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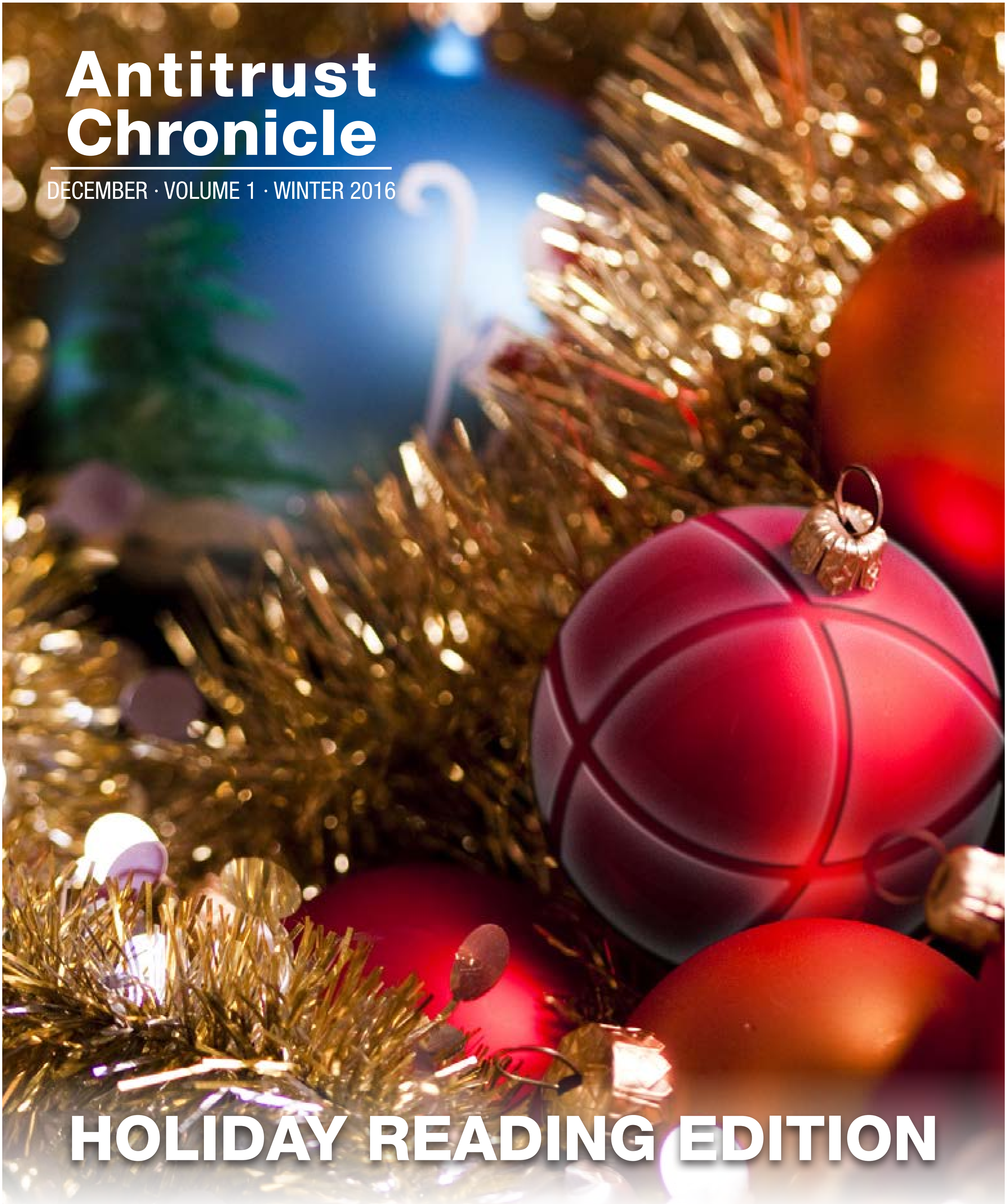

HOLIDAY READING EDITION

CPI COMPETITION POLICY INTERNATIONAL

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LETTER FROM THE EDITOR

Dear Readers,

Before you all enjoy a well-deserved winter break, this month's Antitrust Chronicle brings you a seasonal present throughout our selection of Holiday Readings. This compilation of articles from academics, practitioners and even a newly appointed head of antitrust under President-Elect Trumpwill make your cold (or hot) days of December more pleasant.

