AGENCY INVESTIGATION OF ABUSIVE CONDUCT IN CHINA: THE *EASTMAN* CASE

EASTMAN

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CPI ANTITRUST CHRONICLE
MARCH 2020

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I. INTRODUCTION

On April 16, 2019, the Shanghai Administration for Market Regulation (the "Shanghai AMR"), the local counterpart of China's State Administration for Market Regulation ("SAMR") made an administrative penalty decision against Eastman Chemical (China) Co. ("Eastman") for alleged abusive conduct, namely exclusive dealing.[2]

Eastman sells several coalescent and related products to coating manufacturers operating in mainland China, including Texanol CS-12 coalescent, TXIB plasticizer and OE300 CS-16. Coalescent is an important input for coating products. On August 16, 2017, the Shanghai AMR officially initiated its investigation against Eastman for suspected abuse of dominance, and concluded that from 2013 to 2015 Eastman held a dominant position in the relevant market for CS-12 coalescent in mainland China, and abused its dominance through exclusive agreements, with contractual clauses imposing minimum purchase requirements, a so-called "take-or-pay" policy, and Most Favored Nation ("MFN") requirements.

The Shanghai AMR's investigation encompassed Eastman's sales policies and the clauses and terms in Eastman's sales contracts and orders. According to the Shanghai AMR, these exclusive agreements caused Eastman's trading partners to purchase all or most of the CS-12 coalescent they needed from Eastman, which restricted trade between Eastman's trading partners and its competitors, and hampered competition in the relevant market. Eastman's conduct allegedly violated Article 17.1(4) of China's Anti-Monopoly Law ("AML"), according to which "a business operator that has market dominance is prohibited from…restricting trade counterparties from dealing exclusively with it or with business operators designated by it without legitimate reasons."[3] Therefore, the Shanghai AMR ordered Eastman to terminate its illegal conduct and imposed a fine of RMB 24,378,711.35 (approximately US$ 3.48 million), which amounted to 5 percent of Eastman's turnover in 2016. This short article provides a detailed analysis of the case, and some of our own opinions regarding the Shanghai AMR's ruling.

II. THE SHANGHAI AMR'S RULING

Eastman has been operating in China since 1994, and its China businesses covers coating additives and other functional materials such as Texanol CS-12, specialty materials, fibers, and chemical intermediates. Eastman has nine manufacturing bases, two sales offices and one technology center in China. China is one Eastman's most important markets, and its turnover in the Asia-Pacific region accounted for 25 percent of its world-wide revenue in 2018.[4]

A. Market Definition

The Shanghai AMR's decision defined a relevant market for the mainland China market of CS-12 coalescent alone. CS-12 is the most widely used coalescent for water-borne construction-related coating products, such as latex paint, real stone paint, colorful paint, etc., and is an essential raw material for many coating producers for use in film forming. Coalescent includes ester alcohol-based coalescent products such as CS-12 and CS-16, and non-ester alcohol based coalescents such as diisobutyl succinate and diisobutyl glutarate.

The Shanghai AMR analyzed substitution between CS-12 and non-ester alcohol based coalescents. From the demand side, it claimed that compared to non-ester alcohol based coalescents, CS-12 provides more comprehensive functionality, with good hydrolytic stability, and can meet various requirements for coatings for both indoor and outdoor uses. Further, CS-12 is less expensive than most of non-ester alcohol based coalescents, and coasting producers would be subject to high switching costs if they were to change coalescent type. From the supply side, new entrants into the CS-12 market face barriers to entry such as high capital and technology thresholds, difficulties in switching from producing non-ester alcohol based coalescents to producing CS-12, and a long market trial period. Therefore, the Shanghai AMR found that CS-12 and non-ester alcohol based coalescents were not close substitutes.

2 State Administration for Market Regulation, "State Administration for Market Regulation Issues Administrative Penalty Decision against Eastman for Abuse of Market Dominance, April 29, 2019, Chinese version available at http://www.samr.gov.cn/fldj/tzgg/xzcf/201904/t20190429_293241.html.

3 The Anti-Monopoly Law of the People's Republic of China, effective as of August 1, 2008, Chinese version available at http://www.gov.cn/flfg/2007-08/30/content_732591.htm.

4 Eastman, "About Eastman China," available at https://www.eastman.com.cn/Pages/Home.aspx, accessed on December 5, 2019.

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Then, the Shanghai AMR analyzed possible substitution between CS-12 and CS-16, and concluded that they were not close substitutes from the demand side perspective due to differences in their overall functions, and coating producers on a given type of coalescent. However, CS-12 and CS-16 can be produced through the same production facilities, and are close substitutes from the supply side.

