

**Order  
Of The State Committee Of The Russian Federation  
For Antimonopoly Policy No. 169 Of December 20, 1996  
On Approval Of The Procedure For Making Analysis And Appraisal  
Of The Competition Environment In Commodity Markets  
(As Amended March 11, 1999)**

The present Order has been amended pursuant to the Order of the MAP RF No. 71 of March 11, 1999.

See the previous wording of this Order.

For the purpose of ensuring a unified approach by the Ministry of the Russian Federation for Antimonopoly Policy (the "MAP") and its regional agencies to the analysis and appraisal of the competitive environment in commodity markets within the framework of the realisation of the RSFSR Law on Competition and the Limitation of Monopolistic Activity in Commodity Markets I order:

1. To adopt the Procedure for Making an Analysis and Appraisal of the Competitive Environment in Commodity Markets (appended).
2. To forward the present order to the Ministry of Justice of the Russian Federation for registration in keeping with the established order.
3. Control over the implementation of this Order shall be exercised by N.Y.Fonareva, Deputy Minister of the Ministry of Russia for Antimonopoly Policy.

Appendix: the annexed text.

Chairman of the Committee L.A.Bochin  
Registered by the Ministry of Justice of the Russian Federation on January 10, 1997.  
Registration No. 1229

**PROCEDURE  
FOR MAKING ANALYSIS AND APPRAISAL OF THE COMPETITIVE  
ENVIRONMENT ON COMMODITY MARKETS  
(Approved by the Order of MAP RF No. 169 of December 20, 1996)**

On the List of socially significant commodity markets subject to comprehensive analysis in 1996, by departments of the State Committee of the Russian Federation for Antimonopoly Policy see the Order of SCAP RF No. 53 of April 29, 1996.

- Section 1. General Provisions
- Section 2. Product Boundaries of the Commodity Market
- Section 3. Determination of the Complement of Sellers and Buyers
- Section 4. Geographical Boundaries of the Commodity Market
- Section 5. Determination of the Volume of the Market Commodity Resources and a Share of the Economic Entity in the Market
- Section 6. Quantitative Indicators of a Commodity Market Structure
- Section 7. Qualitative Indicators of a Commodity Market Structure (Barriers to Entry to a market)
- Section 8. Market Potential of an Economic Entity
- Section 9. Final Appraisal of the Competitive Environment in Commodity Markets and Its Use in Practice

- Appendix 1. Information about the Volume of Production and Sale of Products
- Appendix 2. Questionnaire for Interviews with Buyers (Natural Persons)  
Questionnaire for Interviews with Buyers (Legal Entities)
- Appendix 3. Model List of Indicators Needed for the Assessment of Goods under Review
- Appendix 4. Examples of the Interchangeability of Goods from the Standpoint of Buyers
- Appendix 5. Examples of the Interchangeability of Goods from the Standpoint of Producers
- Appendix 6. Examples for the Definition of a Geographical Market
- Appendix 7. Conditional Example of the Calculation of a Market Share of an Economic Entity in a Commodity Market
- Appendix 8. Calculation of Market Concentration Ratios (According to Reported Data for the Analyzed Period)
- Appendix 9. Calculation of the Market Concentration Index of Herfindahl and Hirschman
- Appendix 10. Calculation of the Lind Index
- Appendix 11. Summary Table of the Assessment of the Competitive Environment on a Commodity Market

The present Procedure has been formulated in conformity with Article 4 of the RSFSR Law on Competition and Restriction of Monopolistic Activity on Commodity Markets with the aim applying the following normative enactments:

The Rules for the Examination of the Antimonopoly Legislation Violations Cases of, registered by the Ministry of Justice of the Russian Federation No. 1143 of August 5, 1996 in respect of violation of Articles 5, 6, 17 and 18 of the RSFSR Law on Competition and Restriction of the Monopolistic Activity on Commodity Markets;

The Order of the State Committee of Russia for Antimonopoly Policy No. 145 of November 13, 1995, on the Approval and Registration of the Regulations for the Submission by the Antimonopoly Authority of Requests and Notices in Accordance with the Requirements of Articles 17 and 18 of the RSFSR Law on Competition and the Restriction of the Monopolistic Activity in Commodity Markets, registered by the Ministry of Justice of the Russian Federation No. 981 of November 24, 1995<sup>1</sup>.

#### 1. General Provisions

##### 1.1. The present procedure shall be used in the following cases:

for the analysis of the competitive environment in federal and regional commodity markets, carried out during the preparation of the State report on competitive policy, the State program for demonopolisation, sector and regional programs of demonopolisation;

for the elaboration of a program of measures to overcome the barriers to entry to commodity markets and of programs to support private businesses and the development of competition;

<sup>1</sup> Currently Order 276 of August 13, 1999 (last amendment on October 31, 2000) Author's note.

for the analysis of the socio-economic consequences of the adoption of normative enactments for competition in commodity markets;

for the examination of violation of antimonopoly legislation cases .

The present procedure may be also used in the solution of questions involved in the granting of credit, financial and tax concessions to economic entities and in other cases calling for an analysis and assessment of the competitive environment in commodity markets and the status of economic entities.

1.2. In the practical use of the present procedure it is necessary to take into account the regional and sectoral features of specific commodity markets (federal and regional).

1.3. The present Procedure makes use of the concepts of goods, mutually replaceable goods, commodity markets, economic entities, competition, dominant position, which are defined by the RSFSR Law on Competition and the Restriction of the Monopolistic Activity on Commodity Markets with amendments and addenda, introduced by the Federal Law on the Introduction of Amendments and Addenda to the RSFSR Law on Competition and the Restriction of the Monopolistic Activity on Commodity Markets. This Procedure also makes use of the following concepts:

"product (commodity) boundaries of a commodity market" means a group (basket) of substitution goods.

"geographical (territorial) boundaries of a commodity market" means a territory in which buyers acquire or may acquire goods under review (substitutes) but do not have such possibility beyond this territory.

"market structure" is the totality of quantitative and qualitative indicators which embrace economic entities and their shares of the given commodity market; the indicators of market concentration; conditions for the entry into the market; the openness of a market for interregional and international trade.

"barriers on entry to a market" means the circumstances that prevent the possible entry of new economic entities into a commodity market.

1.4. To assess the competitive environment in commodity markets, it is necessary to carry on the calculation and analytical work for the determination of:

the product boundaries of a commodity market;

the subjects of a commodity market (the quantity and complement of sellers and buyers);

the geographical boundaries of a commodity market;

the volume of the commodity resources of the market;

the shares of the economic entity in the market;

the quantitative indicators of the commodity market structure;

the qualitative indicators of the commodity market structure (entry barriers);

the market potential of the economic entity.

Conclusions on the developed or undeveloped degree of competition on a commodity market, the advisability and forms of influence of the antimonopoly authority on the change in the situation shall be made on the basis of the results of the analysis made.

1.5. Procedure for the assessment of the competitive environment shall be implemented in the above described sequence. In each concrete case it may change. If a commodity group is defined unambiguously, it is necessary to proceed to the definition of the complement of buyers and sellers by disregarding the corresponding stage. It is also possible to disregard several

stages. While establishing the above-said parameters, it is necessary to correct the indicators, defined at the previous stage, after the passage of each stage.

#### 1.6. The information base for determining the commodity market parameters.

The condition of the competitive environment on commodity markets shall be assessed on the basis of the all received information from sellers, buyers, competitors, including governmental, non-governmental, scientific, profit-making and non-profit organisation, and experts.

The following data shall be used as sources of initial information:

the data of the State statistical reports describing the activity of economic entities;

information from the tax and customs bodies, banking structures and investment funds;

information on the volumes of production and sales of products (works, services), received by the antimonopoly authority directly from economic entities (Appendix 1);

the data of selected interviews with buyers describing consumers' preferences, criteria of the interchangeability of goods, criteria of the

definition of the geographical boundaries of a commodity market (Appendix 2);

the data of a commodity expert examination, which confirm or negate the interchangeability of goods during the formation of commodity groups;

the data of the departmental and independent information centers and services on the condition, structure and volumes of commodity markets, the participation of particular producers and buyers of products in the trade turnover.

