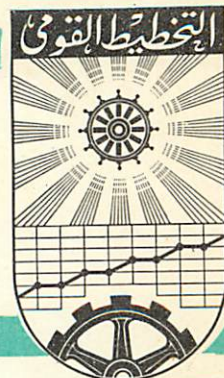


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Short Term Financial Planning and
the Market Equilibrium.

by

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Short Term Financial Planning and the Market Equilibrium.

It is evident, that in the annual economic plans, both the physical and monetary sides of economic processes are rigidly connected to each other, what means that every planned supply of material goods and services at current prices is connected with corresponding monetary demand. This equality is assured in central annual plans not only in total levels of supply and demand, but also in their internal structure. The supply of consumption goods is connected with purchase funds of individual and collective consumers, while the supply of investment goods is connected with the amount of investment funds, and further, the equality of planned supply and demand within the central economic plan is assured also in sectorial or branchial structure. But this rigid equality may not be reached already at the stage of detailed economic planning in enterprises (based on central directives), though not speaking about the implementation of the planned targets. Let us consider the main factors, entailing differences between the supply of material goods and services and the monetary demand during the implementation of central plans, enclosing the establishment of detailed enterprises' plans already to the stage of implementation.

These main factors may be enumerated as follows:

- a) The difference between average current prices, adopted in plans, and the specific prices of any kind of good and service. Enterprises, planning and performing their production according to the orders of home and foreign trade companies and of other enterprises, do not use average prices, but specific (unitary) ones, and consequently, the value of their production may differ from the central planned one. In this way the total supply of goods and services in nominal value differs from the central planned one, too. Certainly, the same difference must appear also between the performed and planned amount of monetary revenues from the sale of production (if other factors are not changed), but it does not assure market's equilibrium, because the adjustment of the structure of supply and demand be in this way changed. Let us suppose that, as a result of the mentioned differences between average and specific prices the total amount of supply of consumption goods was reduced. It does not reduce

the amount of loan fund and other monetary revenues of individual consumers, and consequently, does not reduce total demand on consumption goods, what entails occurrence of an inflationary gap on consumption goods' market. At the same time, the reduction of enterprises' monetary revenues from the sale reduces their gross benefit, and consequently, their demand on production (investment) goods. A deflationary gap on investment goods' market is occurring.

- b) The differences between actual and planned physical (or real) amount of production. Like the precedent case, this fact does not cause in general disequilibrium between total supply and total demands (changing at the same time the value of produced goods and the amount of monetary revenues), but as a rule it causes changes in the structure of production and disequilibrium on both specific markets.
- c) The production of goods of bad quality, having no real value or having a reduced one as compared with their nominal prices, or of quantities of certain goods surpassing effective demand. This factor may lead to a general disequilibrium, to the occurrence of an inflationary gap on both markets at the same time. This fact results from granting bank credits on stocks of final products. In theory, the stocks of goods of poor quality etc. have to be excluded by bank offices from stocks to be financed by credit and in this way the expenditures on their production would be covered by gross benefit earned on the sale of other products. If so, the output of bad quality goods, diminishing at the same rate the planned value of goods and monetary revenues, may cause structural disequilibrium only, but does not cause a general disequilibrium. But bad quality goods being not exempted from bank credits granted on stocks, total monetary revenues surpass total value of goods and services available, causing both general and structural disequilibrium.
- d) Too great or too small amount of bank credits, granted on purchase of goods. This category of credits includes credits on stocks of raw materials; investment credits and consumption credits. The increase of these credits during the planned period has to be equated with monetary savings and the increase of reserves, which reduce monetary demand below the total sum of monetary revenues. Differences in the total sum and in

the internal structure of purchase credits and of savings cause general and structural disequilibria between supply and demand.

- e) Deviations of the planned amount of financial transfers of different kinds. For example, other things being equal, the over-planned amount of the loan-fund causes an increase of the demand for consumption goods and the reduction of the demand for investment goods (as a result of reduced enterprises' gross benefit), the over planned budgetary revenues from taxes paid by the private sector reduce the demand for consumption goods and increase the budgetary surplus etc. This factor in most cases causes only structural disequilibrium between supply and demand.

