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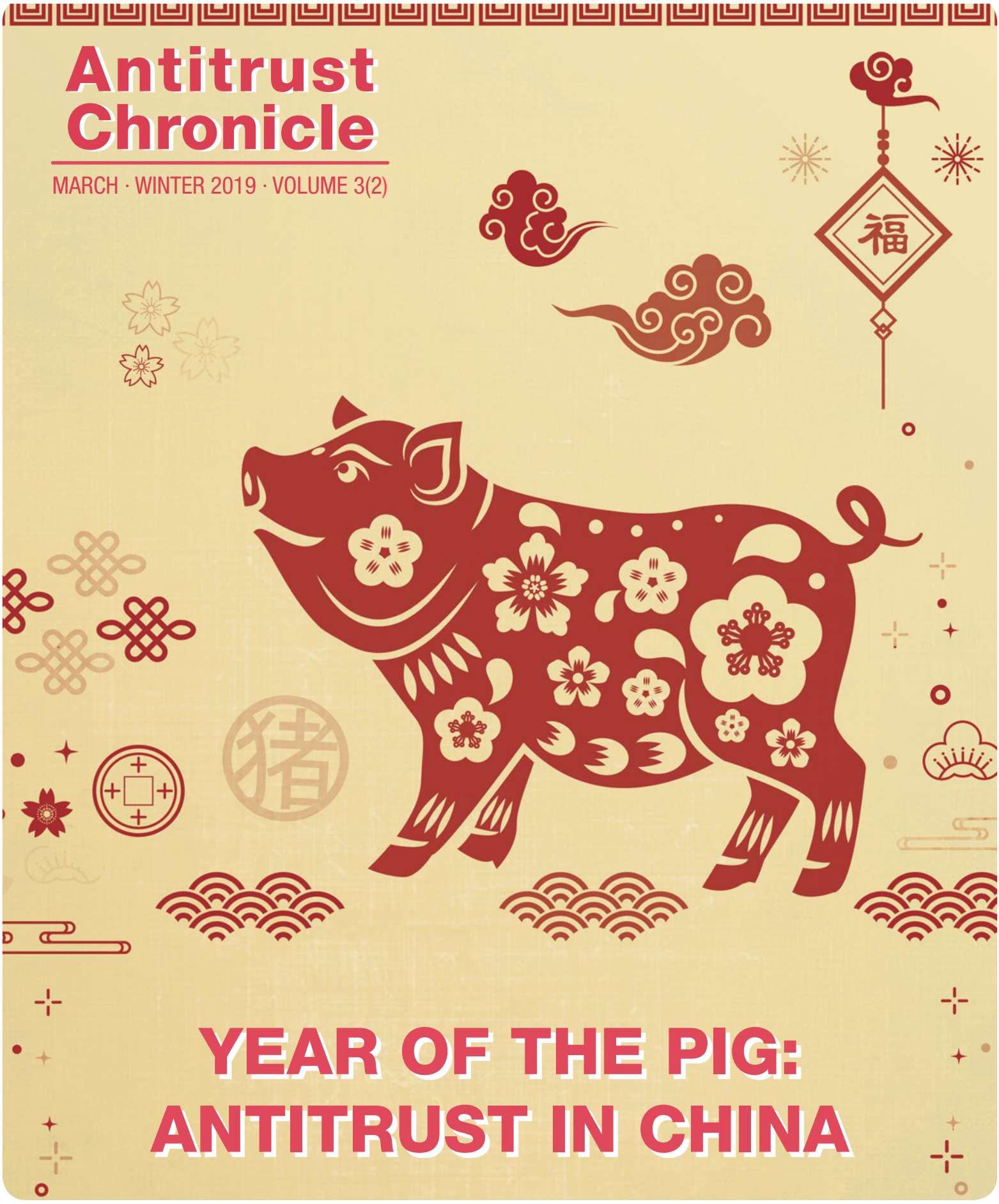

YEAR OF THE PIG: ANTITRUST IN CHINA

CPI COMPETITION POLICY INTERNATIONAL

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LETTER FROM THE EDITOR

Dear Readers,

We are delighted to release our CPI Antitrust Chronicle issue for March 2019, "Year of the Pig: Antitrust in China," and present you ten articles as a tribute to the 10th Anniversary of the Anti-Monopoly Law.

2018 has been an important year in China's development in competition policy. We have witnessed the restructuring of China's anti-monopoly authorities in April and celebrated the 10th anniversary of the implementation of the Anti-Monopoly Law in August.

This China issue starts with a CPI Talks interview with Mr. Zhenguo Wu, Director General of the Anti-Monopoly Bureau of State Administration for Market Supervision ("SAMR"), the newly established anti-monopoly authority combining all the anti-monopoly enforcement responsibilities of the previous authorities. DG Wu introduces the functions of the new Anti-Monopoly Bureau and the benefits of the unified anti-monopoly law enforcement, reviews the case work since the establishment of the Bureau, and briefs the policy and industry focus of SAMR.

In 2018, SAMR issued conditional approval of four high profile mergers: *Bayer/Monsanto, Essilor/Luxottica, Linde/Praxair,* and *UTC/Rockwell Collins*. John Yong Ren, Wesley Wang, and Schiffer Shi from T&D Associates analyze the four cases from the procedural and substantial perspectives.

Prof. Wei Han from the University of Chinese Academy of Social Sciences and Yajie Gao from Queen Mary University of London analyze merger control from another aspect. They look into concentrations in China between Internet companies. The authors present challenges that Chinese competition authorities confront, put forward suggestions, and discuss the future development of merger control with the development of the digital economy in China.

Economic analysis is playing an increasingly important role in both antitrust cases and unfair competition cases. Dr. Vanessa Yanhua Zhang, Prof. John Jiong Gong, and Prof. Nina Yin from Global Economics Group assess the unfair competition case *Tencent v. Xinghui* and the conduct at issue with a standard approach for welfare analysis. The authors also compare the case to the U.S. and European legal treatment of ad blocking, which shows that Chinese court takes its own unique approach.

High-tech M&A transactions are on the rise. What are the issues here that might give rise to competition concerns involving the Chinese authority? Michael Han and Bivio Yu from Fangda Partners draw upon their experience from advising global tech-deals and offer suggestions on how to plan high-tech merger deals in China.

Yi Xue from Zhong Lun Law Firm continues to discuss typical competition issues in the era of Internet and digital economy from the perspective of the Anti-Monopoly Law, including algorithm collusion, personalized pricing, and platform-based exclusionary conduct.

Life science has been the focus of China's antitrust enforcement. Jet Deng and Ken Dai from Dentons examine various types of high-profile antitrust cases in the life science sector, and discuss China's antitrust trends in terms of pay-for-delay agreements, generic drug-related practices, and follow-on actions for multinational life science companies.

LETTER FROM THE EDITOR

Zhan Hao, Song Ying, Wu Yuanyuan, Yang Zhan, and Lv Hongjie from AnJie Law Firm review China's chemical industry. They further examine merger control filings, antitrust investigations and penalties, and private antitrust litigation in China's chemical industry.

Wei Huang and Bei Yin from Tian Yuan Law Firm summarize the anti-monopoly enforcement in China's automotive industry and explore the influence of the enforcement actions on the development of China's anti-monopoly law.

The intellectual property antitrust mechanism in China is developing rapidly. Zhao Ye from Jingtian & Gongcheng divides the development of the mechanism into three stages and analyzes the key features and developmental trends in antitrust enforcement in the intellectual property area.

We would like to thank our contributors for their efforts and dedication to our March 2019 CPI Antitrust Chronicle, and we hope you enjoy reading this special China issue.

Sincerely,

Vanessa Yanhua Zhang, Ph.D.
Global Economics Group and Market & Regulation Law Center, Renmin University

SUMMARIES

SUMMARIES

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WHAT'S NEXT?

For April 2019, we will feature Chronicles focused on issues related to (1) **Public Procurement**; and (2) **Online Advertising and Antitrust**.

ANNOUNCEMENTS

CPI wants to hear from our subscribers. In 2019, we will be reaching out to members of our community for your feedback and ideas. Let us know what you want (or don't want) to see, at: antitrustchronicle@competitionpolicyinternational.com.

CPI ANTITRUST CHRONICLES MAY 2019

For May 2019, we will feature Chronicles focused on issues related to (1) **Healthcare**; and (2) **Common Ownership**.

Contributions to the Antitrust Chronicle are about 2,500 – 4,000 words long. They should be lightly cited and not be written as long law-review articles with many in-depth footnotes. As with all CPI publications, articles for the CPI Antitrust Chronicle should be written clearly and with the reader always in mind.

Interested authors should send their contributions to Sam Sadden (ssadden@competitionpolicyinternational.com) with the subject line "Antitrust Chronicle," a short bio and picture(s) of the author(s).

The CPI Editorial Team will evaluate all submissions and will publish the best papers. Authors can submit papers on any topic related to competition and regulation, however, priority will be given to articles addressing the abovementioned topics. Co-authors are always welcome.

CPI TALKS...

...With Zhenguo Wu

In this month's edition of CPI Talks… CPI's Vanessa Yanhua Zhang[1] had the pleasure of speaking with Zhenguo Wu. Mr. Wu is Director General of the Anti-Monopoly Bureau of State Administration for Market Regulation ("SAMR") of P.R. China.

Thank you, Mr. Wu, for sharing your time for this interview with CPI.

2018 is a historical year in China's anti-monopoly development. It was not only the 10th anniversary of the implementation of the Anti-Monopoly Law, but also a milestone for China's anti-monopoly authorities. On April 10, 2018, the State Administration for Market Regulation (SAMR) was official inaugurated, combining the anti-monopoly enforcement responsibilities of the previous Price Supervision and Anti-Monopoly Bureau of the National Development and Reform Commission, the Anti-Monopoly Bureau of the Ministry of Commerce, and the Anti-Monopoly and Anti-Unfair Competition Bureau of the State Administration for Industry and Commerce. The unified authority conducts more efficient regulatory work, and guarantees the comprehensive implementation of the Anti-Monopoly Law. On January 30, 2019, on behalf of the Antitrust Chronicle, we are very honored to have an interview with Mr. Zhenguo Wu, Director General of the Anti-Monopoly Bureau of the State Administration for Market Regulation (SAMR) of P.R. China. Below is the full interview.

Dr. Zhang: In April 2018, the State Administration for Market Regulation (hereinafter referred to as SAMR) was officially inaugurated. The new Anti-Monopoly Bureau integrates the anti-monopoly responsibilities of the National Development and Reform Commission ("NDRC"), the Ministry of Commerce ("MOFCOM"), and the State Administration for Industry and Commerce ("SAIC"). Please introduce the functions of the new Anti-Monopoly Bureau and the benefits of the unified anti-monopoly law enforcement.

DG Wu: According to the State Council Institutional Reform Plan, the Anti-Monopoly Bureau of SAMR is responsible for unified anti-monopoly law enforcement. SAMR has currently finished its institutional reform of the national anti-monopoly law enforcement agencies, while the overhaul of the local anti-monopoly law enforcement agencies is in progress. The Anti-Monopoly Bureau of SAMR is responsible for: coordinating and promoting the implementation of competition policies; formulating Anti-Monopoly measures and guidelines; organizing and implementing anti-monopoly law enforcement, conducting anti-monopoly review on concentrations of undertakings according to law, and being responsible for anti-monopoly law enforcement against monopoly agreements, abuse of market dominance and abuse of administrative power which excludes and restricts competition; providing guidance to enterprises in response to offshore anti-monopoly complaints; undertaking international cooperation and communication in anti-monopoly law enforcement, and undertaking the daily work of the Anti-Monopoly Committee of the State council. At present, the Anti-Monopoly Bureau has a total of 10 divisions, and 7 of them are case divisions, which reflects the comprehensive supervision of the Bureau from prevention at the very beginning to supervision during the process and afterwards.

SAMR is responsible for unified anti-monopoly law enforcement, which eliminates the cross-functional issues with the three former law enforcement agencies, and is conducive to building a unified, authoritative, and efficient anti-monopoly law enforcement system and realizing the optimization, coordination and efficiency of anti-monopoly law enforcement. According to China's Anti-Monopoly Law, the central authority is entitled to the enforcement of the Anti-Monopoly Law, which is under the responsibility of the anti-monopoly law enforcement agency of the State Council. This is conducive to ensuring the unity of anti-monopoly law enforcement, and building a unified, open, and orderly market system in China.

1 Special Editor of the CPI Antitrust Chronicle, Chief Editor of CPI Asia Column, Managing Director of Global Economics Group, and Senior Research Fellow of MRLC Renmin University. We are grateful to Mr. Hang Lin to coordinate and facilitate this interview.

Meanwhile, pursuant to Article 10, Paragraph 2 of the Anti-Monopoly Law, the anti-monopoly law enforcement agency of the State Council may authorize the corresponding agencies of the people's governments of provinces, autonomous regions, and municipalities, to take charge of the anti-monopoly law enforcement when needed. In order to make up for the lack of anti-monopoly law enforcement forces at the national level we will learn from enforcement agencies in the jurisdictions in Europe and the U.S. in the institutional settings, establish the mechanism of law enforcement authorization for provincial market supervision agencies, and issue the Notice of SAMR on Anti-Monopoly Law Enforcement Authorization. We strengthen the guidance and supervision of local anti-monopoly work, mobilize the initiative of provincial market supervision agencies, unify law enforcement rules and standards, establish the fair, open and transparent market rules, and resolutely prevent and overcome local protectionism and market segmentation. By further improving the anti-monopoly law enforcement system, we promote the comprehensive and effective implementation of the Anti-Monopoly Law.

Dr. Zhang: Please introduce the case handling work of the Anti-Monopoly Bureau since its establishment.

DG Wu: In the past decade, China's anti-monopoly enforcement agencies handled 172 monopoly agreement cases, and 58 market ascendancy abuse cases, with an accumulated fine exceeding RMB 11 billion; the agencies investigated and punished 220 cases of abuse of administrative power to exclude or restrict competition; the agencies also reviewed more than 2,500 filings of concentration of undertakings, with a total transaction value of more than RMB 40 trillion.

In 2018, China's anti-monopoly enforcement agencies filed 19 cases of suspected monopoly agreements and 17 cases of suspected abuse of market dominance, and settled 16 of them; the agencies investigated and punished 54 cases of abuse of administrative power to exclude or restrict competition; the agencies received 513 applications for concentration of undertakings, filed 468 of them, concluded 468 cases (the annual growth rates of the applications, the filings and the case conclusions all exceed 30 percent), and approved 4 transactions with additional conditions; the agencies punished 15 transaction not filing according to law, as well as Thermo Fisher's violation of its announced obligations in its acquisition of Life Technologies. These conducts maintain the legal authority of the Anti-Monopoly Law.

Dr. Zhang: Please introduce the focus of SAMR in anti-monopoly law enforcement and the mainly involved industries.

DG Wu: The Anti-Monopoly Bureau will promote anti-monopoly law enforcement in the following five aspects:

First, we will establish a unified, authoritative and efficient anti-monopoly law enforcement system. We will strengthen the central and local anti-monopoly law enforcement forces. We will continue to build the enforcement system and mechanisms, strengthen the construction of anti-monopoly law enforcement forces, and provide the talent to carry out effective anti-monopoly work. We will enhance the investment and allocation of local anti-monopoly law enforcement forces, realizing optimized, coordinated and efficient anti-monopoly law enforcement. We will strengthen the construction of the cooperation mechanism. SAMR and the provincial market supervision authorities will collaborate and cooperate to form the joint force. We will strengthen the communication and cooperation with experts and think tanks to provide intellectual support for anti-monopoly work.

Second, we will promote the anti-monopoly law enforcement to be more normal, professional and normative. We shall maintain the comprehensive law enforcement environment. We will resolutely investigate and punish various monopoly conducts including monopoly agreements, abuse of market dominance and abuse of administrative power which excludes and restricts competition, and conduct anti-monopoly review on concentration of undertakings. Key areas should be focused on. We will pay attention to the important fields and key sectors which affect fair competition and economic development, and advance the overall anti-monopoly work through typical cases. We will strengthen anti-monopoly law enforcement in key areas affecting people's livelihood, ensuring and protecting consumers' choices and fair-trading rights. We will strengthen economic analysis of cases, improve law enforcement procedures, restrict discretionary power, treat all types of market entities on an equal footing, and promote the professionalization and standardization of law enforcement.

Third, we will construct a complete, scientific, standardized and efficient anti-monopoly system. Based on the national conditions and considering all aspects, we will promote the amendment of the Anti-Monopoly Law and the supplementary laws, and complete the establishment, amendment or abolition of supplementary laws and regulations of the three former law enforcement agencies. We will formulate the Provisions on Prohibition of Monopoly Agreements, the Provisions on Prohibition of Abuse of Market Dominance, and the Provisions on Prohibition of Abuse of Administrative Power to Exclude or Restrict Competition, in order to improve the Anti-Monopoly Law system. We will issue and implement anti-monopoly guidelines to further improve the transparency and predictability of law enforcement. We will strengthen the fundamental role of competition policies, create an institutional environment for fair competition, and further enrich the

tools for implementing competition policies. While strengthening anti-monopoly law enforcement and implementing the fair competition review system, we will explore policy tools for promoting competitive reform in key industries and optimizing the competitive environment, further enhance the pertinence and effectiveness of competition policies, fulfill the fundamental role of competition policies, and promote the high-quality development of China's economy.

Fourth, we will strengthen the construction of the antimonopoly law enforcement team and their relevant capacities. Having the law enforcement agencies in the jurisdictions of the United States and Europe as reference, we will train law enforcement talents to be not only familiar with macro-economics but also understand industrial development; not only master the domestic market situation, but also have insight into international trends; and not only know the rules of law but also be proficient in international trade. We will strengthen training and international communications, and promote the construction of the learning and working mechanism of "learning by doing" and "doing by learning." We will promote the establishment of a talent pool for anti-monopoly law enforcement, and build an anti-monopoly law enforcement team with exquisite skills, excellent styles, and strict disciplines.

Fifth, we will deepen international communication and cooperation in competition policy and anti-monopoly law enforcement. We will monitor the development of economic globalization, adapt to the expanding trend of China's opening-up, and expand the scope of international cooperation in the anti-monopoly area. We will focus on strengthening cooperation with the "One Belt, One Road" countries in the anti-monopoly area, and jointly cope with the competition risks and challenges in the global market. We will deepen the cooperation with mature market economy countries, strengthen the construction of the cooperation mechanisms with other anti-monopoly law enforcement agencies, further broaden the areas of cooperation in case law enforcement, and constantly enrich the content of cooperation. We will pay more attention to participating in the construction of multilateral and bilateral international competition rules, strengthen the consultation and dialogue with other anti-monopoly law enforcement agencies, and promote international coordination on competition rules.

Dr. Zhang: Please introduce the typical cases and experiences of SAMR in anti-monopoly law enforcement since its establishment.

DG Wu: Since the establishment of SAMR, its functional advantages in unified anti-monopoly law enforcement have been fully developed. In 2018, we handled and closed 85 monopoly cases, reviewed and closed 468 applications for concentration of undertakings, and approved four significant transnational mergers and acquisitions with additional conditions, including Bayer's acquisition of Monsanto, the merger of Essilor International and Luxottica Group, the merger of Linde AG and Praxair, and United Technologies Corporation's acquisition of Rockwell Collins. The anti-monopoly work of SAMR has been carried out in an orderly manner, and the anti-monopoly law enforcement talents gather together rapidly, which effectively guarantees the realization of the target of the institutional reform and provides more optimized, coordinated and efficient anti-monopoly law enforcement.

When carrying out the anti-monopoly work, we will insist on several principles in the long run, which will guide our enforcement actions throughout the law enforcement efforts. **First, following the principle of fairness and justice.** All people are equal before the law. It is the important connotation of ruling the country by law and the basic requirement of administration by law to guarantee the fair participation of all types of market entities in the market's competition and protect the legitimate rights and interests of participants according to law. **Second, following the concept of law enforcement for people.** To safeguard the legitimate rights and interests of consumers is to safeguard the interests of the people, which also reflects the principle of "sticking to the principle that people are the center" in the anti-monopoly work. **Third, insisting on the position of open cooperation.** Anti-monopoly is a common rule in market-economy countries. Open cooperation meets the needs of economic globalization and the internationalization of enterprise competition. It also represents a future development trend. **Fourth, following the spirit of being professional and efficient.** Professionalism and efficiency is the embodiment of law enforcement, and was also an important factor for earning international reputation and respect in recent years, which is worth adhering to.

Dr. Zhang: At last, please share with us the prospects for future work of SAMR.

DG Wu: Next, we will take institutional reform as an opportunity, focus on strengthening the fundamental role of competition policies, create a fair competition system, actively promote anti-monopoly law enforcement, and safeguard market competition order and consumers' interest.

First, we will further improve the anti-monopoly law enforcement system with Chinese characteristics. We will focus on an anti-monopoly law enforcement system which unifies law enforcement responsibilities, optimizes the layout of functions, improves the law enforcement authorization system, and is authoritative, unified, professional, and efficient. We will further improve the ability and level of the law enforcement team, maintain the integrity of the law enforcement team, and uphold fair competition in the market.

Second, we will further strengthen the fundamental role of competition policies. We will strengthen the fundamental role of competition policies and improve the competition policy system. We will promote the amendment of the Anti-Monopoly Law and the supplementary laws, and improve the anti-monopoly legal system. We will issue and implement anti-monopoly guidelines to further improve the transparency and predictability of law enforcement. We will implement a comprehensive fair competition review, pay equal attention to cleaning up the existing regulations and elaborating the new regulations, and improve the effectiveness of the fair competition review. We will strengthen the evaluation of market competition and the construction of the anti-monopoly database, and constantly strengthen the basis of law enforcement and intellectual support.

Third, we will further strengthen anti-monopoly law enforcement. We will make overall use of prevention and supervision in process and afterwards to create a market environment of honesty, trustworthiness and fair competition, and enhance the international competitiveness of China's business environment. We will uphold the consumers' interests, strengthen law enforcement in people's livelihood, and better serve the people's needs for a better life. We will stop and correct all kinds of abuse of administrative power to exclude or restrict competition according to the law, and promote the formation of a unified national market. We will uphold fair and impartial law enforcement, treat all types of enterprises equally, and guarantee the fair participation of all types of market entities in the market.

Fourth, we will further deepen international cooperation and communication in anti-monopoly law enforcement. We will strengthen the construction of cooperation mechanisms with other anti-monopoly law enforcement agencies, strengthen bilateral and multilateral negotiations on competition policies and anti-monopoly law enforcement issues, and promote the construction of a global competition governance system. We will strengthen the communication with developing countries, promote international cooperation with "One Belt, One Road" countries, and jointly cope with the competition risks and challenges in the global market. We will strengthen our capacity in international cooperation and communication, learn from other agencies, and improve our law enforcement capability.

Fifth, we will further promote the wide spread of the competitive culture. We will promote the construction of the enterprise compliance system, advocate competition in the industries, and promote the dissemination of the competitive culture. We will continue to enhance the awareness of competition laws of market participants and the public, promote the recognition of the fair competition spirit and the innovative development concept in the whole society, and create a good external environment for anti-monopoly law enforcement. We will promote the construction of the expert consultation system and the new anti-monopoly think tanks with Chinese characteristics, and build important think tanks and platforms with international influence.

HIGH PROFILE CONCENTRATIONS IN CHINA: AN ANALYSIS OF CONDITIONAL APPROVALS IN 2018

BY JOHN YONG REN, WESLEY WANG & SCHIFFER SHI[1]

1 Dr. John Yong REN is the Managing Partner of T&D Associates; Dr. Wesley WANG and Dr. Schiffer SHI are associates of T&D Associates.

I. OVERVIEW

2018 was the 10th anniversary since the enactment of the *Anti-Monopoly Law of the People's Republic of China* ("AML")[2] on August 1, 2008, which is at the core of the competition regime in China.

For high-profile mergers which may cause anti-competitive effects, according to Article 29 of the AML, remedies can be imposed by the competition authority to reduce potential anti-competitive effects generated by the proposed concentration in the event that it decides not to prohibit such a transaction.[3] The other key document regarding merger remedies is the *Provisions on Imposing Restrictive Conditions on the Concentration of Undertakings (for Trial Implementation)* ("Remedy Provisions"), which entered into force in January 2015.[4] The Remedy Provisions is an important part of the regulatory framework to implement the AML with respect to the imposition, implementation and supervision of conditions with respect to concentrations in merger reviews. However, the Remedy Provisions primarily address structural remedies rather than more complicated behavioral remedies.

The Remedy Provisions comprise seven chapters and 32 articles, and include detailed provisions on the type of remedy, decision-making procedures, enforcement procedures, supervision and trustees' responsibilities, as well as modification and elimination of restrictive conditions. Some 14 articles are specifically devoted to structural remedies, i.e. divestitures.

Article 3 provides three types of remedies that can be imposed to address potential adverse impacts on competition: (i) structural remedies: divestiture of tangible assets, intangible assets such as intellectual property, or relevant interests or rights; (ii) behavioral remedies: open networks or platforms, licensure of key technologies (including patents, preparatory technologies or other intellectual property), or termination of exclusive agreements; and (iii) hybrid remedies, i.e. a combination of structural and behavioral remedies.

In terms of enforcement, from 2008 to the end of 2018, there are in total 39 cases which were conditionally approved. Among the 39 conditional approvals, the number of cases in which pure divestitures and pure behavioral remedies were used were 11 and 17, respectively. Hybrid remedies (being a combination of both divestitures and behavioral remedies) were used in the other 11 cases. Please refer to Table 1 as below:

Table 1: Types of remedies from 2008 to 2018

Types of remedies	Number	Percentage
Pure structural remedies	11	28.2%
Pure behavioral remedies	17	43.6%
Hybrid remedies	11	28.2%
Behavioral remedies included	28	71.8%
Total	39	100%

The data in Table 1 proves the long-lasting impression that the Anti-Monopoly Bureau of the State Administration for Market Regulation ("AMB") prefers behavioral remedies to pure structural remedies, which is different from its counterparts in the United States and EU Commission.

2 See Standing Committee of the National People's Congress, *Anti-Monopoly Law of the People's Republic of China (*中华人民共和国反垄断法*)* (Adopted August 30, 2007, entered into force August 1, 2008).

3 *Ibid.* Article 29. Since April 2018, the newly-establisehd State Administration for Market Regulation of the P.R.C. ("SAMR") is responsbile for merger review rather than the Ministry of Commerce of the P.R.C. ("MOFCOM").

4 See The Ministry of Commerce of the People's Republic of China, *Provisions on Imposing Restrictive Conditions on the Concentration of Undertakings (for Trial Implementation) (*关于经营者集中附加限制性条件的规定(试行)*)* (Adopted December 4, 2014, entered into force January 5, 2015).

More specifically, in 2018, there were four cases that were approved conditionally, namely, *Bayer/Monsanto*,[5] *Essilor/Luxottica*,[6] *Linde/Praxair*,[7] and *UTC/Rockwell Collins*.[8] This article will focus on analyzing the conditional approvals issued by the AMB in 2018. The table below provides a summary of the four cases.

Table 2: Summary of Four Conditional Approvals in China in 2018

Approved date	Parties Concerned	Remedies	Approval stage	Notifications in the U.S. and the EU
Mar. 13, 2018	*Bayer/Monsanto*	Hybrid remedies	Withdraw and re-file; Approved in Phase III	√
Jul. 25, 2018	*Essilor/Luxottica*	Behavioral remedies	Withdraw and re-file; Approved in Phase III	√
Sep. 30, 2018	*Linde/Praxair*	Hybrid remedies	Withdraw and re-file twice; Approved in the first Phase in its third notification	√
Nov. 23, 2018	*UTC/Rockwell Collins*	Hybrid remedies	Withdraw and re-file; Approved in Phase III	√

It can be seen from Table 2 that hybrid remedies are popular. Only *Essilor/Luxottica* contains a pure behavioral remedy, although the case involves an horizontaly overlapped relevant market. Another interesting fact is that all four conditional approvals have experienced withdraw and refile and were approved within or after Phase III. This means the AMB's review of these high-profile cases took more than 6 months.[9]

II. AN ANALYSIS ON AMB'S CONDITIONAL APPROVALS IN 2018

A. Procedural Perspectives

1. Timing for Merger Review

As mentioned above, in all four cases in 2018, the notifying parties withdrew the notifications of their proposed transactions and refiled. Generally, the Parties may withdraw their notifications just before the expiration of Phase III (see details below) to avoid a possible prohibition from the competition authority. There is no mandatory waiting time between the withdrawal and the refiling, whereas the notifying parties are likely to refile their transaction soon after the withdrawal to restart the merger review clock and to obtain the approval at the earliest time possible.

According to the AML, the merger review procedures in China can be divided into two periods and three stages, both of which are summarized in Table 3 as follows.

5 See MOFCOM Official Websites, *MOFCOM Public Notice 2018 No. 31, Conditionall Approval regarding the acquisition of shares of Monsanto Company by Bayer Aktiengesellschaft,Kwa Investment Co.* (March 13, 2018) http://fldj.mofcom.gov.cn/article/ztxx/201803/20180302719123.shtml.

6 See SAMR Official Websites, *SAMR Public Notice of the Conditionall Approval regarding the merger between Essilor International and Luxottica Group S.p.A.* (July 25, 2018) http://samr.saic.gov.cn/gg/201807/t20180726_275250.html.

7 See SAMR Official Websites, *SAMR Public Notice of the Conditionall Approval regarding the merger between Linde AG and Praxair, Inc.* (September 30, 2018) http://samr.saic.gov.cn/gg/201809/t20180930_276188.html.

8 See SAMR Official Websites, *SAMR Public Notice of the Conditionall Approval regarding the acquisition of shares of Rockwell Collins, Inc. by United Technologies Corporation* (November 23, 2018) http://samr.saic.gov.cn/gg/201811/t20181123_277177.html.

9 According to T&D's experience, AMB normally will take 2 months to initiate the case after submission. According to the AML, Phase I lasts for 30 calendar days, Phase II lasts for 90 calendar days.

Table 3: Timeframe for Non-Simplified Merger Review in China

Stage	Timing	SAMR's Decisions
Pre-initiation Period for Non-Simplified Cases		
	approximately **2 months**	• Assessing the completeness of the submitted documents; and • Issuing an Initiation Notice to initiate the case or requiring supplementary documents
Post-initiation Period		
Preliminary investigation (Phase I)	Within **30** calendar days	• Conducting preliminary investigations and to deciding whether to approve or to initiate an in-depth investigation.
In-depth investigation (Phase II)	within **90** calendar days	• Conducting in-depth investigations and to deciding whether to approve or to extend the in-depth investigation.
Extension of Stage II (Phase III)	**60** calendar days at most	• Reviewing the transaction and to finally deciding whether to approve (or with remedies) or to prohibit the notified transaction.
Withdraw and refile	The time clock restart from Phase I	• If the review process cannot be finished within Phase III, the authority may ask for withdraw and refile

As noted in Table 3, it can take up to 8 months if a notified transaction is approved before the expiration of Phase III. The wait can be even longer if the notification of a transaction was withdrawn and refiled. Given that all four cases in 2018 were refiled, the timing for the review was extremely long, which is summarized below.