## 2. Product Boundaries of a Commodity Market

- 2.1. The definition of the product boundaries of the market is a procedure for estimating goods (its consumer properties), their substitutes and for forming a commodity group (groups of commodities whose markets are assessed as one commodity market),
- 2.2. The opinion of buyers' (both individual and legal entities) on the interchangeability of goods comprising one commodity group shall support the definition of the market's product boundaries. This opinion shall be determined as a result of a general or selective survey of buyers and shall be reinforced with the data of the commodity expert examination. The survey shall be conducted in groups of buyers, differentiated according to the methods of participation in the trade turnover (wholesale and small-scale wholesale buyer and buyer of a single quantity of goods).
- 2.3. Initially it is necessary to establish that a commodity belongs to a classification group with the use of the effective classifiers of products, services and types of activity; commodity dictionaries, handbooks of commodity experts, the State standards of corresponding goods, the data of commodity expert examinations, the opinions of independent sectoral experts, and materials of interviews with buyers.

Commodities under review shall be estimated by the indicators describing their consumer specifics, the conditions of consumption (use) of commodities by buyers, the conditions of sales, the level satisfying the demand. The indicators of commodities shall be differentiated depending on their type and purpose (Appendix 3).

2.4. Substitutes included into a commodity group shall be selected on the basis of the criteria of the interchangeability of marketable products. In this case it is necessary to take into account two aspects of the interchangeability of goods in the context of their use - the interchangeability in terms of

consumption (demand) and in the context of their production - the interchangeability in terms of production.

Theoretically, one of the criteria of the interchangeability of goods in terms of consumption is represented by the indicator of the cross elasticity of the demand at their price, reckoned as the ratio of the change of volume of sales of goods X (in percent) to the change of price of goods Y (in percent) for a defined period.

The demand for goods X with the rise in the price for goods Y may increase and decrease, depending on the attitude of the buyer to the joint use of goods. Thus, the cross elasticity of the demand may be both positive and negative.

If the cross elasticity ratio has a positive value, then goods X and Y are interchangeable. The more positive the ratio the more is the degree of the interchangeability of goods. Zero ratio means non-substitution of goods. A negative cross elasticity characterizes complementary goods (e.g. a rise in the price of petrol should lower the demand for cars).

Imbalance of demand and supply in the market calculations of cross elasticity ratios may lead in some cases to distorted results.

In the absence of a necessary information in statistical bodies for the calculation of the cross elasticity ratio, an independent observation over the change of prices and the volume of sales in one commodity group during one quarter or one year should be conducted.

As a rule, in practice specialists resort to more accessible and less labor-intensive methods of the assessment of the interchangeability of goods - to expert opinions, interviews with buyers and experts in certain economic sectors.

The choice depends on a concrete situation in the market and on the score of the specialists' information used in their analyses.

The criteria of interchangeability also include:

- a) the functional interchangeability of various products, which is established by the comparison of the purpose of consumption of the given goods and that of its anticipated substitutes. It is necessary to take into consideration the differentiated approach to this group on the part of different groups of buyers. The same products on one and the same territory may circulate in different commodity markets (with regard to buyers and sellers, both wholesale and retail) These markets shall be examined in isolation.
- b) the similarity of the consumer specifics of goods and their substitutes to be established as a result of the comparison of the physical, technical and operating price characteristics of goods and their-expected substitutes (Appendix 4).

In a market with persistent deficit, the boundaries of the interchangeability of goods tend to expand, but only to the limits defined by the functional purpose of marketable products.

In the process of analysis it is necessary to take into account the available barriers to interchangeability.

For example:

- a) the commodity has advantages over its substitutes in the system of distribution (catalogue trade and trade with home delivery service);
- b) the commodity has advantages over its substitutes in case of sale (without a loader, with spare parts, price concessions, credit rebates and other guarantees for buyers) and operation (after-sale service), etc.

To assess the interchangeability of goods in the context of their production, it is necessary to take the following measures:

to reveal free production capacities that can be used for the production of one of the commodities included in the commodity group under review (e.g. idle capacities or excessive capacities that make possible the output of marketable products with minimum additional outlays);

to determine the technological potentialities of the switching over of capacities for the production of other commodity groups to the output of the commodity group under review (Appendix 5).

### **3. Determination of the Composition of Sellers and Buyers**

- 3.1. It is necessary to reveal all sellers who function on the commodity market with the defined product boundaries.
- 3.2. It is necessary to determine all the groups of buyers who acquire goods from a concrete seller. A grouping of buyers shall be made by the methods they acquire the concrete goods.
- 3.3. A composition of the identified group of buyers shall be made more precise according to the following criteria: each buyer from the identified group may acquire goods from any seller of goods on the specific commodity market.
- 3.4. In addition to the actually active sellers it is desirable to identify potential sellers and buyers on the specific commodity market .

### **4. Geographical Boundaries of a Commodity Market**

- 4.1. The geographical boundaries of a commodity market are determined by the economic, technological and administrative barriers that limit the possibilities of the buyers' participation in the acquisition of the goods in question on the territory under review.
- 4.2. The geographical boundaries of a commodity market shall define the territory on which the buyers of the identified group have an economic opportunity of buying the goods under review and do not have such beyond this territory.
- 4.3. The territory of the market shall be defined just in a manner as a commodity group: according to the principle of the recognition by buyers of equal availability of goods. If buyers regard goods sold in one region as a substitute of goods sold in another region, then these regions may be regarded as one and the same geographical market of the goods in question.
- 4.4. In defining the geographical boundaries of the market it is necessary to take into the account the following factors:

possibility of the shift of demand between the territories which probably comprise a single geographical market;

availability of transport facilities for transportation of the goods from <sup>2</sup> the buyer to the seller;

insignificant amount<sup>2</sup> of the costs for transportation of the buyer to the seller;

possibility of the movement of goods between the territories which probably comprise a single geographical market;

insignificant amount<sup>2</sup> of additional costs of the transportation of goods from the seller to the buyer;

presentation of the quality and consumer specifics of goods in the process of their transportation;

absence in a given territory of administrative restrictions on the importation or exportation of goods;

---

<sup>2</sup> Seems to be missing in the original text by misprint – Author's note.

comparable level of prices of corresponding goods inside the boundaries of this market.

#### 5. Determination of the Volume of the Market Commodity Resources and the Share of an Economic Entity in the Market

- 5.1. The total volume of the sale (delivery) of goods within the geographical boundaries of a market to the identified group of buyers in cost and/or natural indicators is a quantitative characteristic of the volume of the market's commodity resources.
- 5.2. The total volume of sale (delivery) of goods shall be determined as the sum of the sales (deliveries) of goods by all the sellers in the given market.

$$V_m = \sum_{i=1}^N V_i, \text{ where}$$

" $V_m$ " stands for the total volume of sale (delivery) of goods<sup>3</sup>;

" $V_i$ " stands for the volume of sale (delivery) by the  $i$ -seller of goods<sup>3</sup>;

" $N$ " stands for the number of sellers acting within the geographical boundaries of the market.

- 5.3. In the absence of direct data on the volumes of products to be sold (delivered) to buyers the scope of the market shall be determined by the calculation method according to the formula:

$$V_m = V_p + V_{im} - V_{ex}, \text{ where}$$

" $V_m$ " stands for the total volume of sale (delivery) of goods;

" $V_p$ " stands for the volume of production of goods by local goods producers<sup>4</sup>;

" $V_{im}$ " stands for importation to the territory of the market under review;

" $V_{ex}$ " stands for exportation beyond the market under review.

- 5.4. The share of an economic entity - the seller in the commodity market under review ( $D_i$ ) shall be determined as a ratio of marketable products sold by it in the market to the total volume of sale (delivery) of goods (Appendix 7)<sup>5</sup>.

$$D_i = V_i/V_m$$

#### 6. Quantitative Indicators of a Commodity Market Structure

- 6.1. The quantitative indicators characterizing the structure of the commodity market include:

the number of sellers acting in a given commodity market;

the stakes of sellers in a given commodity market;

the market concentration indicators.

The issue of the inclusion of potential competitors (sellers) in the calculation of the share in the market shall be solved depending on the situation being considered:

if the analysis of the State of the competitive environment in the market is being carried out in connection with the institution of proceedings on the fact of the violation of the antimonopoly legislation then, most probably, it will be necessary to calculate the share by the actually existing structure of the market (without regard to potential competitors);

if the analysis of the state of the competitive environment is being performed for the evaluation of long-term and promising projects

(merger of economic entities, creation of financial-and-industrial groups, acquisition of blocks of shares or property, etc.), then it should be adequate to take into account the potential volumes of realisation in the market by potential competitors (sellers) on the condition that the entry into the market of a new economic entity may be carried out at the earliest possible time (determined upon concrete market conditions, within one or two years) without considerable material expenses.