This list of factors, causing discrepancies between material and monetary flows and disequilibrium on the two main markets in the socialist economy, is not of course exhaustive one. It includes some examples only of these factors most frequently observed in the economic life. In practice, many factors of this kind appear simultaneously, acting in different directions and partially balancing results of their activity, but as a rule in the final result, the estimation of the plans implementation in the coming period reveals the danger of disequilibrium and requests the adaptation of economic measures in order to balance the economic development.

The estimation of relations between supply and demand must be performed separately for the market of consumption goods and for the market of production goods, these two groups of commodities being in general non-substitutive (with few exceptions, as for example fuel). In many cases, supplementary estimations are requested for more detailed groups of commodities within both markets, as for example for food products, but the basic analysis encloses each of markets as a whole.

The estimation of the implementation of planned targets, which ought to serve the choice of measures of balancing demand and supply on both markets, has to discover:

- a) The character of the gap between demand and supply, which can be inflationary or deflationary.
b) The size of the gap, expressed in monetary units.

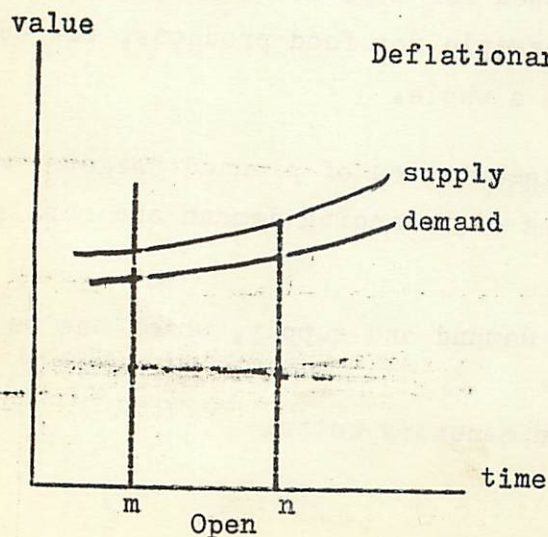
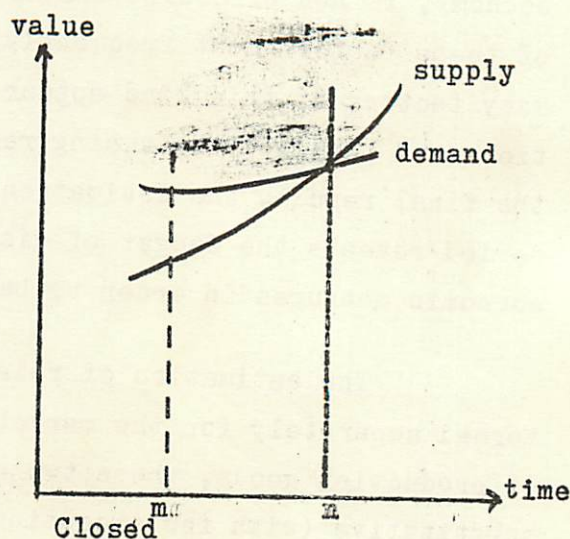
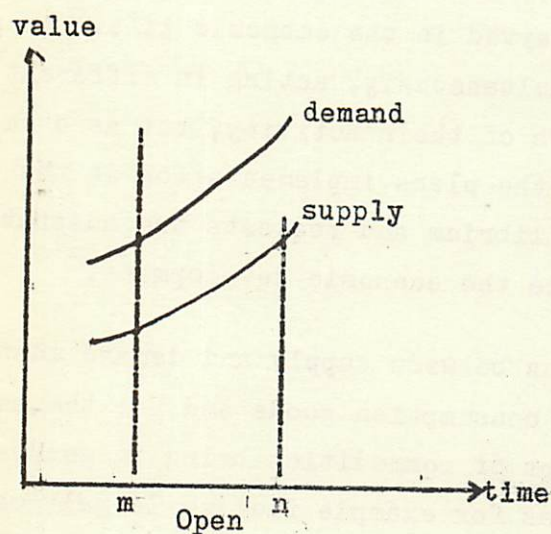
- c) The shape of the gap, i.e., the tendencies of development of demand of supply, if no economic measures influencing them would be adopted.
- d) The internal structure of the gap - only in more detailed investigations.