Table 4: Time Spent in Four Conditional Approvals in China in 2018

Case Name	Timing		Total months
Bayer/Monsanto	Feb. 9, 2017 Sep. 8, 2017 Sep. 19, 2017 Mar. 13, 2018	Submission of the Notification Withdrawal Refile Conditional approved	More than 13 months
Essilor/Luxottica	May 25, 2017 Feb. 11, 2017 Mar. 7, 2018 Jul. 25, 2018	Submission of the Notification Withdrawal Refile Conditional approved	14 months
Linde/Praxair	Aug. 14, 2017 Mar. 23, 2018 Apr. 4, 2018 Sep. 27, 2018 Sep. 28, 2018 Sep. 30, 2018	Submission of the Notification Withdrawal Refile Withdrawal Refile Conditional approved	More than 13 months
UTC/Rockwell Collins	Nov. 16, 2017 Jun. 7, 2018 Jun. 8, 2018 Nov. 23, 2018	Submission of the Notification Withdrawal Refile Conditional approved	More than 12 months

As noted in Table 4, the average time for reviewing the four conditional approvals was about 13 months after submission.

2. Submission and Approval of the Remedy Proposals

Generally, the remedy proposals can be submitted during any stage of merger review, usually after the authority indicatates the competition con-

cerns. There can be several rounds of negotiations before the remedy proposals are finally accepted. During the negotiations, in order to solve the competition concerns, AMB may ask the parties to modify the remedy proposals, issue supplemental questions, and conduct market survey, etc.

According to the published decisions of the four conditional approvals in 2018, the following table summarizes the date for accepting the proposed remedy and the date for approvals.

Table 5: Date for Accepting Remedy Proposal and Final Approvals

Case Name	Date for accepting remedy proposal	Approval date	Timing
Bayer/Monsanto	Jan. 25, 2018	Mar. 13, 2018	Around 2 months
Essilor/Luxottica	Jul. 20, 2018	Jul. 25, 2018	5 days
Linde/Praxair	(Unpublished)	Sep. 30, 2018	-
UTC/Rockwell Collins	Aug. 2, 2018	Nov. 23, 2018	3 months and 3 weeks

Once the remedy proposal is finally accepted by the AMB, the internal approving procedures will follow, during which the supervisor(s) of the case handler will review the internal report and assessment prepared by the case handler before the transaction is finally approved. Normally, according to the practice of the competition authority, it may take two to four weeks for such an internal procedure. However, given the special economic and political situations in 2018, the timing for the final approvals after the remedy proposals were finally accepted varied significantly in the four cases. This, to some extent, increases the difficulty of predictability.

B. Substantial Perspectives

1. Related Industry

Among the four conditional approvals, the industry concerned varies. However, each industry is related to people's daily lives and the national economy in China, making them high-risk targets in 2018. Please refer to Table 6 as below.

Table 6: Industry Concerned in the Conditional Approvals in 2018

Case Name	Industry Concerned
Bayer/Monsanto	agricultural products
Essilor/Luxottica	spectacles lenses; eyeglasses frames
Linde/Praxair	industrial gas
UTC/Rockwell Collins	airplane parts

2. Types of Remedies

a) Structural Remedies

The main structural remedy used in the cases was divesture, which deals with competition concerns in horizontal overlapping relevant market(s). For example, in *Bayer/Monsanto*, vegetable seeds, non-selective herbicide and traits of corn, soybean, cotton and rape are horizontally overlapped businesses of Bayer and Monsanto. In order to solve competition concern in such relevant markets, the remedy adopted by the authority is divesting the relevant businesses. As a comparison, in *Linde/Praxair*, one of the structural remedies was divesting capacity of helium, rather than the business itself. Similar structural remedies can be found in *WDC/Hitachi Storage* which was approved with conditions by Chinese antitrust authority on March 2, 2012.[10]

10 See, MOFCOM's official website: http://fldj.mofcom.gov.cn/article/ztxx/201203/20120307993758.shtml.

It is also noteworthy that in *Essilor/Luxottica*, the parties have horizontal overlap in the optical lens, optical frames, sunglasses wholesale, and optical products retail markets. Nevertheless, the authority did not choose any structural remedies to address the competition concern in such horizontal overlapped markets. It still remains to be seen whether the behavioral remedies in *Essilor/Luxottica* can solve the competition concern in the horizontally overlapped markets effectively. As a contrast, the EU Commission cleared this case in March 2018 without conditions. The U.S. Federal Trade Commission also unconditionally cleared this case in March 2018.

b) Behavioral Remedies

It is believed that Chinese antitrust authority, compared to its counterparts in the United States and the European Union, has a stronger preference for using behavioral remedies in its merger review process to resolve competition concerns. As of 2018, behavioral remedies were used in 28 (out of 39) conditional approvals in China, which is about 72 percent.

In 2018, all 4 conditional approvals contained behavioral remedies:

Table 7: Summary of behavioral remedies in the conditional approvals in 2018

Case Name	Relevant Market	Summary of Behavioral Remedies
Bayer/Monsanto	Digital Farming	• Chinese developers should be allowed to connect their digital agricultural software applications to the digital agriculture platform in China used by Bayer, Monsanto and the entity after the Transaction based on FRAND[11] conditions • Allowing all Chinese users to register or use digital agricultural products or applications of Bayer, Monsanto and after-transaction entities
Essilor/Luxottica	Spectacles lenses; eyeglasses frames	• No tying glasses products • Chinese optical shops can choose frames and sunglasses via the parties or after-transaction entity freely • No imposition of exclusive conditions on Chinese optical shops (except for single-brand stores and franchise stores) • No discriminatory treatment based on FRAND conditions
Linde/Praxair	Helium	• Transfer the helium contract to buyer • Provide the buyer with the necessary support to enable it to transport helium to China
	Inert gas	• Continue to supply Chinese customers with inert gas mixtures in a timely and stable manner at reasonable prices and quantities.
UTC/Rockwell Collins	Aircraft parts and systems	• No tying in Chinese market • Maintain the current business model • Promise to continue the contract and organization form for Chinese customers

It can be seen from Table 7 that the main types of the behavioral remedies imposed in 2018 include allowing or maintaining supply of the product/service for Chinese customers based on FRAND conditions, no tying/bundling, and no other restrictive conditions, such as discriminatory treatment and exclusive conditions.

11 "FRAND" in this article refers to fair, reasonable, and non-discriminatory

Another noteworthy point is that, like in *Essilor/Luxottica*, the AMB explicitly requires that the undertaking concerned should apply *ex ante* to the AMB for the removal of the behavioral remedies. The AMB will then decide on whether to remove the conditions. This new requirement may enhance the burden for the undertakings being imposed behavioral remedies.

Depending on the company's business practices, strict compliance with these behavioral remedies may become quite burdensome both in terms of time and expenses. These additional operational costs can become even more pronounced given the long tenures of some of the remedy periods, which may last for five or even 10 years. Indeed, some remedies do not have a specified expiration date, meaning that the post-closing entities are bound by these remedies indefinitely, or at least until the remedies are lifted by SAMR.

These additional operational costs will be exacerbated not only by the fees for the services of the monitoring trustee (which are borne by the subject company of the remedy), but also by additional legal fees to help ensure that the company remains in compliance. These additional costs can easily run into the hundreds of thousands or even millions of dollars over a full review period.

Apart from the above variations, it is generally accepted that AMB's remedies imposed on the conditional approvals in China is to a large extent consistent with its counterparts in EU and US. Please refer to Table 8 as below.

Table 8: Remedies imposed by U.S. and EU antitrust Authorities

Case Name	US	EU
Bayer/Monsanto	Conditionally approved on March 29, 2018 • Divestitures • Hold separate • Affidavit • Firewall	Conditionally approved on March 21, 2018 • Divestitures
Essilor/Luxottica	• **Unconditionally** approved on March 1, 2018	• **Unconditionally** approved on March 1, 2018
Linde/Praxair	Conditionally approved on October 22, 2018 • Divestment	Conditionally approved on August 20, 2018 • Divestment of gas business; • Divestment of helium sourcing contracts • The transfer of Praxair's stake in SIAD, an Italian joint venture, to Praxair
UTC/Rockwell Collins	Conditionally approved on October 1, 2018 • Divestment • Hold separate • Asset preservation obligation	Conditionally approved on May 4, 2018 • Divestment

III. CONCLUDING REMARKS AND FUTURE TRENDS

This article analyzed the four conditional approvals in 2018 reviewed by AMB. From a procedural perspective, one of the most significant features may have been the long review time. The review time for such high-profile cases can be extremely long, due to the possibility of several rounds of negotiations of remedies and the complexity of cases. In 2018, the average review time of the four conditional approvals was more than 13 months. Therefore, for high profile or extremely complex transactions in China, the Parties are advised to be prepared for a long review period.

To save time to the extent possible, the Parties are also advised to be cooperative and keep in close communication with the competition authority in China so as to understand its thoughts and its competition concerns. In addition, experienced local antitrust counsels help a lot in this regard, because, generally, they are familiar with the procedures and can have a good understanding of the competition authority's requirements and working style, which can be important to proceed with the notification process in China.

From the substantive perspective, the AMB tends to adopt tailormade behavioral remedies to address competition concerns, rather than pure structural remedies. As of 2018, behavioral remedies were used in 28 (out of 39) conditional approvals in China, which implies the prevalence of behavioral remedies in China. Such an approach is in contrast with the practice in the U.S. and the EU, where divestitures are traditionally favored over behavioral remedies because they are deemed as straightforward and no long-term monitoring is required.[12]

The reasons behind China's preference for behavior remedies can be complicated. One of the reasons can be the flexibility of behavioral remedies in China. As demonstrated, the form of behavioral remedies in China varies. It is possible that a divestiture may not be sufficient to solve competition concerns in some cases in the eyes of AMB. For example, in *UTC/Rockwell Collilns (2018)*, apart from divesture, the parties also promised to continue the supply of certain products and not to engage in any illegal tying. Another example in this regard is *Thermo Fisher/Life Tech (2014)* where the Parties committed themselves to reduce price by 1 percent per year without reducing the discount to Chinese distributors for certain products in order to address the Chinese competition authority's concerns of post-merger price increase.[13] Therefore, it seems the competition authority in China is open to various forms of behavioral remedies, as long as such a remedy can address its concerns.

Last, but not the least, according to the conditional approvals in 2018, when a global transaction was reviewed by different competition authorities in several jurisdictions, including China, it can be observed that, first, if a divestiture was imposed by the competition authorities in other jurisdictions, then, most likely, such a divestiture will also be included in China. Second, in 2018, with the exception *Linde/Praxair*, there was no case in which a divestiture was imposed only in China.[14] Third, it is possible that a behavioral remedy could be required in a notified transaction in China, whereas the same transaction could be approved unconditionally in other jurisdictions, as was the case in *Essilor/Luxottica (2018)*.

12 See, for example, Mengmeng Shi, "The Divestiture Remedies under Merger Control in the US, the EU and China: a comparative law and economics perspective," (unpublished Ph.D. dissertation, Faculty of Law, Maastricht University 2017), Chapter 13, p. 410.

13 For the full text, see: MOFCOM Official Websites, *MOFCOM Public Notice 2014 No. 3, Conditionally Approval regarding the acquisition of Life Technologies Corporation by Thermo Fisher Scientific, Inc.* (January 14, 2014) http://fldj.mofcom.gov.cn/article/ztxx/201401/20140100461603.shtml.

14 In *Linde/Praxair,* AMB required Linde to divest its shares in the four JVs in Canton, China. This condition was neither mentioned in the EU nor U.S.'s *Linde/Praxair* decision.

CHALLENGES AND PROSPECTS FOR MERGER CONTROL IN CHINA IN THE DIGITAL ECONOMY

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I. BACKGROUND

The popularity of mobile services in the internet economy, with data and algorithms as both their key elements and driving force, have developed rapidly. Vibrant mergers & acquisitions ("M&A") have become one of the most salient features of the Chinese digital economy. M&As between leading undertakings from certain sectors have sprung up constantly, such as that between Ctrip and Qunar, two top online traveling companies in 2015; Didi Chuxing's ("Didi") acquisition of Uber China ("Uber") in 2016; Alibaba's acquisition of Damai in 2017; and Meituan's acquisition of Mobike in 2018 being classic examples. What's worth mentioning is that only a few digital M&As have been officially reviewed by the Chinese competition authority[2] during the ten years since the Anti-Monopoly Law of the People's Republic of China ("AML") came into effect. This is due to the turnover-based notification threshold, the variable interest entity ("VIE") arrangement and others, namely the conditional clearances of Walmart's Acquisition of 33.6 percent Shares in Newheight Holding which concerned online direct sales business in 2012;[3] and Bayer Aktiengesellschaft, Kwa Investment Co.'s ("Bayer") acquisition of Monsanto Company ("Monsanto") shares which involved digital agricultural market in 2018[4] as classic examples.

In sharp contrast to these concentrations barely reviewed by the Ministry of Commerce ("MOFCOM"), much more influential M&As in the digital economy have triggered Chinese doubt regarding their compliance with competition law. Ever since the institutional reform of the Chinese anti-monopoly authority in 2018, merger control is no longer the competence of the MOFCOM, while the Anti-Monopoly Bureau affiliated with the State Administration for Market Regulation ("SAMR") has become the exclusive central department to enforce anti-monopoly laws. Considering merger control plays an essential role, which attitudes the SAMR has towards digital concentrations is of great interest to the whole community.

This paper aims to present the challenges and predict the future of merger control in China's digital economy. Part II would discuss the notification threshold. Special issues in the competition assessment of the digital economy will be analyzed in Part III. Part IV focuses on remedies. The authors have tried to summarize the development trends and main issues to be solved in Part V. Our Conclusion can be found in the final sections.

II. NOTIFICATION

A. VIE

Though the advancement of the digital economy has facilitated a digital transformation of almost every industry, the most vibrant market participants are still internet companies who established their business models on the basis of the internet from the early beginning. A large majority of Chinese internet companies have a connection with VIE, which is one of the main reasons why barely any concentrations in the internet industry have been reviewed by MOCFOM in the last ten years. Since the Chinese authority's attitude towards VIE is not clear, MOFCOM was afraid that its anti-monopoly review of concentrations involving VIE might be understood as recognizing the legality of VIE indirectly. As a result, MOFCOM usually declined to accept any notification of concentrations, especially those between internet companies, involving VIE, which partly explains why most of the internet concentrations involving VIE have not been notified to MOFCOM.

Whether the VIE obstacle would be cleared directly determines the trend of anti-monopoly review of digital concentrations in China. Nowadays, China is on the way to passing the Foreign Investment Law of the People's Republic of China ("Foreign Investment Law").[5] If the nationality of the undertaking, now determined by "registered address," were revised to "actual controlling power," it could solve the VIE plight to large extent.[6] Otherwise, an eclectic alternative would be for the anti-monopoly authority to explicitly state that its enforcement would have no effect on obligations imposed by other laws and regulations, which would separate anti-monopoly enforcement from VIE. In other words, whether and how the SAMR would review digital concentrations depends on its attitudes towards VIE and whether anti-monopoly enforcement could be separate from VIE.

2 Please note that the competence to review concentrations has been transferred from the Ministry of Commerce ("MOFCOM") to the State Administration for Market Regulation ("SAMR") after the central administration institutional reform in March 2018. In the following part, the explicit mention of the MOFCOM or the SAMR corresponds with the cases it has dealt with in practice.

3 Available at http://fldj.mofcom.gov.cn/article/ztxx/201303/20130300058730.shtml.

4 Available at http://fldj.mofcom.gov.cn/article/ztxx/201803/20180302719123.shtml.

5 Available at http://finance.people.com.cn/n1/2017/1103/c1004-29625247.html.

6 Available at http://tfs.mofcom.gov.cn/article/as/201501/20150100871010.shtml.

B. Notification Threshold

1. Limitation of the Turnover-Based Notification Threshold

The notification threshold for merger control in China is based on turnover, which might not be the proper benchmark. In multi-sided markets, a widely used model in the digital economy, services provided by one side are free, which brings challenges for the application of turnover-based notification thresholds. In fact, it is quite normal for digital undertakings to remain in deficit for long periods of time. Nevertheless, they could still impose a non-negligible effect on the market. Just as Didi's acquisition of Uber in 2016 shows, in response to public doubts, Didi replied that, "Until now, neither Didi nor Uber has obtained any profits. Turnover obtained by Uber in China in the last financial year did not meet the notification threshold."[7] In general, the turnover-based notification threshold cannot screen out all the potentially problematic concentrations in the digital economy.

2. The Introduction of a Transaction-Value-Based Threshold

It is worth mentioning that a transaction-value-based notification threshold has been introduced in certain jurisdictions, such as Germany and Austria,[8] as well as South Korea.[9] As for China, considering the increase in influential digital concentrations, the Provisions of the State Council on the Threshold for Notifying Concentration of Undertakings[10] ("Provisions on Threshold for Notification") should be amended, complementing the current turnover-based threshold with a transaction-value-based threshold in response to the practical requirement mentioned above. Before this amendment, the Chinese anti-monopoly agency could only obtain the authority to review concentrations where the turnover of the undertakings involved did not meet the turnover-based threshold through residual jurisdiction in accordance with Article 4 of the Provisions on Threshold for Notification. Part III will list special competition concerns in the review of concentrations in the digital economy, covering data, privacy, innovation and the leveraging effect.

III. COMPETITION ASSESSMENT

A. Openness of Data

Most of the online platforms in China are data-driven. Since data, especially personal information, plays an essential role in business, a large percentage of digital concentrations involve or are even undertaken for the very reason of data integration. As for the two concentrations that have raised widespread attention all over China, namely Alibaba's acquisition of Eleme and Meituan's acquisition of Mobike in 2018, data integration is probably what the acquirers were looking for. Competition agencies from the main jurisdictions across the globe pay close attention to data, which we believe SAMR will also focus on in the future, including determining whether the data could trigger input foreclosure.[11] In data-driven concentrations, huge controversies still remain regarding whether data held by one undertaking could be recognized as an essential competition element and whether competitors could obtain similar data from other sources. Besides, as for the request to open access to data, special attention shall be paid to the operability of data openness and its potential chilling effect on innovation.

7 Available at http://m.21jingji.com/article/20160802/herald/29df68176ebf184049383a973596a939_zaker.html.

8 Available at https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Leitfaden/Leitfaden_Transaktionsschwelle.pdf?__blob=publicationFile&v=2.

9 Available at http://www.ftc.go.kr/solution/skin/doc.html?fn=d683557915e4704e9db250e2a6ae49f66deea36589173a4539a300a322d23592&rs=/fileupload/data/result/BBSMSTR_000000002402/.

10 Available at http://fldj.mofcom.gov.cn/article/c/200811/20081105917434.shtml.

11 MOFCOM, Interim Provisions on Assessment of the Impact of Concentrations on Competition, 2011, Article 7.

B. Privacy Protection

Theoretically speaking, privacy is a non-price competition element. A firm with a certain level of market power may not offer its customers a better deal in terms of privacy if it faces no pressure from competitors. Likewise, firms in a concentrated market may tacitly coordinate to avoid competition on privacy.[12] In a concentration, if one of the undertakings concerned has strong market power, data privacy might be a concern for competition. If two horizontal market players compete on privacy as an aspect of product quality, their merger could be expected to reduce quality.[13]

The passing of the Cyber Security Law of the People's Republic of China ("Cyber Security Law") and other laws shows increasingly stronger protection of personal information, especially for user privacy. In November 2016, The Internet Rule of Law Research Centre affiliated with the China Youth University of Political Studies, together with the Cover Institute, released the Report on Chinese Individual Information Security and Privacy Protection ("Report") on the basis of millions of questionnaires conducted for the first time in China. The Report shows that more than 70 percent of participants acknowledge the seriousness of information leaks; 26 percent have received at least two to three spam messages every day; 20 percent have received at least two to three harassing calls per day; as much as 81 percent have experienced unknown callers with knowledge of their name, employer and other personal information; 53 percent complain that they have been harassed continuously by certain advertisers only for having visited certain web pages, or leaving behind certain personal information; the percentage for unwelcome advertisement or fraud due to leaks of information on house rental/purchase, car insurance, admission to higher education, and others, is as high as 36 percent.[14]

Whether the SAMR would also assess data-driven concentrations from the perspective of privacy protection, as well as input foreclosure, also deserves commentary. The SAMR, which the Anti-Monopoly Bureau is affiliated with, is a comprehensive market supervision department, also consisting of a Price Supervision and Anti-Unfair Competition Bureau, Cyber Transaction Supervision and Management Bureau, Enforcement and Inspect Bureau, and others. Considering the current institutional arrangement many elements would affect the application of merger control rules, such as how the Anti-Monopoly Bureau would consider privacy or coordinate with other internal departments within the SAMR, as well as how the SAMR would coordinate with the Office of the Central Cyberspace Affairs Commission in specific cases, especially considering the increasing importance of privacy protection in the digital economy.

C. Competition in Innovation

The digital economy is closely connected with innovation. It is predicted that the digital economy will constitute the main area of innovation competition that will have to be analyzed by global anti-monopoly authorities. In accordance with Article 27 of the AML, elements which shall be considered when reviewing a concentration include, but are not limited to, its influence over market entry and technical progress, which has laid the legal foundations for considering innovation. Article 8 of the Interim Provisions on Assessment of the Impact of Concentrations on Competition further clarifies what influence a concentration could have on technical progress, both positively and negatively.[15]

In practice, the MOFCOM has already reviewed concentrations from the perspective of innovation. In 2017, the MOFCOM conditionally cleared the merger between the Dow Chemical Company ("Dow") and E.I. Du Pont De Nemours And Company ("Du Pont"). The MOFCOM concluded that the merger would eliminate or restrict competition in the markets of selective herbicides and pesticides for rice, the competition analysis of which covered innovation. The MOFCOM observed that the transaction would cause side effects affecting technical progress in the market of selective herbicides for rice. To be more specific, before the concentration, both Dow and Du Pont were significant innovative powers in the market and competed fiercely in research and development ("R&D"), pouring huge amounts of money, being equipped with strong innovative power, and having a rich product reserve. The merger would eliminate the basis for this competition. Following the concentration both parties might lack the incentive to perform R&D, decrease investment in current parallel innovation (products having the same targets), or delay the launch of new products, which would drag down overall technical progress in the market.[16] Similarly, the MOFCOM conditionally cleared Bayer's acquisition of shares in Monsanto, and concluded that the concentration would eliminate or restrict competition in the global digital agricultural

12 Organization for Economic Co-operation and Development ("OECD"), Considering non-price effects in merger control – Background note by the Secretariat, 4 May 2018, 34-35.

13 Autorité de la concurrence & Bundeskartellamt, Competition Law and Data, May 10, 2016, 24.

14 Available at http://news.cyu.edu.cn/xyyw/hzjl/201611/t20161123_78640.html.

15 Available at http://www.mofcom.gov.cn/aarticle/b/c/201109/20110907723440.html.

16 Available at http://fldj.mofcom.gov.cn/article/ztxx/201705/20170502568075.shtml.

market. Before the transaction both Monsanto and Bayer were essential innovative powers in the digital agricultural market, investing massively in R&D, while after the transaction Bayer would probably reduce its investment in innovation, which would have a detrimental impact on technical progress. Worse, Bayer might also raise the technical threshold and block market innovation.[17]

How to value innovation, including how to judge the possibility for innovation, the motivation to innovate, as well as the costs and benefits of innovation, are challenges being confronted by various anti-monopoly agencies, which still require theoretical research and enforcement exploration. What's worth mentioning is that the relationship between a concentration and innovation is not clear in every case, which means that the Chinese anti-monopoly agency shall be really cautious when assessing concentrations from the perspective of innovation.

D. Leveraging Effect

It is quite common for an undertaking with market power to influence adjacent markets. Through a concentration an undertaking could weaken competition in the adjacent market by making use of its power in another market, which is usually called a "leveraging effect." Under the influence of undertakings becoming platforms, network flow coming first, and trans-sector competition, the conditions for the application of leveraging theory, which have been widely questioned before, are also changing. The Commercial Use of Consumer Data – Report on the CMA's Call for Information published by the United Kingdom's Competition & Market Authority in 2015 pointed out that "Respondents raised concerns about the potential for consumer data to be used to generate or exacerbate market power in a single market, or being used as a source of power that could be leveraged into a related market."[18] The Challenges for Competition Policy in a Digitalized Economy released by the European Parliament in 2015 also emphasized the effect certain conducts might have on adjacent markets through leverage.[19]

China's anti-monopoly agency has applied leverage theory in practice. In the blocked Coca-Cola's acquisition of Huiyuan, the MOFCOM concluded that Coca-Cola had the ability to leverage its dominant power in the carbonated beverage market to affect the juice beverage market so as to eliminate or restrict competition in the latter, and would ultimately harm the legitimate rights and interests of consumers. Furthermore, following the concentration Coca-Cola's controlling power over the juice beverage market would be significantly enhanced through making use of two famous fruit juice brands, "Mei Zhiyuan" and "Huiyuan," together with its dominant power in the carbonated beverage market and leveraging effect, which would remarkably increase the barriers to entry in the juice beverage market.[20] As for the Chinese digital economy, internet titans have engaged in large scale trans-sector acquisitions. The possibility for the application of leverage theory to the following anti-monopoly review of non-horizontal concentrations cannot be excluded.

IV. REMEDIES

A. Choice Between Remedies

Remedies consist of structural and behavioral remedies, with the former including the divestment of certain business units. Behavioral remedies regulate the future behavior of merging parties, which might include commitments not to engage in certain conduct, or contractual arrangements such as compulsory licensing or access to intellectual property. Generally speaking, competition agencies prefer structural remedies over behavioral remedies, as structural remedies are regarded as being more effective in avoiding the potential negative impacts of mergers.[21]

With regards to the digital economy, how to choose between structural remedy and behavioral remedy is well worth some contemplation. Considering that the digital economy is characterized by network effects and multi-sided markets, would this make a difference to whether behavioral remedies would continue to be preferred? Even if in the digital economy, behavioral remedies are still confronted with dilemmas, such as the difficulty of designing mechanisms and supervising compliance, as well as over remedies brought by the authorities' continuous intervention of the market. In this regard, how to apply behavioral remedies is still worth deeper research. Furthermore, use could be made of blockchain technology to solve the problems of supervising enforcement.[22]

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17 Available at http://fldj.mofcom.gov.cn/article/ztxx/201803/20180302719123.shtml.

18 Competition & Market Authority, The commercial use of consumer data - Report on the CMA's call for information, June 2015, 9.

19 European Parliament, Challenges for Competition Policy in a Digitalized Economy, January 2015, 31-33, 61-62.

20 Available at http://fldj.mofcom.gov.cn/article/ztxx/200903/20090306108494.shtml.

21 Alison Jones & Brenda Sufrin, "EU Competition Law," Oxford University Press, 2016, 1195-1200.

22 OECD, Blockchain Technology and Competition Policy – Issues paper by the Secretariat, June 8, 2019, 8-9.

B. Would China Continue to Prefer Behavioral Remedies?

In China, Article 29 of the AML stipulates that mergers may be approved with restrictive conditions. Up through January 2019, the Chinese competition authority had conditionally cleared nearly forty mergers, having imposed both structural and behavioral remedies. The preference for behavioral remedies has been widely debated in the competition community, particularly the rather unique hold-separate remedy.[23] The use of this unique condition by the MOFCOM is partly explained by the specific Chinese context and market environment. It is no wonder why the MOFCOM adopts different remedies in merger cases. In addition, changes in the digital market require constant adaptation, which is a challenge faced by every competition agency globally. As such, the function and application of experimental and innovative remedies cannot be arbitrarily denied.

We predict that the SAMR would remain open to behavioral remedies, and the possibility for issuing creative remedies revolving around data, algorithms, privacy, and innovation cannot be excluded. Taking the openness of data as an example, Article 3 of the Provisions on Imposing Remedies on the Concentration of Undertakings (Trial Implementation)[24] has explicitly stipulated, "… requir[ement for] the undertakings participating in a concentration to make available their respective networks, platforms and other infrastructure, license key technologies (including patents, proprietary technologies or other IPRs), terminate exclusive agreements …" Even if there is no precedent directly connected with "data" foreclosure, the MOFCOM did express concern over "input" foreclosure. Behavioral remedies, such as openness, have been applied several times. The possibility for SAMR to recognize data as an essential input for competition and require open access cannot be excluded. Nevertheless, the risk of conflicts between increasing access to data and the protection of personal information cannot be ignored.[25] Besides, the Chinese competition agency does not recognize arbitration in disputes arising from the implementation of behavioral remedies, especially those of openness to essential inputs. The introduction of an arbitration mechanism could be another worthy goal for the Chinese merger control system.

V. PROSPECTS OF THE SAMR'S ENFORCEMENT

A. Increasing Attention Paid to Monopolistic Issues in the Digital Economy

The Chinese academic community has paid growing attention to monopoly issues in the digital economy. Since 2018 in particular, topics discussing data and algorithms could be found in various seminars, for example, the 7th China Competition Policy Forum hosted by the Anti-Monopoly Commission affiliated with the State Council in July 2018,[26] and the seminar on Fair Competition and Anti-Monopoly in the Digital Economy organized by the SAMR in December 2018. During the latter seminar heated discussions were held about regulation and governance of trans-sector competition in the internet era, how to coordinate the relationship between competition policy and high-tech industrial policy, and other concrete issues, such as data monopolies. Mr. Zhenguo Wu, Director General of the Anti-Monopoly Bureau of the SAMR, also attended the seminar.[27]

It is worth noting that the SAMR is still investigating Didi's acquisition of Uber. During a press conference held by the State Council Information Office in November 2018, Mr. Zhenguo Wu announced that, "The SAMR is investigating the acquisition in accordance with anti-monopoly laws and regulations. Online car hailing is an emerging social phenomenon, no matter whether it is in China, the European Union, or the United States, which is different from traditional industries. Competition in this market is not only complicated, but also versatile, which has drawn widespread attention. We are doing research into regular patterns and characteristics of internet competition, comprehensively analyzing and assessing the effects the acquisition has on market competition and sector development, and would seriously punish monopolistic conducts which would harm consumer rights. Acting as the anti-monopoly enforcement agency, the SAMR pays close attention to competition problems in the innovative sectors, and would regulate internet and other emerging sectors in accordance with their respective innovative development, new regulatory methods, as well as sticking to tolerant and prudent principles, so as to maintain fair competition in the market, and provide a loose and tolerant environment for the emerging form and innovative business model of internet. The market competition mechanism shall play its due role to strengthen innovation momentum, while the regulatory system over the internet industry should also be reinforced. The SAMR will coordinate with other departments properly in order to strengthen market supervision, prohibit industrial monopoly and clear market entry barriers, and protect legitimate consumers' rights and public interests."[28]

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23 Ariel Ezrachi & Wei Han, "Merger remedies – the Chinese experience, Journal of Antitrust Enforcement," Volume 3, Issue suppl_1, October 1, 2015, i74, i80-i82, i86- i87.