- 6.2. The number of sellers acting in a given commodity market does not make it possible to infer full and trustworthy conclusions on the presence or absence of competition between them and on the character of this competition, except for the cases when they are very few.
- 6.3. Depending on the stakes held by sellers in a given market, it is necessary to make a ranged list of them; analysis shall be made of the substantial distribution of sellers in the commodity market; a conclusion is drawn on the frequency (regularity) of the presence of sellers in a commodity market.

It is desirable that the conclusions based on the analysis of the statistical data describing the situation over a specific period of time should be backed by an analysis of the dynamic of the presence of sellers in the market during the last three to five years.

- 6.4. The market concentration indicators include:

- a) the market concentration ratio (CR). It shall be computed as a percentage ratio of the sale (delivery) of products by a definite number of major sellers to the total volume of sales (deliveries) in a given commodity market.

It is recommended to use the level of concentration of three (CR-3), four (CR-4), six (CR-6), eight (CR-8), ten (CR-10) and 25 (CR-25) major sellers.

The calculation of market concentration ratios shall be made according to the form indicated in Appendix 8.

- b) the Herfindahl and Hirschman index of the market concentration (HHI). It shall be computed as a sum of the squares of the stakes held in the market by all the sellers acting on it.

The computation of the market concentration index shall be carried out according to the form indicated in Appendix 9<sup>6</sup>.

- 6.5. In accordance with different values of the concentration ratios and the Herfindahl and Hirschman indexes three types of the market shall be identified:

the first type is represented by highly concentrated markets:

when  $70\% < CR3 < 100\%$ ;  
 $2,000 < HHI < 10,000$ ;

the second type is represented by moderately concentrated markets:

when  $45\% < CR3 < 70\%$ ;  
 $1,000 < HHI, 2,000$ ;

the third type is represented by low concentrated markets:

when  $CR3 < 45\%$ ;  
 $HHI < 1,000$ .

The market concentration indicators make it possible to carry out a preliminary assessment of the degree of the monopolization of a market, the even or uneven presence of economic entities on it. The more sellers with

equal delivery of products act in the market, the less is the value of relevant indicators<sup>7</sup>.

## 7. Qualitative Indicators of a Commodity Market Structure (Barriers to Entry to a Market)

7.1. The qualitative indicators describing a commodity market structure are as follows:

the presence or absence of barriers to entry into the market for potential competitors and the degree of overcoming the barriers ;

the openness of a market for interregional and international trade.

7.2. The following economic entities may be potential competitors:

economic entities which have a material and technical base, personnel and technologies for the manufacture of the given goods, but for various reasons do not realize these possibilities;

the economic entities which produce these goods but do not offer them on the territory of a commodity market under review;

new economic entities which enter the given commodity market.

7.3. It is recommended to analyze the following barriers to entry of potential competitors to a market:

### 7.3.1. Economic and Organisational Restrictions

It is necessary to analyze the value of the following economic factors for the entry to a market:

State policy in the sphere of investments, credits, taxes, prices, tariff and non-tariff regulation of foreign economic activity and consequences of this policy for specific commodity markets;

the average sector rate of profit;

time-limits of recumbent of capital investments;

non-payments;

presence or absence of effective support of small businesses: the accessibility of financing from funds for the support of private enterprises, the accessibility of credit resources for the small businesses, the low or high level of rent for production

and office premises. This kind of economic barriers shall be taken into account while analyzing the commodity markets in which small businesses are mainly represented.

### 7.3.2. Administrative Restrictions

It is necessary to reveal the presence or absence of restrictions on the activity of sellers in a given commodity market, offered by the organs of power and administration in all levels. These restrictions are as follows: the licensing of particular types of activity, distribution by quotas, decisions taken by organs of power to limit the importation of goods from or exportation of goods to, the territory concerned, handicaps imposed on the allotment of land plots, on the granting of production and office premises, etc.

### 7.3.3. Undeveloped Character of Market Infrastructure

It is necessary to reveal the presence or absence of necessary means of communication (transport and communication), the departments of rendering information, consulting and leasing services, etc.

It is especially important to determine the conditions for the transport accessibility of a given market for potential competitors. The

advisability of additional transport costs for the entry to a market shall be correlated with the cost of a specific commodity, while the length of hauls - with the qualitative and technical characteristics of a commodity, which allow (or do not allow) to affect this transportation.

#### 7.3.4. Influence of the Vertical Integration of Organisations Functioning on a Market

It is necessary to disclose the degree of the use by the sellers who are united into vertical structures of all the advantages of intra-corporate links and to reveal the influence of these relations on the competitors which are not part of these vertical structures.

If by virtue of vertical integration a new participant could not receive essential input resources or could not advertise its output product without the simultaneous entry into the higher or lower market, and if this additional entry is difficult for it, the obstacles to penetration tend to increase.

#### 7.3.5. Strategy of Behavior of the Economic Entities Operating on a Market

It is necessary to analyze the pricing and marketing strategies of leading sellers and their policies in their capacities of holders of

patents, licenses, trademarks, etc. The largest economic entities acting in the commodity market have solid economic ties with sellers of material and technical resources and buyers of goods. These facts give them advantages over potential competitors entering a commodity market. The extensive size of the economic turnover that determines the corresponding mass of profits enables them to create reserve capacities, use preferential methods of settlement with sellers and thereby hinder their competitors. The largest sellers have more access to non-price methods of competition.

Among these kinds of barriers it is necessary to identify the existence or absence of long-term contracts for the delivery of products with the already acting entities on the market and the fulfillment of deliveries by them to meet the State needs, etc.

It is recommended to pay special attention to the analysis of the facts of the use by large sellers of the market potential (Section VIII of the present Procedure) for anticompetitive purposes in dynamics for the last three to five years and to assess the influence of this factor on the development of competition by means of surveying potential competitors (sellers).

#### 7.3.6. Barriers Associated with the Effect of the Scale of Activity

If the minimally effective scale of activity in a given commodity market is to be high (for example, production is ineffective with the output of 100 lorries a year, while economically justified production is with the annual output of dozens of thousand lorries), potential competitors entering the market can have substantially greater outlays for a period of achieving this level than the already acting economic entities and hence can be less competitive in the market. The time and costs needed for surmounting this barrier shall be assessed by surveying the acting sellers and potential competitors, and also sector specialists.

#### 7.3.7. Barriers Based on the Absolute Superiority in the Level of Costs

These barriers arise in the case if the costs of the acting sellers per unit of products is lower than those of the economic entities which enter the market. The reasons for the difference in the levels of costs may include the inequality of the starting conditions of being present in the market, property and price inequality in the first place; the limited access of new sellers to cheap and more convenient raw material

sources; the technological superiority of the economic entities already acting in commodity market, and the lower interest rate of loan capital, which is accessible for them.

#### 7.3.8. Ecological Restrictions

It is necessary to disclose the facts of the prohibition by ecological safety services, nature consideration institutions, non-governmental organisations and movements of the expansion of the trading acting in the given commodity market, the building of new production projects and warehouses, transport communications, etc.

#### 7.3.9. Demand Restrictions

A high level of satisfaction of the demand that reflects both the high saturation of the market with goods and the low paying potential of buyers is a serious hindrance to the assimilation of the market by potential competitors. In this connection it is suggested to analyze the capacity of the commodity market separately - by demand and by needs. As a source of information it is necessary to make use of the data of the survey of the main buyers of the commodity under review. At the same time, it is advisable to take into account the elasticity of demand depending on the change, or reduction of prices that should take place when new entities enter the market. If the market becomes more competitive, prices should go down and demand should grow accordingly.

#### 7.3.10. Barriers of Capital Costs or Volumes for the Initial Investments Needs for the Entry into the Commodity Market

The considerable size of original capital that is necessary for the start of activity of an economic entity may be an important barrier to the entry into the market.

To analyze the situation by means of expert examination, it is necessary to assess the amount of capital expenditure associated with the assimilated output of the commodity under review by potential competitors (the costs of new construction or reconstruction and technical re-equipment of the existing capacities that can be adjusted for the output of the given commodity and the possibility of covering these costs during a definite period of time).

The data of interviews of acting sellers and potential competitors, and also sector specialists may be sources of appropriate information.

#### 7.4. The list of factors to be analyzed during the disclosure of barriers to entry into the given commodity market may be wider or narrower than the above-mentioned list and differ from it due to sector and regional specific features.