This month's edition covers topicsthat created debate for the whole year in a number of jurisdictions. From patent licensing and the scope of patents, to merger analysis in the hospital sector to the banking system and big data. Additionally, we also have contributions about China's decision in Tetra Pak, bathtub conspiracies in India and the Energy Market investigation in the United Kingdom.

In other words, our last issue of 2016 will satisfy our most demanding readers, covering cartels, abuses and mergers from U.S. to China passing through Europe and India.

We sincerely hope you enjoy reading this winter edition of theAntitrust Chronicle and we look forward to bringing you more and new products in 2017.

We wish you all a happy and healthy New Year!

Thank you, Sincerely,
CPI Team

SUMMARIES

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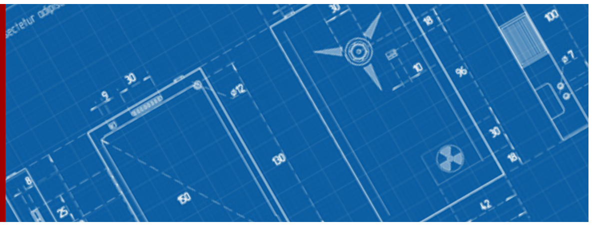

Extra-Jurisdictional Remedies Involving Patent Licensing

By Koren Wong-Ervin, Bruce H. Kobayashi, Douglas H. Ginsburg & Joshua D. Wright

This article discusses the various approaches taken by competition agencies thus far on extra-jurisdictional remedies, as exemplified by four recent decisions: one by the FTC against Google/MMI; two by DG Comp against Motorola and Samsung, respectively; and one by China's NDRC against Qualcomm. The latter three limit remedies to the patent holder's domestic practices in the licensing of their domestic patents, illustrating remedies that are consistent with principles of international comity.

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Big Data, Big Concerns?

By Maikel Van Wissen & Lodewick Prompers

The role that big data plays in the financial services industry is changing at a rapid pace. Data is no longer a lump of facts but rather a vibrant source of insight leading to innovative products and better business decisions.As a result, big data is transforming the processes and organization of financial services firms. In this article, the authors analyze these developments from an EU competition law perspective, providing insights into the relevant analytical framework, key considerations and potential concerns that may arise under EU competition law in relation to the use of big data in the financial services sector.

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Bank Mergers And Systemic Risk

By Zsolt Macskasi

In this article, the author begins with a brief description of the regulatory environment and the recent history of bank mergers in the U.S., followed by a discussionof the regulatory practices regarding the analysis of the likely effects of bank mergers on the stability of the financial system. The article contrasts systemic risk analysis as practiced before and after the financial crisis and concludes with suggestions of how current practices might be improved.

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Analyzing The Geographic Market In Hospital Mergers: Travel Patterns Take A Backseat To Payer Response

By Andrea Levine & Andy Hasty

This article looks at recenthospital merger cases which highlight not only the importance of a properly defined geographic market, but also courts' definitive shift away from relying on patient travel patterns in making this determination. A close look at the ensuing hospital merger challenges shows that patient flow data—and even some semblance of the Elzinga-Hogarty test—continued to inform geographic market analysis in hospital mergers until recently. But now, two appeals courts have issued opinions clearly rejecting the Elzinga-Hogarty framework. How should practitioners react?

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Market Dominance Under The Anti-Monopoly Law: Saic's Landmark Decision On Tetra Pak

By Vanessa Yanhua Zhang, John Jiong Gong & Amanda Jing Yang

On November 16, 2016, SAIC issued a press release on its over-four-year investigation against Tetra Pak for abuse of market dominance. In its decision, SAIC elaborated on several issues in this case, including the market definition, the market power, the abuse of market dominance and the corresponding penalties. In this paper, the authors describe the food packaging industry in China, highlight the main decision of the *Tetra Pak* case, and discuss some implications.

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Unexplained Mysteries Of The Energy Market Investigation

By Mark Friend

In its final report on the Energy Market Investigation, the UK Competition and Markets Authority ("CMA") announced its intention to impose a temporary cap on the prices charged to energy customers on pre-payment meters. A central plank of the CMA's argument is its claim that the Big 6 energy firms have been over-charging customers, resulting in detriment of £1.4 billion (£388 million of which relates to pre-payment customers). However, as this article explains, this detriment figure of £1.4 billion appeared for the first time in the final report, without any prior consultation, and significant elements of the CMA's detriment calculations are redacted, making it impossible to verify whether the CMA's analysis is robust. Given previous analytical errors by the CMA at earlier stages in the investigation, there are reasons to be cautious before accepting the CMA's findings at face value.