24 Available at http://www.mofcom.gov.cn/article/b/c/201412/20141200835207.shtml.

25 Wei Han & Yajie Gao, Promote Openness or Strengthen Protection? Application of Law to Data Competition in China, CPI Antitrust Chronicle, May 15, 2018.

26 Available at http://news.uibe.edu.cn/info/1381/36140.htm.

27 Available at http://samr.saic.gov.cn/xw/yw/zj/201812/t20181225_279045.html.

28 Available at http://www.xinhuanet.com/fortune/2018-11/16/c_129995829.htm.

According to an official public report, priorities for the SAMR's work in 2019 would include, "… evaluating the competition status of the Chinese market as a whole and key sectors; establishing an anti-monopoly database; initiating dynamic assessment of competition in the markets of medicine, internet, I-cloud, and other industries so as to provide support for the implementation of competition policy and the enforcement of anti-monopoly law. …"[29] With better understanding of the digital economy and more experience obtained through investigating Didi's acquisition of Uber, it is expected that the SAMR will officially review more digital concentrations in the future.

B. Insufficient Enforcement Human Resources

There are four divisions within the Anti-Monopoly Bureau which are in charge of merger control, namely the Law Enforcement Supervision Division, and Merger Control Divisions 1, 2, and 3.[30] These consist of less than twenty case handlers in total. In comparison, even if three other divisions are authorized to investigate monopoly agreements, abuse of dominance and administrative monopoly respectively, market supervision departments at the provincial level are also empowered to investigate certain cases, as stipulated by the Notice of the SAMR on the Authorization of Anti-Monopoly Enforcement Power;[31] while the SAMR is the one and only agency entitled to review concentrations. However, the number of notified concentrations is much higher than that of other anti-trust cases. If VIE is not an obstacle any longer then the notification of concentrations in the digital economy would become commonplace. It would make the insufficient human resources for enforcement even worse. We recommend that the SAMR take the following actions in response to this shortage:

First and foremost, local enforcement forces must be made good use of. Since the key to institutional reform in recent years has been streamlining organisms and decreasing the number of enforcers, it is not practical to enlarge the enforcement team at the SAMR in short term. With this context, it would be proper to make better use of local enforcement forces. To be more specific, the SAMR could explore empowering market supervision departments in developed regions where concentrations are really active, such as Beijing, Shanghai, Guangdong, Zhejiang and Jiangsu, to review concentrations, on the basis of "location of notifying undertaking" and other standards.

Second, to revise substantive merger control rules. The SAMR is advised to pay special attention to data, privacy and innovation on the basis of deep research into the digital economy and to try to ameliorate relevant rules. For example, the Interim Provisions on Assessment of the Impact of Concentrations on Competition could be complemented with competition elements specific to the digital economy. Besides, the introduction of clear rules over how to judge controlling power, notification of JVs and the others, would also help. To be more specific, guidelines on how to judge the change of control in M&As with the purpose of data integration should be provided. Nowadays, the MOFCOM treats all JVs the same, no matter it is fully-functional or non-fully-functional, as long as the notification threshold has been surpassed.[32] After the institutional integration, rules on how to coordinate the three Merger Control Divisions and the Monopoly Agreement Investigation Division when it comes to non-fully-functional JV shall also be given.

Third, internal management of knowledge should be strengthened. Good knowledge management could strengthen internal communication, facilitate knowledge transfer, cut down on redundant work, enhance enforcers' ability, and increase working efficiency. If combined with a suggestion for empowering local authorities to review concentrations, it would be necessary to train local enforcers with the support of better knowledge management. Furthermore, enforcement databases could be established, while the results of various exchange training programs and external commissioned research projects should be better transformed to application, so as to improve the enforcement quality.

Fourth, more support shall be provided by technical experts. Besides external legal and economic experts, technical experts also play an irreplaceable role in anti-monopoly enforcement. From a long term perspective, apart from external technical experts, a permanent independent technical support team is also advised to be set up.[33]

29 Focus of Anti-Monopoly Work in 2019: Promote Competition Enforcement and Maintain Fair Competition, China Market Regulation News, January 9, 2019.

30 Interview with Wu Zhenguo, Director General of China's State Administration for Market Regulation (SAMR), the Antitrust Source, December 2018, 2.

31 Available at http://samr.saic.gov.cn/xw/yw/wjfb/201901/t20190103_279720.html.

32 Ariel Ezrachi & Wei Han, "Merger remedies – the Chinese experience, Journal of Antitrust Enforcement," Volume 3, Issue suppl_1, 1 October 2015, i70.

33 Wei Han, Yajie Gao & Ai Deng, "Algorithmic Price Discrimination on Online Platforms and Antitrust Enforcement in China's Digital Economy," the Antitrust Source, August 2018.

Last but not least, international exchange in anti-monopoly enforcement in the digital economy shall continue intensify. China keeps frequent communications with many jurisdictions, such as the regularly held BRICS International Competition Policy Conference[34] and the China-EU Competition Policy Week.[35] During the 16th Competition Policy Week held in March 2018, the application of competition law to big data, the sharing economy and other emerging issues were discussed.[36] Ever since the reform of Chinese competition agency, it is necessary to further enhance international communications through bilateral cooperation agreement, especially in the area of digital economy. Besides, in order to strengthen cooperation with its overseas counterparts, the SAMR could also consider joining the International Competition Network.

VI. CONCLUSION

The digital economy is blending in with almost every aspect of the Chinese economy and has infused it with impetus.[37] In comparison to the active M&As in the digital economy, only few official investigations have been initiated by the MOFCOM. In recent years, increasing concentrations have attracted public attention to competition concerns, and people from all walks of life deeply care about the Anti-Monopoly Bureau's attitudes in this regard. VIE, with the enactment of the Foreign Investment Law, would probably not be an obstacle for review any more. Besides, the introduction of the complementary transaction-value-based threshold could help the SAMR better capture problematic digital concentrations, in our opinion. As for competition assessment, openness to data, privacy protection, innovation competition and leveraging effect shall be paid special attention to, on the basis of characteristics of digital economy. With regard to remedies, how to choose between structural and behavioral ones is still well worth some attention. From anti-monopoly enforcement in the last ten years, the possibility for the Chinese competition authority to remain open to behavioral remedies cannot be excluded.

Ever since the establishment of the SAMR, enough importance has been attached to the digital economy, which has also been included in the 2019 working plan. Nevertheless, the Anti-Monopoly Bureau would still face the challenge of having insufficient case handlers. In order to review digital concentrations more efficiently, we suggest empowering certain local competition agencies to review concentrations, amending the current merger control rules, strengthening internal knowledge management, increasing support from technical experts and maintaining international communications.

Only effective anti-monopoly enforcement can help ensure adequate competition in China's digital economy, so as to provide rich soil for more excellent undertakings, like Alibaba and Tencent. Maintaining a market which could constantly bring up undertakings of high quality is where the value of the anti-monopoly law lies, which would benefit consumers in the end. After all, only effective competition can truly protect consumer rights and interests.

34 Available at http://fldj.mofcom.gov.cn/article/xxfb/201711/20171102673003.shtml.

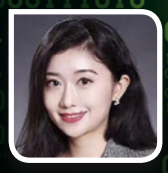
35 Available at http://www.euchinacomp.org/index.php/zh/.

36 Available at http://www.cicn.com.cn/2018-04/19/cms106206article.shtml.

37 Available at http://www.ndrc.gov.cn/xwzx/xwfb/201709/t20170929_862265.html.

MADE IN CHINA: THE GLOBAL INFLUENCE OF CHINA'S MERGER CONTROL REGIME IN THE HIGH-TECH SECTOR

BY MICHAEL HAN & BIVIO YU[1]



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I. INTRODUCTION

Escalated tensions over trade between China and the U.S. since early 2018 have led to growing concerns that deals involving high-tech companies might crumble under China's merger control regime. Foreign high-tech companies are increasingly anxious about non-competition factors and industrial policy concerns playing a role in the review of transactions. Parties almost always ask whether China's antitrust review of global tech-deals might be impacted by broader geopolitical or industry policy considerations. If not, what are the issues that might give rise to competition concerns in high-tech transactions for the Chinese authority?

This article will endeavor to answer these questions drawing from our own experience advising global tech-deals. We will also offer some suggestions on how foreign high-tech companies should plan ahead for their China merger cases, and formulate the right strategies to navigate through the Chinese merger review cases.

A. Qualcomm/NXP

In July 2018, Qualcomm terminated its proposed US$ 44 billion takeover of Dutch counterpart NXP after it failed to obtain merger control approval from China's State Administration for Market Regulation ("SAMR") before expiration of the long-stop date of the deal. It is worth noting that the Chinese merger review of this deal had taken more than one year and Qualcomm had to pull and refile the deal once. This deal was cleared in all notifiable jurisdictions, except China.

SAMR found that the remedies proposed by Qualcomm failed to allay SAMR's concerns. A spokesperson commented later that the trade war between Beijing and Washington had no role to play in Qualcomm's failed acquisition of NXP Semiconductors, which is only relevant to antitrust enforcement. Others were not convinced. The New York Times observed that "An escalating trade battle over which country will dominate the technologies of the future is now threatening Qualcomm's business and its growth."[2]

B. ZTE

In April 2018, the Trump administration imposed a ban on Chinese smartphone and telecommunications company ZTE for violation of its export control law, which prevented it from buying sensitive products from American companies. This ban nearly paralyzed ZTE's business. The U.S. government eventually struck a deal allowing ZTE to resume business with American companies provided that a fine of US$ 1 billion be paid, among other things.

C. Huawei

Huawei, the Chinese telecommunications company, has come under intense scrutiny by western countries in recent months over security concerns. Tensions escalated further when the Chief Financial Officer at Huawei and daughter of its founder was arrested last month in Canada and accused by the United States of breaking sanctions against Iran. The actions against Huawei have become another key issue in the larger trade confrontation between the United States and China with New Zealand, Australia Japan, India, Canada, and the UK having expressed concern over the use of Huawei equipment in their 5G networks.

D. Made in China 2025

Another layer of complexity to China's merger control regime may stem from China's strategic plan to promote local innovation. China has developed a strategic plan – known as "Made in China 2025" – which aims to reduce China's reliance on foreign technology imports and invest heavily in its own innovations in order to create Chinese companies that can compete both domestically and globally. The plan highlights ten key prioritized industries including robotics, new energy and green vehicles, new generation information technology, aviation and aerospace equipment, maritime equipment and hi-tech ships, railway transport, energy equipment, agricultural equipment, new material and biopharmaceuticals, and hi-tech medical devices.

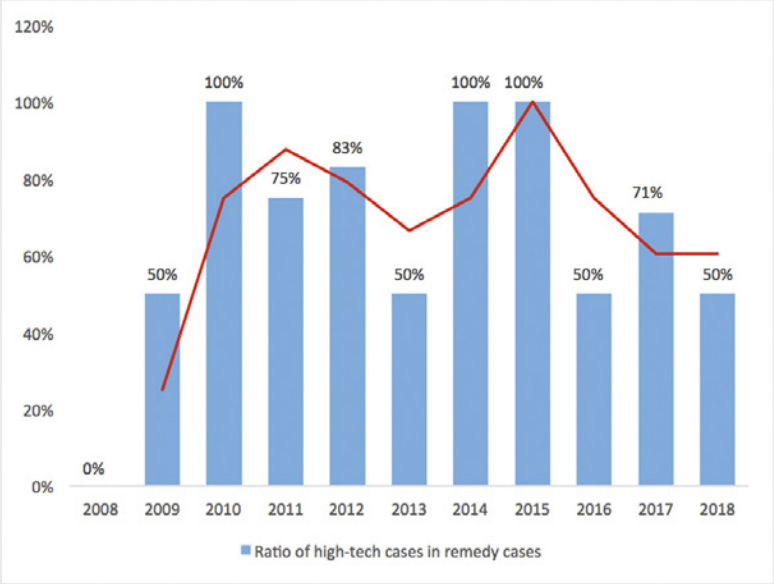
2 See https://www.nytimes.com/2018/04/18/us/politics/qualcomm-us-china-trade-war.html?action=click&module=RelatedCoverage&pgtype=Article&region=Footer.

II. HIGH-TECH CASES REVIEWED BY MOFCOM/SAMR

China's track record of merger review enforcement in the high-tech sector shows that remedy cases involving high-tech companies seem to account for a large share of all cases cleared by SAMR (or its predecessor, MOFCOM) with conditions. Nevertheless, many cases involving high-tech companies are cleared in China without conditions.

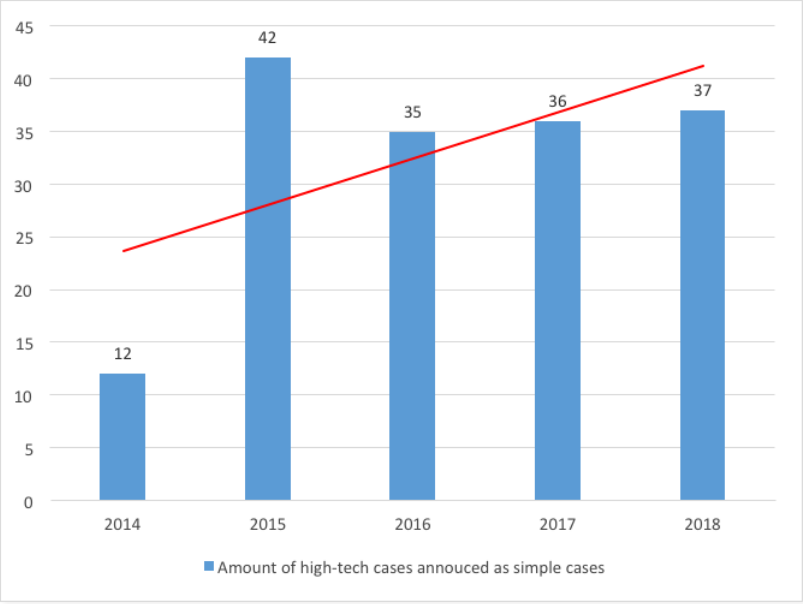
A. High-tech Cases Account for a Large Share of All Remedy Cases

On average, high-tech cases account for nearly 70 percent of all remedy cases in China. As the chart below illustrates, the share of high-tech cases out of all remedy cases is volatile over the years, but is generally over 50 percent.



B. Many Cases Cleared Without Conditions

Nevertheless, statistics also show that many high-tech cases are filed and cleared in China under the fast-track procedure as simple cases ever since the introduction of the Simple Case procedure in 2014. In that regard, many high-tech transactions are clearly not subject to industrial policy concerns or political considerations.



Further, despite the high-profile failure of the *Qualcomm/NXP* merger to secure antitrust approval in China amid Beijing-Washington trade tensions, merger reviews involving other high-tech companies (including U.S. companies) seem to be proceeding as normal. Based on the public record, some deals did not appear to be affected by the trade tensions at all – for example, *Microsemi* (U.S. military and aerospace semiconductor equipment)/*Microchip* (U.S. semiconductor), *Cavium* (U.S. electronic chip and semiconductor)/*Marvell* (U.S. electronic chip and semiconductor), *Advent International* (U.S. investment)/*Laird* (U.S. electronic materials), *Renesas Electronics* (Japan semiconductor)/*IDT* (U.S. semiconductor), *MKS Instruments* (U.S. instrument)/*ESI* (U.S. material processing) were all cleared unconditionally after the *Qualcomm/NXP* deal fell apart.

Not all high-profile high-tech cases will necessarily be impacted by the China-U.S. trade war or industrial policy concerns. However, for those high-tech cases that are likely to raise competition concerns – precedents show that MOFCOM/SAMR is not shy in testing various theories of harm. It is therefore important that sufficient guidance is provided. Failing this, where there is uncertainty about potential post-merger effects, parties risk having remedies imposed to guarantee strong competition post-merger. The next section discusses competition concerns or theories of harm identified by MOFCOM/SAMR in previous remedy cases in the high-tech sector.

III. COMPETITION CONCERNS OR THEORY OF HARM IDENTIFIED BY MOFCOM/SAMR

An overview of competition concerns identified and theories of harm tested by MOFCOM/SAMR in high-tech remedy cases demonstrates that MOFCOM/SAMR generally examined typical theories of harm, which are also relied on by other antitrust agencies in reviewing high-tech cases, but also resorted to some non-typical theories of harm in building up its competition analysis.

A. Theories of Harm in High-tech Deals which are in Line with Other Competition Agencies

1. Loss of Innovation

Loss of innovation is a common theory of harm in high-tech transactions. The concern is that the transaction may have an adverse impact on innovation where the parties have a unique ability to develop new products and innovate in a particular field.

Loss of innovation was considered in nine remedy cases involving high-tech products and services, including *Samsung/Seagate* (2011), *Western Digital/Hitachi Storage* (2012), *MediaTek/Cayman Mstar* (2013), *NXP/Freescale* (2015), *Dow/DuPont* (2017), *ASE/SPIL* (2017), *Becton/Bard* (2017), *Bayer/Monsanto* (2018), *UTC/Rockwell Collins* (2018).

For example, in the recent *UTC/Rockwell* decision, SAMR concluded that:

> Once UTC's oxygen supply product enters the market, it will directly threaten the current market dominance of Rockwell Collins. The proposed transaction would directly eliminate this potential competing product and would strengthen Rockwell Collins, possibly reducing its R&D investment and motivation for commercialisation of its innovative products of the same kind. At the same time, the transaction will delay the speed of new product launches, which will adversely affect market competition and technological progress.

As one of SAMR/MOFCOM's most used theories of harm in high-tech cases, loss of innovation is a typical theory of harm also tested in high-tech sectors by other regulators. For instance, according to the EC's *Horizontal Merger Guidelines*, innovation is one of the criteria against which to assess the likely effects of a merger. The EC's *Horizontal Merger Guidelines* also acknowledged that effective competition may be significantly impeded by a merger between two important innovators. Likewise, the *Horizontal Merger Guidelines* of the U.S.'s DOJ and FTC listed "curtailment of innovation" as one of the factors to be considered.

Take *Dow/DuPont* as an example. Both MOFCOM and the EC have adopted an innovation theory of harm. MOFCOM's concern stemmed from its perception of the parties' strong R&D and innovation capabilities before the merger, and its worry over the potential negative impact of the merger on R&D and innovation. Similarly, the EC focused on the analysis of "technology markets" or "innovation spaces" and noted that the impact of mergers on such innovation spaces is generally negative.

Another example is *Bayer/Monsanto*. Innovation is a competition concern shared by China, the EU, and the U.S. regulators. MOFCOM concluded that the deal may have negative impacts on technical advancement in the markets of corn, soybean, cotton, and oilseed rape traits because the decrease in the number of R&D competitors may incentivize Bayer to cut the investment in innovation and delay the launch of new products. Further, MOFCOM concluded that the merger may have adverse impacts on innovation in digital agriculture for the same reason, and also an increased risk that Bayer may prevent market innovation by raising technical barriers. In line with MOFCOM's decision, the DOJ approved the deal conditioned upon a divestment to ensure competition in future product innovation and development, which was a key concern for the regulator when reviewing this merger. Similarly, the EC cleared the proposed merger with conditions to address concerns not only over existing products, but on areas of innovation where both parties had active R&D projects.

2. Access to Competitors' Confidential Information in Vertical Mergers

Given the importance of IP and confidential or proprietary information to success in the high-tech industry, vertical integration may lead to improper exploitation by the merged entity of the confidential or proprietary information of its suppliers or customers (who will become competitors to the merged entity), which will harm competition.

Misuse of confidential information was one of the key concerns shared by antitrust agencies in China, the EU and the U.S. in *Broadcom/Brocade*. In the eyes of all three regulators, there is a concern that Broadcom (who is in the upstream market) may make improper use of the confidential information of third-party suppliers (who are in the downstream market as Broadcom's customers), excluding or restraining competition on the downstream market where the merged entity will now compete with Broadcom's customers.

3 Degradation of Interoperability

Interoperability is an important element in the high-tech sector as it enables different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.

The interoperability theory of harm examines a situation where a dominant firm degrades product interoperability so that a product by a competitor cannot be made reasonably compatible or interoperable with readily available information. This serves to strengthen the position of the already dominant company and foreclose competitors.

The interoperability issue is not a concern that is unique to the Chinese antitrust authority. Interoperability has been a focused area of competition assessment by the EU Commission in a number of high-tech cases including *Microsoft/LinkedIn, Qualcomm/NXP*, and *Broadcom/Brocade*.

In *Broadcom/Brocade*, MOFCOM reached the same conclusion as the EC, that Broadcom may, while improving the interoperability between its own FC Switches and FC Adapters, refuse to improve interoperability with third-party FC Adapters, or otherwise treat third-party FC Adapters discriminatorily, thus excluding or restraining competition on the FC Adapter market.

B. Competition Concerns not Typically Identified in Other Jurisdictions

MOFCOM/SAMR would also identify competition concerns not typically well-founded in high-tech cases reviewed by other antitrust agencies. There have been cases in which MOFCOM/SAMR adopted a different decision with respect to markets that have a worldwide scope – which is generally a feature of the high-tech industry.

1. Bundling and Tying Risks

MOFCOM/SAMR has a tendency to focus on anticompetitive bundling and tying concerns in transactions involving high-tech sectors, and it considered this issue in five remedy cases involving technology including *Merck/AZ Electronic* (2014), *Broadcom/Brocade* (2017), *Samsung/HP* (2017), *Bayer/Monsanto* (2018), and *UTC/Rockwell Collins* (2018). It seems to take the view that if the merging parties have "complementary products" with superior technology regarding one product, it would be easier for them to engage in anticompetitive bundling and tying.

Case name	Products subject to the concern of bundling and typing
Merck/AZ Electronic (2014)	Liquid crystal and photoresistances
Broadcom/Brocade (2017)	Fiber channel switches and Fiber channel adapters
Samsung/HP (2017)	Printer and printing supplies
Bayer/Monsanto (2018)	Agrochemical products, seeds and traits
UTC/Rockwell Collins (2018)	Avionics equipment and parts / Global Atmospheric Data Sensor, Atmospheric Data Computer and Integrated Atmospheric Data System

Bundling and tying theories of harm have their unique place within Chinese merger reviews of high-tech cases in the sense that it is not an unusual concern, often examined by other regulators (particularly the U.S. antitrust authorities) who, however, generally consider bundling and tying as less relevant. For example, *Merck/AZ Electronic* and *Samsung/HP* were cleared in both the U.S. and the EU without conditions. The U.S. and EU authorities did not identify any concerns relating to potential anticompetitive bundling and tying. With regard to the other three cases, different conclusions were drawn by MOFCOM/SAMR on this same issue.

Broadcom/Brocade

In *Broadcom/ Brocade*, the EC concluded that the merged entity will likely not have the ability and incentive to engage in mixed bundling strategies of FC SAN switches and FC HBAs, due to (i) the asynchronous purchasing patterns for FC HBAs and FC SAN switches; and to (ii) the customer's (server and storage OEMs) ability to unbundle the offer.

MOFCOM reached an opposite conclusion on the basis of what distinguishes the Chinese market from the global market. MOFCOM noted that China has a large number of diversified downstream users, and that the largest buyer accounts for only 1-10 percent of Broadcom's sales volume and cannot therefore bargain with Broadcom. Further, Chinese buyers are likely to buy bundled or tied-up products from the perspective of lower costs and increased profitability, considering the growing demands of the Chinese market, thus excluding or restraining competition on the Chinese FC Adapter market.

Bayer/Monsanto

In *Bayer/Monsanto*, the EC's decision shows that an in-depth investigation does not confirm any ability for the transaction to exclude competitors from the market through the bundling of seeds and pesticides products, whether at the distributor or grower level. In the U.S., the DOJ did not review bundling or tying theories of harm in this case, consistent with their recent merger review approach.

In stark contrast, MOFCOM identified concerns in non-selective herbicide related bundle sales (e.g. seeds and traits), as well as Monsanto and Bayer's digital agriculture business strategy through platformization, and concluded that Bayer's motivation and ability to use the digital agriculture platform to promote the company's products and foreclose other competitors through bundling and tying may be enhanced post-transaction.

UTC/Rockwell Collins

The EC ruled out tying/bundling concerns in *UTC/Rockwell Collins* and concluded that UTC would have neither the market power nor the incentives to engage in bundling or tying, i.e. using components in its portfolio to shut out competitors, and harm competition. The DOJ did not appear to review bundling or tying issues in this case.

However, SAMR, replacing MOFCOM as the new antitrust regulator in China since early 2018, dedicated a lot of effort to analyse tying and bundling concerns in this case. SAMR concluded that after the transaction UTC has the motivation and incentive to bundle different products; market competitors will not be able to compete by using a similar strategy since they do not have a comprehensive product line or cannot enter a new market within a short time; customers (especially medium-to-small-sized aircraft manufacturers) will not be able to counter such a strategy due to their strong reliance on the combined entity.

2. SEP-related FRAND Issues

MOFCOM also looks at possible theories of harm that are not merger-specific in nature. A notable example is Standard Essential Patent (SEP) related FRAND issues, which were raised by MOFCOM in three cases – *Google/Motorola, Microsoft/Nokia*, and *Nokia/Alcatel-Lucent*. A comparison of the opinions by the EC in these three cases shows that SEP-related FRAND issues are generally understood as non-merger specific, and therefore it is a unique approach taken by the Chinese regulator.

The effect of SEPs is that any company manufacturing products incorporating a certain standard must either obtain the appropriate licenses covering the technology included in that standard or risk infringing the IP rights of the SEP holders. In the event licensing discussions fail, the SEP holder may ultimately take its counterparty to court and seek an injunction. Depending on the circumstances, it may be that the threat of injunction, the seeking of an injunction, or indeed the actual enforcement of an injunction granted against a good faith potential licensee, may significantly impede effective competition by, for example, forcing the potential licensee into agreeing to potentially onerous licensing terms, which it would otherwise not have agreed to. Generally, any party to a merger who is a SEP holder would already be under the FRAND obligation and it would need to honor its FRAND commitment regardless of the merger.

Google/Motorola

In *Google/Motorola* MOFCOM found that with Motorola's large number of core patents for mobile phones, the extensive capabilities of the merged entity in development, and integration of both hardware and software by leveraging its dominant position in the smart mobile terminal market, Google has both the incentive and the ability to impose unreasonable conditions on its patent licenses, which will hurt competition in the relevant market.

By contrast, both the DOJ and the EC took a "wait and see" approach – they will continue to monitor Google's and Motorola's post-merger conduct. The EC recognized that this issue is largely non-merger specific and also that the merged entity is bound by FRAND commitments in any event, and is also potentially subject to proceedings under Article 102 TFEU and/or court proceedings, as well as any national competition legislation or national procedural law, if it were to engage in any anti-competitive behavior by leveraging its SEP portfolios. In the U.S., the DOJ's probe focused on SEPs which Motorola had committed to license in SSOs as well as whether Google could use these patents to foreclose on rivals. The DOJ finally concluded that the transaction is not likely to significantly change existing market dynamics. However, the DOJ would continue to monitor the use of SEPs, particularly in the smartphone and computer tablet markets.

Microsoft/Nokia

MOFCOM determined that the deal would harm competition in China's smartphone market both in terms of what Microsoft could do with its patents (SEPs and non-SEPs) as a result of the acquisition, and in terms of what Nokia could do with the SEP assets that were not part of the acquisition.

Specifically, MOFCOM holds that a post-transaction Microsoft as a player in the smartphone market, with the SEPs and non-SEPs related to the Android system, has the motive to raise royalty fees; Nokia could abuse its reserve of patent licenses because the deal enhances Nokia's motive to rely on profits from patent licensing.

Neither the DOJ nor the EC speculated on the likely post-merger licensing conduct of the merged entity or the portion of Nokia that was excluded from the acquisition with respect to SEPs and non-SEPs. Both cleared the transaction without conditions. In particular, the EC noted that concerns related to the licensing of Nokia's patent portfolio that was not part of the acquisition were beyond the scope of its review, but that it will monitor Nokia's post-merger licensing practices.

Nokia/Alcatel-Lucent

MOFCOM concluded that the acquisition would have an anticompetitive effect in the market for communications technology SEP licensing. The acquisition would strengthen Nokia's position in all segments of the communications technology SEP market and increase the degree of concentration. With Alcatel-Lucent's large portfolio of 2G and 3G SEPs, the acquisition would strengthen Nokia's bargaining power in patent negotiations. In China, a majority of the actual and potential licensees are mobile device and wireless communications network equipment manufacturers, who do not have the leverage to cross-license with Nokia. China is the world's largest producer of mobile phones, but Chinese mobile device and wireless communications network equipment manufacturers have low-profit margins. As such, any unreasonable changes to Nokia's SEP licensing policy may lead these businesses to exit the market or pass on all or some of those costs to consumers.

In stark contrast, the transaction was unconditionally cleared in the EU and U.S. The EC noted that the merged entities' SEPs portfolio is subject to FRAND obligations. FRAND commitments essentially oblige SEP holders to make the patent in question available to all interested third parties, not to discriminate between different licensees, and to offer a license under fair and reasonable terms. The merged entity is therefore obliged to license its SEPs to any interested party under such FRAND terms, and the transaction will not affect or change the Parties' FRAND commitments in this regard.

IV. TYPES OF REMEDIES IMPOSED BY MOFCOM/SAMR

Considering that MOFCOM/SAMR's review not only focuses on competition concerns shared by other competition authorities but also considers some non-typical theories of harm that are to some extent unique to China, it is not surprising that MOFCOM/SAMR tended to resort to a wider range of remedies to allay those China-specific concerns. Overall, in high-tech deals, while MOFCOM considers structural-type remedies to the same extent as U.S. agencies and the EU, it also showed a greater preference for behavioral remedies, and some of the remedies imposed by MOFCOM/SAMR are unique to China.

A. MOFCOM/SAMR's Preference for Behavioral Remedies

There have been 27 high-tech related remedy cases. SAMR has imposed behavioral remedies in 20 of them. Among the 20, there are seven cases involving hybrid behavioral/structural remedies and 13 involving pure behavioral remedies. By contrast, there are only 4 out of 27 cases in which the U.S. and the EU imposed behavioral remedies, i.e. *UTC/Goodrich* (2012), *ARM/G&D/Gemalto (JV)* (2012) (U.S. did not review this case), *Broadcom / Brocade* (2017), and *Bayer / Monsanto* (2018), and only in *Broadcom/Brocade* did the three regulators consistently impose a pure behavioral remedy. As for the rest, the U.S. and the EU have unconditionally cleared 9 mergers, including 2 that were not notifiable in the EU (*Merck / AZ Electronic* (2014) and *ASE/SPIL* (2017)). In addition, 3 cases are China-specific (*GE/Shenhua* (JV) (2011), *Walmart/Niuhai* (2012), and *Hunan Corun New Energy/Toyota (JV)* (2014)), meaning they were not notified in the EU or U.S.