Facts of rare or intensive appearances in the market of new sellers over a definite period of time are deemed to be market confirmations of the presence or absence of entry barriers. If as a result of the analysis of the situation over the last three to five years, new sellers have only made rare appearances in the market, despite a high rate of profit, this testifies as the existence of high entrance barriers. However, the absence of new participants in the recent past is not a final evidence of the fact that access to the market has become difficult.

#### 7.5. For the appraisal of the degree of the surmountability of barriers to entry to a market it is recommended to use the following criteria:

speed of entry;

probability;

sufficiency of entry of new subjects to a market.

Only those variants of entry to a market are deemed to be well-timed that may be realised within two years since the beginning of the preliminary planning until a considerable impact in a market.

The impact on a market can be deemed to be considerable, if it is accompanied by a real reduction of the indicators of market concentration and accordingly by a smaller possibility for each entity in the market to influence the market in a unilateral way.

The entry to a market is deemed to be probable, if it is profitable at the prices which presumably exist in the market in the corresponding period of time and their level is guaranteed by the relevant volumes of deliveries of goods by market participants.

The entry to a market shall be deemed to be sufficient, if it effected on a scale that provides for the preservation and development of competitive relations between market participants.

#### 7.6. The openness of the market for interregional and international trade

The possibility of the entry to a commodity market for sellers from other regions or other countries substantially reduces market concentration, and curtails the share of the local or national sellers in the market. On the contrary, the weak inclusion of the market into the interregional or international exchange, intensifies market

concentration and increases the share of local or national sellers in this market with all consequences for buyers. Tentatively, the degree of the openness of the market for the participation in interregional and international trade may be assessed according to the share of imported products in the total volume of the sales (deliveries) of products in a concrete commodity market.

This indicator is a starting-point for the assessment of the condition of the commodity market in the solution of questions bearing on protective measures for home commodity producers<sup>8</sup>.

### 8. Market Potential of an Economic Entity

8.1. With unfavorable structural prerequisites for the development of competition in commodity markets it is necessary to analyze the behavior of economic entities which have the largest share of the market in relation to their competitors, which makes it possible to reveal the presence or absence of their market potential.

8.2. The term "market potential" shall be understood to mean the possibility of an economic entity to exercise decisive influence on the general conditions of the circulation of commodity on the relevant commodity market and/or render difficult the access to the market for other economic entities and the possibility not associated directly with the share of the economic entity in the commodity market.

The market potential of the economic entity can be associated with its dominant position in the market. However, in some commodity markets there arise situations when the economic entity with a 35 percent share of the market possesses a market potential in relation to other economic entities in the same commodity market.

8.3. The analysis of the market potential presupposes:

measurement of the market potential;

definition of trends of the use of market potential, including to the detriment of competition.

8.4. Three different approaches may be applied in the measurement of market potential:

the structural approach with an analysis of the position of an economic entity in the commodity market;

the appraisal of the degree of efficiency of an economic entity;

the analysis of the dependency of the indicators of the activity of an economic entity on the indicators of the activity of competitors.

The structural approach includes the computation of the number of sellers in a given commodity market and the comparison of shares held by each market participant.

The share of each market participant shall be used both as the indicators of the market potential: the larger is the share, the greater is the market potential.

To apply the structural criteria properly, it is necessary to weigh carefully different market conditions: the record-keeping of the possibility and probability of the entry of other sellers to the market, the presence of sale of second-hand goods and other acceptable (but not equivalent) substitutes, and also of other factors testifying to the question whether the given seller can raise prices and reduce output of products.

In addition to the structural approach, it is recommended in the measurement of the market potential to make use of the efficiency of the activity of economic entities. With this approach it is necessary to determine the deviations of the indicators of efficiency of the economic entities (profit and probability) from their average sector values, and also the factors responsible for these deviations.

The efficiency of economic entities in a commodity market can be taken as market potential only on the condition that the maximum sizes of efficiency indicators are preserved for a long time (not less than one year).

To measure the market potential, it is possible to made use of an analysis of the dependency of the performance indicators of an economic entity on the competitors activity indicators:

the computation of the demand elasticity according to prices: the higher the elasticity of demand for the products of the given seller, the greater is his potential in the market;

observations over the behavior of a seller of goods during the period of price formation: whether prices are fixed on the level that is higher than the competitive one and how long prices can be sustained on this level. In practice it is also possible to use the method of computing the residual demand: the possibility of the supplier to raise prices as a result of reducing the output of products shall be determined after the computation of the scope of consumer demand and supply by competitors in the period of time being analyzed.

8.5. The price exceeding the level of competitive prices in a given market, including a monopolistic high price<sup>9</sup>, is an integral indicator of the market potential of the economic entity which acts in the commodity market.

See the Explanations on the exposure of monopolistically high prices communicated by the Letter of the State Antimonopoly Committee of the Russian Federation No. VB/1034 of March 14, 1996

8.6. In addition to the foregoing, the following factors (especially when several factors are present simultaneously) may be evidence of the presence of market potential:

constant profits are higher than normal profits in a given sector;

reduction of the level of output of products in combination with rising prices in the absence of losses;

continuous price discrimination, that is, the setting of different prices for different groups of buyers or for different geographical regions, the pricing being unjustified by the difference in outlays;

excess of actual costs beyond the level that can be achieved with the most effective growth of the scale of production;

level of sales expenses that exceeds the economically justified level;

level of technological progress which is considerably higher than the average sector indicators;

conditions for the use of the industrial property rights (patents, licenses, trademarks, etc.);

existence of agreements concluded between competitors for the delivery of necessary goods, services and rights as to the use of patents and other intellectual property rights;

appearance in the balance of expenses for such items of spending as, for example, payment for the services used to create the organized support for the interests of economic entities in the executive and legislative bodies, or excessive hospitality expenses.

## 9. Final Appraisal of the Competitive Environment on Commodity Markets and Its Use in Practice

9.1. The comparison and analysis of the quantitative and qualitative indicators describing the structure of a commodity market enable to ascertain more exactly to which type of market structures the market structure of the commodity market under review belongs to and to assess the degree of the development or absence of competition in a given commodity market.

It is recommended to fill in the summary table, indicated in Appendix 1 1, for the purpose of systematizing the results of the computation and analytical work of estimating the condition of the competitive environment in the commodity market.

9.2. In the event of the appraisal of the conditions of the competitive environment as undeveloped and of the inference of the conclusion on the advisable intervention of MAP of Russia and its regional agencies in the process of formation of a competitive environment in the given commodity market, it is necessary to define the trends, forms and methods of this intervention.

9.3. Depending on the different levels of concentration of commodity markets, it is necessary to differentiate the actions of the antimonopoly authority with regard to different markets and economic entities acting in them. These actions may include the following measures:

### 9.3.1. For highly concentrated markets:

elaboration of sectoral programmes of demonopolisation and control over their implementation;

control over the market behavior of economic entities, included in the register of economic entities with a share of more than 35 percent of a definite commodity in the market;

actions taken to prevent or stop the monopolistic activity of economic entities which hold dominant positions on commodity markets;

actions taken to reduce the barriers to entry to commodity markets, including actions aimed at the reduction of tariff and non-profit obstacles in the way of international trade and investments;

increase in the number of economic entities acting in the given commodity market by dividing the economic entities which

resort to anticompetitive actions or by assisting new economic entities that wish to enter the given commodity market;

bans on the merger of economic entities and the creation of associations of legal entities;

elimination of unfair competition.

#### 9.3.2. For moderately concentrated markets:

observations over the dynamics of concentration indicators. With increasing concentration it is necessary to elaborate measures for the development of competition;

control over the activity of the economic entities included in the register of economic entities with a market share exceeding 35 percent in a definite commodity market. Whenever necessary, preventive measures shall be taken;

actions aimed at the limitation of the market potential of the economic entities which hold dominant positions in commodity markets;

merger of economic entities and creation of associations of legal entities shall be allowed, but with the proviso, that the market potential will not increase;

elimination of unfair competition.

#### 9.3.3. For low-concentrated markets:

observations over the process of concentration of production and of the development of commodity markets;

elimination of unfair competition.