The authority further engaged in an econometric exercise to ascertain the correct market definition. It adopted a Critical Loss Analysis based on the Hypothetical Monopolist Test ("HMT") or SSNIP test to measure whether a small but significant and non-transitory increase in price would be profitable. Shanghai AMR used the formula below to calculate critical loss, and compared it with actual losses:

$$Critical\ Loss = \frac{x}{x + m}$$

In this formula, m is the gross margin of the target product, and x is the percentage price increase, which is normally 5 to 10 percent.

The Shanghai AMR reached the conclusion that if a hypothetical monopolist supplied all CS-12 from 2013 to 2016, a 5 to 10 percent price increase would be not only profitable, but also sustainable. Therefore, in the Shanghai AMR's view, CS-12 constituted a separate product market.

As (i) there are obvious trade barriers regarding CS-12; (ii) different environmental protection standards for coating products apply in various countries; and (iii) business operators in other jurisdictions do not have production bases or sales teams in China to support a stable and scaled sales channel, the Shanghai AMR defined a geographic market for mainland China only.

B. Dominance

Pursuant to China's AML, dominance is "a market position where a business operator has the ability to control the price or quantity of goods or other trade conditions in the relevant market or to impede or affect the entry of other business operators into the relevant market."[5] Accordingly, in its decision, the Shanghai AMR analyzed not only Eastman's market share, but also the competitive situation in the relevant market, Eastman's market power over CS-12 prices, Eastman's financial and technological advantages, coating producers' dependence on Eastman, and the high entry barriers in the relevant market.

From 2013 to 2015, there were only a few CS-12 producers in mainland China, including Eastman, Runtai Chemical Co. ("Runtai"), Dynamic Chemical Binhai Industry Co. ("Dynamic"), Daqing Tianyuan Chemical Co. ("Tianyuan"), etc. In China, CS-12 producers directly supply large-scale producers of water-borne construction-related coating products and emulsions which have stable demand and development potential ("direct sales clients"), and indirectly supply small-and-medium-sized coating and emulsion producers or distributors ("indirect sales clients") through authorized distributors. CS-12 producers mainly compete for direct sales clients, as they have stronger purchasing abilities and more stable demand. During the investigation period, Eastman essentially maintained a share above 50 percent in the relevant market. Eastman, Runtai and Dynamic jointly accounted for around 95 percent of the market. However, in the area of direct sales clients, Eastman had significantly more clients and larger direct purchase volumes than its domestic competitors, which indicated that Eastman had strong market power, and was not subject to obvious competition constraints from its competitors.

The Shanghai AMR further analyzed the price of Eastman's CS-12 product and found that it was higher than the average price in the CS-12 industry and the average price of other suppliers. Further, when the price of the main raw material for CS-12 ("iHBu") fluctuated, Eastman did not its CS-12 prices, but its competitors did under the similar circumstances.

As regards financial and technological advantages, Eastman had more stable supply capacity, more mature technologies, more reliable raw material supply, and better sales teams due to its earlier entry into the market and self-operated transportation pipelines for iHBu.

5 The Anti-Monopoly Law of the People's Republic of China, effective as of August 1, 2008, Chinese version available at http://www.gov.cn/flfg/2007-08/30/content_732591.htm.

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Coating producers usually engage in a one-to-two-year inspection period to determine their CS-12 supplier. Once a supplier is determined, coating producers do not switch suppliers frequently, in order to ensure product quality. Eastman established long-term relationships with major coating producers in mainland China before its competitors could, which led to coating producers being strongly dependent on Eastman's CS-12 products.

According to the Shanghai AMR, Eastman's potential competitors face relatively high entry barriers, in terms of capital requirements, technology, environmental protection approvals, technology supports, etc. More importantly, Eastman could produce CS-12 with purity of over 98 percent, which was generally accepted by coating and emulsion producers, while most of its competitors were not capable of doing so at the time. Therefore, branded coating and emulsion producers preferred Eastman's CS-12 over its competitors' products.

In short, Shanghai AMR not only looked into Eastman's large share in the relevant market, but also analyzed the competitive situation, Eastman's advantages in terms of financial status and technological development, clients' dependence on Eastman's products, the entry barriers, etc. After comprehensively considering all these factors, the Shanghai AMR concluded that Eastman was dominant in the relevant market.

It is interesting to note that the Shanghai AMR looked into Eastman's performance in the sub-market for direct sales, and concluded that Eastman had strong market power in the overall relevant market covering both direct and indirect sales. This is an important signal that the anti-monopoly authority is paying more attention to sub-markets beyond the relevant market definition. If a business operator is not subject to competitive constraints in a sub-market, the authority can still raise competition concerns.