Case	Merger Type	Overlapping Industry	Remedy Type China	Remedy Type EU	Remedy Type U.S.
Pfizer / Wyeth (2009)	Horizontal	Pharmaceutical	Structural	Structural	Structural
Panasonic / Sanyo (2009)	Horizontal	Electrical equipment	Hybrid	Structural	Structural
Novartis / Alcon (2010)	Horizontal	Pharmaceutical & Bio-science	Behavioral	Structural	Structural
Penelope / Savio (2011)	Horizontal	Machinery and equipment	Structural	Cleared	Cleared

GE / Shenhua (JV) (2011)	Vertical	Energy Technology	Behavioral	N/A	N/A
Seagate / Samsung (2011)	Horizontal	Electrical & IT	Behavioral	Cleared	Cleared
Western Digital / Hitachi (2012)	Horizontal	Electrical & IT	Hybrid	Structural	Structural
Google / Motorola (2012)	Vertical	Electrical & IT	Behavioral	Cleared	Cleared
UTC / Goodrich (2012)	Horizontal	Machinery and equipment	Structural	Structural	Behavioral & Structural
Walmart / Niuhai (2012)	Horizontal	Retail	Behavioral	N/A	N/A
ARM / G&D / Gemalto (JV) (2012)	Vertical	Electrical & IT	Behavioral	Behavioral	N/A
Baxter / Gambro (2013	Horizontal	Pharmaceutical & Bio-science	Hybrid	Structural	N/A
MediaTek / Cayman Mstar (2013)	Horizontal	Electrical & IT	Behavioral	Cleared	Cleared
Thermo Fisher / Life Tech (2014)	Horizontal	Pharmaceutical & Bio-science	Hybrid	Structural	Structural
Microsoft / Nokia (2014)	Vertical	Electrical & IT	Behavioral	Cleared	Cleared
Merck / AZ Electronic (2014)	Conglomerate	Electrical equipment	Behavioral	N/A	Cleared
Hunan Corun New Energy / Toyota (JV) (2014)	Horizontal & Vertical	Electrical equipment	Structural	N/A	N/A
Nokia / Alcatel Lucent (2015)	Horizontal	Electrical & IT	Behavioral	Cleared	Cleared
NXP / Freescale (2015)	Horizontal	Electrical & IT	Structural	Structural	Structural
Abbott / St. Jude Medical (2016)	Horizontal	Pharmaceutical & Bio-science	Structural	Structural	Structural
Dow / DuPont (2017)	Horizontal	Chemicals	Hybrid	Structural	Structural
Broadcom / Brocade (2017)	Vertical & Conglomerate	Electrical & IT	Behavioral	Behavioral	Behavioral
Samsung / HP (2017)	Horizontal & Conglomerate	Electrical & IT	Behavioral	Cleared	Cleared
ASE / SPIL (2017)	Horizontal	Electrical & IT	Behavioral	N/A	Cleared

Becton / Bard (2017)	Horizontal	Pharmaceutical & Bio-science	Structural	Structural	Structural
Bayer / Monsanto (2018)	Horizontal & Conglomerate	Chemicals	Hybrid	Hybrid	Structural
UTC / Rockwell Collins (2018)	Horizontal & Conglomerate	Machinery and equipment	Hybrid	Structural	Structural

B. Behavioral Remedies Unique to China

Behavioral remedies are a commonplace feature in high-tech transactions that are subject to conditions. Some of the behavioral remedies are unique to China and are largely specific to high-tech deals. More than that, behavioral remedies imposed involve conditions that have never before been sought by other antitrust agencies around the world (usually, because of difficulties in administering and monitoring the remedies), making it a minefield of unpredictability. Behavioral remedies include commitments related to continued supply, price commitments, commitments relating to interoperability, no further related acquisitions, continuation of current business models/contracts/capacity, continued R&D investment, anti-tying and bundling, FRAND commitment, anti-exclusive dealing arrangement, guarantee of access to platform, and hold-separate measures, etc.

1. Hold-Separate

Hold-separate remedies are a hybrid of a behavioral remedy and structural remedy that allows the acquiring party to close the merger deal but refrain from integrating the target business into its own business post-closing until the condition is lifted. The parties must therefore continue to operate independently and in competition with each other for a certain period. This leaves the parties with a high degree of uncertainty and unable to achieve the desired synergies from their investments, as well as facing considerable uncertainty as to what the future holds. A hold-separate remedy can effectively maintain the market structure post-merger as if the merger never occurred.

Since 2011, MOFCOM/SAMR has imposed hold-separate remedies in a total of five cases. Four of the five cases are high-tech transactions including *Seagate/Samsung* (2011), *Western Digital/Hitachi* (2012), *MediaTek/MStar* (2013), and *ASE/Siliconware* (2017). The average period of such hold-separate remedies ranges from one to three years.

In contrast to the U.S. and EU, where there are hold-separate orders by the authorities to maintain the independence of the businesses until clearance or upfront buyer approval, etc., China has imposed unusual "hold-separate" behavioral remedies. First, hold-separate remedies are imposed to address horizontal competition concerns as a fix, rather than following the global trend toward requiring clean-cut, structural divestments to address horizontal issues. Second, MOFCOM's hold-separate remedies are global in nature, although it is not always the case that other regulators share the same concern as MOFCOM. For example, in *ASE/Siliconware*, MOFCOM imposed global hold-separate, and other behavioral remedies, for a period of 24 months. The transaction did not trigger EC merger control filings; in the U.S., the FTC conducted an investigation of the transaction and approved it without conditions. Additionally, the Taiwan TFTC cleared it without conditions.

MOFCOM's hold-separate remedies were normally imposed when it was not comfortable with the level of concentration resulting if the transaction went through. Rather than outright prohibitions or pure structural remedies, the hold-separate remedies provide opportunities to see if things might change in the future. MOFCOM's approach appeared to give scope for a phased and proportionate review over time, reflecting a more cautious approach than that taken in Europe and the United States.

That said, MOFCOM/SAMR has already lifted or partially lifted hold-separate conditions in two of the four abovementioned high-tech deals. In October 2015, MOFCOM partially lifted the hold-separate obligation of the merging parties in *Western Digital/Hitachi*, allowing the integration of their manufacturing and R&D activities, but still required Western Digital to maintain two separate sales divisions and brands (alongside certain other behavioral commitments). Then, in November 2015, MOFCOM removed the hold-separate obligation on *Seagate/Samsung*, allowing full integration (again while still maintaining certain other behavioral commitments). MOFCOM also noted that these revisions would allow the parties to offer full product ranges and reduce costs.

2. Continued R&D Investment

In some high-tech cases where intervention has been triggered by concerns over the loss of innovation, parties were requested by MOFCOM/SAMR to commit to continued R&D investment. MOFCOM has, on three occasions, imposed commitments to guarantee investments related to R&D in the high-tech sector, including in *Seagate/Samsung* (2011), *Western Digital/Hitachi* (2012), and *UTC/Rockwell Collins* (2018), while neither the EU nor the U.S. imposed similar remedies.

In *Seagate/Samsung*, Seagate was required to invest at least US$ 800m a year in R&D. The deal was cleared by the U.S. and EU without any conditions.

In *Western Digital/Hitachi*, which occurred shortly after Seagate, MOFCOM made the parties commit to an R&D expenditure and speed equivalent to those of previous years. Both the FTC and EC imposed divestitures only, which also formed part of MOFCOM's conditions.

In *UTC/Rockwell Collins*, continuous R&D investments were again imposed by SAMR, including a commitment to promote certain levels of innovation benefitting the aviation industry and aircraft platforms in China. The DOJ and EC both imposed structural remedies through divestitures only.

3. FRAND Commitments

MOFCOM/SAMR's FRAND commitment remedies normally requested that the SEP holders post-transaction must comply with their FRAND commitment as made to SSOs. In addition, the FRAND commitment remedies would also require the SEP holders not to seek injunctions or exclusion orders against a "willing licensee" or potential licensees within mainland China. MOFCOM/SAMR has imposed a FRAND commitment in three high-tech mergers involving SEPs issues, i.e. *Google/Motorola, Microsoft/Nokia*, and *Nokia/Alcatel-Lucent*. Considering that China is a global mobile phone production powerhouse and the Chinese government's initiatives aimed at growing the country's tech industry, it is no surprise that MOFCOM/SAMR takes a more proactive stance than its U.S. and EU counterparts. The FRAND commitment remedy is a less onerous form of condition because it arguably only reinforces the pre-existing obligation of the SEP holders to honour the FRAND commitment.

MOFCOM/SAMR has also imposed unusual remedies akin to FRAND commitments in non-SEP related cases.

In *Merck/AZ Electronic*, a "reasonable and non-discriminatory" licensing obligation on non-SEPs was imposed – "Merck shall license any patent in liquid crystal on a non-exclusive basis without the right to sublicense. All terms shall be commercially reasonable and non-discriminatory."

In *Bayer/Monsanto*, to allay concerns raised in MOFCOM's decision that the transaction could increase the control of the merged entity on the global digital agriculture market, increase the entry barrier, increase the risk of using digital agriculture platform to conduct bundling and tie-in sales, and reduce innovation in the digital agriculture market, MOFCOM required the merging parties to allow Chinese agricultural app developers to access the digital agricultural platform on fair, reasonable, and non-discriminatory terms.

In *UTC/Rockwell Collins*, to address tying and bundling concerns, the merged entity was required to provide A664 terminal system chips and licenses to customers based on fair, reasonable, and non-discriminatory principles for use on Chinese aircraft platforms.

4. No Tying and Bundling

Concerns about potential tying and bundling are a commonplace theory of harm in high-tech transactions in China. To address such concerns, anti-tying and bundling behavioral remedies are normally required. Commitments of no tying and bundling were required in four of the five remedy cases raising tying and bundling concerns, including *Merck/AZ Electronic Materials* (2014), *Broadcom/Brocade* (2017), *HP/Samsung* (2017), and *UTC/Rockwell Collins* (2018).

The specific requirement varies depending on the specific industry dynamics in each of these four cases. In *Merck/AZ Electronic* and *HP/Samsung*, MOFCOM simply required the combined entity to refrain from tie-in sales or bundling absent justifiable reasons. In *Broadcom/Brocade* and *UTC/Rockwell Collins*, the combined parties were also requested to guarantee interoperability, openness and compatibility to reduce further the possibility of tying or bundling. Further, in *UTC/Rockwell Collins*, given the strategic importance of the aviation industry in China, SAMR also

imposed a series of specific conditions to enhance the no tying and bundling commitments (e.g. continue to supply the products separately or provide customers with supply sources for the next-generation version of the products.")

V. KEY TAKEAWAYS

A. Close Scrutiny, but not Necessarily Political or Industrial Policy Intervention

Almost 70 percent of remedy cases relate to the high-tech sector. It should not be assumed, however, that there is a link to political and industrial policy intervention. Actually, as explained above, the majority of high-tech deals have been cleared without remedies and even under the simplified case review procedure. However, high-profile high-tech transactions will likely continue to be subject to close scrutiny by the Chinese competition authority. Therefore, it will still be important to have a good understanding of the potential competition concerns (especially China-specific concerns) that might be relevant in high-tech cases so as to identify early on some of the possible sticking points.

B. Industrial Policy Factors need to be Considered

Merging parties need to be aware of potential competition concerns that may arise, including possible remedy designs, (e.g. remedies that are not typical in other jurisdictions but may come up in high-tech deals), some of which are partly due to industrial policy considerations.

Industrial policy considerations are likely to continue to influence SAMR's decision-making process. Given its legal obligation to consider the impact of a transaction on national economic development, SAMR will continue to assess the impact on China's high-tech industry, customers or license holders. This may result in decisions in which SAMR takes a different approach to its peers.

The divergence should not be overstated, however. Out of the 2,435 transactions that MOFCOM/SAMR has cleared so far (excluding the two that resulted in prohibition), only 39 were cleared with conditions. Some of these 39 transactions were only notifiable in China and not elsewhere. Thus, the divergence seems to be limited.

Industrial policy factors should be considered even when the scope of the relevant market is normally considered global, which is common in large tech deals. Nevertheless, markets that appear worldwide in scope may often be more limited in practice, which may mean that unique and varied concerns raised by other authorities need to be addressed. Nor should parties assume that SAMR, as a newer competition authority relative to more established ones in the EU and the U.S., will tend to defer to longer-established authorities. MOFCOM/SAMR is not shy in examining unique theories of harm and imposing non-typical and unusual behavioral remedies, as discussed above.

It is therefore important that sufficient guidance is sought through legal counselling. Failing this, where there is uncertainty about potential post-merger effects, parties risk having behavioral remedies imposed to guarantee strong competition post-merger.

Certain remedies imposed by SAMR are burdensome and can take a long time to work through. Parties should consider their respective rights in advance (e.g. the purchaser's 'walk-away' rights; termination and break fees; etc.). Hold-separate remedies, for instance, effectively prohibit the parties from materializing business and cost synergies. Buyers might find this too onerous and, in effect, not a clearance; nor will they be willing to deal with ongoing hold-separate orders and the uncertainty of subsequent review.

C. Be Prepared and more Creative when Designing and Offering Remedies

Global mergers can end up with two types of remedy conditions in China: local remedies and international remedies common to many jurisdictions. As SAMR would work from the basis of their own national perspective, and often with different approaches and inputs (e.g. in terms of market testing results), local remedies that are not commonly seen in other jurisdictions might be required in order to address China's unique concerns. For example, as noted above, MOFCOM occasionally uses a hold-separate remedy, which neither the European Union nor the United States would like to impose.

D. Impact on Deal Timetables

Needless to say, China's antitrust regime can be unpredictable. *Qualcomm/NXP* will serve as a long-standing reminder of that. In the high-tech sector specifically, this means that sufficient time needs to be accounted for to ensure deals do not fall through, particularly when negotiating condition precedents and long-stop dates.

E. More Sophisticated Frameworks of Analysis Anticipated

Unlike other regulators, SAMR has not separately developed strategies to tackle novel high-tech issues such as big data or algorithms. It has also not publicly commented on these hot topics. Nonetheless, SAMR is acutely aware of these issues and is continuously developing more sophisticated frameworks of analysis and theories of harm.

ECONOMIC ANALYSIS UNDER THE ANTI-UNFAIR COMPETITION LAW IN CHINA: *TENCENT v. XINGHUI*

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I. INTRODUCTION AND CASE BACKGROUND

On December 28, 2018, the Beijing Intellectual Property Court issued the ruling in *Tencent v. Xinghui* and overturned the ruling of the Chaoyang District People's Court of Beijing (hereinafter "Chaoyang Court"), the court of first instance.[2] This litigation was about whether it's legitimate for browsers to block advertisements on video websites. The ruling of the Beijing Intellectual Property Court provides clear guidance to evaluate this type of conduct pursuant to Article 2 of the Anti-Unfair Competition Law (2017).[3]

Shenzhen Tencent Computer System Co., Ltd. (hereinafter "Tencent") develops and operates the Tencent Video website (https://v.qq.com) to provide online video services. Tencent acquires the copyrights of movies and television works and provides the membership broadcasting service with the business mode of "free video + advertisement."

Beijing World Xinghui Technology Co. Ltd. (hereinafter "Xinghui") is a wholly owned subsidiary of 360 Technology Co., Ltd. (hereinafter "360 Technology"), established in October 12, 2009. The Xinghui's business includes browser service, advertisement, technical consultation, etc. Xinghui develops a browser software called "TheWorld." When using the TheWorld browser, the users can choose to block advertisements.

In 2017, Tencent sued Xinghui at the Chaoyang Court for unfair competition. Tencent claimed that Xinghui's TheWorld browser blocked the advertisement on the Tencent Video website, which violated the principle of good faith and business ethics and hampered the legal interests of Tencent. According to Tencent, the TheWorld Browser developed by Xinghui blocks the advertisements at the movie title sequence and the pause on Tencent's video websites and constituted unfair competition. Therefore, Tencent could not derive the corresponding advertisement revenue and was subjected to economic loss. Besides, Xinghui's misconduct improved its users' experience and increased its own business value, which violated the principle of good faith and business ethics. Tencent demanded a compensation of RMB 4.8 million, plus the lawyer's fees and the notary fees.[4]

Xinghui defended that it did not compete with Tencent directly, and the blocking of advertisements on the browser does not infringe on the interests of the website operators as the users are not obliged to watch the advertisements. Xinghui also questioned Tencent's business model of "free video plus advertisement," and thought it should not belong to an area of interest under the protection of the laws. Xinghui also indicated that ad block does not necessarily lead to an economic loss for Tencent's video website; and that even if it does, it should be the natural result of normal competition as browser users are free to choose whether or not to block the advertisement.

The Chaoyang Court issued the first-instance ruling on January 26, 2018 and rejected all the claims by Tencent. The Chaoyang Court concluded that the ad block did not constitute unfair competition and that there was no special damage to or fundamental impact on Tencent's business. According to the Chaoyang Court, it was a common practice in the industry for browsers to provide the ad block function, and the ad block conduct would not have fundamental impact on Tencent as the advertisement revenue was not the only source of Tencent's revenues. Regarding public interests, the Chaoyang Court concluded that Internet users demand the ad blocking function, and the ad blocking function may promote technology innovations and maximize the users' welfare. Therefore, the Chaoyang Court ruled that Xinghui's conduct of developing and operating the TheWorld browser did not constitute unfair competition and rejected all the claims by Tencent.

Tencent disagreed with the ruling, and appealed to the Beijing Intellectual Property Court, claiming that, besides the factual mistakes in the first-instance ruling, the alleged conduct did hamper the legal interest of Tencent as the advertisement is still the major revenue source of its video websites. Tencent also submitted an economic report to illustrate the negative effect of ad blocking software on Tencent and consumers.[5] The economic report provided a quantitative analysis into the video company's welfare loss and impact on consumer welfare and further concluded that the ad blocking function reduced the welfare of all the parties involved in the long run.

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2 Second-Instance Judgment of *Tencent v. Xinghui*, Beijing Intellectual Property Court, December 28, 2018, available at http://n.iphouse.cn/cases/detail/740492.html?keyword=腾讯公司%20世界星辉公司.

3 "Anti-Unfair Competition Law of the People's Republic of China," Standing Committee of the National People's Congress of the People's Republic of China, amended on November 4, 2017, effective as of January 1, 2018, available at http://www.npc.gov.cn/npc/xinwen/2017-11/04/content_2031432.htm.

4 First-Instance Judgment of *Tencent v. Xinghui*, Chaoyang District People's Court of Beijing, January 26, 2018, available at http://n.iphouse.cn/cases/detail/617971.html?keyword=腾讯公司%20世界星辉公司.

5 The report was authored by Prof Guofu Tan & Dr. Yejia Xu from the University of Southern California.

Xinghui defended that the ad blocking technology might urge video websites to innovate in advertisement technologies, which increase the total social welfare. Besides, the ad blocking function enables users to freely choose their desired content, which is legitimate, without significant damage to the video websites.

The Beijing Intellectual Property Court issued the second-instance ruling on December 28, 2018 and overturned the first-instance ruling.[6] Compared to the first-instance ruling, the Beijing Intellectual Property Court concluded that the alleged conduct not only violated business ethics, but also obviously hampered social welfare. The Beijing Intellectual Property Court referred to Article 16 of the *Interim Measures on Administration of Internet Advertisement* issued by the State Administration for Industry and Commerce (SAIC),[7] which stipulates that "Internet advertising activities should not provide or use features, software, etc. to block, filter, cover, or fast forward the advertisement of properly operated advertising." Xinghui's conduct of blocking Tencent's video advertising presented strong evidence sufficient to prove that such alleged conduct violated business ethics. As far as social welfare is concerned, Beijing Intellectual Property Court disagreed with the first-instance ruling's analysis of the consumers' welfare only, but further investigated the companies' interests as well. The Beijing Intellectual Property Court concluded that in the short run, the video websites may change their business model from "free video plus advertising" to a charging mode as they cannot receive advertisement revenue, which reduced the users' options from paying the membership fee or watching advertisement to paying the membership fee only. In the long run, the video websites may not survive, which will eventually hamper consumers' interest. The ad blocking function may not be favorable to even the advertisers or the browser operators in the long run as it will not increase their benefits, but would increase the cost. The ad blocking function has damages to the total social welfare.

Therefore, Beijing Intellectual Property Court revoked the first-instance ruling and determined a compensation of RMB 1.89 million to Tencent.

II. CASE ANALYSIS

Analysis under the Anti-Unfair Competition Law ("AUCL") is different from that under the Anti-Monopoly Law ("AML"). Per the AML, parties first need to define the relevant market, analyze if market dominance is present, then argue if the alleged conduct causes any anti-competitive effect to the extent of constituting an abuse, or further assess if legitimate pro-competitive effects would outweigh anti-competitive effects.[8] AUCL, however, does not require the definition of relevant market, nor a market dominance in the associated relevant market. It puts more weight on the competition relationship and competitors' interests. The principle of the AUCL is fairness and business ethics. Any evidence, either factual evidence or economic reasoning that could demonstrate the violation of this principle would be the focus of the litigation.

In this case, fair competition means business operators should respect others' business choice and should not interrupt other operators' operation without legitimate reason of public interest.[9] Public interest could be interpreted as whether social welfare is enhanced or harmed, which is the focus of this case. The main difference between the decisions of the court of the first instance and the appellate court is the scope of social welfare. According to the court of first instance, consumer welfare is equal to social welfare. Therefore, as long as Xinghui's ad blocking conduct is to meet certain consumers' interests, the court of first instance found that it did not constitute unfair competition. The appellate court, however, found this decision flawed as social welfare should include both consumer welfare and companies' profits. To the appellate court, there might be some consumers who dislike advertising while watching video. Considering only the welfare of those consumers would be short-sighted as such consumer welfare is merely "current welfare." In the long run, the negative impact of the alleged conduct might be two-fold.

First, the business model of online video websites might completely change, which will affect consumer welfare. Freemium is a popular business model for most online video websites. It leaves the consumer options to choose from two different menus: (1) free video plus advertising; or (2) paid membership without advertising. If certain consumers dislike advertising, they can choose Option 2 to pay a certain amount of membership fees per month or per year to get rid of advertising while watching videos. If they choose Option 1, they have agreed to watch

6 Second-Instance Judgment of *Tencent v. Xinghui*, Beijing Intellectual Property Court, December 28, 2018, available at http://n.iphouse.cn/cases/detail/740492.html?keyword=腾讯公司%20世界星辉公司.

7 "Interim Measures on Administration of Internet Advertisement," State Administration for Industry and Commerce, promulgated on July 4, 2016, effective as of September 1, 2016, available at http://www.gov.cn/gongbao/content/2016/content_5120707.htm.

8 A representative example is the *Qihoo 360 v. Tencent* case ruled by the Supreme People's Court. For more discussion on how antitrust cases have been handled at the Chinese court, see David S Evans & Vanessa Yanhua Zhang, "Qihoo 360 v Tencent: First Antitrust Decision by The Supreme Court," CPI Asia Column, Oct 21, 2014, available at https://www.competitionpolicyinternational.com/qihoo-360-v-tencent-first-antitrust-decision-by-the-supreme-court/.

9 Shi Bisheng (Beijing High People's Court), "Principle of No Interfere If Not Necessary for Public Interest to be Followed in Internet Competition," ChinaCourt.org, June 12, 2014, available at https://www.chinacourt.org/article/detail/2014/06/id/1314247.shtml.

certain advertising for the exchange of free video. Such a mechanism design clearly separates the consumers' type according to their tolerance for advertising and willingness to pay. Meanwhile, online video companies will get revenue from advertisers (from Option 1) and consumers who pay membership fees (from Option 2). If advertising were blocked, advertisers' ads will not reach their targeted audience, and advertisers will no longer pay the online video companies. Losing ad revenue from Option 1, online video companies will switch from two options to Option 2 only, i.e. paid membership. Such a change of business model will hurt Group 1 consumers who initially have chosen Option 1, i.e. free video plus advertising, as they don't have any choice but have to pay the membership fees to watch videos which initially could have been free of charge.

Second, blocking advertising also directly harms Group 2 consumers who have chosen Option 2, i.e. paid membership, and online video companies, which eventually harms consumer welfare. Group 2 consumers have a lower tolerance of advertising, but a higher willingness to pay. Their membership fees are the exchange of the valued service of watching complete videos without interruption by spontaneous advertising. If Group 1 consumers can also watch complete video without advertising for free, Group 2 consumers will feel that they have overpaid. They will stop paying membership fees and switch to Option 1. As a consequence, online video companies will lose membership revenue. As explained above, ad blocking also makes online video companies lose advertising revenue. Losing both advertising and membership revenues makes it difficult for the online video companies to cover the cost of operating the online video websites. Eventually those companies will get out of business and consumers will worse off.

As a result, the appellate court found that the ad block function will effectively harm social welfare by harming both consumers and online video companies' interests and will not necessarily improve the advertisers' and the web browsers' interests.

III. ECONOMIC ANALYSIS ON THE WELFARE EFFECTS OF THE AD BLOCKING FEATURE

Tencent v. Xinghui is one representative case in which economic analysis plays an important role in AUCL cases. Given that economic analysis has been widely used in antitrust cases under the AML, we haven't seen many anti-unfair competition cases which have used economic reports as admissible evidence to support the arguments. In this case, the appellate court appeared to have fully accepted the plaintiff's economic welfare analysis which obviously identifies ad blocking's damages to the plaintiff and consumers. As the decision by the appellate court does not disclose detailed information of the reasoning in the economic report, we will use the standard research approach to make objective assessment of the conduct at issue.

To explore why the final decision should favor the Tencent rather than Xinghui, we will analyze the total social welfare effects of the ad blocking feature on the online video market. According to the economic decision rule, if the total benefits measured by the social welfare outweigh the total costs resulted from the ad blocking feature, we should uphold the position of Xinghui. Otherwise, Tencent's position should be upheld.

As a starting point, let's assume, if the ad blocking feature is approved by the court, other browsers will follow Xinghui in providing the ad blocking feature through their browser products, given that the development costs for such a feature in a browser is not high. The follow-up question is what will happen if all the browsers start to provide the ad blocking feature through their options in the browser setting. The welfare effects will be assessed from the following aspects:

A. The Welfare Effects on the Online Video Companies

As we all know, the online video industry is an industry in which most players haven't made any profit yet. For example, iQiyi, one of the top two online video suppliers in China, had a loss of 2.58 billion RMB in 2015. Its loss reached 3.07 billion RMB in 2016, and 3.74 billion RMB in 2017, although it has generated around 0.99 billion, 3.76 billion and 6.54 billion RMB of paid revenue from its VIP users for 2015-2017 respectively.[10] According to the statistics in *the Report on China's Business Situation in Online Video* provided by iResearch, advertising revenue and membership fee revenue have become the two major revenue sources for the industry. Although the share of advertising revenue is decreasing since 2014, it still accounts for 49.7 percent of total revenues in 2017. And the share of membership fee revenue is constantly increasing from 4.4 percent in 2014 to 28.2 percent in 2017.[11]

10 Registration statement of iQiyi, February 27, 2018, available at http://ir.iqiyi.com/phoenix.zhtml?c=254698&p=irol-sec&secCat01.2_rs=21&secCat01.2_rc=20.

11 iResearch, "The Report of China's Business Situation in Online Video," May 2018, available at http://www.iresearch.com.cn/Detail/report?id=3216&isfree=0.

Advertising is the fundamental source of revenue generation. Once all the users found out that they don't have to pay for the VIP membership to shield themselves from the advertising[12] because the ad blocking browser can do the job, the membership fee revenue would be greatly reduced. The demand for VIP membership depends on the consumers' preference towards the "No Advertising" feature and other features, such as "Access to Some Unique Contents," "High Definition" etc. To carry out sound economic analysis, when the historical VIP membership purchasing data is available for demand estimation, we could try to obtain a reliable estimate for the demand elasticity for the "No-Advertising" feature. According to the estimated demand elasticity, economists could calculate the estimated loss from membership fee revenue due to the ad blocking feature.

On the other hand, with the widespread feature of ad blocking in the browser, the advertising arrival rate decreases, which measures the ratio of audience that are exposed to advertising over the total audience on the platform. It implies that the value added to the advertising is largely deteriorated. There are two potential changes involved in this effect: (1) assuming that the price of an ad is unchanged, as the value of ad declines, the advertisers' willingness to advertise will decrease; only those advertisers who have higher profitability from each targeted consumer would like to advertise, such as luxury goods and consumption. (2) If advertisers successfully negotiate with online video platforms for a lower price, it may not reduce the total number of ads placed on the platform but overall the total advertising revenue is also undermined given the lower advertising price. The extent to which the advertising revenue decreases could be predicted by the percentage of audience choosing the ad blocking setting while watching video.

Therefore, both effects could lead to dim prospects for online video market's profitability. As we all know, the current market investment depends on the future profitability and cash flow of the online video industry. If the profitability is undermined due to the ad blocking feature, the investors of online video companies would have concerns given that they are not yet profitable. China's entire online video industry would be in jeopardy.

B. The Welfare Effects on the Consumer Side

Although someone may argue that blocking advertising renders an instant benefit to consumers, as advertising in most of cases is time-consuming and disturbing, this benefit is a second-order effect compared to the risk of the entire online video market diminishing. Without the healthy development of the online video market, no consumer welfare will be realized. Therefore, the consumer welfare effects can be distinguished as two parts: One is the short-run benefits from no advertising with ad blocking, and the other is the long-run losses from the diminishing online video services if the business model is no longer sustainable with the prevalence of ad blocking.

The short-run benefits could be projected with the time incurred by each viewer during their video watching, i.e. the accumulated time spent on ads multiplied by the average opportunity costs of time (say, the average wage rate), which is minimal comparing to the substantial long-run losses. Before quantifying the long-run losses suffered by the consumers, it should be noted that in the *status quo*, a large portion of consumer surplus hasn't been extracted by the online video providers given that only a small number of users are VIP users. The only costs those free users paid is the time spent on the ads. As long as those users are still in use, it indicates that their willingness to pay is higher than the costs spent on the ads. Otherwise, they opt to exit. Furthermore, even for the VIP users' surplus, it hasn't been fully realized by the membership fee revenue because the VIP membership fee is set very low[13] in order to conform to Chinese consumption habits. Therefore, given the enormous number of users in the online video market,[14] the overall underlying value from online videos is huge.

12 Per iResearch report (2015) "The report of the user-paid market for China's online video industry," "Free from Advertising" is ranked as the most important factor and feature for the users to become VIP members. iResearch, "The report of the user-paid market for China's online video industry," February 2016, available at http://wreport.iresearch.cn/uploadfiles/reports/635932899870684807.pdf.

13 Most of the online video platforms charge VIP users for no more than 25 RMB per month.
The VIP membership fees are available at http://vip.youku.com/vips/vipPackage.html?spm=a2h03.8164468.2069755.30 for Youku, https://film.qq.com/film/p/topic/2019CNY/index.html?ptag=v.focus for Tencent, and https://vip.iqiyi.com/pcw_vip_privilege.html for iQiyi.

14 According to the estimates by iResearch, the total number of online video users in 2017 reaches 0.58 billion, which accounts for more than 40 percent of China's population. (0.58/1.39=41.7%). For the total number of online video users, please see page 7 at iResearch Report, "The Report of China's Business Situation in Online Video," May 2018, available at http://www.iresearch.com.cn/Detail/report?id=3216&isfree=0. For the total population, please see the National Bureau of Statistics' database http://data.stats.gov.cn/easyquery.htm?cn=C01.

