A number of industry sectors could be dramatically transformed as a result of the development of new connected and autonomous (CAV) technology, which has far reaching applications. As companies seek to collaborate with each other and navigate the complex legal landscape in developing the CAV world of tomorrow, we explore the key antitrust risks to be mindful of in the development of CAV technology in Asia and beyond.

THE ADVENT OF CAV TECHNOLOGY

While the development of CAV technology undoubtedly presents a plethora of business opportunities, the pace at which it is developing, combined with the evolving global regulatory landscape, poses a number of novel and challenging legal issues, including in the antitrust field.

Companies across a number of industries from automotive to technology and telecoms are paving the way for the advent of CAVs and this has already lead to rapid transformations in some sectors. Nowhere is the pace of change faster than in Asia: at the Winter Olympics in South Korea in February 2018 self-driving cars were showcased; Singapore was the first country to run a public trial of self-driving taxis in 2016; a 100-square-kilometer closed course was created in Shanghai in 2016 for testing of autonomous vehicles and in April 2018 China issued its Administrative Rules on Intelligent and Connected Vehicle Road Testing (Trial) which will take effect nationally on 1 May 2018; and Japan has big ambitions for the 2020 Olympics - Toyota has reportedly been conducting trials with a modified Lexus GS CAV in Tokyo.

Collaboration is likely to be a vital part of achieving success in these times of immense, fast paced change. For example, BMW, Delphi, Intel, Mobileye and others are working together on the development of an autonomous platform for the next generation of cars. Beyond the technology and sector specific companies with an interest in the new era of driverless vehicles, companies responsible for infrastructure will need to adapt existing facilities and structures to meet the demands of the new CAV world. For example, telecoms companies are already busy planning the development of 5G, which will be one technology which enables connected and autonomous driving by vastly improving the reliability of data services for CAVs, due to low latency and higher reliability of wireless internet services. In addition, road networks would need to be updated with CAV enabling technology and it is expected that the rise of electric CAVs would precipitate the need to modernize underlying
electricity networks. It will also be necessary to think about the storage and recharging of vehicles, in domestic and commercial settings.

CAVs are expected to have a wide variety of benefits for users and society as a whole. As businesses gear themselves up to realise the huge upward potential of CAV technology, particularly in Asia which seeks to be at the forefront of the CAV revolution, there is a need to be mindful of the key antitrust pitfalls to avoid in the context of commercial collaborations.

**RESEARCH AND DEVELOPMENT**

In the realisation of the new technological era, one important form of commercial collaboration between competitors (and non-competitors) is likely to be research and development ("R&D") projects. One example of this would be the R&D required for sensors and networks to support CAVs, and to produce CAV specific technology or systems. Another example would be two automotive companies forming a partnership to develop the next generation of CAVs.

Typically, competition regulators tend to adopt a less strict approach to R&D projects as compared to other types of commercial collaboration, even when undertaken between competitors, provided certain conditions are met. Pure R&D cooperation with no joint exploitation/restrictions on exploitation is considered unlikely to infringe the prohibition on anticompetitive agreements, whether or not undertaken between competitors. Moreover, R&D agreements between non-competitors (with the concept of competitors including actual and realistic potential competitors) are unlikely to be problematic from an antitrust perspective.

In relation to R&D agreements between competitors which include joint exploitation of results, this is also typically permissible provided that the joint exploitation is limited to the R&D results protected by intellectual property rights ("IPRs") and the combined market share of the parties in the relevant market for the contract product/technology is not high (e.g. a combined share of less than 25%). In addition, all parties must have full access to the final results of the joint R&D, including any resulting IPRs and know-how, for the purposes of further research or exploitation, as soon as they become available. These criteria are set out in the EU Research and Development Block Exemption Regulation, which creates a safe harbor for agreements in the EU that meet these criteria. It seems reasonable to expect that this approach would be followed to a greater or lesser extent by the regulators in some Asian jurisdictions (e.g. guidelines covering R&D agreements are expected to be finalized in China later this year).