#### 9.4. Depending on the disclosed reasons for the low level of competition, and within their powers the antimonopoly authority may direct their actions at:

##### a) the increase in the number of economic entities acting in the given market by means of:

reduction of barriers to entry into the market and general measures to activate the investment process;

promotion of the development of interregional and international trade;

division of economic entities proved guilty of anticompetitive actions;

encouragement of businessmen divisions of entering the given commodity market;

adoption of decisions aimed at limitation of mergers and conclusion of agreements between the economic entities acting in the market;

##### b) rise in the competitiveness of economic entities acting in the given commodity market;

##### c) limitation of the market potential of the economic entities in the market, if these entities hold dominant positions in the market.

#### 9.5. The elaboration of concrete measures to form a competitive environment in the given commodity market is the purpose of the following stage of the

elaboration of programs of demonopolisation, competition and the development of private enterprise.

Appendix 1

Information  
About the Volumes of Production and Sales of Products  
(Works, Services) of \_\_\_\_\_  
(full name of the legal entity)  
over \_\_\_\_\_  
(period of time)<sup>10</sup>

Table 1

Nos	Name of legal person and its location	Basic nomenclature of products (works, services) of the economic entity, measurement unit.	GCP or ACAP code	CC FEA code	Volume of production of basic products (works, services) of the economic entity		Cost of basic product of the economic entity	Profit from sales of basic product of the economic entity
					total	Including for the market under review <sup>1</sup> <sup>2</sup>		
A	B	C	D	E	1	2	3	4

Volume of sales by the economic entity of basic products (works, services)			Total volume of production of basic products (works, ser-		Volume of sale of similar products (works services) by all sellers <sup>12</sup>		Total volume of export of basic products (works, services) <sup>12</sup>		Volume of imports of similar products <sup>12</sup>	
Including										
Total	in the territory of market under review	Beyond the market under review	Total	including in the territory of the market	Total	including in the territory of the market under review	Total	from the territory of the market under	Total	in the territory of the market under review
5	6	7	8	9	10	11	12	13	14	15

Appendix 2

Questionnaire<sup>13</sup>  
for Interviews with Buyers (Individuals)

The purpose of this survey is to determine the commodity market boundaries.

We request that you should note with a small circle the number of the variant of the answer that corresponds to your opinion. The questionnaire is anonymous, and all the results will be analysed in a generalized form.

In this case, it is a question relating to the acquisition of goods by you

(please, write)

1. Have you ever bought this good or would you like to buy it?
  1. Yes
  2. No (if the answer is "No", please proceed to Question 14)
2. What kind of goods do you usually buy?

(please, write)

3. How often do you buy these goods?
  3. Every day
  4. Several times a week
  5. Once in a week
  6. Several times a month
  7. Once in a month
  8. Several times year
  9. Once in a year
  10. Less than once in a year

4. For which purposes do you buy this commodity ?

11. To satisfy personal needs
12. To resell this commodity
13. To exchange it for another commodity
14. For other purposes (please, write) \_

5. Does this kind of commodity correspond to its basic purpose, in your opinion

?

15. Corresponds in full
16. Corresponds in part
17. Does not correspond
- 18.1 hardly know what to answer

6. If the commodity you prefer has disappeared for some reason, by which commodity will you replace it? (please, write)

7. Towards which entities are you mainly oriented in buying this commodity?

19. Towards local enterprises

20. Towards other enterprises of Russia or the Commonwealth of Independent States
21. Towards foreign enterprises and firms
22. It makes no difference for me which enterprise produces this commodity
23. I have a different opinion (please, write)
8. Are you satisfied with the choice of potential goods that interest you and with their assortment?
24. Yes, I am satisfied in full
25. Yes, but I am satisfied only partially
26. No, I am not satisfied
9. Have you any possibility of choosing the sellers of goods that interest you ?
27. Yes, I have a substantial possibility
28. Yes, but I have a small possibility
29. No, I have not
10. By what are you guided in choosing the given commodity?
30. Usually I buy the commodity to which I am accustomed
31. I try, if there is such a possibility, to buy different kinds of the given commodity in an attempt to choose the best one
32. I have a different opinion (please, write)
11. How will you act, if the price of this commodity rises?
33. I shall continue to buy this commodity at higher prices as well
34. I shall look for this commodity in another place and at lower prices
35. I shall look for another commodity that will meet my needs better and may cost less
36. I shall look for another kind of this commodity at a lower price
37. I shall refuse to buy this commodity
38. I have a different opinion (please, write)
12. To which aspects of a commodity that interests you do you pay your attention? (You may choose several points)
39. To the external appearance of the commodity
40. To its packaging
41. To the convenience and comfort of its use
42. To the producer of this commodity
43. To the price of the commodity

- 44. To the quality of the commodity
- 45. To the availability of its technical service and repair
- 46. To the length of the guarantee period of its service
- 47. To the ecological advantages of the commodity
- 48. To the product's life and the reliability of its use or consumption
- 49. Whether the commodity is in fashion
- 50. To the advertisement of this commodity
- 51. I have a different opinion (please, write)

13. Which of the following factors prevent you from buying the given commodity? (You may choose several points)

- 52. The amount of additional expenses for the transportation of the commodity
- 53. The preservation of the level of quality and consumer specifics in the process of transportation
- 54. The accessibility of transport facilities for the transportation of goods to the seller
- 55. The presence of administrative restrictions on the purchase of goods (licensing, bans on their exportation or importation, etc.)
- 56. The presence of other similar goods in the market
- 57. There are no difficulties impeding acquisition of the given commodity
- 58. I have a different opinion (please, write)

14. What are you?

- 59. An urban worker
- 60. A worker in a collective or a State farm
- 61. An engineer, a technician or an office employee
- 62. An employee in the non-production sphere (a physician, a teacher, etc.)
- 63. A businessman or a merchant
- 64. A pensioner or a housewife
- 65. A student or a technical school pupil
- 66. A schoolboy or a schoolgirl
- 67. Provisionally out of work or unemployed
- 68. I have a different status (please, write)

Questionnaire<sup>13</sup>

for Interviews with Buyers (Legal Entities)

The purpose of this survey is to determine the commodity market boundaries.

We ask that you should note with a small circle the number of the variant of answer that suits to your opinion.

In this case, it is a question relating to the acquisition of goods by you

(please, write)

Which kind of the given commodity would you prefer to buy ?

(please, write)

How often do you buy this commodity?

(please, write)

If the commodity that interests you disappears from the market for one or another reason, by which commodity would you replace it ?

(please, write)

1. For what purpose do you buy this commodity?
  1. To resell it to wholesale buyers
  2. To sell it off in retail trade
  3. To exchange it for another commodity, service or work
  04. I have a different opinion (please, write)
  
2. Towards products of which entities are you generally oriented when buying this commodity?
  5. Towards products of local entities
  6. Towards products of other entities in Russia or CIS
  7. Towards products of foreign entities
  8. It makes no difference to us which entity produces this commodity
  9. I have a different opinion (please, write)
  
3. Are you satisfied with the choice of the goods that interests you and with their assortment?
  10. Yes, we are satisfied in full
  11. Yes, but we are satisfied only in part
  12. No, we are not satisfied
  
4. Have you got any possibility of choosing sellers of the commodity that interests you ?
  13. Yes, we have a substantial possibility
  14. Yes, but we have only a small possibility
  15. No, we have not
  
5. What will your reaction to the substantial rise of the price of this commodity?
  16. We shall continue to buy this commodity at higher prices as well

17. We shall look for this commodity in another place and at lower prices
18. We shall look for another kind of this commodity and at a lower price
19. We shall refuse to buy this commodity
20. We have a different opinion (please, write)

6. To which aspects of the commodity do you mainly pay your attention when you buy the commodity that interests you? (You may choose several points)

21. To the external appearance of the commodity
22. To its packaging
23. To the convenience and comfort of its use
24. To the producer of this commodity
25. To the price of one unit of commodities
26. To the price of a batch of commodities
27. To its quality
28. To the accessibility of technical service and repair
29. To the length of the guarantee period of its service
30. To the ecological advantages of the commodity
31. To the product's life and reliability of its use (consumption)
32. Whether this commodity is in fashion
33. To the advertisement of the given commodity
34. To the demand for this commodity
35. To the possibility of keeping it in custody
36. To the level of competition in the sale of this commodity
37. We have a different opinion (please, write)

7. Which of the following factors prevent you from buying this commodity? (You may choose several points)

38. The amount of additional expenses for the transportation of the commodity
39. The preservation of the level of quality and consumer specifics in the process of transportation
40. The accessibility of transport facilities for the movement of goods to the seller
41. The presence of administrative restrictions on the purchase of goods (licensing, banning of exportation or importation, etc.)
42. There are no hindrances to the acquisition of the given commodity
43. We have a different opinion (please, write)

Please indicate the full name of your organisation

## Appendix 3

### Model List of Indicators Needed for the Assessment of Goods Under Review

- a) consumer specifics of the commodity
  - functional purpose;
  - physical parameters (weight, dimensions, etc.);
  - technical and operational indicators;
  - price of the commodity
- b) conditions for the consumption or use of the commodities by buyers:
  - electric power supply;
  - water supply;
  - provision as to assembly and transportation services;
  - technical service;
- c) conditions for sales of goods:
  - through the system of wholesale or small-scale wholesale trade;
  - through the system of retail trade, including specialised shops of manufacturers;
  - under direct contracts between sellers and buyers, including through barter deals.

