

The development and expansion of use of software algorithms which start to make part of common business practices and at the same time can significantly change conditions for competition on markets is a challenge tackled by the Federal Antimonopoly Service (the FAS Russia) in its activities since 2016.

According to the FAS Russia, the following factors related to software algorithms may require new approaches from competition enforcers:

1) Given that price systems become more automated we assume that correspondence / telephone conversations between potential participants of anticompetitive agreements for fixing prices will soon be replaced by computers that will actually collude (including through algorithms). However, the current provisions of the Russian antimonopoly legislation concern relations that involve economic entities, organisations, authorities and individual persons. In this regard, the question arises how to apply the antimonopoly legislation to collusions through software algorithms.

2) We assume that an increase in the number of algorithms used for setting prices can help create longer-term cartels that are less obvious to traditional regulators using traditional methods of proving violations, which *inter alia* can negatively affect consumers.

In 2016, the FAS Russia requested information from a number of resellers of electronics and household appliances on software products that optimise price-setting (calculation of recommended prices for products including through taking into account the prices of competitors). The information equally was requested from the developer of one of such products (Revionics).

After analysing the received responses, the FAS Russia revealed that some resellers use different software products when determining retail prices for products. Goals of using the software products, which depend both on needs of users and functionality of the selected product, can be divided into four groups:

1) collection and / or analysis of information on the prices of competitors, on product range and other information;

2) automated calculation of prices and / or automated price-setting based on the data uploaded by user;

3) collection and / or analysis of information on the prices of competitors, product range and other information and automated price-setting and / or automated price-setting based on the data collected via software products;

4) collection and / or analysis of information on the prices of resellers set for specific brand products, automatic comparison of retail prices with recommended / minimum prices (in contrast to the above, these software products are used by vendors for controlling retail prices for brand products of resellers).

The use of software products specified in paragraphs 3) and 4) present the greatest concern to the competition authority at the moment. In particular, software products aimed at achieving the objectives specified in paragraph 4) may be used as an illegal instrument (in accordance with Part 5 Article 11 of the Federal Law of 26.07.2006 "On Protection of Competition" No. 135-FZ (hereinafter referred to as the Law on Protection of Competition)) of coordination of economic activities leading to restriction of competition.

Based on the analysis of information provided by economic entities in responses to requests, as well as publicly available information, the FAS Russia established that a number of resellers use such software products as **Competera, Oracle Retail Regular Price Optimization; Revionics, METACOMMERCE**.

**Competera** is a product that collects data on goods (price, product range, availability) on a daily basis and in real time and provides access to them in its interface. Based on the collected data, users can use automatic price-setting scenarios and optimise marketing and product range.

Competera offers two main products: "Price Intelligence" (platform of dynamic price-setting) and "Brand Intelligence".

The platform of dynamic price-setting has the functionality of automatic and manual revaluation of goods based on the data collected by the platform. Also, this product allows adjusting prices taking into account the information on a particular competitor if necessary.

The product "Brand Intelligence" is aimed at collecting and analysing up-to-date information on prices and price-setting (including on violations of recommended retail prices) and the position of brand products on the market. The software allows quickly identifying the first violators who sell the product at a price below recommended "in a few clicks".

**Oracle Retail Regular Price Optimization** is a software product allowing regularly optimising the user's current retail prices for goods in order to maximize profit at a particular moment.

Use of this product involves several steps: downloading necessary data, determining the period for which new prices should be calculated as well as

selecting certain price-lists, determining the group of products subject to price-setting, rules, restrictions, choice of pricing strategy and purpose. Also, the data on prices of competitors can be uploaded in case if a competing strategy is used.

After the user makes all the initial settings, the software product calculates new prices, as well as the forecasted result taking into account the new prices. The software provides a possibility of changing parameters, recalculating prices and adjusting them manually.

**Revionics** is a software product for retailers allowing automatically analysing and evaluating the effectiveness of price-setting of the user, taking into account its strategies for entering the market, consumer feedbacks and operational aspects.

Users can automatically upload their data, including the information on goods' items, prices, volumes, sales as well as the information on competitors.

**METACOMMERCE** is the online platform for online stores used for monitoring prices, product range and analyzing the information about competitors, which allows setting prices, managing product range and perform marketing activities automatically.

The platform includes a module for automatic price-setting, which allows to generating prices for goods based on data on the demand, prices, product range and marketing activities of competitors as well as various business data.

After evaluation of all the available information, the FAS Russia came to conclusion that such software products can be used as programs for identifying price deviations.

Having considered the above, in 2017, the FAS Russia initiated dawn raids of LG Electronics Rus Ltd., Philips Ltd. and Sangfiy SES Electronics Rus Ltd. due to receiving complaints on concerted actions of these enterprises in sales of equipment. As of now, this investigation continues.

It should be stressed again that while using the available tools of antitrust regulation and methods of proof, competition agencies face a number of difficulties, including in determining the responsibility of computer engineers for programming machines that are “educated” to coordinate prices on their own.