Although the exact magnitude of long-run losses suffering from the diminish of online video market is still an open question, which requires further detailed information about the consumers' willingness to pay, it's obvious to see that the short-run benefits is smaller than the long-run losses since the benefits from blocking advertising can be regarded as the costs of tolerating advertising. These two values are simply the two sides of one coin. The fact that these free users stay in the market, indicates that benefits from accessing to free online videos is larger than the costs of tolerating the disturbance of advertising. So do the VIP users.

C. The Welfare Effects on the Advertisers and the Bowser Company

The online video platform with high volume of audience provides a perfect arena for advertising. The ad blocking feature makes advertisers fail to reach their targeted audience and their advertising expenditure will be wasted. It may also result in additional search costs of advertisers for other similar platforms. Therefore, the welfare effects on the advertisers are negative due to the ad blocking feature.

The welfare effects on the browser company might be positive in the short-run but negative in the long-run. In the short-run, the ad blocking feature lets Xinghui enjoy a certain degree of advantage to attract more users. In the long-run, however, this advantage will diminish with the imitation from other browser competitors given the competition status of the browser market. Meanwhile, if the online video companies run out of business due to the ad blocking feature as we explained above, the browser company will lose their content and users too. Therefore, the browser company Xinghui will be worse off in the long run.

To summarize, by analyzing the welfare effects of the ad blocking feature on the different players in the markets, i.e. the consumers, the online video company, the advertisers and the browser company, we can draw a conclusion that all players' welfare would be harmed, i.e. social welfare will be harmed. The total benefits are far less than the potential losses, therefore, the ad blocking feature should be banned for the browser.

IV. INTERNATIONAL COMPARISON

The plaintiff litigated this case under the 2017 AUCL only considered in the context of business ethics under Article 2 of the AUCL.[15] The Beijing Intellectual Property Court (the appellate court) referred to Article 16 of the *Interim Measures on Administration of Internet Advertisement* issued by the State Administration for Industry and Commerce ("SAIC") as being violated by the defendant, and deemed this action *per se* as adequate enough to constitute a violation of business ethics under Article 2 of the AUCL. The appellate court further added that regardless of the SAIC interim measure, "if a legal business operation can be interfered at will by others, the business entity then cannot decide how to properly operate. And if such an operation cannot be legally protected when it is facing interference or sabotage, the business entity can no long cast normal expectations over its operations. This will lead to the failing of a legal and orderly market competition."[16] The appellate court further lamented that this simple argument should be fairly obvious, and in no more need of further reasoning.

Regrettably, it is not so obvious to the authors of this article. But the so-called simple argument places the debate over the ad blocking issue entirely within the realm of a competition matter. And for the purpose of sorting out a competition matter, the appellate court further accepted the defendant's argument of applying an economic welfare analysis as a necessary basis, albeit by no means implying it was sufficient, for testing if ad blocking constitutes a violation of business ethics. The court overturned the ruling by the court of first instance on this case, partly by pointing out that the previous simple social welfare analysis conducted by the court of first instance has failed to incorporate the provider's welfare, aka the plaintiff's welfare.

It might be of interest to investigate the past legal treatment of ad blocking overseas. Outside of China, the history of ad blocking can be traced back decades ago, many years before the Internet-based video, or even the Internet itself for that matter, came into being. Long before the Internet became a viable platform for streaming video, ad blocking and its associated legal battle had already begun in the multichannel television industry. At that time there was a whole set of technologies to support what was then called the commercial-skipping apparatus. For example, the ad blocking function was implemented on a digital video recorder ("DVR") that allows the viewer to essentially fast-forward in a non-intrusive manner to skip ad commercials, or simply avoid recording the program during time of advertising.

15 "Anti-Unfair Competition Law of the People's Republic of China," Standing Committee of the National People's Congress of the People's Republic of China, amended on November 4, 2017, effective as of January 1, 2018, available at http://www.npc.gov.cn/npc/xinwen/2017-11/04/content_2031432.htm.

16 Second-Instance Judgment of *Tencent v. Xinghui*, Beijing Intellectual Property Court, December 28, 2018, available at: http://n.iphouse.cn/cases/detail/740492.html?keyword= %20 .

Sony Corp. of America v. Universal City Studios Inc. was the first legal battle to consider the argument against commercial-skipping in the analog age.[17] The case went all the way to the U.S. Supreme Court, which eventually rejected the argument that would hold Sony contributorily liable for a time-shifting function implemented in a video cassette recorder that was only secondary to its legitimate, non-infringing general purpose. The Court conceded that viewers may choose to fast forward through commercials during playback, and that making such a choice was not unlawful in that it did not alter or violate the copyright of the program. In other words, viewers are entitled to alter content and the technology merely automated something that viewers were already doing.

In the digital age, the battle over commercial-skipping continued. Two DVR-enabled devices manufactured respectively by TiVo and ReplayTV in the late 1990s were at the center of the controversy. Ultimately *Paramount Pictures Corp. v. ReplayTV, Inc.* was settled out of court with ReplayTV agreeing to abandon its commercial-skipping feature.[18] Tivo escaped formal litigation by offering to work with advertisers to study the ways in which its viewers could utilize its commercial-skipping feature. The significance of both cases lies in upholding the fundamental copyright infringement argument against truncated duplication, a legal principle that is first manifested in *WGN Continental Broadcasting Co. v. United Video, Inc.*[19] The ruling in that case states:

> A copyright licensee who 'makes an unauthorized use of the underlying work by publishing it in a truncated version' is an infringer – any 'unauthorized editing of the underlying work, if proven, would constitute an infringement of the copyright in that work similar to any other use of a work that exceeded the license granted by the proprietor of the copyright.'[20]

Later, the U.S. Seventh Circuit further clarified that conclusion regarding the illegality of commercial-skipping in *In re Aimster Copyright Litigation*, where it stated, "commercial-skipping, amounted to creating an unauthorized derivative work, … namely a commercial-free copy that would reduce the copyright owner's income from his original program, since 'free' television programs are financed by the purchase of commercials by advertisers."[21]

As Internet-enabled video has developed rapidly in recent years, the ad blocking legal battle has expectedly attached to it as well. A recent influential litigation involves Adblock Plus, which is a browser plugin popular in Europe that enables the ad blocking function. Axel Springer filed a court order in Germany for the removal of the Adblock Plus post.[22] The case went through trials in the Cologne Regional Court, then in the Regional Court of Appeals, and finally in Germany's Federal Constitutional Court, which is the equivalent of the Supreme Court. It confirmed again with its ruling that Adblock Plus does not violate any laws in Germany.

The *Tencent v. Xinghui* case in China appears to straddle over two previous lines of legal thinking on both sides of the Atlantic. While the history of jurisprudence in the U.S. courts negate ad blocking with respect to copyrighted materials based on the intellectual property protection argument, the European court appears to have afforded more liberal and broader consumer right protection with respect to more general web content in addition to video. It is worth noting that the American precedents were established requiring no social welfare calculation, nor analysis of business ethics of any kind. As long as the producer's welfare, that is, the copyright interest of the video platform owner, is in harm's way, the infringement status is automatically constituted.

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17 *Sony Corp. of America v. Universal City Studios Inc.*, available at https://supreme.justia.com/cases/federal/us/464/417/.

18 *Paramount Pictures Corp. v. Replay TV*, 298 F. Supp. 2d 921 (C.D. Cal. 2004), available at https://www.courtlistener.com/opinion/2564283/paramount-pictures-corp-v-replay-tv/.

19 *WGN Continental Broadcasting v. United Video, Inc.*, 693 F2d 622, available at https://openjurist.org/693/f2d/622/wgn-continental-broadcasting-company-v-united-video-inc.

20 *WGN Continental Broadcasting v. United Video, Inc.*, 693 F2d 622, available at https://openjurist.org/693/f2d/622/wgn-continental-broadcasting-company-v-united-video-inc, paragraph 8.

21 United States Court of Appeals, Seventh Circuit. *In re Aimster Copyright Litigation*. Appeal of: John Deep, Defendant. No. 02-4125. Decided: June 30, 2003, available at https://caselaw.findlaw.com/us-7th-circuit/1484806.html.

22 Tom Woolford, "German Supreme Court: Ad blocking is legal, Axel Springer lose final appeal," Adblock Plus, April 19, 2018, available at https://adblockplus.org/blog/german-supreme-court-ad-blocking-is-legal-axel-springer-lose-final-appeal.

V. CONCLUSION

In this paper we visited the most recent unfair competition case, *Tencent v. Xinghui.* After thorough analysis of the case, we found that welfare analysis is the focus of the case to evaluate the fairness and business ethics. Given the limited information disclosed in the final decision, we propose a standard approach for welfare analysis, i.e. assessing the welfare effects on the consumers, the online video company, the advertisers, and the browser company. In this case, the total social welfare will be jeopardized by the ad blocking feature in the long run. A comparison to the U.S. and European on the legal treatment of ad blocking shows that Chinese court takes its own unique approach.

CHINA'S INTERNET INDUSTRY: NEW CHALLENGES IN ANTITRUST REGULATION AND COMPLIANCE

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I. INTRODUCTION

2018 was a milestone year for the *Anti-monopoly Law of the People's Republic of China* ("Anti-monopoly Law"). The practical experience of anti-monopoly enforcement over the past decade has given this young law vitality and authority. Regulators, businesses and consumers have gradually become accustomed to examining economic life from the perspective of competition law, and the value provided by fair competition to social welfare is increasingly remarkable. It could be said that China's Anti-monopoly Law stands at a historical moment between the past and the future.

It is worth mentioning that the past decade also witnessed the rapid development of China's Internet economy. As of the first half of 2018, the number of Chinese netizens has passed 800 million, and internet penetration has reached 57.7 percent. China has already become a great power on the internet, with the largest number of internet users and the most abundant mobile network applications.[2] As has happened with regulators in other countries, China's Internet and digital economy, which was seen as representing equality, competition, and innovation during its early development, has now come to the attention of China's Antimonopoly Law, while the focus of discussion on antitrust and competition policies has shifted from traditional industries to the emerging digital economy. There can be no doubt that shaping China's response to the relevant competition issues raised in the era of the Internet and the digital economy will be one of the most prominent challenges that the Anti-monopoly Law's enforcers will face within the next decade.

II. COMPETITION CHALLENGES BROUGHT BY THE INTERNET AND THE DIGITAL ECONOMY

Practitioners of antitrust law are now facing the challenges brought by the Internet and the digital economy. Problems such as collusion through algorithms, price discrimination, and exclusionary conducts by platforms have become real-life competition problems, and over the past year several related hot-topic events have caused widespread competition concerns.

A. Competition Challenges Brought by Data and Algorithms

1. Algorithmic Collusion

Data and algorithms are widely used elements of the internet industry. By exploiting the data collected from their business activities through the use of computer algorithms, companies can achieve greater economic efficiency in customizing services, improving pricing models, forecasting market trends, and optimizing processes.[3] However, on the other hand, the use of data and algorithms may also brush against the red line of anti-monopoly law: facilitating enterprises in reaching monopolistic pricing.

First, the widespread commercial application of data and algorithms can make markets more prone to collusion. For example, the innovation of data mining and information processing technology makes it possible to supervise, analyze or predict competitors' current and future price response,[4] thereby enhancing the factor of market transparency that facilitates collusions.

In addition, the use of data and algorithms may also serve as an ancillary method for facilitating the conclusion of a monopoly agreement, or even constitute a monopoly agreement in itself. In the former, enterprises may agree to adopt the same pricing algorithm to achieve the effect of fixing prices, similar to a price monopoly agreement "agreeing to adopt standard formulas in calculating prices,"[5] which is essentially traditional cartel behavior using Internet technology. Another, more complex algorithm collusion, involves the use of big data and algorithms to achieve real-time price changes and tracking, which may coordinate prices without people's awareness. Under the current regulatory system of China's Anti-monopoly Law, the investigation and determination of this kind of algorithm collusion may become much more difficult in the future. On one hand, since the definition of monopoly agreements in the form of concerted practices under China's Anti-monopoly Law takes as its core factors the intention, communication, and exchange of information between undertakings, its applicability to algorithm collusion will be in question. On the other hand, given that big data and algorithm technology may bring huge efficiency gains, problems such as whether the rule of *per se* ille-

2 See https://www.sohu.com/a/250731723_206427.

3 OECD: "Executive Summary of the Roundtable on Algorithms and Collusion," see https://one.oecd.org/document/DAF/COMP/M(2017)1/ANN3/FINAL/en/pdf.

4 See above.

5 Article 7 of the *Provisions against Price Monopoly*: Competing business operators are prohibited from concluding the following price monopoly agreements: …(5) Agreeing to adopt standard formulas in calculating prices;…

gality generally adopted for price monopoly agreements continues to be applicable, or whether the anti-monopoly liability even exists when price consistency is caused by machine learning, have become unavoidable issues.

Even though there are no cases yet of algorithm collusion in China, we believe that Chinese anti-monopoly enforcement agencies will continue to pay close attention to the regulation of data and algorithms.

2. Personalized Pricing

Personalized pricing, another competition issue closely related to data and algorithms, attracted widespread attention in 2018 and has been voted as one of the top 10 catchwords of the year in China. Some well-known Chinese Internet platform companies, such as DiDi and Fliggy,[6] have reportedly been engaged in personalized pricing,[7] ie. platforms know the purchasing power and preferences of different consumers by collecting a large number of data reflecting consumers' attributes and historical behaviors, based on which those platforms charge different prices for the same product or service according to the consumers' willingness to pay. This amounts to online price discrimination. So, how to treat personalized pricing behaviors from the perspective of China's Anti-monopoly Law?

The legal basis for the regulation of personalized pricing behavior under China's Anti-monopoly Law should be the provision regarding the prohibition on the abuse of dominant market position by differential treatments.[8] However, the first question is whether the provision is applicable. One theoretical argument is that the differential treatment prohibited by the Anti-monopoly Law is limited to discrimination against commercial trading partners, and does not include final consumers. Therefore, its legal applicability remains to be discussed. Despite this, China's Anti-monopoly Law does not explicitly exclude final consumers from its definition of "the counterpart." Unless there are contradictory regulations or cases in the future, the personalized pricing strategy targeting final consumers should not be construed as falling outside the scope of the jurisdiction of prohibition on differential treatment.

If the differential treatment provision is qualified as abuse, the key theoretical problem is how to assess the market power of relevant companies and carefully consider the efficiency gains caused by personalized pricing (carefully handled and defended with legitimate justifications). On the former, the personalized pricing strategy has a natural connection with a certain degree of market power. The OECD pointed out in its report on personalized pricing[9] that a minimum level of market power is one of three necessary market conditions that are usually required for price discrimination behaviors.[10] Specifically, price discrimination may be particularly feasible in markets with some degree of economies of scale, economies of scope, network effects, entry costs or switching costs. As for the efficiency caused by personalized pricing, it may improve allocative efficiency and benefit low-end consumers who would otherwise be underserved. However, in some cases it may also lead to a loss in total consumer welfare. In addition, if these practices are conducted in non-transparent or deceptive means, there is also the risk of reducing trust in the market and triggering a perception of unfairness, potentially dampening consumer participation in digital markets. Therefore, even though antitrust authorities usually tend to be more open and inclusive in assessing conducts related to big data and algorithms, it is particularly important that online price discrimination behaviors be considered carefully based on overall social welfare.

6 DiDi is China's largest ride-hailing service platform; Fliggy, a company owned by Alibaba, is an online travel service platform well-known in China.

7 The personalized pricing behaviors of the platforms mentioned above have not been officially confirmed. This paper does not intend to make any inferences in any form about the facts or technical issues of these cases, but only to discuss them from an academic perspective based on the publicly reported events.

8 Article 17 of China's Anti-monopoly Law: Undertakings with dominant market position shall not abuse their dominant market position to engage in the following activities: … (6) implement differential treatment in terms of transactions such as transaction price for trading counterparts with identical conditions without justified reasons;… Article 16 of the *Provisions against Price Monopoly*: Undertakings with dominant market position shall not, without justified reasons, apply preferential treatment in terms of transaction price to trading counterparties with identical conditions.

9 OECD: "Personalised Pricing" in the Digital Era, see https://one.oecd.org/document/DAF/COMP(2018)13/en/pdf.

10 The other two necessary market conditions are identification of consumer's willingness to pay, and absence of arbitrage (consumers free of price discrimination cannot resell the product to consumers under price discrimination).

B. Competition Challenges Brought by Platform Exclusionary Conduct

The development of the Internet in China and the wave of mergers and acquisitions in this industry over the years has created many 'super-platforms'. With the development of platform companies, their exclusive trading strategy gradually raised concerns about restrictions to competition. For example, in April 2018, DiDi entered the Wuxi take-away market, trying to start a subsidy war with Meituan and Eleme.[11] It is reported that both Meituan and Eleme required the local commercial users in Wuxi to sign exclusive agreements with them at the time.[12]

The either-or strategy adopted by platforms is essentially a vertical restriction. There exist two possible regulatory approaches for tackling vertical restrictions under China's Anti-monopoly Law: one is to apply the provision that undertakings which hold a dominant market position shall not abuse said position by restricting commercial counterparts to dealing only with them.[13] The other is to apply the catch-all provision related to vertical monopoly agreements.[14]

There are great uncertainties in the above approaches for dealing with exclusionary conducts by platform companies. For the first approach, when applying the provisions prohibiting exclusionary conducts, it will be difficult to overcome the "legal barrier" that Internet companies must be shown to hold a dominant market position. When considering the second approach, the catch-all provision related to vertical monopoly agreements, demonstrating the anti-competitive effects of vertical non-price restrictions will be a big hurdle. There are no precedents for determination of vertical non-price monopoly agreements in China, including within the scope of the internet sector.

Another related issue is whether the exclusionary conducts undertaken by Internet platforms should be treated more leniently due to their industry-specific attributes. The impact of these conducts on competition should be analyzed on a case-by-case basis. However, it is worth reflecting on whether exclusionary conducts in multi-sided markets may generate greater anti-competitive effects than in traditional one-sided markets. On one hand, exclusive trading arrangements are made between platform companies and users on side A, while the interests of users on side B are unlikely to be fully considered in the exclusivity agreements. On the other hand, the indirect network effect of platforms may create economies of scale. A platform with more users on one side will be more attractive to potential users on other sides.[15] Platforms with commercial advantages may increase the costs of their competitors or set up barriers to entry for potential competitors by engaging in exclusionary conducts, which will lead to foreclosure effects. It is undeniable that the exclusive trading arrangements struck by Internet platforms may increase efficiency by things such as avoiding free-riding. A relatively balanced analysis methodology should consider both the efficiency factor and whether the efficiency so increased can offset the effects of restrictions on competition caused by the platforms' exclusionary conducts.

Other than applying the anti-monopoly law, the either-or strategy adopted by platforms can also be regulated by the laws against unfair competition. According to this, the Administration for Market Regulation of Jinhua, Zhejiang Province has determined that the either-or strategy adopted by Meituan constitutes unfair competition and imposed a fine of RMB 526,000.[16] Although falling back to the laws against unfair competition can avoid the "technical barrier" found when applying the anti-monopoly law, its limited legal liability may restrict the effectiveness of supervision, especially for those conducts causing severe restrictions on competition.

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11 Meituan, one of the most successful local life service platforms, was listed on the Stock Exchange of Hong Kong in 2018. It has a competitive relationship with Eleme, a subsidiary of Alibaba, in the area of take-away services.

12 News article: "When Will the Stick of Anti-monopoly would be Waved against the Glorious Internet Giant?," September 20, 2018, see https://www.thepaper.cn/newsDetail_forward_2458842.

13 Article 17 of China's Anti-monopoly Law: Undertakings with dominant market position shall not abuse their dominant market position to engage in the following activities: … (4) restrict trading counterparts to transact only with the undertaking or only with designated undertakings without justified reasons;…

14 Article 14 of China's Anti-monopoly Law: The following monopolistic agreements between undertakings and trading counterparts shall be prohibited: …(3) any other monopolistic agreements as defined by the anti-monopoly enforcement agency of the State Council.

15 OECD: "Rethinking Antitrust Tools for Multi-Sided Platforms 2018," available at http://www.oecd.org/fr/concurrence/rethinking-antitrust-tools-for-multi-sided-platforms.htm.

16 Available at http://www.jhsc.gov.cn/gjjjc/13003.htm.

III. THE "CHANGED" AND "UNCHANGED" UNDER THE ANALYSIS FRAMEWORK IN THE ERA OF THE INTERNET AND THE DIGITAL ECONOMY

Though the Internet and the digital economy have given rise to a series of challenging competition issues, as some scholars have pointed out, the concentration of businesses, monopoly agreements, and the abuse of dominance are still the core contents of antitrust law in the era of the digital economy, and only the content of specific provisions and the assessment of competition effects will be adjusted according to contemporary developments. The framework of the Anti-monopoly Law is still applicable in the digital economy.[17] When dealing with the competition issues faced by the Internet industry, whether a monopoly agreement issue, an abuse of dominance issue, or a merger control issue, the key to solving such problems lies in the consideration of the particular traits of the Internet and the digital economy regarding the following aspects:

A. The Definition of Relevant Markets

First, the role of defining relevant markets in cases involving the Internet is starting to be questioned. In the case of the "3Q War," which is known as the "first antitrust case in China's Internet sector," the Supreme People's Court pointed out that "it is not necessary to define the relevant market clearly and accurately in every case concerning the abuse of dominant market position." However, it should be noted that under the existing system of antitrust civil litigation, the plaintiff bears the burden of proof for the defendant's dominant position in the relevant market. The definition of relevant markets is still a necessary step in antitrust cases. The flexible discretionary right to decide whether or not to clearly define relevant markets seems to be enjoyed only by the judicial authority. In addition, in terms of how to define relevant markets, how many markets should be defined in cases involving multi-sided markets is a typical problem for Internet-related cases. It is worthwhile to consider defining one or more relevant markets according to the different types of platforms (transactional or non-transactional platform).

B. The Determination of Market Position

The market position of the parties is an important aspect in assessing the competitive effects of relevant conducts. In practice, determining the dominant position of Internet companies has always been a difficult problem in antitrust litigation. Following the "3Q War" case, the Supreme People's Court still refused to rule that Tencent held a dominant market position in the case of "Wechat Emoji Package"[18] in 2018. In this case, the emoji uploaded by the plaintiff was not approved because the content of said emoji violated Tencent's conditions on emoji content. The plaintiff claimed that Tencent's conduct constituted an abuse of dominant market position by refusing and restricting transactions. It is worth noting that the Supreme People's Court clearly stated in the case that:

> the characteristics of highly innovative and dynamic competition under the Internet environment make the boundaries of relevant markets far less clear than those in traditional sectors and more susceptible to 'cross-border competition'. Therefore, paying more attention to market entry, market behavior, and the impact on competition, contributes to analyzing the specific facts and evidence related to dominant market position, rather than sticking to the level of market shares.

On January 30, 2019, the State Administration for Market Regulation requested public opinions on the Rules on the Prohibition of Abuse of Dominant Market Position Behaviors (exposure draft) ("the Rules"),[19] and for the first time made provisions for determining the dominant market position of Internet undertakings. The Rules provides that:

> when identifying the dominant market position of new economic agents such as Internet undertakings, the competition characteristics, business models, network effects, technical characteristics, market innovation, relevant data, and the market power of undertakings in relevant markets, etc. should also be considered based on the factors stipulated in the first paragraph of this clause.

The Rules, expected to pass into law this year, will give relatively clear guidance on the analysis of market power for Internet businesses. We are looking forward to seeing the application of this clause in practice in the future.

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17 Economic Daily – www.ce.cn: "The Practice of Anti-monopoly Law is Facing the Challenge of Digital Economy — A Summary of the Symposium on Fair Competition and Anti-monopoly in the Era of Digital Economy," January 9, 2019, available at http://www.ce.cn/cysc/zljd/yqhz/201901/09/t20190109_31215535.shtml.

18 The civil ruling paper issued by the Supreme People's Court, September 14, 2018, available at http://www.pkulaw.com/pfnl/a6bdb3332ec0adc4a7ed3703b3bb8ba0108d1465a66b602fbdfb.html?keyword=%20%E5%BE%90%E4%B9%A6%E9%9D%92.

19 Available at http://samr-saic-gov-cn.wvpn.ncu.edu.cn/gg/201901/t20190130_281326.html.

IV. TRENDS AND SUGGESTIONS

The challenges to competition posed by the Internet and the digital economy are not limited to the issues discussed above. Issues such as data storage and merger control for Internet companies have also caught much attention from anti-trust authorities. It is foreseeable that competition issues surrounding the Internet and digital economy in China will become increasingly prominent. In addition to the antitrust litigations, the anti-trust authority is also expected to take a groundbreaking step in the supervision of competition in the Internet industry.

For those in the Internet industry, we advise relevant companies to abandon outdated ideas such as that there is are no monopoly issues in the Internet industry, and to treat antitrust compliance issues with more discretion. They should assess their own market power in advance for the markets where they belong, keep close attention to updates to the legislation and enforcement by competition authorities, review the antitrust risks of business practices systematically, and make adjustments in due course.

Finally, Internet companies should be wary of algorithms. From an antitrust perspective, people who design algorithms should bear relevant responsibility. As the position held by the EU competition authority: "they (some of the algorithms) all have to go to law school before they are let out."[20] In a way, antitrust is becoming a new "technical ethic."

20 Available at https://www.recode.net/2017/12/9/16752750/european-union-eu-competition-commissioner-margrethe-vestager-recode-decode-lisbon-web-summit.

LIFE SCIENCE IN THE CROSSHAIRS OF CHINA'S PUBLIC ANTITRUST ENFORCEMENT

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I. INTRODUCTION

2018 ended up being a relatively silent year in terms of China's public antitrust enforcement. Due to the internal institutional reform and consolidation of the three antitrust authorities, as well as the external intense relationship with the U.S., China's public antitrust enforcement enters into a transitional period. Nonetheless, life science as a sector closely pertinent to people's livelihood continues to be the enforcement priority of the new Chinese antitrust authority – the State Administration for Market Regulation ("SAMR"). In 2018, SAMR investigated and penalized various anti-competitive practices in the life science sector, including monopoly agreements, abuse of (collective) dominance, gun-jumping in merger transactions, and administrative monopoly. Indeed, during the past several years prior to 2018, China has already seen an increased antitrust enforcement targeted at the life science sector. In terms of legislation, the former antitrust authority, the National Development and Reform Commission ("NDRC") issued the *Price Behavior Guidelines on Operators of Active Pharmaceutical Ingredients and Drugs Prone to Shortages* ("API Guidelines"),[2] which is the first industry-specific pricing guideline since the implementation of China's *Anti-Monopoly Law* ("AML") in 2008. With Chinese antitrust authorities ramping up efforts on enforcement in the life science sector, more antitrust cases are expected to occur in the near future.

II. CHINA'S PUBLIC ANTITRUST ENFORCEMENT ENTERS INTO A TRANSITIONAL PERIOD

In March 2018, the State Council issued the *Plan on Deepening Reform of Party and State Institutions*, which established SAMR as a direct agency under the State Council for comprehensive market supervision. The institutional reform has brought significant changes to China's antitrust enforcement system. Also, the Sino-U.S. trade war has influenced the enforcement focus of the authorities.

A. SAMR is Now the Sole Antitrust Enforcement Authority at the Central Level

The Chinese government consolidated three antitrust enforcers, the NDRC which had regulated price-related conduct, the State Administration for Industry and Commerce ("SAIC") which had regulated non-price-related conduct, and the Ministry of Commerce which had regulated merger control ("MOFCOM"). After China's new antitrust regulator finalizes its agency integration, SAMR will have the power to investigate any monopolistic practice regardless of its type. However, this new authority has not completed adaption to the new situation in terms of substantive and procedural rules, as well as the staffing situation.

B. The Delegation of Enforcement Power from the Central Level to the Provincial Level

One of the adverse impacts of the institutional reform is that the authorized number of antitrust officials in SAMR has decreased from 61 to 41,[3] an approximately 30 percent decrease which has rendered the authority less capable of handling a large number of antitrust cases. As a cure, the *Notice on Antitrust Enforcement Authorization*[4] issued by SAMR in January 2019 authorizes provincial authorities to take charge of antitrust cases in its administrative jurisdiction on a regular basis. After unified authorization, general and prior authorization from a superior agency is not required by provincial authorities. With thousands of officials at the provincial level on the frontlines to take on monopolistic cases and issues, the delegation of authority is expected to generate much more enforcement cases than before at the provincial level.

C. SAMR's Lower Political Status Might Impede Its Progress Towards a Tough Work Style

SAMR is built on the basis of SAIC, which is a so-called direct agency under the State Council, ranking lower than MOFCOM and NDRC (both are classified as the constituent departments of the State Council). Before the consolidation, the NDRC generally took the lead in antitrust enforcement, including its tough enforcement against Qualcomm. As the SAMR is built upon SAIC, it therefore has an overall lower political status than before and its enforcement style might be more alike to the previous SAIC.

2 Only the Chinese version is available at http://www.ndrc.gov.cn/gzdt/201711/W020171123358187048047.pdf.

3 Currently, SAMR has around 50 antitrust officials, exceeding the authorized number.

4 http://samr.saic.gov.cn/xw/yw/wjfb/201901/t20190103_279720.html.

D. SAMR has Reshuffled Officials to Handle Antitrust Cases

SAMR has integrated and reshuffled the officials coming from the three previous antitrust enforcement authorities to conduct antitrust enforcement. At the highest level of SAMR's leadership, the general director Mr. Wu Zhenguo came from the previous merger control authority MOFCOM, and the other four vice general directors come from MOFCOM, NDRC, SAIC, and the General Administration of Quality Supervision Inspection and Quarantine ("GAQSIQ"), respectively. At the level of daily enforcement, SAMR has allocated officials coming from the previous NDRC, SAIC, and MOFCOM into different enforcement divisions under the anti-monopoly bureau. The integration of antitrust officials will sharpen SAMR's antitrust enforcement capabilities and terminate the past chaos status of conflicting enforcement styles. In addition, SAMR's efficiency of antitrust enforcement has also been enhanced after the institutional reform. According to a study of an antitrust intelligence-gathering third party, there has been an outstanding improvement in the duration of SAMR's review of simple procedure merger cases, with the average duration reduced from 17 days in 2Q2018 to 15.57 days in 4Q2018.

E. SAMR has Declared to Adopt a Competitive Neutrality Doctrine and will Continue focusing on the Life Science Sector

In the past decade, there has been a long-held belief in the international business community that China's antitrust authorities apply the AML in a discriminatory way against multinational companies ("MNCs"), with the amount of enforcement higher and the gravity of penalty heavier than that of its domestic companies. In November 2018, the minister of SAMR announced that China will apply the competitive neutrality doctrine to create and maintain a level playing field among domestic companies, state-owned companies, and private companies,[5] which reflects SAMR's determination to provide a fairer competition environment for all kinds of companies, including the MNCs. As demonstrated from the four cases publicly investigated and penalized by SAMR, SAMR enhanced its enforcement against domestic company and will likely take a more prudent attitude in handling cases involving MNCs. The four cases addressed by SAMR are the *Chlorpheniramine Maleate API* case (2018),[6] the *Glacial Acetic Acid* case (2018),[7] the *Tally* case (2018),[8] and the *Tugboat* case (2018),[9] all of them are against domestic companies.