## Appendix 4<sup>14</sup>

### Examples of the Interchangeability of Goods from the Standpoint of Buyers

It is recommended to use the following characteristics for the definition of the interchangeability of goods:

functional interchangeability

relative prices

the expenses incurred by the firm for the introduction of new products to the production process;

the opinion of buyers.

#### Functional Interchangeability

Unless there is another commodity which is functionally equivalent to the commodity under review, this commodity does not have a substitute and it is held that it represents the commodity market.

#### Example 1. Tyres for passenger cars

There is no commodity which is functionally equivalent to tyres for passenger cars. Tyres for lorries cannot perform the same functions that are discharged by tyres for passenger cars, because they are too large. Thus, tyres for passenger cars and lorries represent different commodity markets.

This example is relatively simple, since it is at the level of everyday consciousness. A more complex case - the definition of a commodity market for engineering products - may call for a serious study.

Example 2. Prefabricated concrete blocks (RCB) and bricks.

A building may be designed on the basis of the use of prefabricated concrete blocks and bricks. If the design provides for the use of RCB, the use of bricks is ruled out and vice versa. Thus, from the standpoint of the constructors of the building whose draft provides for the use of RCB, bricks are not a functional equivalent. However it would be a mistake to conclude that prefabricated concrete blocks and bricks do not belong to one commodity market on the basis of these facts only.

If as a result of the increase in prices of RCB brick houses prove to be an acceptable alternative for RCB houses for buyers (provided houses are functionally interchangeable), competition in the commodity market between brick and RCB

houses will prevent the procedures of prefabricated concrete blocks from raising prices of their products. (Otherwise RCB and bricks do not belong to one commodity market)

Relative Prices

If two commodities are not functionally equivalent, this will serve almost in any case as a sufficient condition for the conclusion that these commodities do not belong to one and the same commodity market (see the example of RCB and bricks). However, when two commodities are functionally equivalent, they may still belong to two different commodity markets.

As a rule, commodity substitutes will have similar prices. But prices for goods belonging to one and the same commodity market under review may differ considerably.

Example 3. Let us consider two different types of electric power generators.

Type 1 costs 10 million rubles and uses 1 liter of diesel fuel for the production of Y kW of electric power;

Type 2 costs 5 million rubles and uses 1.5 liter of diesel fuel for the production of Y kW of electric power;

Presently 1 liter of diesel fuel costs 1,000 rubles.

Potential buyers of these generators plan to produce 10,000 kW of electric power during the entire period of the use of the generator. For buyers the cost of the production of electricity will be equal regardless of the type of the generator bought.

Total cost = original cost + operating expenses

Type 1. 10 mn. + 1,000 x 1 x 10,000 = 20 mn.

Type 2. 5 mn. + 1,000 x 1,5 x 10,000 = 20 mn.

As a result the generators belong to one commodity market under review, although their prices differ substantially.

Changes in conditions may lead to other results.

Example 4.

In the present case buyers plan to produce only 5,000 kwh of electric power during the entire period of the use of the generator. In this event, the cost of the production of electric power by the generator of the second type is considerably less than the same cost during the use of the generator of the first type. The high price of the

generator of the first type is no longer compensated by low operating expenses. For these buyers these two types of the generators belong to different commodity markets.

Type 1:  $10 \text{ mn.} + 1,000 \times 1 \times 5,000 = 15 \text{ mn.}$

Type 2:  $5 \text{ mn.} + 1,000 \times 1,5 \times 5,000 = 12,5 \text{ mn.}$

Buyers plan to produce 100,000 kwh of electric power during the entire period of the use of the generator, while the price of diesel fuel is equal to 1,500 roubles per liter. Now the relative inefficiency of the generator of the second type makes its operating expenses so high that its low price no longer compensates the high expenses on its operation. In this case, the two types of generators do not belong to the same commodity markets.

Type 1:  $10 \text{ mn.} + 1,500 \times 1 \times 100,000 = 25 \text{ mn.}$

Type 2:  $5 \text{ mn.} + 1,500 \times 1,5 \times 100,000 = 27,5 \text{ mn.}$

The fact that some goods are sold for rubles and other goods functionally equivalent to them are sold for foreign currency constitutes a separate question. If the markets of the exchange of foreign currency has no free access and cannot function normally so that the holders of rubles should spend their time and other resources on the exchange of rubles for this currency, then not only price in rubles, but also the value of time and other resources spent for the exchange of rubles for foreign currency is the actual price of the "currency" commodity.

The expenses incurred by the firm as a result of the introduction of new products in the process of production. These expenses arise in firms that acquire goods for production consumption.

Example 5. Let us consider a company engaged in mineral water bottling and sales.

Assumptions:

the company can buy glass or plastic bottles;

it makes no difference to buyers, which type of bottles is used;

for the company glass and plastic bottles are goods of equal quality.

An important difference between glass and plastic bottles is expressed in the bottling equipment. For historical reasons some factories use production lines for filling in glass bottles and others use these lines for filling in plastic bottles.

In this example, the most important question in the estimation of the interchangeability of glass and plastic bottles is to ascertain the cost of the re-equipment of production lines. Such information can be obtained:

as a result of interviews with specialists from the companies engaged in mineral water bottling, especially with those specialists who for some reason dealt with such re-equipment in the past;

from engineering and technologists.

The five-percent increase of the price of glass bottles may lead to the switch of the demand for plastic bottles, if the expenses on the re-equipment of production lines are less than the five-percent increase of prices. In this case, glass and plastic bottles will belong to one and the same commodity market. Otherwise they represent different commodity markets.

The opinion of buyers.

For non-transferred goods the estimation of acceptable substitutes is reduced to the analysis of the buyers preferences for different goods. This analysis cannot be mathematically exact. In this case there is no necessity for an official survey of the buyers' tastes. The necessary information can be obtained by means of interviews

with the most typical buyers. It is also possible to survey producers, consumers and experts in this sphere of industry about the latest examples of switching of buyers from one commodity to another in response to changes in relative prices. Here, it is important to put emphasis on the person who gives an interview on the change in the relative price of the commodity under review.

The assessment of the interchangeability of goods is based on an individual opinion. If buyers chosen at random (probability sample) point out unequivocally that they would replace one commodity by another, we can conclude that goods are interchangeable and relate to one and the same commodity market. If their assessment is divergent, it is necessary to conduct a detailed study of the reasons why the commodities are interchangeable for some buyers and non-interchangeable for others.

Example 6. Let us get back to Example 3 with two types of generators. But now we have to deal with two types of buyers.

The first type of buyers is represented by the hospitals which buy generators for use in emergency situations and expect to produce 1,000 kwh of electric power during the entire period of service of a generator. The second type of buyers is represented by the building companies which buy generators for the supply of pumps with electric power. They plan to produce 20,000 kwh of electric power during the term of service of a generator. For building companies the high operating expenses of the generator of the second type make its total cost considerably higher than those of the

generator of the first type. For hospitals the high operating expenses on the use of the generator of the second type are of no great importance due to the rare use of the latter. For hospitals the use of generators of the second type is cheaper. For these buyers the said types of the generators do not belong to one and the same market under review.

For hospitals:

Type 1: 10 mn. + 1,000 x 1 x 1,000 = 11 mn.

Type 2: 5 mn. + 1,500 x 1.5 x 1,000 = 6.5 mn.

For building companies:

Type 1: 10 mn. + 1,000 x 1 x 20,000 = 30 mn.

Type 2: 5 mn. + 1,500 x 1.5 x 20,000 = 35 mn.

With the change in conditions, the results may change, too. For instance, if building companies plan to produce 10,000 kwh of electric power, both types of the generators will belong to one commodity market under review. As for hospitals, only the generators of the second type will be regarded as a commodity market.

