentage of fine-tuning and structural operations does not serve as a monetary policy signal. The Bank of Albania executes such operations in the form of auctions and accepts the interest rate emerging out of them (naturally within the specified limits).

Repurchase agreements are the main open market instrument and can be employed in all three aforementioned operations, whereas outright transactions are used for structural and fine-tuning purposes only.

Box 3. Essential features of repurchase agreements

A. The primary market operation.

The primary market operation is the (reverse) repurchase agreement with a maturity of one week, which is also the Bank of Albania's most important instrument for implementing the monetary policy. The main features of the (reverse) repurchase agreements can be summarized as follows:

- The purpose of their employment is to steer market interest rates, manage the liquidity situation and signal the stance of monetary policy.
- They are auctions with a fixed offered amount and variable prices or fixed price auctions with no pre-specified offered amount.

- The Bank of Albania Supervisory Council determines the fixed interest rate of the (reverse) repurchase agreements. This interest rate acts as a floor or ceiling rate for variable price auctions.
- The repurchase agreements are employed to withdraw liquidity from the banking system, while the reverse repurchase agreements are employed to inject liquidity in the system.
- The auctions for these types of agreements are executed weekly and are of the standard type.
- This instrument has a maturity of seven days.
- Commercial banks that have an account with the Bank of Albania have the right to submit auction bids.

B. Structural operations

The instruments employed in open market structural operations are (reverse) repurchase agreements with a maturity of one month and three months, as well as outright transactions. The features of the (reverse) repurchase agreements with a maturity of one month and three months can be summarized as follows:

- The purpose of their employment is to adjust structural positions and manage the liquidity situation (temporary augmentation or decrease).
- They are executed through quick auctions with no pre-specified auction date.
- The interest rate for these agreements employs the market interest rate at the time of the auction as a reference.
- The Bank of Albania has the right to decline bids whose rates differ substantially from the actual rates in the money market.
- Commercial banks that have an account with Bank of Albania have the right to submit auction bids.

C. Fine-tuning operations

Open market fine-tuning operations use (reverse) repurchase agreements with a maturity of one day, one month and three months, as well as outright transactions. The operational features of the (reverse) repurchase agreements with a maturity of one day can be summarized as follows:

- The purpose of their execution is the adjustment of market's unexpected fluctuations.
- They are quick auctions with a non-standardized frequency.
- Their interest rate uses as a reference the fixed rate of (reverse) repurchase agreements with a seven-day maturity, which is determined by the Bank of

Albania Supervisory Council. The Bank of Albania have the right to submit auction bids.

III.1.2 STANDING FACILITIES OF THE BANK OF ALBANIA

Standing facilities are:

1. Overnight deposits and loans
2. Lombard loans

These instruments describe the Bank of Albania's lending to commercial banks. By overnight loans and Lombard loan, the Bank of Albania extends loans to commercial banks (injects liquidity), whereas by overnight deposits the Bank of Albania obtains loans from commercial banks (absorbs liquidity from the market).

The function of these instruments is the supporting of the main instrument of repo. These instruments specify the band in which the interbank market interest rate may fluctuate. The interest rate on the overnight deposit facility is currently 3.0 percentage points lower than the Repo interest rate, whereas the interest rate on the overnight loan facility is currently 2.5 percentage points higher than the fixed REPO interest rate. The interest rate on the Lombard loan facility is currently 6.0 percentage points higher than the Repo interest. It is extended only in specific cases, when the absence of liquidity in a bank seems to have a permanent nature.

As a rule, standing facilities are initiated by commercial banks. They determine a band within which the interest rates may fluctuate. No bank would accept to receive loans in the interbank market with a higher interest rate than overnight loan interest rate, given that it may use the overnight loan facility provided by the Bank of Albania. Also, no bank would accept to invest funds at a lower interest rate than that of the overnight deposit, given that it may deposit such funds in the form of overnight deposit at the Bank of Albania.

III.1.3 REQUIRED RESERVE

The main function of this instrument is the control on money supply growth, and using the facility provided by the central bank to average the daily level

of the required reserve, it performs even the function of stabilizing the interbank market interest rates.

III.2 ROLE OF REPURCHASE AGREEMENTS IN THE TRANSMISSION MECHANISM

III.2.1 ROLE OF REPO IN MEETING THE OPERATIONAL OBJECTIVE

In general, as we underlined above, the operational objectives are of two types: quantitative objectives and qualitative objectives (of interest rates).

Quantitative operational objectives of liquidity are used under the conditions of monetary targeting regime. Through the mechanism of money multiplier, they put a link between the intermediate target (money supply) and operational objectives (liquidity level in the system and base money level). From this viewpoint, repo is used to achieve the desired liquidity level, by absorbing or injecting liquidity.

Operational objectives in the form of interest rates generally are interbank market interest rates (interest rates with which the commercial banks obtain and extend loans with one-another). So, they are not directly the repurchase agreement interest rates. From this viewpoint, the interest rate of repo is only an orienting rate for market interest rates.

Initially, the Bank of Albania has used repos (which were introduced on July 2000) exclusively to manage the market liquidity. The interbank market development has made the Bank of Albania pay special attention to the role of repo in managing the market interest rates. How does a central bank manage to keep the interbank market interest rates close to repo interest rates? (The changes are insignificant).