As to the industries facing enforcement, the SAMR has always paid enormous attention to those industries closely relevant to the people's livelihood, with the life science industry being a top priority in recent years. According to the speech given by the minister of SAMR Mr. Zhang Mao in the first national market supervision annual meeting, the life science industry will continue to be a focus of China's antitrust regulation in 2019.[10]

III. HIGH-PROFILE ANTITRUST CASES IN THE LIFE SCIENCE SECTOR

A. Tacit Collusion has Fallen under the Radar of the Chinese Authorities

In the last few years, China's antitrust authorities have investigated a cluster of horizontal antitrust cases relating to API and finished drug products. One major feature among these cases demonstrates that the companies were penalized for reaching collusion without any written agreement. In the *Allopurinol* case (2015),[11] NDRC penalized five manufacturers of both allopurinol APIs and allopurinol drugs. Allopurinol is used for the treatment of hyperuricemia and gout. The manufacturers were fined for reaching horizontal agreements on price-fixing and allocation of sales market. In terms of price collusion, the NDRC found that the allopurinol manufacturers organized several meetings to discuss the price for sale and bidding, and to allocate the market to each manufacturer. In the *Estazolam* case (2016),[12] the NDRC issued another penalty decision on price-fixing of Estazolam API and tablets, marking the first antitrust case on concerted practices in China. Estazolam is a type of psychotropic drugs used to treat patient with anxieties by its sedative, hypnotic, and anti-anxiety effects. The investigation showed that the three Estazolam manufacturers had reached horizontal agreements to jointly boycott other Estazolam tablet manufacturers while ceasing to supply API to the downstream tablet market in order to increase prices of the tablets manufactured by themselves. The Changzhou company was a follower of the

5 http://www.chinanews.com/wap/detail/zw/gn/2018/11-06/8669434.shtml.

6 http://samr.saic.gov.cn/gg/201901/t20190118_280436.html.

7 http://samr.saic.gov.cn/gg/201812/t20181224_278969.html.

8 http://samr.saic.gov.cn/gg/201807/t20180720_275163.html.

9 http://samr.saic.gov.cn/gg/201806/t20180625_274741.html.

10 http://samr.saic.gov.cn/xw/yw/zj/201812/t20181227_279356.html.

11 http://www.ndrc.gov.cn/xwzx/xwfb/201601/t20160128_772977.html.

12 http://www.ndrc.gov.cn/xwzx/xwfb/201607/t20160728_812719.html.

other two companies on joint boycott and price-fixing. In terms of collusion, the NDRC found that the Changzhou company had reached a meeting of minds with the other two companies for the reasons that (1) it had participated in the meeting; and (2) it had neither clearly opposed the cartel proposal nor reported the meeting to China's antitrust authorities. It was also found by the NDRC that the Changzhou company, jointly with the other companies, had simultaneously increased the price to the same level. This case demonstrates that to apply the rule of concerted practice, the NDRC will consider information exchange and parallel conducts. After the institutional reshuffle, the SAMR rendered the case involving the issue of horizontal agreement in the *Glacial Acetic Acid* case (2018). Glacial acetic acid is for the treatment of renal failure and uremia. The agreement reached in this case was likely to be a hub and spoke cartel. At first, the Jiangxi company in the downstream market communicated with three glacial acetic acid manufacturers to raise prices separately by telephone. Then, the Jiangxi company held several meetings with two of the three glacial acetic acid manufacturers. The SAMR concluded that the three manufacturers had exchanged price information with each other and had concluded and implemented the price increase agreement.

B. Monopolistic Practices in Indirect Vertical Relationships are also Forbidden

Two notable penalty decisions rendered by China's enforcement authorities on vertical agreement cases in the life science industry in the last few years are the *Medtronic* case (2016) addressed by the NDRC and the *Smith & Nephew* case (2017, addressed by the Shanghai Price Bureau.

The highlight of these two cases is that both relate to manufacturers setting the resale prices at all distribution levels. According to Article 14 of the AML, a vertical agreement can only be concluded by an undertaking with its primary distributor. Yet in these two cases, the enforcement authorities, when determining the illegality of the manufactures' practices, took into consideration the resale price maintenance ("RPM") imposed on secondary distributors. For example, in the *Smith & Nephew* case, Shanghai Price Bureau analyzed the RPM on secondary distributor as "strengthened the implementation effect of the monopolistic agreement," and that such practice "precluded and restricted the price competition among secondary distributors."

Vertical agreements are generally regarded as having less of an anticompetitive effect than horizontal agreements or abuse of dominant position. At present, only retail price fixing and minimum retail price setting are expressly prohibited by Chinese antitrust law, yet with the reform of the antitrust authorities, new regulations on vertical agreement as well as other monopolistic practices are in the pipeline and likely to provide guidance on the determination of other vertical agreement.

C. Chinese Authorities have no Hesitation in Condemning Controversial Abusive Practices

The philosophy of abuse regulation has been wandering between the protection of private rights and the preservation of social equality ever since the introduction of antitrust law. Differing from some jurisdictions, especially the U.S., Chinese authorities are vigilant against big companies damaging market competition, and will often find practices which might not be forbidden in other jurisdictions to be illegal as an abuse of dominance. In the recent legislation and enforcement cases, the issues of unfairly high price and collective dominance, which are highly controversial in other jurisdictions, were further examined by the Chinese enforcement authorities.

1. Unfair High Pricing

Unfair high pricing, or excessive pricing, is often addressed in Chinese antitrust laws and enforcement. The previous NDRC published the *Provisions on Anti-Price Monopoly*[13] in 2010, in which it defined unfairly high price by comparison with the price of other sellers and the normal extent of price increases and production costs. In the next year, the NDRC first discussed the issue in the life science industry in the *Compound Reserpine API* case (2011).[14] In the public notice, it described the illegal practice as "an abrupt price increase from less than 200 RMB per kg to 300-1350 RMB per kg," but failed to ascertain the analysis of its illegality. Under the API Guidelines, other elements are considered in determining unfairly high price, including the previous price in the market and the price of other geographic markets. In the *Chlorpheniramine Maleate API* case (2018), the SAMR compared the product price with its cost (which is reflected in the purchased price and the imported price). Without referring to the other elements, the SAMR found that the product price is unfairly high as it was 3-4 times its cost.

2. Collective Dominance

Although the term "collective dominance" is not clearly construed in Chinese antitrust laws, Article 19 of the AML, which hints at the concept, is used to interpret it. Article 19 provides that if two undertakings collectively have a market share of more than 2/3, or three of more than 3/4, and

13 http://www.gov.cn/flfg/2011-01/04/content_1777969.htm.

14 http://jjs.ndrc.gov.cn/fjgld/201203/t20120306_465386.html.

none of them has a market share of less than 1/10, then these undertakings are presumed to have a dominant market position. China's antitrust authorities have applied Article 19 on collective dominance in two cases in the life science industry. The NDRC first applied this rule in the *Isoniazide API* case (2017), in which two undertakings were determined to have collective dominance based on its combined and individual market shares exceeding 2/3 and 1/10 without further explanation. In the second case on *Chlorpheniramine Maleate API* (2018), the two undertakings were determined by the SAMR to have collective dominance. In addition to the market share assumption, the sales and purchase relationship, the strategic cooperation agreement, and the coordinated practices between them were considered by the SAMR.

D. Chinese Authorities are Vigilant in Merger Filings Concerning the Life Science Industry

The life science industry has experienced a huge wave of mergers and acquisitions activity in the past several years in China. The reasons for this trend are numerous. First, M&A has traditionally been an important source of innovation and portfolio realignment for life science companies. Second, with the Chinese laws and regulations on the life science industry becoming increasingly stringent, companies, especially small start-up companies, turn to M&A to survive. Also, the healthcare reform in China has removed pricing control of most drugs,[15] and has thus opened up the life science market and attracted large capital inflows. Given the circumstance, the SAMR has adopted a vigilant attitude towards merger review of life science companies. Before January 23, 2019, among the 39 conditionally cleared transactions, six of them were related to life science companies: The acquisition of Wyeth by Pfizer (2009), the acquisition of Alcon by Novartis (2010), the acquisition of Gambro by Baxter (2013), the acquisition of Life Technology by Thermo Fisher Scientific (2013), the acquisition of St Jude by Abbott (2016), and the merger of Becton Dickinson and Bard (2017). Once a merger transaction is deemed anti-competitive, the filing undertakings can propose remedies to offset the anti-competitive effect. In the six conditionally cleared transactions, both structural and behavioral remedies were applied. Structural remedies usually take the form of business divestures, i.e. the divesture of Baxter's global continual renal replacement therapy business in the *Baxter/Gambro* case. Behavioral remedies varied in different cases, such as termination of sales and distribution agreement in the *Novartis/Alcon* case, and price reduction in the *Thermo Fisher/Life Technology* case. In addition, the undertakings were fined for failing to file before the execution of the merger transaction in five transactions, with the fines ranging from 150,000 to 400,000 RMB. These observations from the above cases demonstrate that the Chinese authorities are determined to tackle life science antitrust problems. With the fast development of the investigation techniques and enforcement abilities of the authorities, companies conducting covert or indirect monopolistic practices are now difficult to escape from investigation. Practices which did not attract much attention, such as covert exchange of competitive information or maintaining retail price for indirect dealers, are also highly risky. What's worth special attention is that for practices which may be legal in other jurisdictions might be defined as illegal abuse of dominance in China. With Chinese antitrust authorities making great efforts in the enforcement of all types of monopolistic practices, the supervision on life science industry is becoming increasingly stringent.

IV. TREND OF CHINA'S ANTITRUST ENFORCEMENT IN THE LIFE SCIENCE SECTOR FROM THE PERSPECTIVE OF A PRACTITIONER

With the latest legislation and enforcement developments, China's antitrust enforcement in the life science sector has become increasing complex and difficult to handle. Based on the foregoing study on the antitrust practice in the life science sector, several conspicuous trends may be worth noting:

A. Sectors Pertinent to People's Livelihood, Primarily the Life Science Sector, is the Priority of China's Antitrust Enforcement

The life science sector is closely connected with people's daily life and the Chinese government has attached great importance to it. Since 2018, the Chinese Premier Mr. Li Keqiang has strongly urged the price deduction of expensive imported drugs.[16] As a consequence, the multinational pharmaceutical giant Pfizer has volunteered to decrease the prices of all 20 of its imported drugs.[17] Under this regime, life science has become an increasingly important enforcement focus of China's antitrust enforcement authorities. In the *Glacial Acetic Acid* case (2018), the SAMR fined the API companies up to 12.83 million RMB for price fixing, which is the biggest fine in API cases during the last ten years. Enforcement in the life science sector can always raise a wave of discussion and attract large public and media attention, and the massive coverage of heavy penalties can effectively deter future monopolistic practices. It is expected that more antitrust enforcement in the life science sector will take place in 2019.

15 In May 2015, NDRC issued *Notice on Issuing the Opinions on Pushing Forward the Pharmaceutical Pricing Reform*, which removed the government pricing control for all drugs except for narcotics and type I psychotropic drugs. http://www.ndrc.gov.cn/zcfb/zcfbtz/201505/t20150505_690664.html.

16 http://www.gov.cn/guowuyuan/2018-04/13/content_5282287.htm.

17 http://hbyphcjgw.hbwsjs.gov.cn/new/show4452.html.

B. China's Antitrust Authorities May Tighten Its Scrutiny on Pay-for-Delay Agreements

In recent years, the U.S. and EU have penalized certain pay-for-delay agreements. So far, China has seen no enforcement or litigation concerning pay-for-delay agreements. This may be because China, as one of the biggest producers of generic drugs, fundamentally refuses to enter into any pay-for-delay agreements. Also, it might not be practical if the originator life science company needed to negotiate the terms and make a payment with every generic drug manufacturer.

In December 2018, China's National Health Commission issued the *Notice on the Work Plan of Accelerating the Supply Guarantee and Utility Policy of Generic Drugs*,[18] which strengthened that antitrust enforcement efforts should be made in the field of generic drugs. China's antitrust authorities therefore might take a more stringent attitude against pay-for-delay agreements when such matters occur, especially if they lead to excessively high drug prices.

C. The Institutional Reform May Break Out on Generic Drugs Antitrust Enforcement

Worldwide, a number of antitrust matters arise out of generic drugs, including product hopping, forced switching, the aforementioned pay-for-delay agreement, etc. Such practices have been penalized in the U.S. and EU, but the prohibition on them is not expressly provided in the AML. These matters have stirred heated discussions, but no enforcement has been made in China. As China has always tried to regulate the high price of drugs, especially imported drugs, to an affordable level, China's antitrust authorities are likely to take opposing attitudes towards any drug-related practice with any anti-competitive effect. While the institutional reform erases the enforcement limitation of enforcement authorities, SAMR might pay much more attention to the anti-competitive effects of a practice than before, and new types of monopolistic practices might be defined.

D. More Follow-on Damage Actions might be Carried Out in 2019

Follow-on actions are private enforcement where the victims of anticompetitive behavior rely on the penalty decisions issued by antitrust authorities to bring actions for damages against the investigated companies. The follow-on actions have more possibility to win a case than other antitrust civil actions brought without penalty decisions, for the plaintiffs' burden of proof will be greatly reduced by relying on the fact and legal analysis of the penalty decisions. Due to the lack of discovery procedure of evidence, plaintiffs in an antitrust lawsuit bear an enormous burden of proof and as a result it is extremely difficult for them to win in any type of antitrust lawsuit. In China, the civil proceeding legislation practically stifles the development of private antitrust enforcement. Although the Supreme People's Court of China ("SPC") has released a judicial interpretation on antitrust civil lawsuits which reduced plaintiffs' burden of proof to a certain extent, the heavy burden of proving the existence of antitrust conduct and its anti-competitive effect still lies upon antitrust plaintiffs. It is reported that the SPC has been working on drafting a legal interpretation of the AML to reasonably reduce the plaintiff's burden of proof. Under such circumstance, a large amount of follow-on damage actions, including public interest litigation, are presumed to occur in 2019.

18 http://www.nhfpc.gov.cn/tigs/s7848/201812/8311038726604686a9e91832c81584b4.shtml.

A TEN-YEAR REVIEW OF CHINA'S ANTITRUST ENFORCEMENT IN THE CHEMICAL INDUSTRY

BY ZHAN HAO, SONG YING, WU YUANYUAN, YANG ZHAN & LV HONGJIE[1]

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I. BACKGROUND

As a backbone to the national economy, the chemical industry accounted for roughly 1/6 of China's GDP in 2017, making it a non-negligible area for antitrust enforcement. Several trends differentiate the chemical industry from other sectors of the economy and impact the antitrust practice in the field.

Following the massive fiscal stimulus in response to the 2008 financial crisis, the same year when China's Anti-Monopoly Law (the "AML") went into effect, the production capacity of the chemical industry spiraled upward and quickly went into a glut. The imbalance between supply and demand depressed the whole industry, resulting in a government-mandated cutback. The contraction, which persisted for several years, was coupled with tightening environmental regulation and dismal prices in oil, a major raw material for the chemical industry.

The tide finally turned towards the end of 2016 when excessive capacity had been reduced to a more sustainable level and oil prices started to rise. The upswing in downstream markets such as the housing, automotive, and the apparels industry prompted the chemical sector's recovery.

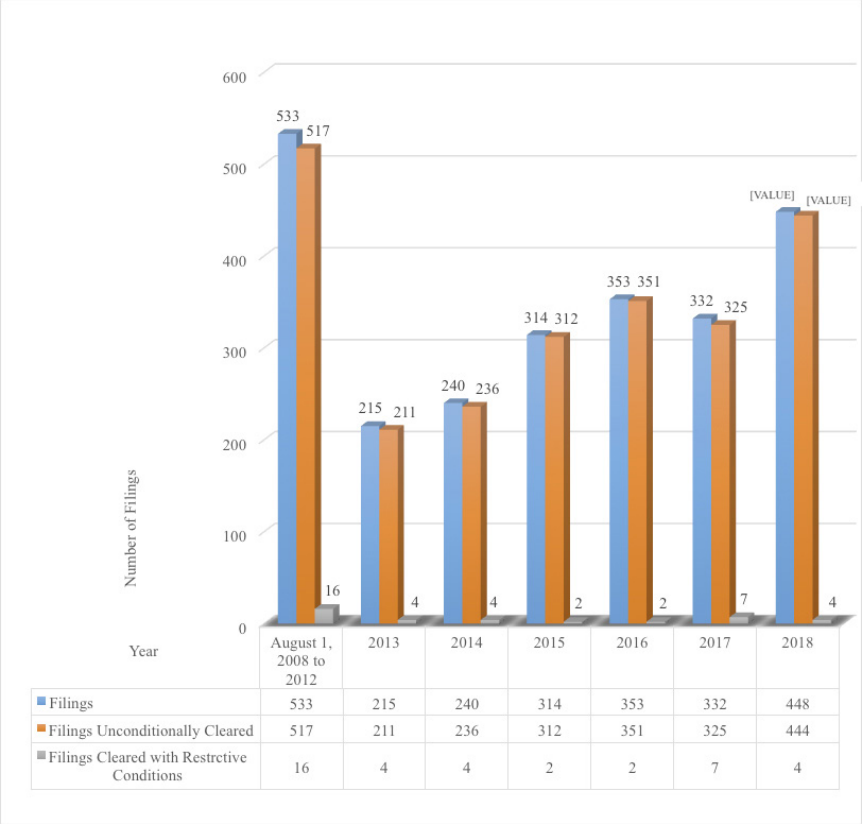
As will be illustrated below, the cyclicality affected the operational and competitive behavior of the firms involved. In down markets, the companies were more likely to engage in anticompetitive conduct, such as collusive restraints, as a means of self-help. Mergers and acquisitions were also used to strengthen the undertakings' ability to weather adverse trends. The resulting increased concentration raised eyebrows with the antitrust authorities, and as a result conditional merger clearances became more of a norm than exception.

Below we divide the review into three parts: merger control filings, antitrust investigation and penalty, and private antitrust litigation.

II. MERGER CONTROL FILINGS

On May 9, 2018 the newly established State Administration for Market Regulation ("SAMR"), as the sole antitrust and competition authority in China, completed unification and reorganization of three previously separate government agencies. Prior to the administrative structural changes in March 2018, China had three antitrust authorities, with the Ministry of Commerce ("MOFCOM") being responsible for merger review, the National Development and Reform Commission ("NDRC") being in charge of price-related antitrust enforcement, and the State Administration of Industry and Commerce ("SAIC") being responsible for non-price related antitrust enforcement. According to public information (see the chart below), MOFCOM and SAMR have reviewed a total of 2,435 cases since the AML was enacted, with 38 cases approved with conditions attached and the others cleared unconditionally. Although the institutional reform was time-consuming, the efficiency of merger control review has not been affected.

Merger Control Filings in China from 2008 to 2018



	August 1, 2008 to 2012	2013	2014	2015	2016	2017	2018
Filings	533	215	240	314	353	332	448
Filings Unconditionally Cleared	517	211	236	312	351	325	444
Filings Cleared with Restrctive Conditions	16	4	4	2	2	7	4

Among the above cases, global merger filings related to agrochemical and petrochemical industries have been increasingly attracted by the competition authorities globally and in China. This article will further elaborate on the significance of China's merger control review for the global filings and the coordination and divergence of decisions (e.g. restrictive conditions) imposed by different agencies in worldwide major jurisdictions.

A. The Merger of Dow Chemical and DuPont

1. Summary of the Transaction

On December 11, 2015, Dow and DuPont announced their merger with the intention to subsequently spin into three independent publicly traded companies. Dow is a US diversified chemicals company mainly active in businesses including plastics and chemicals, agricultural sciences, and hydrocarbon and energy products and services. In 2016, Dow had annual sales of $48 billion and employed approximately 56,000 people worldwide. The company's more than 7,000 product families are manufactured at 189 sites in 34 countries across the globe. DuPont, a US listed company, is mainly active in R&D, production, and sales of a variety of agrochemical products, polymers, agro-chemicals, seeds, food ingredients, and other materials since 1802. The merger between the top two and three chemical companies worldwide is regarded as the biggest M&A transaction in the chemical industry worldwide so far, and is expected to create significant cost synergies of approximately $3 billion, along with the potential for $30 billion of market value and $1 billion in growth synergies. On September 2, 2017, the merged entity, DowDuPont, which is controlled equally by Dow and DuPont, was established and listed on New York Exchange. DowDuPont, instead of BASF, is expected to be the top 1 chemical company worldwide with annual sales of $77 billion and 100 thousand employees.

In the context of merger filing in Mainland China, regarding the market for agrochemical products (defined as national market), nine horizontal overlaps concerned in this transaction were identified, including rice selective herbicides and rice insecticides (where MOFCOM imposed remedies) cereal selective herbicides, vegetables insecticides, fruits insecticides, cotton insecticides, vegetable fungicides, fruit fungicides and potato fungicides. Regarding the market for material science products and specialty products, there are seven horizontal overlaps (ACP, ionomers and *etc.*) and nine vertical relationships that have been identified in this case.

2. Remedies in China, the EU, and the U.S.

Announced on April 29, 2017, MOFCOM issued conditional clearance including both structural and behavioral remedies being imposed, while EC and DOJ did not require commitments for behavioral remedy. To be specific, remedies imposed by MOFCOM, EU Commission and US DOJ are compared below.

Remedy	China MOFCOM (Decision – April 29, 2017)	EU Commission (Decision – March 27, 2017)	U.S. DOJ (Decision – June 15, 2017)
Behavioral Remedy	DuPont and Dow shall supply certain herbicide, insecticide ingredients and formulations for rice crops to Chinese companies on a non-exclusive basis and at a reasonable price, and not to require distributors to sell such ingredients and formulations on an exclusive basis in China for five years after the closing of the transaction.	N/A	N/A
Structural Remedy	1. Divest DuPont and Dow's certain crop protection products and other assets (part of the global remedy) including DuPont's certain pipeline products. 2. Divest Dow's acid co-polymer(s) and ionomers business.	1. Divest significant part of DuPont's existing crop protection business, tangible and intangible, including its R&D Organization. 2. Divest Dow's two manufacturing facilities for acid co-polymers in Spain and in the US, and the contract with a third party through which it sources ionomers that it sells to its customers.	1. Divest DuPont and Dow's certain crop protection products and other assets; 2. Divest DuPont's acid copolymers and ionomers business in the US
Highlights	• The behavioral remedy was only required by China. • The transaction shall not be implemented before MOFCOM has formally approved the purchasers of the divestment businesses and the sale and purchase agreements. • MOFCOM has concerns about specific insect pests in China and imposed additional remedies (global remedies were not considered to be sufficient).		

B. Acquisition of Sole Control of Monsanto by Bayer

1. Summary of the Transaction

On September 14, 2016, Bayer announced its takeover of Monsanto for an acquisition price totaling about USD 66 billion. The transaction would create the global leading integrated player in seeds and traits, pesticides, and digital agriculture. Bayer, incorporated in Germany with a worldwide turnover in 2015 of EUR 47 billion, is active in four areas: pharmaceuticals, consumer health, agriculture, and animal health. Monsanto, incorporated in the U.S., is an agriculture company which produces seeds for crops including corn, cotton, oilseeds ("OSR"), fruit, and vegetables. Monsanto also provides crop protection products. It focuses on the herbicide glyphosate which it commercializes under the "Roundup" brand, and other herbicides used by farmers, industrial customers, lawn-and-garden professionals, and consumers. Additionally, Monsanto is involved in research on agricultural biologicals, and how they may be used to increase crop health and productivity. Monsanto also provides farmers with digital agriculture services through its Climate Corporation.

China's MOFCOM defined 12 horizontal overlaps (*e.g.* non-selective herbicides, vegetable seeds, seeds for broad acre crops, and plant biotechnology traits) and 3 vertical relationships (bactericidal dressing and insecticidal dressing for crop seed, and hybrid corn seed) concerned in this transaction. Due to China statutory regulations of license authorization for market entry, the geographical market of relevant agrochemical products involved in the concentration are defined within national scope, i.e. Chinese market, while other relevant products are defined as global market.

2. Remedies in China, the EU, and the U.S.

MOFCOM and the DOJ imposed conditions for this clearance including both structural and behavioral remedies respectively on March 13, 2018 and May 29, 2018, while EC did not request for behavioral remedies. To be specific, remedies imposed by MOFCOM, EU Commission and US DOJ are compared below.

Remedy	China MOFCOM (Decision – March 13, 2018)	EU Commission (Decision – March 21, 2018)	U.S. DOJ (Decision – May 29, 2018)
Behavioral Remedy	Bayer, Monsanto and the merged entity shall allow (1) their digital agriculture platforms access to all Chinese agriculture applications developers' digital agriculture applications; and (2) registered and used by all Chinese users on FRAND basis in China for 5 years after Bayer, Monsanto and the merged entity entered into Chinese market.	N/A	Bayer will supply BASF with the seed treatments that Bayer currently applies to (row crop seeds) for a period of up to two years.
Structural Remedy	Bayer shall divest its global vegetable seeds business, global non-selective herbicide, global corn, soybean, cotton, oilseed rape character businesses, including infrastructure, employee, IP and other tangible and intangible assets.	Bayer committed to divest its assets and business to BASF SE including: (a) Bayer's global broad acre crop seeds and traits business, with certain limited carve-outs(i.e. hybrid rice in Asia); hybrid cotton, juncea (mustard), and millet in India, cotton in South Africa, R&D programs directed to sugarcane in Brazil, and sugarbeet in Europe; (b) Bayer's global glufosinate ammonium business; (c) assets comprising Bayer's agricultural and non-agricultural glyphosate products in EEA; (d) assets comprising Monsanto's NemaStrike nematicides business; (e) Bayer's line of research for development of herbicides, non-selective herbicides; and (f) a license to Bayer Digital Farming's global portfolio	Bayer shall divest its R&D programs associated with wheat, certain groups of Monsanto soybeans used for research and breeding, assets relating to is foundational herbicides business, certain crop protection products that are complementary to Bayer's trait business, assets relating to its seed treatment businesses, digital agriculture business to BASF, and comprehensive set of tangible and intangible assets representing Bayer's entire global vegetable seed business. As part of the divestitures, over 4,000 Bayer employees who currently support the various divestiture businesses will become BASF employees.
Highlights	• Only the EU Commission did not adopt a behavioral remedy • MOFCOM issued the earliest decision among other jurisdictions		

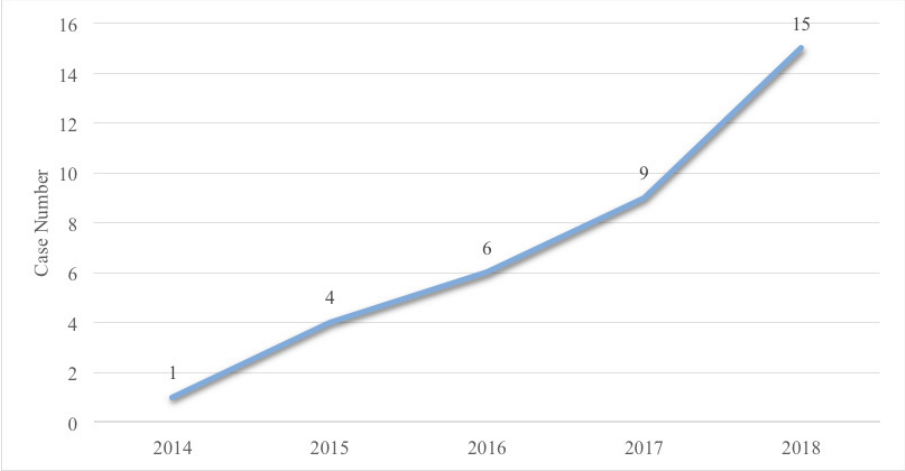
C. The Acquisition of Shares in Syngenta AG by China National Chemical Corp ("ChemChina")

This acquisition is viewed as one of the largest outbound investments by Chinese SOEs so far. ChemChina is a state-owned enterprise and the leading supplier of chemical pesticide both in China and the world, while Syngenta AG is a top three global agrochemical firm. The acquisition would impact the national and global agrochemical industry dramatically. Given this transaction is subject to antitrust approvals in 26 jurisdictions, coordination with filings in other jurisdictions is key to a successful completion. Moreover, MOFCOM's decision in this case may, to some extent, affect the decisions of competition authorities in other countries. During the notification process, some scholars and consumers have jointly challenged this deal. Through the local law firms' efforts, the transaction was unconditionally approved on April 12, 2017. With the transaction, ChemChina has become one of giant worldwide agrichemical companies.

It is worth noting that MOFCOM in these two cases requested for additional remedies and reached its decision earlier than some other major antitrust regulators. China's merger control review has reached a new level and exerted increasing influence over global transaction.

Furthermore, for those cases which failed to notify (i.e. gun-jumping), MOFCOM/SAMR took and will continue to take a harsher stance. There are 15 cases in 2018 out of 35 cases in total since the AML was enacted. Generally, it takes MOFCOM/SAMR an average of 4-9 months for review, and most penalties ranged from RMB 150,000-200,000 yuan; two cases in 2018 incurred penalties of RMB 400,000 yuan. Among these cases, a wide range of companies are involved, such as multinational companies, Chinese SOEs and domestic firms, and a variety of industries including chemicals, port, steel, food, paper, real estate, semiconductor, automobile parts, automobile sales, duty-free products, etc.

Enforcment Cases for Failure to Notify



III. ANTITRUST INVESTIGATION AND ADMINISTRATIVE PENALTY

By the end of October 2018 China's antitrust authorities had concluded investigations into, and imposed administrative penalties in, a total of 220 cases, 165 of them concerning monopoly agreements and 55 concerning the abuse of a dominant position. The combined fines amounted to RMB 11 billion (equivalent to USD 1.6 billion).[2] Of these administrative cases, the chemical industry made up a relatively small portion and most violations took the form of horizontal price restrictions. However, the cases set a few records in the country's antitrust enforcement history and raised important issues for the industrial and legal professions to ruminate.

In May 2016 five producers and one distributor of chlorophenal (an ingredient of pesticides and drugs) were fined RMB 3.8 million for concluding price agreements by the Jiangsu Provincial Bureau of Price Supervision and Anti-monopoly.[3] The infringers convened meetings to discuss unifying sales prices and implemented a monitoring mechanism by providing undertakings with each other and sending monitors to supervise the enforcement. They also integrated their sales channels into one distributor to better execute the price agreement. The antitrust agency found the practices to have infringed Article 13, Section 2 of the AML, which prohibits horizontal price restrictions, and assessed a penalty of 1 percent of the violators' revenues in 2014.