The key pitfalls (or hardcore restrictions) to avoid in relation to R&D collaborations include the following types of restrictions, which would amount to serious antitrust law infringements and mean that the R&D agreement would not benefit from any available safe harbour or exemption:

- Restricting the ability of the parties to carry out R&D in a field unconnected with the R&D project or, after its completion, in the field to which it relates or in a connected field;
- Agreeing to limit output or sales as between the parties to the R&D project;
- Fixing prices when selling the R&D project products or licensing the R&D project technologies to third parties;
- Limiting the territory in which, or the customers to whom, the parties may passively sell the R&D project products or license the R&D project technologies, except a requirement to exclusively license the results to another party (which is permissible in certain circumstances);
Limiting active sales (these are sales where the customer is actively approached by direct mail or unsolicited emails) of the R&D project products or technologies in territories or to customers which have not been exclusively allocated to one of the parties by way of specialisation in the context of exploitation.

**SPECIALISATION**

One aspect of R&D agreements includes specialisation in the context of exploitation of the results. This is where the parties allocate between them individual tasks such as production or distribution, or impose restrictions upon each other regarding the exploitation of the results such as restrictions in relation to certain territories, customers or fields of use. For example, in the context of CAV technology if an automotive company entered into a joint R&D project with a technology company for the production of certain R&D to make CAVs, it may make sense for the automotive company to be exclusively responsible for the production and distribution of the final product and the technology company to be responsible for licensing of the technology. A degree of specialisation is typically permissible in the context of exploiting the results of joint R&D provided the combined market share of the parties is below 25% and there are no hardcore restrictions.

Another type of specialisation can occur separately from any R&D project. For example, two companies both active in the production of systems and sensors for CAVs may decide that one party will focus on systems and the other on sensors; this would be a reciprocal specialisation agreement between competitors. A unilateral specialisation agreement would involve one of the companies giving up the production of sensors in favour of the other and then buying sensors from the other company. Specialisation agreements between competitors could be permissible where the combined market share of the parties is less than 20% and there is no agreement to limit output or production, fix prices or share markets. These criteria are set out in the EU Specialisation Agreement Block Exemption Regulation which it seems reasonably likely would be broadly followed by some of the regulators in Asia.

**INFORMATION SHARING**

A key risk area in the context of any collaboration with competitors is the sharing of competitively sensitive information ("CSI"). In the context of CAV, this could include information on prices, costs, volumes, technologies (to the extent they are outside of a R&D project field) and customer details. The risks around information sharing and how to manage those risks is discussed in our previous e-bulletin in this series on the rise of 5G (see here).

Another issue to watch out for is the potential for new technologies, algorithms and processors to inadvertently be used as a means of sharing CSI or colluding with competitors. An example of this would be if an interconnected platform for CAVs with some artificial intelligence capabilities, which was created as a result of a joint collaboration between competitors and non-competitors, began to disseminate CSI to competitors once in full operation.

**LICENSING OF IP RIGHTS AND STANDARD ESSENTIAL PATENTS**

It is expected that technology licensing between competitors and non-competitors will be a common feature in terms of the creation of the CAV technological architecture and more generally in the CAV market. Licensing agreements between competitors entered into on a reciprocal basis (where technology is licensed between two competitors) or a non-reciprocal basis (where technology is licensed unilaterally from one competitor to another) could in certain circumstances be exempt provided that the combined market share of the parties is less than 20% in the relevant technology and product markets. This is set out in the EU Technology Transfer Agreements Block Exemption
Regulation which has been in force for many years in the EU and which it seems reasonable to expect could be used as a yardstick by some regulators in Asia. Nevertheless, technology transfer agreements between competitors typically require careful analysis and structuring to comply with the antitrust rules in Asia (which in some cases are stricter than the model in the EU).