On each of the two markets, four different situations may occur:

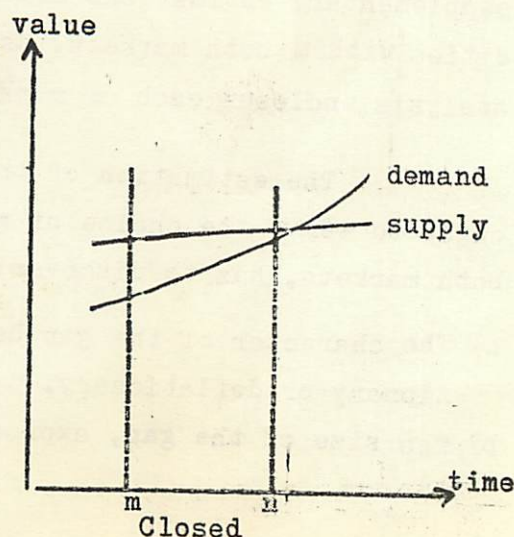
- a) The open inflationary gap.
- b) The closed inflationary gap.
- c) The open deflationary gap.
- d) The closed deflationary gap.

These situations are illustrated by the following diagrams:

Inflationary gap



Deflationary gap



(Points m , n on all diagrams are marking limits of the planned period).

It is obvious, that the closed gaps in some time have to turn into their opposites: the closed inflationary gap has to turn into an open deflationary one, and the closed deflationary one has to turn into an open inflationary gap. That is why the establishment of the shape of the gap is so important and the analysis cannot be stopped on the mere statement of the character of the occurring gap as an inflationary or a deflationary one. The deflationary gap on the market of consumption goods, which is often considered as a opportunity for raising wages and other monetary revenues of the population, having closed shape is almost as dangerous as the open inflationary gap and at all events does not allow to increase wages. The proper measures of balancing markets and of maintaining equilibrium on them may be chosen only when the shapes of the gaps are determined.¹⁾

The mutual adjustment of demand and supply may be reached by:

- 1) The adjustment of real supply,
- 2) the adjustment of nominal supply, i.e., by changing in the price level, physical quantities of supplied commodities remaining unchanged,
- 3) the adjustment of monetary demand.

Within short time periods the only factor of the adjustment of real supply are the disposable reserves of different commodities, formerly not designed to be sold. The adjustment of current production to the needs of

- 1) The determination of the shape and of the size of the gap is easy if demand and supply are functions of time, expressed with equations:

$$\begin{aligned} d &= f/t/ = a/l+b/^{t-1} && \text{demand} \\ s &= f/t/ = p/l+q/^{t-1} && \text{supply} \end{aligned}$$

where a, b, p, q are parameters determinable on statistic data with the method of least squares, a and p indicating the level of demand respective supply at the time t=1, b and q indicating their rates of growth.

In order to determine the shape of a gap, the first derivatives of both functions have to be calculated, according to equations expressing them:

$$\begin{aligned} f'/t/ &= a/l+b/^{t-1} \ln a/l+b/ \\ f'/t/ &= p/l+q/^{t-1} \ln p/l+q/ \end{aligned}$$

If the first derivate of the curve lying higher on the diagram is greater than the first derivate of the curve lying lower, (at the point t=n/, the curves have the tendency to separate each from another /open gap/. In the opposite case they have the tendency to cross, which indicates the closed gap.

the market requires more time, and if even started within the planned period, its results would be sensible only in the coming periods. This does not mean, of course, that on the basis of estimations of the planned targets' implementation no measures have to be taken in order to improve the plan; on the contrary, these estimations are aimed to contribute to permanent adjustments and improvements of physical plans, too. But awaiting their results, for the time being we can dispose only of material reserves, of means of price policy and of financial instruments, regulating current monetary demand. Let us consider the application of these instruments at different market conditions.