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Bathtub Conspiracies – An Indian Competition Law Perspective

By Ravisekhar Nair & Aakarsh Narula

The Competition Commission of India ("CCI") has become one of India's most active regulators. The wide-ranging commercial implications of competition law enforcement on domestic and international business groups present in India have made it imperative for them to insulate their legitimate commercial practices from conduct which may be abusive or anti-competitive. One such area within which the mandate of CCI's intervention remains largely untested is the regulation of business groups' internal cooperation and arrangements, and their resultant obligation to ensure parity of treatment between a competitor and owned verticals.

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Challenge Restraints And The Scope Of The Patent

By Erik Hovenkamp

Challenge restraints are used within a variety of different patent agreements – ranging from ordinary licensing deals to "reverse settlements" – with varying competitive effects.However, the courts have failed to recognize challenge restraints as a distinct antitrust issue. This brief article explains why they ought to be viewed as such. The analysis also helps to clarify the proper ambit of antitrust intervention in patent agreements.

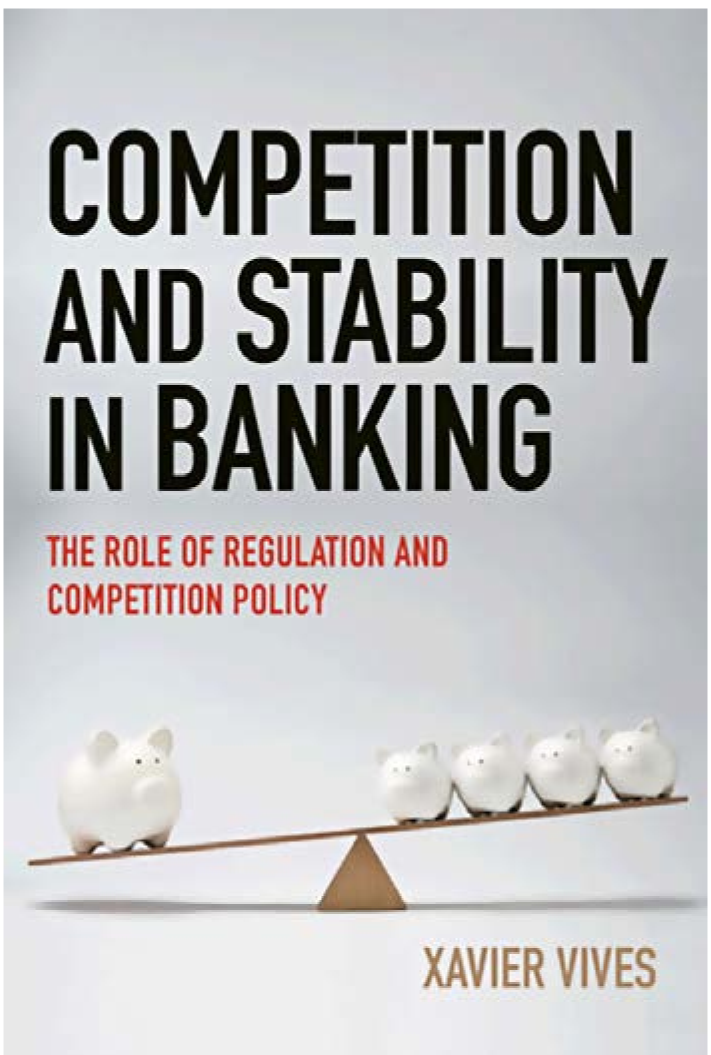
CPI TALKS

CPI – Inside the ICN Cartel Workshop, Madrid, October 2016.

In this month's CPI Talks, we give our readers a special interview with the ICN Cartel Workshop co-chairs, ACCC and FAS and the ICN Cartel Workshop host, the Spanish CNMC. The heads of these agencies explained to CPI the aim of this workshop, they discussed hot topics in cartel enforcement, such as individual and criminal sanctions, leniency programs, the role of new technologies and they went even further talking about detection, deterrence and investigative tools.

This is a unique opportunity to learn from the source what conduct agencies are most concern about, what are they planning for in the years to come and how to meet their expectations.