In March 2018, the China State Council issued measures on the transfer of IP to foreign investors. According to public sources, under the External Transfer of Intellectual Property Rights Measures (the “Measures”), the Chinese government will focus on the impact of overseas transfers of IPRs on national security and/or the impact on the development capabilities for certain key industries in China. Pursuant to the Measures various governmental departments, including those responsible for IP, technology, agriculture, and forestry, are able to become involved in reviews of overseas IPR transfers conducted by the Chinese Ministry of Commerce (MOFCOM). The Measures could conceivably cover CAVs in the future (for example, if this becomes a key industry in China), although this is not certain or clear at this stage.

There is also likely to be a high level of technology standardisation involved in the development of CAV technologies. Technology standardisation has the potential to raise antitrust challenges which should be properly managed. For instance, the holder(s) of standard essential patents for CAV technologies should be careful not to engage in patent hold up (i.e., demanding a higher royalty or fees for patents that have been widely adopted across the industry), and should charge fair reasonable and non-discriminatory (FRAND) royalty rates. Moreover, engagement in a standard setting organisation should be approached carefully because the possibility of the exchange of CSI, as well as allegations of patent ambush, could arise. The implications of standard setting are discussed in further detail in our previous bulletin in this series, available here.

It is clear that Asia is taking a particular interest in developing CAVs. Furthermore, given that the Chinese antitrust authorities are taking interest in the use of IPRs, it is important for companies operating in Asia to properly manage the antitrust risks associated with the CAV technological revolution. According to press reports, China’s National Development and Reform Commission stated in January 2018 that its top enforcement priorities include tackling antitrust violations involving IPRs. The China State Council’s Anti-Monopoly Commission is expected to publish the final guidelines on IPRs later this year. These provide guidance on several antitrust issues including the treatment of SEPs, refusal to license essential IPRs, joint R&D, cross-licensing and discriminatory practices related to IPRs.

**MERGER CONTROL**

Certain types of more formal collaborations in respect of CAVs in Asia could require merger control approvals. For example, if two automotive companies decided to contribute their businesses to a joint venture in the field of CAVs this may trigger merger control filings. It is important to note that some merger control regimes catch joint venture arrangements where the relevant jurisdictional thresholds are met by the parents alone, even if the joint venture in question does not have any operations there (an “offshore joint venture”). These include the merger control regimes in the EU, China and South Korea.

**CONCLUSION**

CAV technology is expected to bring about enormous changes to the way in which we go about our daily lives and interact with the world around us. To realise the huge benefits presented by the technology, it is important for businesses and stakeholders to work together in a variety of different settings and across sectors. The dynamic global regulatory environment, including antitrust laws, is a landscape to be navigated with care in the journey to create the interconnected world of tomorrow.
KEY CONTACTS

If you have any questions, or would like to know how this might affect your business, phone, or email these key contacts.

MARK JEPHCOTT
SENIOR CONSULTANT, HONG KONG
+852 21014027
Mark.Jephcott@hsf.com

MARK ROBINSON
PARTNER, SINGAPORE
+65 68689808
Mark.Robinson@hsf.com

SHEENA LOI
SENIOR CONSULTANT, HONG KONG
+852 21014146
Sheena.Loi@hsf.com

JAMES ALLSOP
SENIOR ASSOCIATE, TOKYO
+81 3 5412 5409
James.Allsop@hsf.com

HOWARD CHAN
ASSOCIATE, HONG KONG
+852 21014265
howard.chan@hsf.com

LEGAL NOTICE

The contents of this publication, current at the date of publication set out above, are for reference purposes only. They do not constitute legal advice and should not be relied upon as such. Specific legal advice about your specific circumstances should always be sought separately before taking any action based on this publication.

Herbert Smith Freehills LLP is licensed to operate as a foreign law practice in Singapore. Where advice on Singapore law is required, we will refer the matter to and work with licensed Singapore law practices where necessary.

SUBSCRIBE TO STAY UP-TO-DATE WITH LATEST THINKING, BLOGS, EVENTS, AND MORE