#### Appendix 5<sup>15</sup>

Examples of Goods from the Standpoint of Producers of the Interchangeability

To determine interchangeability from the standpoint of production, it is necessary to take the following steps:

- to assess the period of the penetration of any firm into the market of a particular commodity in response to a considerable rise in prices. The time period of one year from the moment of a considerable rise in prices till the moment of the entry of the firm into the market is considered to be a "reasonable period" or a period of "quick" penetration into the market;

Example 1. Let us assume that paper napkins represent a separate commodity market, since woven napkins are much more expensive, whereas other paper articles (facial napkins and toilet paper) are not regarded by buyers as substitutes for paper napkins. However, producers of facial napkins and toilet paper, can quickly penetrate into the market of paper napkins, since both commodities are produced by the same machines. The transition to the production of one commodity to another may be effected in several hours (by means of a simple fitting of paper pulp into a paper machine and by changing some parameters of the machine). In the event of a considerable rise in prices of paper napkins, the producers of toilet paper and facial napkins will be able to change quickly to the manufacture of the paper napkins.

-to assess the difficulty of the penetration into a market. For this it is necessary to determine which equipment, knowledge and professional training are required for starting the production of a given commodity. The entry into a market is deemed to be easy, if the " irreplaceable costs" (losses which cannot be recompensed if the firm concerned left the market), used for the entry, do not exceed five percent of the total production costs. Information about the expenses on entry and irreplaceable costs may be received as a result of the survey:

of the persons acting in the market which have penetrated it quite recently;

the users and the firms that have produced assets to reveal the possibility of their alternative use. Another method of estimating the degree of the irreplaceability of expenses is the determination of the existence of the market of the used assets;

Example 2. Let us assume that the procedure of production of toilet paper requires buying a new cutting machine (since paper is cut in a different way than paper napkins). At first, it is necessary to reveal the possibility of a different application of such machine. If this is impossible, then one has to investigate the cost of such a machine and the annual expenses on the manufacture of paper napkins. This will

make it possible to ascertain whether the irreplaceable expenses associated with the entry into the market will be considerable or not. In this case it is necessary to estimate the total annual costs. Let us assume that these costs will be equal to 1010 million rubles. If even the expenses on the cutting machine prove to be irreplaceable, the spending will not be deemed to be considerable. The spending will not exceed 50.5 million rubles, or five percent of 1010 million rubles.

to establish a sequence of steps leading to the entry into the market and to estimate their duration.

The necessary information can be obtained:

as a result of the study of recent entries;

from interviews with specialists in the given sphere of production;

to determine the possibility of entering the market.

The probability will be higher if the proceeds from sales as a result of the entry into a new market are higher as compared to the proceeds which the producers receives now from its investments. Such information can be obtained by ascertaining the readiness of potential producers to start production as a reaction to a considerable rise in prices. It is supposed that the firm that possesses everything necessary for the entry into the market and does not incur irreplaceable expenses upon the entry into the market must be interested in the penetration of the market, if prices are higher than the competitive prices by five percent. But in some situations the entering firm can receive such attractive income that even the five-percent increase in prices in the given market will be insufficient to draw the firm to enter the market.

## Examples for the Definition of the Geographical Market

It is necessary to reveal the following factors, while defining the geographical market:

presence of other points of sale (production);

possibility of replacing one point by another in case of a rise in prices in some specific points of sale;

expenses for transportation of goods;

duration of transportation of goods (this is most important for perishable food products).

In line with these requirements and from the standpoint of the buyers of goods, a particular point of sale might prove to be (a reasonable alternative) a substitute for another point, if the offered price of goods with delivery to the point under review and the prices at the substitute point differs by not more than five percent.

Example 1.

Cement has different marks and purposes (e.g. for the building of bridges). A building organisation intends to build a bridge in one city. The nearest plants producing cement for the construction of bridges are to be found at the following distances from the building site:

Plant A- 100 km;

Plant B-125 km;

Plants C and D - 200 km;

Plant E - 500 km;

Let us assume that the transportation of cement costs 20 kopecks per ton/km. If the price of cement in each plant is equal to 400 rubles per ton, then the cost of cement in each said plant for bridge builders will comprise:

Plant A:  $420 \text{ rbls} = 400 + (100 \times 0.2)$

Plant B:  $425 \text{ rbls} = 400 + (125 \times 0.2)$

Plants C and D:  $440 \text{ rbls.} = 400 + (200 \times 0.2)$

Plant E:  $500 \text{ rbls} = 400 + (500 \times 0.2)$

The price of cement with delivery

from Plant B is one percent higher;

from Plants C and D is five percent higher;

from Plant E is 20 percent higher than from Plant A.

Proceeding from the fact that five percent is a relatively small difference, while 20 percent is a relatively big difference, we conclude that Plants A, B, C and D are to be found in one geographical market, and Plant E - in another geographical market.

## Appendix 7

(Conditional) Example of the Calculation  
of the Market Share of an Economic Entity in a Commodity Market

The object of research is assumed to be the market of heat insulation materials.

The subject of research is the factory of building materials (hereinafter referred to as the factory).

The purpose of research is the determination of the factory's place in the market of heat insulation materials.

1. The determination of the production boundaries of the commodity market.

1.1. Determination of a commodity and commodity substances

The factory produces the following engineering items perlito-phosphogel and perlito-plastoconcrete plates.

The heat-insulation materials used in building constructions include the following materials produced by other factories: mineral cotton plates, perlitoconcrete slabs and expanded polystyrene plates.

By their purpose and consumer specifics all the listed materials belong to interchangeable goods: they are applied in building constructions for heat insulation. The interchangeability of the listed heat-insulation materials has been supported by the expert opinion of sector scientific-research organizations. The buyers of the factory's products have been surveyed with the aim of checking the results of the expert examination.

All the listed heat-insulation plates can be included in one commodity group of heat-insulation materials on the basis of this opinion.

2. Determination of the Subjects of the Market.

2.1. The buyers of perlito-phosphogel and perlito-plastoconcrete plates produced by the factory include:

wholesale buyers (the administrations of technical complete equipment in building trusts, construction trusts and factory associations, economic entities engaged in building and repair operations) 99 percent of the total sales of plates by the factory

retail buyers (individual developers) 1 percent

The share of an economic entity shall be determined in each market separately. In this case, since the share of retail buyers in the volume of sales of the factory is insignificant, we may limit ourselves to the appraisal of the share of the subjects of economic entities under review only in the market of wholesale purchases of perlito-phosphogel and perlito-plastoconcrete plates and their substitutes.

2.2. The enterprises which sell perlito-phosphogel and perlito-plastoconcrete plates and their substitutes.

As a result of the survey of the buyers of the factory's products four sellers have been identified in addition.

The geographical boundaries of the market cover the district of the Moscow Region where the identified sellers of heat insulation materials operate.

Perlitoconcrete slabs - Plants A and B

Mineral cotton plates - Plant C

Expanded polystyrene plates - Plant D.

3. Geographical Boundaries of the Commodity Market.

The geographical boundaries of the market are the districts of the region where the identified sellers of heat-insulation materials operate.

Let us assume that the total volume of sales of perlito-plastoconcrete plates in the market under review made up 100,000 sq.m. over a definite period of time, while the volume of sales of these plates by the factory is equal to 26,000 sq.m. over the same period of time.

Accordingly, the share of the factory in the market of heat-insulation materials comprised 26 percent.

Appendix 8

Calculation of Market Concentration Ratios  
(According to Reported Data for the Analysed Period)

	CR-3	CR-6	CR-10	CR-25
The volume of sale (delivery) by a certain number of maior				
The total volume of sales of N goods $V_m = \sum_{i=1}^N V_i$				
Concentration ratio (CR, %) = $\frac{V_1 + V_2 + \dots + V_n}{V_m}$				

Appendix 9

Calculation of the Market Concentration Index of Herfindahl and Hirschman

Table 3

List of sellers of goods in the market	The volume of sales (delivery) of goods by each seller ( $V_i$ )	The share of an economic entity selling goods in the	Squares of shares ( $D_i$ )
1. .... N. ...			

Total:  $V_m = \sum_{i=1}^N V_i$        $HHI = D_1^2 + D_2^2 + \dots + D_i^2$

Appendix 10

Calculation of the Lind Index

The Lind index determines the degree of inequality between the sellers of goods leading in the market.