In September 2017 the NDRC published its penalty decision concerning 18 producers of PVC (a plastic ingredient widely used in construction materials, medical equipment, and home appliances).[4] Although the NDRC only assessed 1-2 percent of the infringers' relevant revenues in the preceding year, the fines totaled a whopping RMB 457 million, the largest ever imposed on domestic companies.

The NDRC found that the 18 producers, whose capacity accounted for 3/4 of the national PVC production, convened six meetings in 2016 to exchange market information and discuss production and sales, and ultimately reached 13 agreements to collectively raise PVC prices. As a result, PVC prices increased by 40 percent between June 2016 and November 2016.

2 Press conference held by the State Council Information Office on the 10th anniversary of the implementation of the Anti-monopoly Law, available at http://www.scio.gov.cn/xwfbh/xwbfbh/wqfbh/37601/39282/index.htm.

3 http://www.chinanews.com/sh/2016/05-24/7881104.shtml.

4 http://www.ndrc.gov.cn/gzdt/201709/t20170927_861744.html; http://jjs.ndrc.gov.cn/fjgld/.

A. Unlawful Online Communication

It is worth noting that this is the first time in China where the violators are found to have reached monopoly agreements on social media – Tencent's WeChat in this case, which is the largest instant messaging platform in China. The violators created a chatroom on WeChat to exchange sensitive information and post price lists for the cartel members to follow. As online communication gains increasing popularity, it has become a go-to place for antitrust enforcers to collect evidence and much attention should be paid to the risks involved.

One of the cartel members, Ningxia Jinyuyuan Energy and Chemical Company, contended that it was not a party to the price agreements because it did not voice any explicit opinion during the group discussions, i.e. it did not say it agreed to, or would be implement in, the price recommendations. The NDRC flatly rejected the argument. Article 13 of the AML provides that "[f]or the purposes of this Law, monopoly agreements mean agreements, decisions or other concerted conduct that exclude or restrict competition." Article 6 of the Anti-price Monopoly Provisions (promulgated by the NDRC) further clarifies that "other concerted conduct" is to be found by considering (1) the uniformity of the pricing behavior; (2) the existence of communications between the alleged violators; and (3) the market conditions.

Applying the rule to the facts, Jinyuyuan's behavior would fall within the "concerted conduct" category. First, by joining the chatroom and being present during the sensitive discussions, it effectively learned the content of the communications between the cartel members. Second, the prices it implemented were in conformance with the price lists posted in the chatroom. Third, it failed to proffer a justification based on market conditions for the price increases. Therefore, even a silent attendee can be held to be a co-conspirator in unlawful restrictions if its subsequent conduct conformed with the agreement.

The antitrust law does not categorically prohibit communication between competitors, and it may become increasingly common for communication to occur online. However, a business operator should be particularly alert to any dubious information exchange, as it may constitute evidence of unlawful agreements. A company that is exposed to exchanges of sensitive information such as price, volume, and clients must immediately reject such exchanges and withdraw from the discussion. In the case of online communication such as WeChat chatrooms, a participant should explicitly voice its opposition to suspect proposals and withdraw from the chatroom immediately. The participant is advised to take a screenshot of the online discussion to preserve evidence for subsequent administrative investigation, and to refrain from or delay parallel price increases or other business conduct indicative of unlawful collusions.

B. Exemptions Not Applicable

During the investigation by the NDRC, an organizer of the chatroom argued that the PVC industry had been in a severe slump over the previous five years. The proportion of loss-making firms in the entire industry notched an unprecedented 90 percent in 2015. The parties charged had no intention of reaching monopoly agreements, but rather were engaging in self-help to counter the adverse headwinds. Therefore, the agreement was entitled to one of the statutory exemptions under Article 15 of the AML, which applies to agreements reached in a sluggish economy to alleviate slumping sales or counter excess capacity. However, Article 15 specifies two additional conditions for the exemption to apply. The charged business must prove that the agreement does not substantially restrict competition in the relevant market and that consumers are able to share the benefits generated by the agreement.

The usual factors for determining the restrictiveness of an agreement include market definition, market shares of the charged parties and their competitors, the ability of the charged parties to control the sales market or the raw materials procurement market, and the financial and technical conditions of the charged parties. In this case, the 18 companies under probe accounted for 75 percent of the national PVC production in 2016, which enabled them to exert substantial influence over the entire industry. The sharp price increases were further evidence of the restrictive effect of the agreement. Consequently, the "economic downturn" exemption is not applicable to the alleged conduct.

Over the past decade the chemical industry has undergone dramatic ups and downs, which have affected sub-industries to varying degrees due to particular supply and demand situations for the chemicals concerned. Businesses experiencing negative shocks or positive windfalls are a natural phenomenon in market competition. Market disruptions are generally not a justification for chemical companies to engage in anticompetitive conduct, even if they are on the brink of going out of business altogether. In this respect, the antitrust law provides no exception. However, it is not clear whether the business conditions played a role in the penalty assessment in that the NDRC fined the two organizers two percent of their revenues and the other 16 companies a mere one percent. The NDRC cited the cooperativeness of the probed firms as a factor in making the final penalty decision.

IV. PRIVATE ANTITRUST LITIGATION

Of the more than 700 private antitrust lawsuits filed over the past ten years, the chemical industry accounts for a paltry portion. However, the limited number of cases provide some interesting arguments where multiple areas of the law are intertwined and where unique characteristics of the chemical industry are exhibited.

A. The Yingding v. Sinopec Case

The most significant case involves a refusal-to-deal claim filed by a small biodiesel producer against the country's largest petrol distributor, Sinopec.[5] In early 2014, after attempts to access the distribution channel of Sinopec failed, Yunnan Yingding Company ("Yingding") brought an action before the Kunming Intermediate People's Court, alleging that Sinopec violated Article 17, Section 3 of the AML by refusing to purchase biodiesel produced by Yingding. As the first antitrust litigation in the petroleum industry and with Sinopec, a Fortune 500 company, standing for trial, the case immediately caught the attention of various stakeholders.

Yingding claimed that the Renewable Energy Law of the People's Republic of China imposed an obligation on Sinopec to purchase its gutter-oil-made biodiesel, because Article 16 of the Renewable Energy Law provides that "petroleum distribution enterprises shall incorporate bio-liquid fuels into their fuel distribution network in accordance with the regulations of the energy department of the State Council or provincial governments." Moreover, with a two-third market share of the petroleum sales market in Yunnan Province, Sinopec presumptively held a dominant position in the relevant market under Article 19 of the AML. Sinopec then abused that dominant position by refusing to deal with Yingding, without a reasonable justification, as required by the Renewable Energy Law. Therefore, Sinopec infringed the AML and should be ordered to open its sales channel to Yingding.

The case went through a series of back-and-forth results between the first and second instance courts. After Yunnan Higher People's Court vacated the Kunming Intermediate Court's ruling in favor of Yingding and remanded the case for retrial, the lower court found for Sinopec in 2017 and the judgment was affirmed by the higher court. Yingding immediately appealed to the Supreme People's Court, the country's highest court, but the latter has not decided whether to hear the case yet.

On retrial, the court found that the Renewable Energy Law only created a general duty for petroleum distributors to sell bio-fuel, because the duty must be satisfied "in accordance with the regulations of the energy department of the State Council or provincial governments." Without specific regulations setting forth the terms of trade such as contractual parties, quantities/quota, pricing, manner of sales, rebates and subsidies, the court is simply unable and unfit to force the parties to reach a deal. Rather, the parties ought to negotiate on an equitable basis and in good faith under the Contract Law. Deals so concluded would comply with the basic principles of market economy in the absence of implementing regulations. On the other hand, transactions force-fed by the court without proper negotiation between the parties are not only impracticable, but would also violate the spirit of the Renewable Energy Law, the AML, and the Contract Law.

The court further found that the parties never went into the negotiation process because Yingding did not make an offer to Sinopec with specific terms. The only preliminary step that Yingding took towards a contracting process was the sending of a lawyer's notice to Sinopec which would at most count as an invitation to deal, not an offer. Without an offer with specific terms being made to it, Sinopec's mere silence did not amount to a refusal to deal within the meaning of Article 17, Section 3 of the AML, because Sinopec had simply nothing to deal on. Thus, the court fleshed out the elements of the statutory cause of action by requiring that, for the plaintiff to allege a refusal-to-deal claim, it must have made an offer with specific terms to the defendant. Again, concepts of the Contract Law played a role in the court's holding.

In the last part of the discussion, the court noted that the parties were not competitors in bio-diesel sales and Sinopec's alleged conduct did not have an anticompetitive effect in the relevant market. In fact, refusal or failure to deal between non-competitors can hardly constitute a violation of the antitrust law, because, in a non-competing relationship, it is difficult to discern an anticompetitive intent of the party defendant. This point is subsequently illustrated in the internet sector when the plaintiffs lost in their lawsuits against Tencent, the country's largest social media company, for failing to have their products placed on Tencent's platform.[6] In those cases, the parties were not in a horizontal relationship and, unsurprisingly, the courts found no significant anticompetitive effect.

5 (2017) Yun Min Zhong No. 122.

6 See, e.g. (2017) Yue 03 Min Chu No. 250; (2017) Zui Gao Fa Min Shen No. 4955.

The court thus nicely resolved the apparent conflict between the Renewable Energy Law, the AML, and the Contract Law. In creating the duty to purchase bio-liquid fuels, the Renewable Energy Law notes that "the nation encourages the production and use of bio-liquid fuels."[7] As part of the state's regulation of economic affairs, the Renewable Energy Law was enacted in furtherance of the public interest of environmental protection. The AML can also be regarded as the state's intervention in the functioning of the market to protect the public interest.[8] However, the state's economic regulation statutes are, by nature, more general and vague than the civil laws, such as the Contract Law, and therefore require regulations promulgated by the administrative agencies to be implemented. When the agencies fail to make specific rules, the courts, without the expertise of the agencies, would struggle to set out the exact terms on which to enforce the regulatory statutes against private parties. In fact, for the court to impose a transaction upon private parties would place it in the position of the government and undermine its role as an impartial and detached arbiter.

Therefore, the court did not attempt to fill up the holes left by the statute. Instead, it looked to contract law for guiding principles. Without an offer being made to the defendant, the court had nothing to adjudicate and no basis for finding a refusal-to-deal violation under the antitrust law.

This case was brought on the heels of the boom-and-bust cycle in the bio-diesel industry. The adoption of the Renewable Energy Law in 2005 spurred a slew of enterprises to engage in the production of bio-diesel from gutter oil. The short sprint, however, did not produce products that met the quality requirements of the ultimate consumers. Most of the hundreds of bio-diesel companies went into bankruptcy within a span of a few years. Under relevant regulations, the bio-diesel companies were not permitted to sell their products on their own. The inability to sell through distributors' channels would, therefore, deal a fatal blow to the businesses.

The Renewable Energy Law does create a cause of action for the plaintiff to claim damages and seek injunctions. Article 31 of the Law provides that petroleum sales enterprises that fail to incorporate bio-liquid fuels shall be held liable for damages and be ordered to rectify their behavior by relevant government agencies. Nonetheless, Yingding chose to sue under the AML, perhaps to circumvent the lack of implementing regulations. In recent years, as "antitrust" becomes increasingly a buzzword in the media, private parties have attempted to bring up antitrust claims when lacking confidence in bringing suits under other laws. The courts, however, have been cautious in encroaching the fields of other laws by way of the antitrust law, taking a relatively conservative approach in broadening the scope of antitrust claims.

B. The Mengbaihe Case

Mengbaihe, a furniture company, filed a litigation against four TDI manufacturers for their suspected horizontal monopoly agreements in 2018. Ningbo Intermediate People's Court accepted the case and the plaintiff claimed that the TDI price abnormally increased owing to horizontal monopoly agreements by the four defendants. The plaintiff sought an injunction on the collusive conduct and damages of RMB 45 million.

This is the first non-follow-on private antitrust litigation regarding horizontal monopoly agreements in China. Since the plaintiff in parallel complained to the NDRC, coordination between the investigation and litigation proceedings is complex, challenging, and innovative. In addition, multiple challenging issues will be raised in this case, such as the applicability of the pass-on defense, given that the first instance court is Ningbo Intermediate Court and appeal of this case would be heard by the Supreme People's Court. This case is still on going, and it is foreseeable that the litigation will attract significant attention from scholars, lawyers, judges, and SAMR officials.

V. OUTLOOK

The chemical industry will continue to evolve and grow with the emphasis shifting towards new materials and new energy. Innovation and technological advances will be pivotal to the attainment of a competitive edge in the traditional, yet fast-changing industry. As the firms have returned to profitability in recent years, it can be expected that the chemical industry will cause less concerns for the antitrust authorities. Nonetheless, the market is always moving and new forms of competition will create fresh subjects for antitrust practitioners to examine.

7 Article 16 of the Renewable Energy Law.

8 Article 1 of the AML.

THE DEVELOPMENT OF ANTITRUST ENFORCEMENT IN CHINA'S AUTOMOTIVE INDUSTRY

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I. THE AUTOMOTIVE INDUSTRY AND ANTITRUST

The automotive industry has been always an industry where antitrust enforcement activities are relatively intensive.[2] Whether in the United States or the European Union, enforcement actions targeting the automotive industry are by no means rare. This may be attributed in part to the special features of the automotive industry as compared to the other industries, e.g. expensive manufacturing costs, complicated technologies, high safety requirements, and its common status as the pillar industry of a nation.

Due to these special features, the automotive industry is normally capital and technologically intensive, and industrial concentration ratios may be relatively higher. The manufacturing and supplying of spare auto parts is premised with getting hold of relevant technological information of relevant vehicles, and compatibility issue may be found between original components of the vehicle and other non-original components. Additionally, consumers who have invested in car purchases may need to use the original components during car repairing and maintenance, and thus may be more likely to have their cars repaired and maintained at the store where they purchased the cars. Thus, in the automotive industry, it may be relatively easier to emerge the collusion between undertakings in the industry, as according to the conventional economic theory, there appears to be a certain relationship between high market concentration ratio and anticompetitive conduct; as well as the restrictions of carmakers imposed upon spare parts suppliers and consumer choices, which are just the issues concerned by antitrust law/competition law.[3]

The focus of the antitrust enforcement agencies in the U.S. and the EU in the automotive industry is often the collusion between relevant undertakings in the industry and the restrictions imposed by relevant vehicle manufacturers on suppliers of spare parts.[4] Yet, the focus and concern of China's enforcement authority is clearly different.

II. THE ENFORCEMENT ACTIONS OF CHINA'S ANTITRUST ENFORCEMENT AGENCY IN THE AUTOMOTIVE INDUSTRY

A. Antitrust Issues in China's Automotive Industry

Monopolies in China's automotive industry are typically reflected by such phenomenon as the excessive profits reaped by imported vehicles, the overly high ratio between car spare parts price and car selling price, and the abnormally excessive prices charged by the car dealerships that provide car sale, car spare parts, after-sale service, and surveys (which in China are called "the 4S stores"), etc.[5] What is behind the phenomenon is not only the influence of relevant undertakings in the automotive industry reaching and the implementation of monopolistic agreements, but also = China's policy and rule for the automotive industry that fails to advance with the times and even conflicts with the Anti-Monopoly Law ("AML").[6]

For instance, manufacturers of import branded vehicles restricting the resale price of branded vehicles may directly lessen or eliminate the price competition between dealers of the same vehicle brand, which may cause the direct effect of maintaining high prices of branded cars. Undertakings who supply spare parts in the automotive industry to reach and implement agreements to fix the price of spare parts also directly elevate car-making costs as well as car repairing costs, thereby increasing car selling prices and repairing price. And the *Implementation Measures for the Administration of Automobile Branded Sales* provide that vehicle brand dealers shall not sell vehicles unless being authorized by

2 In the EU, antitrust enforcement actions in the automobile industry include the 2011 *Volkswagen* Case, the 2003 *BMW* Case, the 2013 *Auto Harness* Case, the 2014 *Auto Bering* Case, etc. In the U.S., antitrust investigations in the automobile industry include the *Bridgestone* Case, the *Takata* Case, the *Furukawa Electric* Case, etc.

3 In this article, the concepts of "antitrust law" and "competition law" are used interchangeably.

4 See Shi, Jianzhong & Ma Chenghao "Ou Mei Fan Qi Che Pei Jian Xiao Shou Ling Yu Long Duan Xing Wei de Zhi Fa Jing Yan ji Dui Wo Guo de Qi Shi (The Enforcement Experiences of the U.S. and EU against the Monopolistic Conduct in the Auto Sale Area and the Implications for China)," Vol. 9, Price Supervision and Anti-Monopoly in China (2014).

5 *Id.*

6 Regarding the conflict between China's policy for the automotive industry and the AML, see e.g. Su, Hua & Han, Wei "'Qi Che Pin Pai Xiao Shou Guan Li Shi Shi Ban Fa' de Fan Long Duan Fen Xi (The Anti-monopoly Analysis of the Implementation Measures for the Administration of Automobile Brand Sales)," Vol. 1 China Price (2014); see also the opinion expressed by Professor Wu, Hanhong in "'Qi Che 'Fan Long Duan': Fan de Shen Me (Automobile Antimonopolies: What to Combat?)," News 1+1, August 8, 2014, who expressed that the excessive price charged for high-end autos is related to the Implementation Measures for the Administration of Automobile Brand Sales.

vehicle manufacturers[7] and can only engage in business in branded vehicles for which they have been authorized[8] have resulted in the more advantageous position held by the branded vehicle manufacturers relative to their dealers,[9] and laid down the foundation for them to impose such vertical restrictions as limiting the channel of 4S stores to sourcing spare parts, restricting the sales territory of 4S stores, etc.

B. Actions of China's Antitrust Enforcement Agency in the Automotive Industry

China's Antitrust Enforcement Agency ("AEA") initiated the investigations into China's automotive industry as early as the end of 2011.[10] Yet it was in 2014 when the AEA consecutively punished Audi, Chrysler, BMW, and 12 Japanese spare auto part suppliers that the antitrust enforcement actions came into sight of the public.[11] After 2014, the Jiangsu Price Bureau issued the administrative sanction decision against Mercedes-Benz in April 2015, and dealers of Mercedes-Benz in Suzhou City, Nanjing City, and Wuxi City were fined a total amount of CYN 7.87 million. In December 2016, the Jiangsu Price Bureau again took actions against undertakings in the automotive industry, and this time Shanghai General Motors ("SGM") was punished.

Summarizing the antitrust enforcement actions in China's automotive industry, a finding would be that the main monopolistic conduct penalized is the vertical price restriction imposed by carmakers on their dealers, including carmakers who fix the car resale prices or after-sale service prices, and carmakers who restrict the minimum price for dealers to resell cars/spare parts. In a small number of administrative sanction decisions, the dealers of the same vehicle brand reaching and implementing agreements to fix the prices of car sales are also punished. And except for the punishment over 12 Japanese car spare part suppliers for they entered in and implemented horizonal monopolistic agreements to fix the prices of spare auto parts, there is no other case to punish vehicle manufacturers (suppliers) for they reach and implement horizontal monopolistic agreements.

Table 1: Main Antitrust Enforcement Actions in China's Automotive Industry

Date of Punishment	Undertakings Involved	Illegal Conduct
August 2014	12 Japanese spare auto parts suppliers	Entering in and implementing monopolistic agreements to fix or change the prices of spare auto parts.
August 2014	Chrysler	Chrysler requires its dealers to publish price information based on its recommended resale prices and punishes dealers who make offers at prices lower than the recommended resale prices through phone calls.
September 2014	Audi	FAW-Volkswagen Automotive Sales Co., Ltd. organizes 10 Audi dealers in Hubei Province to reach and implement monopolistic agreements to fix the car selling and car repairing prices. 10 Audi dealers in Hubei Province signed the Price List for the Dealer Union of Wuhan City to reach and implement monopolistic agreements to fixing the selling prices of Audi cars.
April 2015	Mercedes-Benz	Mercedes-Benz restricts the minimum resale prices for Level E and Level S cars and restricts the minimum resale prices of spare parts for its dealers in Jiangsu Province.

7 The Ministry of Commerce of the People's Republic of China, the National Development and Reform Commission, the State Administration of Industry and Commerce, Implementation Measures for the Administration of Automobile Branded Sales (date of promulgation: February 21, 2005, effective date: April 1, 2005) (Nullified/Repealed), Article 27.

8 *Id.* Article 25.

9 See Zhang, Yanyu "The Research on Anti-monopoly Law in the Chinese Auto Industry," B.E. (Hunan University of Science and Technology) 2013.

10 See "Fan Long Duan Dao Di Da de Shi Shen Me (What Does Antimonopoly Strike?)," Finance_iFeng, available at http://finance.ifeng.com/news/special/cqfld/.

11 Regarding why the antitrust enforcement action in China's automotive industry took a long time to be recognized by the public, see Xiao, Cheng "Zhong Guo Qi Che Fan Long Duan Wei He Zhan Zhan Jing Jing: Zhi Nan Qi Cao Gong Zuo Tuo Le Qi Nian (Why Is the Antimonopoly in the Automotive Industry So Cautious: Drafting of Guidelines Took Seven Years)," *Southern Urban Daily*, June 17, 2015. The author pointed out that "as the interests and conflicts in the industry are complicated, a slight move in one part may affect the situation as a whole, China's automotive industry is young, and monopolistic conduct are often disguised, antimonopoly work in the sector encounter many difficulties and obstacles."

September 2015	Dongfeng Nissan	Through sending out business rules, price management measures, and assessment regulations to dealers, Dongfeng Nissan strictly restricts the making of offers by dealers in Guangdong Province and the eventual bid prices. Regarding dealers in Guangzhou City which do not abide the management measures, Dongfeng Nissan imposes punishments on them. Through calling meetings, dealers of Dongfeng Nissan in Guangdong Province reach and implement monopolistic agreements to fix the prices for relevant models of Nissan cars.
December 2016	SGM	SGM restricts the minimum resale prices for Cadillac SRX, Chevrolet Trax, Buick New Exelle, etc.

III. THE INFLUENCES OF THE ANTITRUST ENFORCEMENT IN CHINA'S AUTOMOTIVE INDUSTRY

A. Approaches to Finding Monopolistic Vertical Price Agreements

Although the AML explicitly prohibits vertical price monopolistic agreements,[12] with respect to what kind of activities constitute "fixing resale prices" and "restricting minimum resale prices," for instance, what kind of requirements should the conduct concerned be met, the AML does not provide specific provisions or guidance of what the features of the conduct concerned are. However, the antitrust enforcement in the automotive industry has enriched the understanding of China's AEA regarding vertical price monopolistic agreements and has developed its approaches to find vertical price monopolistic agreements.

For instance, the administrative sanction decision against SGM clearly considered that such activity by vehicle manufacturers that used recommended price was only a name, while in fact it restricted the resale prices, constituted conduct which could be considered reaching and implementing vertical price monopolistic agreements. Specifically, although judging from the texts of the price documents sent out by SGM to dealers, the resale prices seemed to be only recommended prices, in actual execution SGM required dealers to communicate timely with the regional sales center when they found that the actual prices of vehicles provided by dealer(s) to end-consumers were not consistent with the "expectation," and in that circumstance the regional sales center would organize conversations with the relevant dealer(s), getting the picture of the actual situations and making corresponding adjustments.[13]

For another example, in the administrative sanction decision against Mercedes-Benz, the Jiangsu Price Bureau considered that the requirement of the manufacturer which required that the discount rate of 2013 E level domestic Benz should not exceed 12 percent may also incur the effect of the maintenance of resale prices.[14] In other words, through indirect means such as restricting the maximum discount rate, the resale prices can be maintained as well.

It can be understood that the antitrust enforcements in China's automotive industry have exerted a direct and profound influence over the approaches to find vertical price monopolistic agreements, that is, focusing on the substance rather than confining to the specific manifestation of conduct. In fact, the *Antitrust Guidelines for the Automotive Industry* (Draft for Deliberation) (hereinafter "Guidelines") which are drafted on the basis of synthesizing the antitrust enforcement experiences in the automotive sector have been the most systematic document which provides guidance for finding vertical price monopolistic agreements in China. The Guidelines clearly provide that vertical price monopolistic agreements may come in the form of direct restrictions, or may come in the form of indirect restrictions, for instance, fixing the dealers' profit margin and discount level. There may be various manifestations of vertical price monopolistic agreements. Vertical monopolistic agreements may be concluded by means of business policy, circular, communication, and notice. The AML is concerned with the effect rather than the form of the conduct.

12 Standing Committee of the National People's Congress, The Anti-monopoly Law of the R. R. China (promulgation date: August 30, 2007, effective date: August 1, 2008), Article 14, "The following monopolistic agreements between undertakings and trading counterparts shall be prohibited: 1) fixing the price of commodities for resale to third party; 2) fixing the lowest price for resale of commodities to third party; and 3) any other monopolistic agreements as deemed by the AEA of the State Council."

13 Jiangsu Price Bureau, the No. 2520160027 Administrative Sanction Decision, available at http://www.shdrc.gov.cn/fzgggz/jggl/jghzcfjds/25286.htm.

14 Jiangsu Price Bureau, The [2014] Su Jia Fan Long Duan An No. 2 Administrative Sanction Decision.

B. Restricting Intra-Brand Competition as Horizontal Monopolistic Agreements

As discussed, when the AEA punished Audi and Dongfeng Nissan, it considered that the dealers of the same brand reached and implemented horizontal monopolistic agreements when they fixed the selling prices of relevant models of branded vehicles. However, when the Shanghai No. 1 Intermediate People's Court ruled the case between *Shanghai Rijing Electric Co., Ltd. v. Panasonic (China) Co., Ltd.* in 2016, it clearly denied finding that dealers of the same brand to allocate market constitute the conduct of reaching and implementing horizontal monopolistic agreements in violation of the AML. Specifically, the Shanghai No. 1 Intermediate People's Court pointed out that the conduct implemented by the dealers at the distribution level only harmed intra-brand competition. As space for inter-brand competition remained in the market, the restriction imposed inside the brand itself would not lead to the effect of eliminating or restricting competition.[15]

Apparently, the approaches to find horizontal monopolistic agreements as reflected in the antitrust enforcement in the automotive industry directly conflict with the thinking held by the court. The conflict fuse was buried, however, as early as in October 2012 when the Guangdong Higher People's Court ruled in the case between *Hui'erxun Technology Co. Ltd. v. Shenzhen Pest Prevention Association* that to constitute the horizontal monopolistic agreement prohibited by the AML, the mere conduct of competitors to fix the prices was not enough, specific analysis should be made with respect to whether the price fixing conduct eliminated or restricted competition.[16] While the abovementioned approaches taken by the AEA in the enforcement actions against undertakings in the automotive industry ignited the conflict fuse, the judgment of the Shanghai No. 1 Intermediate People's Court led to a complete eruption of the conflict.

One of the important reasons for the divergence between the AEA and the courts in China is that they have different understandings of the harms to competition. According to the administrative sanction decisions against Audi and Dongfeng Nissan, it is apparent that the AEA believes that intra-brand competition is also important for maintaining market competition. Yet courts in China, as typically represented by the Shanghai No. 1 Intermediate People's Court, hold the opinion that the assessment of competitive harm should be based on the influence of the conduct concerned over inter-brand competition, and even consider dealers of the same brand as the parallel players in the vertical economic structure, rather than the "undertaking with a competing relationship" under Article 13 of the AML.[17]

Up to the present, China's antitrust enforcement and China's judicial practice have not yet been able to resolve the divergence shared between them. How the approaches to find horizontal monopolistic agreements developed by the antitrust enforcement in the automotive industry will further develop and how the two enforcement bodies of the AML reconcile their opinions are issues to be explored according to China's future development of AML practice.

C. Strengthening the Regulation of Vertical Non-Price Restrictions

To date, China's AEA has not yet in any case found that the vertical non-price restriction(s) imposed by any branded carmakers on their respective dealers constitute vertical no-price monopolistic agreements. This has been largely attributed to the AML's clear stipulation only that the prohibited vertical monopolistic agreements are those related to resale prices. Although the AEA can deem other vertical restrictions as vertical monopolistic agreements based on its authority provided by law,[18] at least when the antitrust enforcement actions were relatively intensive, that is, between 2011 and 2015, in practice there did not exist corresponding standards that the AEA can refer to. While vertical non-price restrictions often have pro-competitive effects, the balance of the anticompetitive effects of vertical non-price restrictions vis-à-vis their pro-competitive effects may be difficult and challenging for the AEA, too.

Other than that, the 2005 issued *Implementation Measures for the Administration of Automobile Branded Sales* created the imbalanced position of branded car manufacturers vis-à-vis their dealers, and thus the manufacturers can impose vertical non-price restrictions, e.g. restricting the dealers' sales territory, tying dead storage to dealers, bundling original components when supplying new vehicles, restricting dealers from selling to end-consumers outside the respective sales territory, limiting dealers confining the channels of sourcing vehicle spare parts to the carmakers or undertakings designated by the carmakers, etc. If the *Implementation Measures for the Administration of Automobile Branded Sales* were not to be amended, the imbalanced position between carmakers and dealers would be difficult to change and, in this circumstance, the AEA's investigations into vertical non-price restrictions would be palliative.

15 Judgment of the Shanghai No.1 Intermediate People's Court, (2014) Hu Yi Min Wu (Zhi) Chu Zi No. 120.

16 Judgement of the Guangdong Higher People's Court, (2012) Yue Gao Fa Min Zhong Zi No. 155.

17 *Supra* note 15.

18 *Supra* note 12.

Nonetheless, the abovementioned difficulties encountered by the AEA and the enforcement dilemma incurred by the *Implementation Measures for the Administration of Automobile Branded Sales* do not indicate that China's AEA do not have concerns over vertical non-price restrictions in China's automotive industry. On the contrary, the Ministry of Commerce of the P. R. China and the National Development and Reform Commission, which were the Antitrust Enforcement Agencies before the 2019 structure and organization reform of the Central Government, respectively drafted the *Measures for the Administration of Automobile Sales* and the Guidelines. The *Measures for the Administration of Automobile Sales* have been come into effect on July 1, 2017.

The promulgation of the *Measures for the Administration of Automobile Sales* repealed the *Implementation Measures for the Administration of Automobile Branded Sales* and consequently the unfavorable tide faced by dealers created by the previous regulations was reversed. Specifically, from such aspects of prohibiting the restriction on the supply and resale of spare parts, differentiating the sales function and after-sale service function of dealers, and enhancing constraints on automobile suppliers, the *Measures for the Administration of Automobile Sales have stricken a more balanced position of carmakers vis-à-vis their dealers.*

It is worth noting that, although the *Measures for the Administration of Automobile Sales* prohibits typical vertical non-price restrictions such as exclusive distribution and tying, strictly speaking they are not directly and necessarily related to the AML. Hence, the conduct of carmakers in violation of the *Measures for the Administration of Automobile Sales* will not necessarily violate the AML, and undertakings would not assume the relevant liabilities under the AML for their conduct.

With respect to whether the vertical non-price restrictions imposed by carmakers may violate the AML, it is the Guidelines that analyze the pro-competitive and anti-competitive effects of relevant vertical non-price restrictions, list the types of vertical non-price restrictions that may be of a greater possibility to affect market competition, and provide preliminary quantitative market share standard to assess the market power of relevant undertakings. It can be understood that the Guidelines have brought sophistication to the regulation of vertical non-price restrictions under the antitrust laws. However, the Guidelines have not yet been promulgated after complete the process of soliciting public opinions on April 12, 2016.