First of all we should deal a little bit with aggregate liquidity position in the banking system. This concept is the arithmetic sum of individual positions of banks' liquidity. So, one or many banks may lack liquidity/have excess liquidity, while other banks may have excess liquidity /lack liquidity, but the whole banking system will either lack liquidity or have excess liquidity.

A. **Let us assume that the system lacks liquidity.** Under these conditions, the central banks, forecasting accurately the liquidity needs in the system and injecting the desired liquidity level in the system, enables the interest rates of interbank transactions be close to interest rate of repurchase agreements. **A bank** would accept to borrow only at interest rates that are close to that of repo (usually lower); **otherwise it will turn to the Bank of Albania.** From this viewpoint, the repo interest rate is the marginal rate of the borrowing. If the central bank does not foresee accurately the level of liquidity requested by the banking system, we may have deviations of market interest rates from that of repo.

B. **Let us assume that the banking system has excess liquidity.** In this case, the central bank is transformed into absorber of liquidity. Let us also assume that the central bank would make an accurate forecasting of liquidity and would withdraw accurately the quantity supplied by banks. **Even in such a case, the level of interbank market interest rate level would approximate to that of repo. A bank would not accept to extend loans in the interbank market at a lower interest rate than the one with which the Bank of Albania withdraws funds.** In this case, the repo interest rate is the opportunity cost of holding excessive funds for the banking system. If the liquidity forecasting has not been accurate, we may still have deviation from interbank market interest rates from repo interest rates.

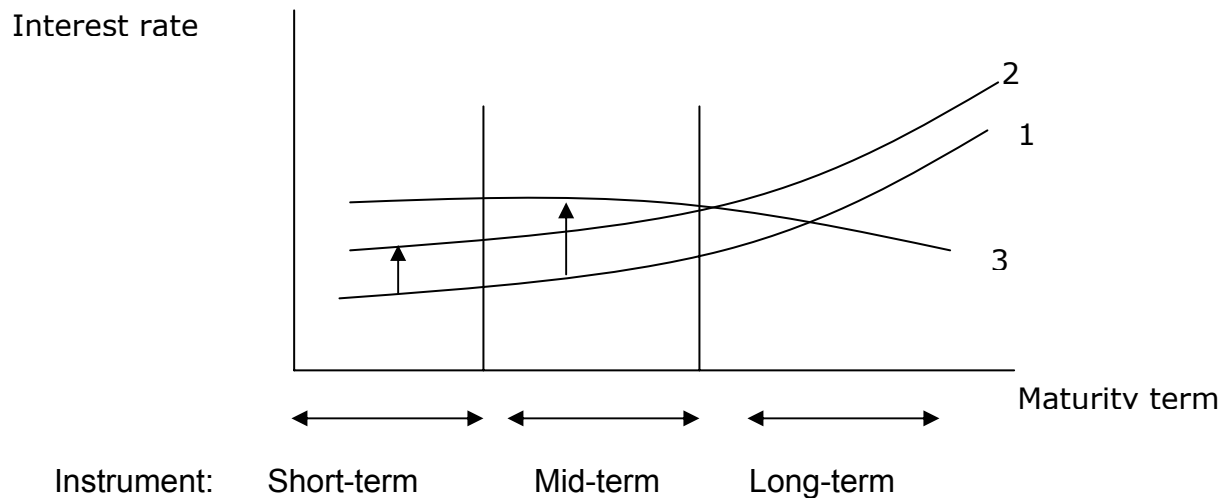
In both cases, the interbank market interest rates will be close to repo interest rate. However, even in the case of wrong liquidity forecasting from the Bank of Albania, the facility instruments and operations mentioned above restrict the movement of interest rates in the interbank market.

III.2.2 HOW IS THE REPO INTEREST RATE CHANGE TRANSMITTED TO ECONOMY?

Turning back to monetary policy transmission presented above, we should stress that the interest rates, which have a larger impact in transmitting the monetary policy decisions to economy, are the interest rates of long-term instruments.

But, the repo interest rates are only short-term interest rates. How do they impact on long-term interest rates? Here enters the concept of *yield-curve* of interest rate. It is known that long-term instruments have higher interest rates, mainly due to the higher risk they represent. (Line 1 of the chart).

Figure 2. Interest rate curve



The Bank of Albania, by changing repo interest rate, wants a parallel shifting of the interest rate curve. In other words, by decreasing / increasing the repo interest rate by 0.5 percentage points, the Bank of Albania wants that the Lek deposits interest rate, bond and treasury bill interest rate, as well as all interest rates in economy, be decreased/increased by 0.5 percentage points. Graphically this would be illustrated by the shifting of line 1 to line 2 of the chart. The passing of the interest rate curve to position 3 is the most undesirable reaction of the financial system to a monetary policy tightening.

The practice shows that the financial markets are rather complex. The inflationary expectations are the main factor determining the form of interest rate curve. If the public does not perceive the monetary policy pursued as a right one, the public reaction may make the monetary policy invalid. Therefore, the central banks are very prudential in adjusting their monetary policy instruments with the economic reality and with the expectations of market agents.