C. Abuse of Dominance

After investigating the case, the Shanghai AMR found that Eastman signed and implemented exclusive agreements with minimum purchase requirements and a "take-or-pay" clause ("take-or-pay agreements") with Chinese coating producers. In addition, Eastman signed and implemented exclusive agreements with MFN clauses, subject to a minimum purchase requirement.

From 2013 to 2015, Eastman signed long-term contracts with six direct sales clients, requiring them to meet minimum purchase quantity requirements with an agreed CS-12 price for the following two to three years. If the clients did not meet these minimum requirements, they could impose the following remedies such as: (a) placing purchase orders covering their purchase shortfall, with full payment within thirty days of the end of each contractual year (the "Remedy Period"); or (b) making full payment for such purchase shortfalls to Eastman within the Remedy Period. The minimum purchase quantity required in each of the six contracts accounted for more than 60 percent of each client's annual demands for CS-12, while for five of the six contracts, the percentage was 80 percent.

In 2013, Eastman Chemical Company signed a global framework purchase agreement with one of its clients and offered world-wide MFN treatment if clients purchased more than a certain percentage of its global demands for coalescent from Eastman Chemical Company from July 2013 to December 2016. Then, from 2013 to 2016, on behalf of Eastman, Qilu Eastman Specialty Chemical ("QESCL"), a joint venture between Eastman and Sinopec Qilu Petrochemical Co., signed and carried out sales incentive agreements with one of its clients, according to which the client would enjoy a certain percentage discount if it met an agreed purchase quantity. In this way, more than 75 percent of that client's CS-12 demands were locked in to Eastman.

The Shanghai AMR considered that the take-or-pay agreement and the MFN treatment jointly compelled clients to purchase most (if not all) of their CS-12 coalescent from Eastman, which restricted and harmed competition in the CS-12 market. According to the Shanghai AMR, the minimum purchase quantity requirements and the take-or-pay clause imposed a heavy obligation on Eastman's clients, as the minimum quantity accounted for a majority of their total demands. Given this lock-in effect, clients would have no incentive to turn to other suppliers. Meanwhile, the take-or-pay agreement exacerbated clients' potential liability for breaches of contract with Eastman, and in turn further enhanced the lock-in effect.

As far as the MFN clause was concerned, the Shanghai AMR noted that a world-wide MFN agreement would not necessarily have restrictive effects in certain geographic markets. However, the addendum agreement on discounts offered extra rebates based on the MFN price if the client could reach the required purchase quantity in certain geographic markets. In this way, Eastman locked-in more than 75 percent of clients' demands in mainland China.

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Based on the analysis of Eastman's market power in the sub-market for direct sales, Shanghai AMR concluded that it was easier to lock in the demand of the direct sales clients (for whom most CS-12 suppliers compete), and that Eastman's exclusive dealing conduct had severe a lock-in effect in the relevant CS-12 market.

Aside from the lock-in effect due to the take-or-pay agreement, and the MFN treatment of direct sales clients, Eastman's conduct also indirectly eliminated and restricted competition for indirect sales clients such as distributors. As distributors had fragmented demand, Eastman's competitors could not attract enough demand, even if they offered lower prices, and were therefore passive in terms of price competition.

To assess anti-competitive effects, the Shanghai AMR adopted another economic tool, the Lerner Index, to evaluate Eastman's market power in CS-12. The Lerner Indexes of the CS-12 products sold by Eastman, Runtai and Dynamic were all increasing while Eastman engaged in its alleged anti-competitive conduct, and Eastman's Lerner Index was consistently higher than those of the others. However, when Eastman ceased the take-or-pay clause in 2017, the Lerner Indexes of the CS-12 products of those three companies decreased. These findings indicated that the take-or-pay clause, as well as the other exclusive agreements, had caused actual anti-competitive effects, i.e. they eliminated and restricted competition.

Eastman explained that the minimum purchase quantity requirement was a mechanism to reduce the risks of price and quantity volatility, and let both Eastman and its customers to plan procurement and production more efficiently, and that MFN clauses are a common practice in the raw material and chemical industries. The Shanghai AMR nevertheless considered that the quantity required in the minimum purchase clause was too high, and imposed significant obligations on Eastman's customers, and thus caused further anticompetitive effects. Moreover, the addendum agreement on discounts exacerbated these effects. Therefore, Eastman did not have legitimate reasons to implement the conduct described above.

III. ISSUES FOR FURTHER ACADEMIC DISCUSSION

This article does not seek to challenge the Shanghai AMR's decision. Indeed, we acknowledge that the economic analysis in the decision provides strong evidence for its conclusions. Moreover, it demonstrates the local antitrust agency's willingness to rely on external economic experts, mostly from highly recognized academic institutions in China. Nevertheless, there are several points where we beg to differ with the authority's conclusions, based on our intimate knowledge of the case. This section provides a brief discussion of these issues.