A. The market of consumption goods.¹⁾

The main factors determining monetary demand on consumption goods are:

- 1) The level of nominal wages and salaries, earned by the population in the socialist sector. This level, in its turn, is determined by : (a) the level of employment at the beginning of the planned period, (b) its planned increase within the planned period, (c) the average nominal wage at the beginning of the planned period, (d) its planned increase.

In the short term financial planning we can operate only with the last of enumerated sub-factors, the starting level of employment and average wage being invariable, and the increase of employment within the planned period being determined by the investments which have started before and are now in the period of completion.

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The size of the gap is determined by the difference between definite integrals within the limits (m,n) of both curves, expressed by the equations:

$$\int_m^n f/t/dt = \frac{1}{\ln a/l+b/} (a/l+b/n^{n-1} - a/l+b/m^{m-1})$$

$$\int_m^n f/t/dt = \frac{1}{\ln p/l+q/} (p/l+q/n^{n-1} - p/l+q/m^{m-1})$$

- 1) We use here the term of "consumption goods" in the conventional sense adopted in Polish planning practice. In this meaning this term encloses not only exactly consumption goods, but all commodities sold to private buyers, machines, tools, fertilisers, fuel and construction materials for private farming and handicraft inclusive.

- 2) The level of budgetary subsidies paid to individual persons (social insurance, rents, pensions, scholarships etc.). Like the precedent case, the only flexible factor, determining this item of population's monetary revenues, is the planned increase of unitary rates of specific categories of subsidies (if, of course, it was planned at all), starting their level being determined by law prescriptions and the number of persons entitled to them being determined on one hand by the law prescriptions, on the other hand by natural demographic phenomena.
- 3) The level of monetary revenues received by the private producers from the sale of their products to the socialist enterprises and organisations (mainly agricultural products). The physical volume of these products, being determined by their production, ought to be considered as independent of planning authorities, unless we do not envisage dangerous and useless policy of limitation of quantities of commodities bought from private suppliers, diminishing the total volume of goods at the disposal of the socialist sector. Therefore, only the changes in prices paid to private suppliers may be considered, and especially their planned increase.
- 4) Compensations paid to private persons by the State general insurance system must be considered as a totally independent factor, free of any influence of short term financial policy. However, at the short term financial planning the implementation of formerly planned figures in this item have to be estimated, verified, and - if necessary - corrected.
- 5) Bank credits, granted to private producers and consumers. This factor in general flexible, especially as far as short term credits granting is concerned, but obligations to grant long-term credits formerly given are stiff.
- 6) The reduction of monetary savings of the population on bank accounts, saving-books and in cash. In normal conditions the general amount of all kinds of savings is never reduced. But if the application of some financial instruments reducing monetary revenues of the population is envisaged, it is necessary to verify whether in the past their application had not entailed temporary reduction of savings, recompensing in this way in some part the reduction of monetary revenues.

- 7) The increase of monetary savings of the population. This factor is rather independent of financial policy, the rate of interest paid on the savings by the saving-banks having in practice no determined influence on their movements. It is however necessary, while applying different financial measures, to take into account not only their direct influence on monetary revenues or expenditures, but also their indirect influence on the level of the savings' increase, resulting of changements of revenues and expenditures.
- 8) The taxation and fees, paid by the population. In short time planning this factor remains inflexible, every changement in taxation demanding the application of the long-lasting parlimamentary procedure. Of course, within the planning limits of a year, the application of this financial instrument may be considered.
- 9) The payments to insurance company and the reimbursment of bank credits, in normal limits of the short term financial planning, i.e. within a quarter, are inflexible, the first of them resulting of formerly made contracts, the second of formerly granted credits.
- 10) The planned expenditures on the purchase of consumption goods for the purposes of collective consumption are performed mainly by the state organisations in non-productive sectors. To some extent, this factor may be considered as a flexible one, because almost always some economies in the state expenditures can be made. However, these possibilities have not to be overestimated if no important damage is expected to occur in the non-productive activity.

The choice between the financial factors influencing monetary demand, together with the application of price policy and the utilisation of material reserves of the national economy has to be made according to the situation on the market of consumption goods, estimated for the nearest future. Let us shortly consider the different conditions on this market and the comptiability of different methods of economic policy.

a) The open inflationary gap.