CPI SPOTLIGHT



Is banking competition good for society? Does competition policy in banking need to take into account the specificity of the sector? What policies can best protect and stabilize banking without stifling competition?

Institutional responses to such questions have evolved over time, from interventionist regulatory control after the Great Depression to the liberalization policies that started in the United States in the 1970s. The global financial crisis of 2007–2009, which originated from an oversupply of credit, once again raised questions about the performance of competitive banking.

Competition and Stability in Banking addresses the relationships between competition, regulation, and stability, and the need to coordinate banking regulation with competition policy.

Xavier Vives argues that while competition is not responsible for fragility in banking, there are trade-offs between competition and stability. Well-designed regulation will alleviate these trade-offs but not eliminate them, and the specificity of competition in banking should be accounted for in competition policy. Vives argues that regulation and competition policy should be coordinated, with tighter prudential requirements in more competitive situations, but supervisory and competition authorities should stand separate from each other, each pursuing its own objective. Vives reviews the theory and empirics of banking competition, drawing on up-to-date analysis that incorporates the characteristics of modern market-based banking, and he looks at regulation, competition policies, and crisis interventions in Europe and the United States, as well as in emerging economies.

ANNOUNCEMENTS

CPI ANTITRUST CHRONICLE FEBRUARY 2017

The Second Antirust Chronicle of 2017 will address The U.S. Antitrust / EU Competition Law Outlook 2017-2020, a relevant topic given the recent political events worldwide.

CPI encourages authors to address this topic from the angle they consider most interesting or especially relevant.

Contributions to the Antirust Chronicle are about 2,500 – 5,000 words long. They should be lightly cited (follow bluebook style for footnotes) and not be written as long ponderous 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 by January 15, 2017 to Sam Sadden (ssaden@competitionpolicyinternational.com) and Aitor Ortiz (aitor.ortiz@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 in any topic related to competition and regulation, however, for the February issue, priority will be given to articles addressing the abovementioned topic. Co-authors are welcome. Contributions to this CPI Antirust Chronicle will be considered for our CPI Journal.

WHAT IS NEXT?

This section is dedicated to those who want to know what CPI is preparing for the next month. Spoiler alert!

The January edition of the Antitrust Chronicle will contain a variety of articles addressing Competition in Digital Markets. From geo-blocking and antitrust investigations to big data to market definition and enforcement, including a wide range of sub-topics addressing digital markets.

CPI TALKS: INTERNATIONAL COMPETITION NETWORK'S CARTEL WORKING GROUP MADRID, OCTOBER 2016

Aitor Ortiz,
Managing Director for Competition Policy International

AO: Thank you all for coming. We are joined today in CPI Talks by the organizing commissioners for the ICN Cartel Workshop: Marcus Bezzi from Australia's ACCC, Vladimir Kachalin from the Russian Competition Authority, Eduardo Prieto from the Spanish Competition Authority, and MaríaOrtíz from the International Competition Network.

The first question for the readers and viewers who may not be familiar with the ICN's work: What is the purpose of the Cartel Workshop?

Marcus Bezzi: The Cartel Workshop is really an opportunity for agencies to get together and talk about our work, exchange our views and thinking on the issues we're each facing in our daily lives, share ideas about how to overcome problems that we might be facing, and to identify best practices, and talk about how we might achieve those best practices in our own agencies.

I think another thing that is very useful is to have conversations about problems we're not quite managing to overcome, and it's great to be able to share that sort of discussion with people who are doing the same job as yourself - I've found that from my own personal experience.

And I think finally what I would say is that it's great also to have NGA's here, because it gives them an insight into the issues that we're currently discussing and some of the solutions that we as agencies are putting forward. And it helps them to understand us a little bit better, and helps them also to contribute to some of the discussions on solutions and some of the ways of dealing with thing going forward.

Vladimir Kachalin: I would like to echo Marcus in our country, and complement him to some extent, by saying that generally the ICN Cartel Working group is intended to facilitate discussion of cartel issues among competition authorities. The CWG have had quite a lot of these workshops, I think this one is thethirteenth. So twelve workshops in the past few years. Also, the CWG participates in all ICN conferences, and we have a quite extensive agenda there as well.