A. Market Definition

The Shanghai AMR used the narrowest possible market definition, i.e. for a single product, CS-12. To correctly define the relevant market, it is necessary to consider the fundamental function of CS-12, which belongs to the broad category of coalescents. Coalescents are a type of paint additive that serve a particular function. The addition of coalescents to water-borne coatings enables better film formation, and thus greatly improves overall paint performance in terms of substrate adhesion and surface durability. But several common types of coalescent serve the same purpose, including ester alcohols, esters, and glycol ethers. It is indeed true that the most widely used coalescent is CS-12, an ester alcohol-based coalescent product. There are also other coalescent types based on alternative chemical formulations, including OE300 (CS-16) and OE400 from Eastman, as well as similar products by other providers. They command slightly different price points for additional features such as low odor and reducing formulated cost by allowing substantial reductions in the amounts of associative thickeners required. Although the prices of the products above are slightly different, they compete in the same market. Based on our demand analysis, for coating producers, they are all considered to be coalescents, and are substitutable for each other. A decision to substitute is usually driven by downstream consumers' demand for coating products, and this type of decision can be made and implemented quite easily. Therefore, we are concerned that the definition of a relevant market for CS-12 only was overly narrow.

B. Economic Analysis of Dominance

When assessing Eastman's alleged dominance, the Shanghai AMR considered several factors including market shares, control over the price of the relevant product, superior financial and technological conditions, other operators' reliance on Eastman's CS-12 product, and entry barriers.

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From our point of view, even on a narrowly-defined CS-12 relevant market, an alternative way to look into Eastman's market position could be based on an analysis of concentrated buyer power. If the buyers, i.e. the coating producers, have bargaining power or are free to reject unsatisfactory trading conditions, the market would be more competitive than it would initially be perceived. Therefore, an investigation into the trading history between Eastman and its buyers and an evaluation the facts and evidence as to whether buyers turned down or refused the trading conditions at issue would be necessary.

Another factor worthy of consideration in analyzing market competition is the presence of new entrants. There has been active entry to the CS-12 market. Eastman's major competitors (Runtai and Dynamic) started their CS-12 businesses in 2012, while Puyang Hongye Hitech Co. entered the CS-12 market in 2016. This pattern of active entry indicates that the market was probably more competitive than the agency concluded, and the incumbents, including Eastman, have been facing credible competition from potential entrants over time.

C. Minimum Purchase Requirements and Take-or-pay Clauses in Long-term Contracts

Long-term supply contracts are often used in business dealings. They are a tool used by many large-scale industrial companies in various industries to develop reliable partnerships with their suppliers or clients in order to ensure reliable supply of high-quality materials, as well as an instrument to hedge risks due to price fluctuations. Transaction cost theory suggests that long-term relationships are important in the presence of relationship specific investments ("RSIs"), which also suggests that a long-term contract that specifies the terms and the conditions reduces the potential for an *ex post* hold-up problem.[6] Porteous et al. suggest that offering suppliers long-term contracts and investments can be a potential solution to incentivize suppliers to commit to sustainable practices.[7] Long-term contracts are also designed to manage risk and uncertainty by allocating resources and risk, which minimizes the variability of profits realized on spot sales and the exposure to more volatile real-time market price fluctuations.[8]

A minimum purchase requirement is normally associated with long-term contracts, which provide insurance for both buyers and sellers. It is a common practice in business. It is the most "flexible" commitment for the buyers, which requires them to specify a total minimum quantity to be purchased over the planning period. The buyer guarantees this minimum purchase quantity, and in return, the supplier provides a price discount. Minimum purchase requirements serve as the standard contractual vehicle when buyers and sellers negotiate for large quantities of products.

Take-or-pay clauses are also common practice in the petrochemical industry, as it is uniquely characterized by long-term production planning cycles. Fundamentally, such clauses prescribe a remedial solution intended to protect the seller's interests in the event of the buyer's breach of contract. Whether this is a violation of the Anti-Monopoly Law or merely a contractual matter deserves further analysis and justification.

IV. CONCLUSION

In this paper, we analyzed the recent investigation into Eastman, and find that China's anti-monopoly authorities are now navigating into finding anti-competitive effects in industries with mixed and complicated conducts. The Shanghai AMR's investigation and analysis was thorough and solid, but we also note some additional issues worthy of further academic discussion, and raise some questions for the further debate. There are several additional factors that could have been taken into consideration when analyzing Eastman's alleged market dominance and the alleged anti-competitive effects of its conduct.

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7 Porteous, A.H. & S.V. Rammohan, H.L. Lee, "Carrots or sticks? Improving social and environmental compliance at suppliers through incentives and penalties," *Production and Operations Management*. 24(9) 1402-1413, 2015.

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