The occurence of the open inflationary gap on the market of consumption goods means that measures must be taken, changing the actual tendency

in the development of real supply. In consequence, some changes must be made within the plan of investments in order to assure supplementary increase of the production of consumption commodities. This program being established and put into operation, the open inflationary gap turns into a closed one. For the time being, this does not make a great change on the market.

The most comfortable and advisable method of equalising the closed inflationary gap is the utilisation of the state's reserve of consumption commodities-unless this reserve is not sufficient in its size and internal structure. Sufficient reserves allow to wait until results of the changes in the structure of production take place, without damaging formerly established aims of the increase of average wages, budgetary subsidies etc. But when the state's reserves are not great enough to cover all lacking supply, the application of other means must be envisaged. The rule of choice among them is the minimisation of economic and social damages caused by them. So the reduction of credits granted to private producers for productive purposes is not advisable as a method of diminishing demand, as well as the reduction of prizes paid by the state for products supplied by the private sector, both measures influencing unfavourably the future development of private production.

The most effective method of the temporary reduction of the demand is the postponement of formerly planned increases of average wages, salaries and budgetary subsidies, and the reduction of the formerly planned amount of consumption credits. These methods are usually applied in the second turn after the utilisation of reserves of commodities. The application of the reduction of consumption credits depends however on the structure of the gap;

consumption credit are namely granted on the purchase of several kinds of commodities only, as for example motor cars, motorcycles, refrigerators, television sets, furniture etc. If, the situation of the consumption goods' market being in general inflationary one, these goods of so-called "higher consumption" are in relative abundance, the reduction of credits granted on their purchase is not advisable, because it entails the increase of demand on other goods, aggravating the inflationary stress.

The increase in taxes ought to be considered together with the

monetary revenues on which they are imposed. The increase in the tax on wages and salaries means the reduction of the nominal wage level; and the increase in the land tax means the reduction of prices paid for agricultural products' deliveries. Both means of the financial policy are hardly applicable in the inflationary situation, because of their influence on the labour productivity in the socialist sector and on the output of private farms. Increases or reductions in tax rates are in general practised when monetary revenues are increasing, too, and are aimed to adjust the proportions among monetary revenues of different social groups, professions etc. So they play almost no role in the reduction of the monetary demand at inflationary situations on the market.

The reduction of budgetary expenditure on consumption goods, reducing the general monetary demand, is practised especially in the cases of an inflationary pressure of a short duration. Too far pushed economies for a longer period may damage the social activity in the non-productive fields, which is, nevertheless, of no less importance for the economic and social development of the country, than the material production.

If, all the above mentioned methods being exhausted, the equilibrium on the consumption goods' market were to be reached within the planned period, the increase of prices on consumption commodities must be considered. The increase, of course, is performed in a differentiated manner for different kinds of commodities, having in regard differentiated shortages of supplies and differentiated consumers' reactions on price changes.

b/ The closed inflationary gap.

The closed inflationary gap may occur as a result of delays in the implementation of investments in industrial sectors producing consumption commodities, and as a result of other factors provoking temporary reduction in the increase of supplies of these goods. In such cases, no essential changes in investment or production plans are necessary although, of course, it is necessary to apply all means available in order to remove the factors concerning the delay in the production's increase and to limit their influence on the market. That being assured, the financial measures of

maintaining temporary equilibrium on the market must be applied, the same measures which were described while analysing the open inflationary gap. It is necessary to remember that in normal cases (excluding such exceptional conditions as the war) every open inflationary gap has to turn into a closed one after necessary adjustments are made in investments and production plans, so in practice in financial planning, one has to deal always with a closed inflationary gap, if any.

c) The open deflationary gap.

The open deflationary gap occurs when, in physical planning, the possibilities of the increase of the output of consumption commodities were underestimated and this output increases more quickly, than it was presumed, or when the level of monetary revenues of the population is below the schedule. In the first case, either the changes in the investment plan are envisaged in order to raise the share of investments in the sectors putting out production goods, or without any changes in the investment plan, it is decided to utilise the over-planned production of consumption commodities for the immediate increase of the standard of living. In the second case only the adjustment of the monetary revenues of the population to the formerly planned level may be envisaged.