Table Two: A Brief Summary of the Regulation on Vertical Non-price Restrictions of the Guidelines[19]

Premise of finding vertical non-price restrictions constitute vertical non-price monopolistic agreements	1) Undertakings concerned have market power in the relevant market. Regarding the evaluation of market power, undertakings with market share in the relevant market being between 25 to 30 percent may not have significant market power. 2) The relevant vertical non-price restrictions lead to obvious effect of eliminating or restricting competition.

19 The table does not summarize the procompetitive effects and anticompetitive effects of various vertical non-price restrictions provided by the Guidelines. For details of relevant analyses, see The Price REGULATORY Bureau of the National Development and Reform Commission, The Antitrust Guidelines for the Automotive Industry (release date for public comments: March 23, 2016).

Vertical non-price restrictions that may constitute vertical non-price monopolistic agreements.	Territory restriction & Customer restriction	1) Restrict passive sale by the dealer; 2) Restrict cross-supply between dealers; 3) Restrict the dealer and repair service provider from selling the components necessary for automobile repair to end-users. 4) Except in the case of the OEM agreement, the carmaker reaches an agreement with the supplier of components, repairing tools, and testing instruments or with other suppliers of equipment to restrict them from supplying relevant components, repairing tools, testing instruments, or other equipment to dealers, repair service providers or end-users.
	Imposing indirect vertical restrictions on after-sale repair services and component circulation through warranty clauses	1) Car supplier uses the end-user will have all the repair and maintenance work outside the scope of warranty completed by the authorized repair network as the condition for the car supplier to assume warranty obligation(s). 2) For the after-sale component outside the scope of warranty, the car supplier requires the use of original components as the condition for assuming warranty obligation(s). 3) Car supplier restricts its repair network from providing the parallel imported vehicles with after-sale services and maintenance services without justifiable reasons.
	Improperly restricting the sales and services capacity of dealers by means of business policies alike.	1) Car supplier mandatorily bundles cars, after-sale components, specialty items, consumables, repairing tools and testing instruments, etc. to dealers or repair service providers when they did not order them. 2) Car supplier forces the dealer or repair service provider to accept unreasonable selling target of cars or after-sale components, inventory types and quantity. 3) Car supplier forces the dealer to bear the publicity and promotion expenses for the advertisement campaigns carried out in the name of car supplier or restricts the particular manner and media for advertising campaigns carried out at the expenses of the dealer itself in manners that are mandatory. 4) Car supplier mandates that the dealer and repair service provider can use the services of particular ad design entities or building entities only, or that the building materials, general equipment, information management system and office facilities required by the dealer and repair service provider must adopt particular brands, supplier and supply channels. 5) Car supplier fails to state the reasons when it refuses to supply or terminates the distribution agreement.

D. After-Sale Markets and Distribution Services as a Relevant Product Market

When dealers no longer provide after-sale service and supply spare parts based on the authorization of carmakers, and when it is possible that a carmaker can be found to have a dominant market position in the after-sale market of its brand, there will be increased risks that the after-sale restrictions imposed by a branded carmaker on its supplier(s) of spare parts, the dealer(s) and repair service provider(s) violate the AML. In this regard, the Guidelines first make it possible to define the after-sale market of a certain brand as an independent relevant market. Based on that, the Guidelines provide that such conduct may be considered an abuse of market dominance from the perspectives of spare parts producing, spare parts supply and circulation, and the availability of repair technology information, testing machines and repairing tools. Such regulations in the Guidelines have laid down the foundation for introducing competition into after-sale market of the automotive industry, and are favorable to solving the overly high ratio between car spare parts price and car selling price.

Additionally, it is very difficult to define a certain brand as an independent relevant market under antitrust laws. Yet the Guidelines which define the after-sale market of a certain brand enlightened the thinking in China on defining the distribution service for a certain brand as an independent relevant market. Specifically, the Guidelines point out that, in the automobile after-sale market, the after-sale repairing and maintaining service of a certain model of vehicle may require the use of the spare parts that are compatible with the vehicle. The completion of relevant after-sale services is premised with availability of the repairing technology information involving that certain model of vehicle, too. Since compatibility issue and lock-in effect do exist objectively in the after-sale market of automobiles, car brand becomes an important relevant factor in defining the after-sale market of automobiles.

Referring to the above thinking in the Guidelines, when the distribution of a certain brand also involves an objectively existed lock-in effect, a natural question would be whether the distribution service of that certain brand may be defined as an independent relevant product market. This question is of both theoretical and practical significance in China.

The practical significance is related to the fact that under the current AML, only the AEA of the State Council can deem vertical non-price restrictions as vertical non-price monopolistic agreements. Since courts are not the AEA of the State Council, the plaintiffs in antitrust civil cases (normally are dealers of manufacturers) can only challenge vertical non-price restrictions such as tying, territory restriction, and exclusive supply/distribution imposed by defendants (normally are manufacturers) under the framework of abuse of market dominance. This means the plaintiffs have to define the relevant market and prove the dominant market position and the anticompetitive effect of the conduct of defendants. This burden of proof is often too heavy. If the distribution service of a certain brand can be defined as an independent relevant market, due to the control that the manufacturers can normally exercise towards distribution, it would be more feasible for plaintiffs in antitrust civil cases to show proof of dominant market position, thereby relieving the burden of proof, which in turn may cause a boom in antitrust civil actions in China.

IV. REVIEWING THE PAST AND LOOKING FORWARD TO THE FUTURE

To a large degree, the imbalanced position incurred by the *Implementation Measures for the Administration of Automobile Branded Sales* has affected the antitrust enforcement of China in the automotive industry. As the imbalanced position provides the basis for branded carmakers to impose various restrictions on their dealers, China's antitrust enforcement in the automotive industry has been focused on the vertical relationship between carmakers and dealers; and while the AML clearly prohibits vertical price monopolistic agreements, the resale price maintenance imposed by branded carmakers has been the main conduct being punished in the enforcements.

The *Implementation Measures for the Administration of Automobile Branded Sales* stepped down from the stage of history in the series of antitrust enforcement actions in the automobile industry. The *Measures for the Administration of Automobile Sales* and the Guidelines as the synthesizer of the enforcement experiences set down the systematic legal framework for the regulation of the relationship between carmakers and dealers. Particularly with respect to the finding of vertical price monopolistic agreements and the regulation of vertical non-price restrictions, the Guidelines reflect the beneficial thinking of the AEA on issues in China's automotive industry. Thus, if the Guidelines can be promulgated successfully, they may provide effective guidance for the antitrust enforcement work in the automotive industry and protect competition in the market and the lawful rights and interests of consumers.

Looking forward to the future, although the relationship between branded carmakers and dealers is gradually returning to a balance, consider that in China's automotive market, where vehicles from the Europe, the U.S., and Japan all have their own suppliers of spare parts, and even domestic branded cars have their own independent part suppliers, the market shares of suppliers of spare parts in China's automotive market are more scattered compared to those in the U.S. or EU markets. As a result, the antitrust enforcement in China's automotive industry can still differ from the U.S.'s or the EU's, concerning the monopolies resulting from collusion between suppliers of spare parts.

Last but not the least, at the time when this summary was written, news has been known inside China's antitrust circle that Ford may be punished because of reaching and implementing vertical monopolistic agreements to restrict the vehicles' resale prices. Given this news, and the fact that China's AEA has accumulated rich experiences in the area of vertical price monopolistic agreements, it is likely that resale price maintenance will remain the focus of China's antitrust enforcement in the automotive industry. Elsewhere, since the *Measures for the Administration of Automobile Sales* and the Guidelines attach attention to the after-sale market of automobiles, conduct in the aftermarket may be another focus of antitrust enforcement in future.

INTELLECTUAL PROPERTY ANTITRUST LAWS IN CHINA: RETROSPECT AND PROSPECT (2008 – 2018)

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I. INTRODUCTION

2018 marked the 40th anniversary of the Reform and Opening-Up of the People's Republic of China (the "Reform"), as well as the 10th anniversary of the enactment of the *Antitrust Laws of the People's Republic of China* ("中华人民共和国反垄断法" the "Antitrust Laws"). Profound changes have taken place in China both economically and socially during this 40-year period. Some would say, "From the perspective of depth and width of the contributions the Reform has made to the human society and the long-lasting influence it brought to the human society, it is fair to say that it is a great reform in the history of human beings."[2] Against this background, intellectual property, antitrust, and other legislations intended to regulate economy related social behaviors were introduced to address the issues emerging from the development in the Chinese society during this process.

China joined the World Trade Organization in 2001, which further opened its domestic market to the world. Together with this move, China enacted its Antitrust Laws in 2008. The Antitrust Laws, from their enactment, included provisions to regulate the antitrust issues in the intellectual property domain. Therefore, the enactment of Antitrust Laws is also usually seen as the symbol for the birth of the intellectual property antitrust regime in China.

During the decade after its birth, the practice of intellectual property antitrust was limited, but meaningful. For the purpose of this article, the author divides the development of the intellectual property antitrust mechanism in China into three stages, namely (i) **the exploration stage** (2000 to 2012), which laid down the ground for legislation, enforcement, and the application of laws mainly from theoretical and legislative perspectives; (ii) **the active stage** (2012 to 2015), which begins from the trial of *Huawei v. Interdigital* case and ends with the penalty decision against Qualcomm; and (iii) **the post-*Qualcomm* Investigation stage** (2015 to 2019), during which focus is on reflection of the previous practice and legislation of the intellectual property antitrust mechanism – cautiousness and reason was the theme at this stage. The author believes that the intellectual property antitrust regime will continue to develop and improve, with the re-organization of the enforcement authorities and the nation-wide awareness of the importance of protecting intellectual property.

II. THE EXPLORATION STAGE: THE ESTABLISHMENT OF THE INTELLECTUAL PROPERTY ANTITRUST REGIME

Antitrust legislation was formally included in the legislative plan of the National People's Congress in 1994, but the Antitrust Laws were only formally enacted in 2008. During this fourteen-year period, debate, which has never stopped, centered around whether any antitrust legislation was necessary at all, what type of antitrust legislation were suitable, and which governmental department should take lead in the drafting.

There were also different opinions on whether intellectual property should be subject to the antitrust legislation and whether relevant provisions around intellectual property should be included in the antitrust laws to be enacted. Some held the opinion that intellectual property, same as other types of rights of property, is a type of monopoly endorsed by laws per se, and therefore, it should either not be subject to any antitrust laws or the relevant legislations should expressly provide for the disapplication of antitrust laws to intellectual property related issues. Some held the opinion that the antitrust laws should specifically provide for the antitrust issues related to intellectual property. Some others held the opinion that the antitrust laws should be clear that the antitrust laws are applicable to the intellectual property related issues as well, but detailed provisions should be subject to further legislation at a later stage.

The Antitrust Laws adopted the third approach. It provides in Article 55 that "the exercise of intellectual property rights by operators in accordance with relevant intellectual property laws and regulations is not the subject of the Anti-Trust Laws, but the abuse of intellectual property rights to exclude and/or restrict any competition shall be regulated by the Anti-Trust Laws."

Based on publicly available materials, the author summarizes the main reasons for adopting the third approach:

First, the legislative body believes that it is necessary to regulate the potential abuse of intellectual property by foreign companies when doing business in China. Professor Wang Xianlin, a member of the Expert Panel for Antitrust Laws Committee of the State Council, expressed such concern in his publication, stating that "some actions taken by cross-border enterprises in China may actually be abusing their intellectual property rights in nature, with the purpose of combatting its rising Chinese local competitors or even excluding these competitors from the market" and "considering the special role and function of anti-trust laws in regulating abuse of intellectual property and the relevant practice in this

2 https://www.sohu.com/a/281928038_115423.

area world-wide, China should also treat the anti-trust laws as the main legislation to regulate the abuse of intellectual property rights."[3] Professor Wang participated in drafting the Antitrust Laws and his advice was also adopted by the enacted Antitrust Laws. Therefore, it is reasonable for the public to believe that tackling with abuse of intellectual property may be one of the intentions of the legislators.

Second, decisions in other jurisdictions, especially *United States v. Microsoft Corporation*, 253 F.3d 34 (D.C. Cir. 2001) in the United States, have justified the necessity of applying antitrust laws to the intellectual property domain. In *United States v. Microsoft Corporation*, one of the key defenses Microsoft Corporation raised was that Microsoft Corporation has the "absolute and unfettered"[4] right to use its intellectual property rights it lawfully acquired and "[I]f intellectual property rights have been lawfully acquired, their subsequent exercise cannot give rise to antitrust liability,"[5] but this defense was not admitted by the court. The court stated that "Intellectual property rights do not confer a privilege to violate the antitrust laws."[6] The aforementioned court decision was widely recognized in China and was repeatedly cited and reported. The Federal Trade Commission ("FTC") and the Department of Justice ("DOJ") of the United States issued Antitrust Guidelines for the Licensing of Intellectual Property and Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition. The European Communities issued COMMISSION REGULATION (EC) No 772/2004 of 27 April 2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements. Both aforementioned practice of the United States and the European Communities have had their influence on the practice in China.

Third, as the legislators were not as familiar with the intellectual property antitrust mechanism back to 10 years ago, they avoided going into details but provided for the general principles in the Antitrust Laws. Given the limited practice in China, the concept of intellectual property antitrust was still foreign to legislators. The practice in other jurisdictions was also quite limited. The issues were complicated and there were no unified or standard practice either. Therefore, legislators only included "declarative" or principle provisions in the Antitrust Laws but did not set out detailed operative rules. The Antitrust Laws only provide for intellectual property issues in the Miscellaneous Chapter (Chapter 8). The contents related to the intellectual property rights were rather declarative and state the legislators' encouragement and set out certain principles. It is a general belief that the provision is not enforceable and cannot serve as a base for law enforcers in their enforcement or be cited in court judgements.

Compared to the difficult birth of the Antitrust Laws, the intellectual property antitrust regime seems quite quiet and left the disputes and arguments to the actual practice.

III. ACTIVE STAGE: FROM *HUAWEI V. INTERDIGITAL* TO THE *QUALCOMM* INVESTIGATION (2012 TO 2015)

The first four or five years after the Antitrust Laws' enactment saw a very limited number of actual enforcements against monopoly agreements and abuses of dominant market position. Low enforcement also occured in relation to intellectual property antitrust. This was quite contrary to the general public's expectation. As a commentary from National Business Daily pointed out, "the Anti-Trust Laws were enacted 5 years ago. People had very high expectation for the Anti-Trust Laws and were hopeful that the various monopoly behaviors could be combatted by the Anti-Trust Laws. However, the actual outcome was quite disappointing to the general public. The Anti-trust Laws were like a sword which never left its scabbard and never played its full function."[7]

Nonetheless, the case of *Huawei Technology Ltd. ("Huawei") v. InterDigital ("IDC")* and the following investigation by the National Development and Reform Commission ("NDRC") against Qualcomm (the "*Qualcomm* Investigation") attracted world-wide attention to the development of intellectual property antitrust in China.

IDC is a non-practicing entity based in the United States and holds various standard essential patents ("SEP"). During the negotiations with Huawei in relation to licensing of several patents, not only the royalty it proposed to charge was much higher than the actual value of its patents in issue, but it also initiated several suits in the United States International Trade Commission and the State of Delaware to seek injunctions against

3 Wang Xianlin, On the Anti-Trust Analysis of Abuse of Intellectual Property Rights by Cross-border Companies in China, Intellectual Property, the 6th Issue in 2005.

4 *United States v. Microsoft Corp.*, 253 F.3d 34, 48 (D.C. Cir. 2001)

5 *Id.*

6 *Id.*

7 See Deng Yuwen, The Anti-Trust Laws Should Catch the Tigers and Do It Accurately, January 18, 2013, China Business Daily, 8th Edition.

Huawei. As a result, Huawei also initiated antitrust litigation against IDC in China. The presiding court in China found that every SEP held by IDC constitutes an independent relevant market and IDC had market dominant position in each of such relevant market, and therefore, IDC's proposed royalty together with the injunction as a threat constitutes unfairly high royalty. The presiding court also found that IDC through bundling pricing of different generations of mobiles, achieved to expand and extend its market dominant positions, which was a violation of the relevant provisions of the Antitrust Laws. This case was the first case in the world that the patent holder of an SEP was found abusing its market dominant position. This case was followed by the investigation of Motorola and Samsung by the European Union and ECJ's judgment in the case of *Huawei v. ZTE*, the ruling or judgement of both cases held the same opinions with the presiding court of *Huawei v. IDC* regarding similar subject matter.

The wide recognition of the judgement for *Huawei v. IDC* in China enhanced the law enforcers' confidence in intellectual property antitrust cases. The Antitrust Bureau of NDRC, in responses to the complaints by several entities both domestic and foreign, launched its investigation against Qualcomm in 2012 and issued its administrative decision in the February 2015 against Qualcomm. NDRC in its decision held that Qualcomm had market dominant position in the relevant markets of both SEP and baseband chip. Qualcomm's charge of royalty for expired patents, request of reverse licensing, and bundling of SEP and non-SEP constituted abuse of its market dominant positions in the relevant market of SEPs, and its "no challenge of patent" provision in sales agreements for chip constituted abuse of market dominant position in the relevant market of baseband chip. NDRC imposed fines of 6.088 Billion RMB (around 960 Million USD) for the aforementioned behavior.

The fine imposed by NDRC was the highest amount of fine ever by an antitrust law enforcement authority in China. However, this administrative decision did not fundamentally affect Qualcomm's business model or pricing model.

First, it did not rule whether the price charged by Qualcomm was unfairly high. The ruling applied the relevant provision of the Antitrust Laws which forbids the operators to charge unfairly high price,[8] but it was silent on whether the price charged by Qualcomm was unfairly high or what would be a fair price; instead it found that there were unfair elements in the composition of the price charged by Qualcomm. Such unfair elements include charging royalty for expired patents and the request of reverse licensing.

Second, the NDRC decision did not penalize Qualcomm for its "No License No Chip" policy or "No license to competitors" policy. According to news reports, NDRC had already collected relevant evidence of Qualcomm's implementation of aforementioned policies. Having such policies in place would usually be considered as abuse of market dominant positions according to classic antitrust law theories and were the precise reason why the Korea Fair Trade Commission ("KFTC") penalized Qualcomm and the FTC initiated antitrust litigation against Qualcomm.

Third, Qualcomm claimed that its adjusted prices were already consented to by NDRC. It announced on its website that "NDRC has reviewed and approved the Company's rectification plan"[9] and Qualcomm would use "a royalty base of 65% of the net selling price of the device" [10] for use in China, while NDRC never announced any statement confirming or denying Qualcomm's such announcement. In reality, many mobile producers were still not satisfactory to the adjusted prices and Qualcomm sued these unsatisfied mobile producers and sought injunctions against those producers. NDRC remained silent despite the movements of the market and did not resume its investigation.

Although the law enforcement departments penalized Qualcomm.in the meantime they were careful in protecting the core interests of the holders of the intellectual property rights, with the purpose of keeping the impact of antitrust enforcement on the ordinary business of market participants at a minimum level.

During this period, there were also several other judicial and administrative cases in additional to the *Huawei v. IDC* case and the *Qualcomm* Investigation. The antitrust law enforcement in the intellectual property area was quite active. Looking back to those cases, the following features can be observed:

First, the protection of intellectual property should not be subject to a violation of Antitrust Laws. There is no special treatment for intellectual property compared to other types of properties, and in some cases, especially when SEPs are involved, the holders of intellectual property rights may be more easily found to have market dominant positions than owners of other types of properties.

8 Article 17 of the Anti-Trust Laws, "Operators who have market dominant positions are forbidden to sell products with unfairly high price or purchase products with unfairly low price."

9 https://www.qualcomm.cn/news/releases-2015-02-09.

10 *Id.*

Second, the antitrust law enforcement departments look closely at the pricing issue. While in the western world the law enforcers would pay more attention to the depriving abuse, the Chinese law enforcers would be more sensitive to unfairly high pricing. It is a common awareness in the Chinese market that although reasonable rewards are necessary for holders of intellectual property rights, unfair licensing pricing attached with unfair conditions would damage the industry. It is necessary for law enforcers to intervene to protect the newly born manufacturing industry.

Third, the law enforcers in China were innovative and making breakthroughs. In both the *Huawei v. IDC* and *Qualcomm* Investigation cases, there were unprecedented issues in China or other jurisdictions. These trials and breakthroughs achieved by the Chinese law enforcers in fact became precedents for other jurisdictions. As mentioned, both the KFTC and the TFTC referred to the precedent in China when investigating Qualcomm in its own jurisdiction.

The practice by the Chinese law enforcers attracted eyes world-wide, but also brought tremendous pressure to the Chinese law enforcers. After the *Qualcomm* Investigation, the trend changed again.

IV. STAGE III: POST-*QUALCOMM* INVESTIGATION STAGE – CAUTIOUSNESS AND MATURITY

After the *Qualcomm* Investigation, the number of cases where penalties were issued by the law enforcers in relation to intellectual property antitrust disputes significantly decreased. Although there was news on certain companies under investigation, and some of these companies actually participated in certain enquiries by NDRC, the antitrust law enforcers, i.e. formerly NDRC and the State Administration for Industry & Commerce ("SAIC") and currently the Anti-Monopoly and Anti-Unfair Competition Enforcement Bureau (the "Antitrust Bureau"), did not announce any penalty ruling in any intellectual property antitrust law related cases. Meanwhile, the courts are also very cautious in trying any dispute in relation to intellectual property antitrust issues.

At this stage, the law enforcers are more enthusiastic in making rules related to intellectual property antitrust issues compared to making decisions in specific cases. NDRC announced its *Antitrust Guidance on Abuse of Intellectual Property (Draft for Public Comment)* (关于滥用知识产权的反垄断指南(征求意见稿)) on December 31, 2015 and SAIC announced its *Antitrust Enforcement Guidance on Abuse of Intellectual Property (SAIC Seventh Draft)* (关于滥用知识产权的反垄断执法指南(国家工商总局第七稿)). These two drafts both covered issues arising from law enforcement in the intellectual property antitrust area, and to some extent reflect the enforcement power division and overlaps between NDRC and SAIC. In light of this situation, the Antitrust Law Committee of the State Council, i.e. the superior authority of NDRC and SAIC in terms of antitrust law enforcement, announced the *Antitrust Guidance on Abuse of Intellectual Property (Draft for Public Comment)* (关于滥用知识产权的反垄断指南(征求意见稿)) on March 23, 2017 and this guidance took both previous draft guidance issued by NDRC and SAIC into consideration. In 2018, after the internal re-organization of relevant departments of the State Council, the Antitrust Bureau took over the antitrust law enforcement power of both NDRC and SAIC. The National Intellectual Property Administration ("CNIPA"), same as the Antitrust Bureau, became a sub-department of the State Administration for Market Regulation ("SAMR"). Although after the re-organization, the jurisdiction of intellectual property antitrust issues will not be subject to any dispute, the Antitrust Bureau has not announced any penalty decision, which reflects its cautiousness in making decision for these types of issues.

The judicial body, in the meantime, was also very cautious. Following the judgement of *Huawei v. IDC*, ZTE, another telecommunication equipment manufacturer also initiated litigation against IDC. Although the cause of action and facts were similar to Huawei's in *Huawei v. IDC*, and the trying court was the same with *Huawei v. IDC*, after several court hearings, the first instance court has not rendered its judgement so far. In *Zhejiang Magnetism Material Association ("Zhejiang Magnetism") v. Hitachi Metals ("Hitachi")*, Zhejiang Magnetism sued Hitachi for abuse of market dominant position by adopting the product hopping method. As per Zhejiang Magnetism, Hitachi, by replacing certain material in its old products, created certain new products before the patents in its old products expired, and forced the market to accept its new products by threatening to litigate, sending cease and desist letters, and signing licensing agreements etc., but there was no significant new technology improvement in the new products. The litigation by Zhejiang Magnetism was initiated in 2015, but the first instance court has not yet rendered any judgement. In addition, several courts issued their own judicial guidance during this period, and some of the guidance to some extent rectified the opinions in the *Huawei v. IDC* case. For example, the Guangdong High Court issued the Trial Working Guidance for Trying Standard Essential Patents Related Cases (关于审理标准必要专利纠纷案件的工作指引(试行)), and this guidance, for the first time in China, expressed that "Breach of FRAND covenants by holders of standard essential patents, does not necessarily constitute a violation of the Anti-trust Laws."

The author believes the aforementioned trend at this stage is a result of the following reasons:

First, parties to SEPs tend to resolve relevant issues through negotiation of royalties and this makes it less necessary to resolve relevant disputes through antitrust law. The core issue for SEP is the holder obtained an unfair market position through methods such as injunctions, and the holders may take advantage of such market position to win certain points in negotiations without making real contribution to the progress of technology. The recent judicial practice tends to fix a royalty directly for parties and adjust over charged royalty in the relevant judgements. Such judgements mitigated risks that the holders might by way of litigations obtain over charged royalty and make the chance of SEP holders abuse market dominant positions lower. As a result, the room for Antitrust Law to play a role became rather limited.

Second, the business models of Chinese market players have switched from pure licensees who rely on foreign technologies to contributors to technological progress. Over application of Antitrust Laws in intellectual property area may do damage to the domestic industry. According to a report by National Applied Research Laboratories of Taiwan, the number of SEP of holders from the Mainland China in 4G area is right next to such number of SEPs of holders from the United States and represents more than 25 percent of all SEPs in 4G area globally.[11] Aggressive enforcement in intellectual property antitrust area may do more harm than help to innovation and the development of this industry.

Third, China is in the process of strengthening the protection of intellectual property rights. Therefore, the mainstream voice is to call for protection of intellectual property rights rather than combatting holders of intellectual property rights. Antitrust law enforcement against intellectual property right holders may still have its grounds, but may deviate from the mainstream track at the moment.

Stable as it is in terms of intellectual property antitrust law, there will still be issues around monopoly in exercising intellectual property rights by the holders. Patents, as a type a monopoly *per se*, can be easily structured by the patent holders as obstacles to the new market players. In the special report of November 2018, The Economist magazine bluntly stated a series of problems brought about by the decline in competition in Western economies. Among them, patents have become one of the reasons for restricting competition. The magazine even suggested that the anti-monopoly law should consider giving market entities data and patent licenses to break the monopoly.[12]

Both the intellectual property regime and the antitrust law regime share the same goal of promoting innovation, but each has its own complexity and uncertainty. The latter is especially true for the antitrust law regime. Although intellectual property antitrust may have its own features, it is still part of the overall antitrust regime. Although the antitrust laws in China has its own features, it still follows the logic and theory of antitrust law mechanism world-wide. The further development of the intellectual property antitrust regime in China relies on the innovation, adjustment, and perfection of the entire antitrust law mechanism . Revolution is clearly ongoing in the entire antitrust law mechanism. The author believes this revolution will influence the construction of intellectual property antitrust law mechanism in China.

Let's see…

11 http://tech.hexun.com/2014-07-23/166894444.html (Last visit at 2019.2.7).

12 https://www.economist.com/special-report/2018/11/15/western-governments-need-a-plan-for-reinstating-effective-competition (Last visit at 2019.2.7).

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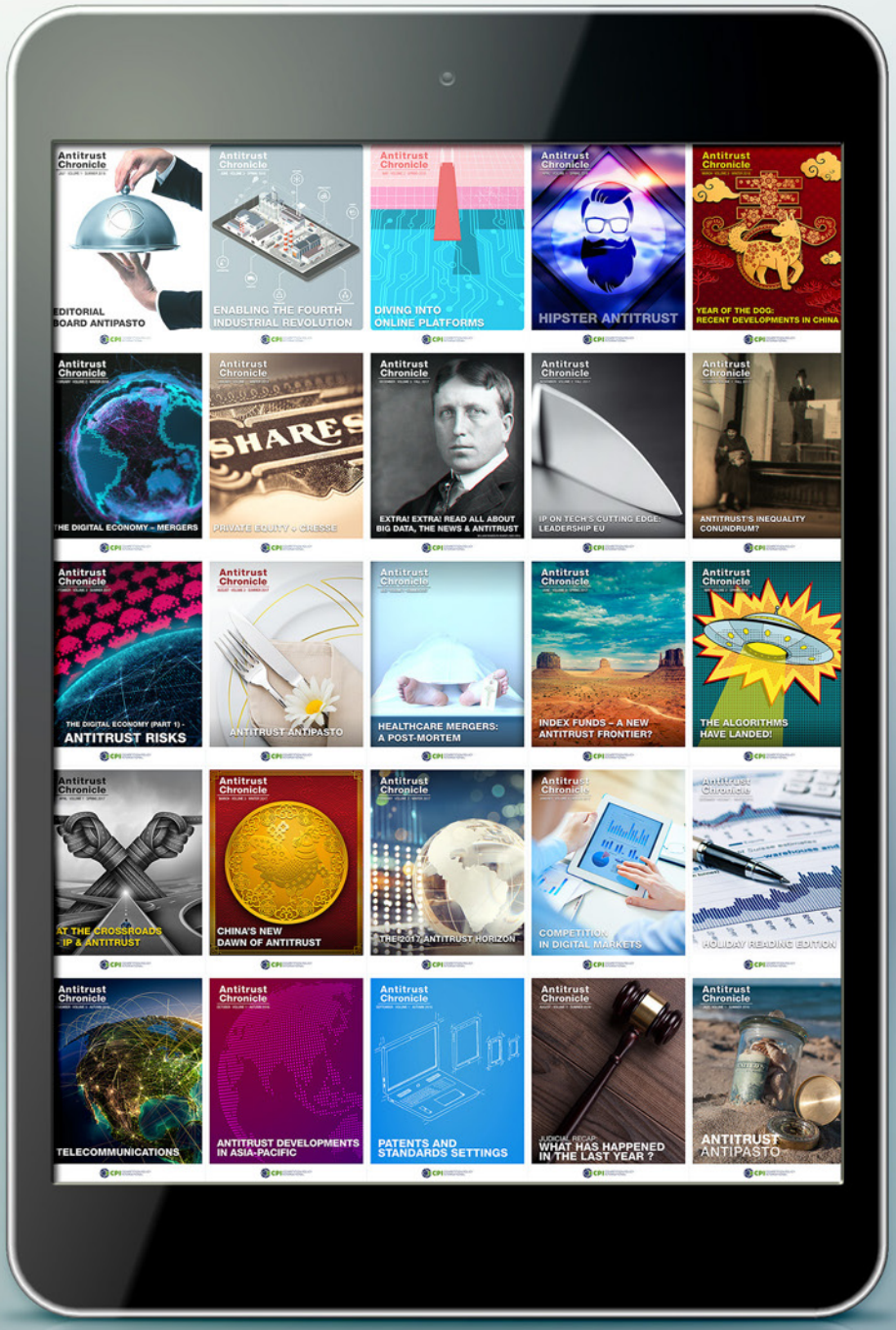


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