$L = \frac{1}{K(K-1)} \times \sum_{i=1}^K Q_i$ , where

"K" is the number of large sellers (from 2 to N);

"Qi" is the ratio of the average share of the market of i sellers to the share of K-i sellers;

"i" is the number of the leading sellers among K of larger sellers.

$$Q_i = \frac{A_i}{i} : \frac{A_k - A_i}{K-i}, \text{ where}$$

"Ai" is the total share of the market accounting for i of sellers; "Ak" is the share of the market accounting for Kf large sellers;

The Lind index is used as a determinant of the "frontier" of oligopoly in the following way: it is necessary to compute L for K=2, K=3, etc. until  $L > L, K+1, K$ , which means that there will be no first violation of the continuity of the indicator L. The "frontier" is deemed to be established with the attainment of the value L of the minimum value as compared with L, K, K+1.

A conditional example of the computation of the Lind index.

Fifteen economic entities function in the federal market of household refrigerators.

Their share of the market comprises (in %):

Economic entities:	No. 1 - 15.7
	No. 2 - 14.5
	No. 3 - 11.9
	No. 4 - 9.3
	No. 5 - 8.8
	No. 6 - 8.8
	No. 7 - 7.3
	No. 8 - 6.5
	No. 9 - 4.2
	No. 10- 3.6
	No. 11 - 2.7
	No. 12- 2.7
	No. 13- 1.4
	No. 14- 1.1
	No. 15- 0.07

76 percent accounts for the first seven economic entities. This gives ground for the suspicion of the existence of oligopoly<sup>17</sup>.

To determine its frontier, a computation has been made according to the above formula. For a visual demonstration of the formula we cite the calculation of L2 and L3.

$$k=2, i=1$$

$$Q_1 = \frac{15.7}{1} : \frac{(15.7+14.5)-15.7}{2-1} = 1.08$$

$$L_2 = \frac{1}{2(2-1)} \times 1.08 = 0.54$$

$$k=3, i=1$$

$$Q_1 = \frac{15.7}{1} : \frac{(15.7+14.5+11.9)-15.7}{3-1} = 1.19$$

$$k=3, i=2$$

$$Q_2 = \frac{(15.7+14.5)}{2} : \frac{(15.7+14.5+11.9 \times 15.7+14.5)}{3-2} = 1.27$$

$$L_3 = \frac{(1.19+1.27)}{3(3-1)} = 0.41$$

In this case, the computation was carried out until k=10. We have received the following indicators:

- L2= 0.54
- L3=0.41
- L4= 0.35
- L5= 0.30
- L6= 0.25
- L7= 0.225
- L8= 0.208
- L9=0.216
- L10= 0.188

The violation of continuity has taken place in k=9 case. Hence oligopoly is comprised by the first eight economic entities. By its nature this oligopoly is "vague".

Appendix 11  
 Summary Table of the Assessment  
 Of the Competitive Environment on a Commodity Market

Table 4

Indicator	Mea- sure- ment unit	Criteria of assessment of the values of indicators	Characteristics of the type of market structure			Assessment of the competitive environment	
			Highly concen- trated market	Mode- rately concen- trated market	Low- concen- trated market	Undev- eloped compe- tition	Deve- loped compe- tition
1	2	3	4	5	6	7	8
1. Number of economic entities acting in the given commodity market(N)	pcs.		The indicator does not make it possible to judge the degree competition in this market with the exception of cases when the number of economic entities acting in the market is very small.				
2. Shares of deliveries of goods by each seller of the total volume of the market commodity resource(Di)	%	Gap between the values of Di - uneven distribution of Di - even distribution of Di	*				
3. Market concentration ration(CR)	%	70% < CR < 100% 45% < CR < 70% CR < 45%	+	+	+	+	+
4. Herfindahl and Hierschman Index (HHI)		2000 < H < 10000 1000 < H < 2000 H < 1000	+	+	+	+	+

5. Barriers to entry to a market		Degree of surmountability					
----------------------------------	--	---------------------------	--	--	--	--	--

		During 2 years (surmountable)	During a longer period of time (unsurmountable)					
- restrictions on the demand;			+				+	
- ...								
6. Openness of the Market								
Final assessment								

**Asterisk (\*) denotes the conditional variant of the values of indicators, the combined analysis of which leads to the final assessment.**

<sup>1</sup> in a situation where the supposed violation of the antimonopoly legislation is regarded with reference to a buyer of products (monopsony as a special case). The opinion of the seller is the determinative factor in the question of the interchangeability of products.

<sup>2</sup> with the existing differences of the value and consumer qualities of goods and the levels of the profitability of operations in commodity markets these magnitudes can differ from each other. As a rule, these magnitudes vary within 5 to 10 per cent (Appendix 6).

<sup>3</sup> it is much more preferable to compute in natural indicators; when it is impossible to use natural indicators it is necessary to compute in value indicators.

<sup>4</sup> if an economic entity produces a given commodity and uses a part of its products to meet the needs of its own production, only that part of the products that is sold by it in the market shall be included in the total volume of sales. While determining the volume of production to compute the share of the economic entity in the market, it is necessary to take into account the volume of production minus products made from the customer's raw material.

<sup>5</sup> In the presence of united structures in the market it is possible to identify the share of the vertically or horizontally integrated structures in the total volume of deliveries to the market.

The question of the inclusion of potential competitors (sellers) in the computation of the share in the market is settled depending on the situation under review:

- if the analysis of the competitive environment in the market is carried out in connection with the institution of proceedings for the violation of the antimonopoly legislation, it is necessary in all probability to calculate the share according to the realised structure of the market (without account of potential competitors);

- if the analysis of the competitive environment is carried out for the appraisal of long-term and perspective designs (the merger of economic entities, the creation of financial and industrial groups, the acquisition of shareholdings, assets, etc.), it is advisable to take account of possible volumes of sales in the market by potential competitors (sellers), provided that new economic entities can enter the market within the shortest possible time (determined depending in a specific market within one or two years) without essential additional expenses.

<sup>6</sup> In the economic literature authors cite other ratios describing a market concentration. However, these ratios are more rarely used in the analytical practice. They include, in particular, the Lind index (L) (See Appendix 10).

<sup>7</sup> A high market concentration is determined by the aggregate share of three or four major entities (that is, by concentration ratios) and also by the Herfindahl-Hirschman index, which shows which place or share is held by smaller subjects in the given market and whether there are prerequisites for the counteraction of smaller entities to the major entities within the existing structure of the market.

Given the undeveloped state of small business in Russia, and also the questionable statistical base for small business the Herfindahl and Hirschman index may give to a certain extent a distorted picture (if incorrect information is squared, the error doubles).

In foreign practice concentration ratios and especially the Herfindahl-Hirschman index are applied only as a point of departure in the study of a specific precedent and have never been used as an argument for court examination.

<sup>8</sup> In 1993, the share of imported goods in the annual retail trade turnover of Russia amounted to 45 per cent, in 1994 and 1995 this share rose to 47 and 49 per cent, respectively, which proves the increased impact of imports on the development of competition and the expansion of possible options for the buyer. However, there are different assessments of the threatening share of imports

. ("aggressive imports") in the national market (from 10 to 35 per cent with regard to different goods). Assessments of the positive influence of imports in the market competition can also vary.

The disclosure of monopolistic high prices is not a subject of the present Procedure. But in the process of determining the market potential of an economic entity acting in a market, it is recommended to analyse the price formation models used by these units.

<sup>10</sup> The form is to be filled in with a breakdown into the basic types of products (works, services).

<sup>11</sup> With an indication of its geographical boundaries.

<sup>12</sup> According to the data of the statistics bodies and to other sources.

Particular table columns can be filled in full or in part, depending on the presence or absence of various information and of the tasks to be solved by the antimonopoly authority.

<sup>13</sup> Questionnaires have been devised by the Sociological Department of the State Committee of Russia for Antimonopoly Policy.

<sup>14</sup> The present Appendix was drawn up with the use of the materials supplied by the specialists of the Organisation for Economic Cooperation and Development (OECD).

<sup>15</sup> The Appendix has been drawn up with the use of the materials supplied by OECD specialists.

<sup>16</sup> The Appendix has been drawn up with the use of the materials supplied by OECD specialists.

<sup>17</sup> It is well known from the theory of oligopoly that if two or three companies dominate a market, this oligopoly is called "tough" and if six or seven companies embrace 70 to 80 percent of the market it is called "wide".