The changes in the investment plan, disfavours the future output of consumption commodities, entail the turn of the existing open deflationary gap into a closed one, with even a risk of the occurrence of an inflationary gap in the future. However, such a risk may be run if the acceleration of the development of the sectors producing machines, tools and raw materials is regarded as most advisable. In consequence, the existing over-planned production of consumption commodities cannot be distributed among consumers, but ought to be stored as an increase of state's reserves, or exported in order to accumulate reserves in foreign currencies, serving the same purpose as the material reserves. It means, that the equilibrium on the consumption goods' market is restored by diminishing current supplies up to the planned limits, and no financial measures for the short time period have to be applied.

If, however, the decision is taken to adjust the monetary demand to planned limits, or to increase it in order to absorb the over-planned

supply, many possibilities of financial manoeuvring have to be considered. Sometimes the character of deviations in formerly established financial plans indicate the proper financial measures to be adopted, but sometimes a deeper investigation of the problem is required.. If the cause of the deflationary pressure on the market is the increase of average wages below the schedule, the adjustment of this item of monetary revenues of the population is necessary in order to assure the implementation of the planned increase of the standard of living of workers, and so the necessary measures are directly indicated by statistical figures. But if it happens, for example, that the lack of the monetary demand is provoked by the over-planned increase of the monetary savings, the increase of average wages as the instrument of restoring the monetary demand may be not advisable. When the propensity to save is increasing quickly, there is always an uncertainty as to its character, and a longer period of time is necessary in order to get assurance of its stability. If it happens to be only a temporary one, it is more advisable to restore the lacking monetary demand by increasing the amount of consumption credits granted, because their reimbursement can in the future absorb dis-savings caused by the reinstalment of the normal rate of savings. Of course, when the increased propensity to save testifies itself as a stable one, the increase of average wages, of social transfers and other stable sources of monetary revenues may be envisaged.

The lack monetary demand on the market of consumption commodities may be caused by changes in the structure of the individual consumption, and namely by the over-planned increase of the share of non-material services in all monetary expenditures of the population. This phenomenon is strickly bound with the improvment of the stand of living: expenditures on recreations (radio, television, cinema, theater etc), on the medical care and other services are increasing very quickly when a level of a relative saturation of first-rate needs is reached. In the long-term planning, it demands a change in the structure of investments in favour of services, but in the short-term financial planning, the lacking demand on consumption goods must be restored. In this case, there is a certainty that the reduction of the demand is a stable one, so all measures of the

stable increase of the monetary revenues may be envisaged in order to restore it.

The mutual adjustment of the monetary demand and the nominal supply in the case of the deflationary gap may be reached either by the increase of monetary revenues, or by the reduction of prices on consumption goods. In most cases, the increase of monetary revenues is chosen, because the reduction of prices: /a/ may influence production, even when equqlised with the reduction of the turn-over tax, /b/ does not allow to differentiate the advantages received by different groups of the population.

The differentiation of the increase of the standard of living among different social groups is necessary not only from the social or political point of view, but also from the point of view of restoring market equilibrium. When, for example, the lack of the monetary demand on consumption goods is caused by the changes in the consumption's structure towards the increase of the share of non-material services in it, the lacking demand may be restored only by the increase of monetary revenues in lowest income classes, because there the stage of the relative saturation of first-rate needs is not yet reached and every increase of monetary revenues entails almost an equal increase of the demand for material consumption goods. In such a case, the increse of monetary revenues in highest income classes may appear quite ineffective on the demand on material goods, accelerating at the same time the stress on services.

d/ The closed deflationary gap.

The closed deflationary gap is inclined to turn itself into an open inflationary gap, and this is why its occurrence requires the application of the measures in the physical planning, proper to the open inflationary gap (acceleration of the development of the sectors producing consumption commodities). The results of the adjustment of investment and production plans may appear in different time limits, in happiest cases abolishing all future occurrence of the inflationary pressure but it is more avdisable and safer in all cases to increase the state's reserves at the expense of the temporary surplus of production of consumption commodities.