So this work is designed to enhance anti-cartel enforcement, and this actually names the workshop, and covers issues of special interests for both competition enforcement agencies and legal and scientific professionals working on competition issues - let me quote a few words from my actual speech here -

In fact, cartels continue to overcharge customers and create dead loss, with different estimates of this surcharge: so the OECD claims that this extra charge rises to roughly 15% to 17%, while some academic scholars, quite reputable academics like Connor &Lande, estimated from 31% to 49% - and there is an observable difference in the estimates. In fact, we do not have complete understanding of the cartelization problem, even at a superficial level where we can observe the cartel's activities from outside the cartel. And even these estimates show a lot of difference, so we don't know exactly what kind of problems they create. And given the disclosure rate of the cartels, which is not so high if I put it cautiously, we do not know so much about the inner strategy of cartels. What it really is that people take to create cartels; how cartels are disciplined; what are the kinds of punishment for cheating in the cartels. We have some insight on that, but more comprehensive knowledge is definitely lacking on that. And filling these gaps is one of the purposes of these workshops… It helps to understand how the existing methods of cartel deterrence can be improved and what new techniques and methods in anti-cartel enforcement can be introduced.

The selection of topics for the workshop was prompted by requests from both antitrust authorities and private practitioners to the themes covered within the anti-cartel workshop. These themes are related to the so-called ICN Second Debate Feedback, which was taken into account when designing this workshop agenda. The agenda includes the most acute and burning issues of anti-cartel enforcement, both private and publicsuch as Investigation Strategies and Techniques; Leniency and Triggering Leniency Applications; Detection Tools for fighting bid-riggings; cartel leads and evidence gathering and use of indirect evidence. Substantial attention will be given to the combination of public and private enforcement, and this will include issues such as settlement, damage recoupment using a kind of class-action or similar mechanisms that would help to recoup damages for a big number of victims of cartelizations, for instance, people at a grocery store.

Some technical features, like building investigator units, procedural fairness & due process, relationship between agencies and prosecutors and the whole array of deterrence issues, like deterrence itself, remedies, sanctions, damage redress, fines calculations and compliance. Additionally to that - issues related to cartels and corruption and criminalization of cartels in the ministry system will be addressed as well.

You mention many things that the workshop will cover, but What is the 'hottest' topic right now, either for agencies or for companies?

Eduardo Prieto: I guess each of us has its own perspective. You should take into account that as agencies our work is focused on our territories, and therefore while we share many of the problems of cartel fight like investigations, detection or sanctioning, there are others that depend on the jurisdiction you are in.

For example- there is a difference between the EU jurisdiction where we have a network of NCAs able, for example, to share information about cases, or to coordinate at early stages vis-a-vis other jurisdictions (like Australia or Mexico for example) where difficult extra-territorial issues have to be faced in the context of leniency applications, for example. We are not so much concerned about that, because if we have a problem with a cartel that is operating in Portugal and France we have legal instruments to solve it internally. So from a National perspective, in the case of Spain we are very much focused on most of the topics that have been dealt with here, like cartel detection, dawn raids, leniency programs, how to set fines, and so on. These are the current questions raise by an administrative system.

From that point of view, one of the features of this cartel workshop, of which we are especially proud of, is that many of the problems that we have in the Spanish administrative system are also faced in other jurisdictions with similar legal background, namely Latin American. In the case of Ibero-american jurisdictions we share similar legal traditions and this brings about problems which are common to all of us when dealing with cartel proceedings. So having this in mind, we thought it will be useful to share experiences and learn from each other, taken advantage of our legal similarities. That is why we decided to set up two BOS in Spanish, one on dawn raids and its procedural challenges and the other on fine setting: criteria for calculation.

MB: Can I add, that one of the things that I think is a great tradition within our sub-group, is that we try to rotate the workshop around the big geographic areas of the world, so we have it in Asia, then we have it in the Americas, then we have it in Europe or Africa. And that really is to recognize the fact that, if it's in Europe, then there are a lot more European agencies that can come - Actually, ironically we've got a lot more Latin American agencies in Madrid than we did last year, when it was in Colombia. I am not sure why, I've asked some people why and I've heard various theories. But in Colombia we also had quite a few Africans and Asians there. The previous workshop was in Taiwan, and we had a lot Asian people there, but we also had a lot of Africans, and the Africans had come because the previous workshop had been in Cape Town and a lot of them had experienced the benefits of the workshop, and then decided to go to Taipei, even though it's a long way particularly from southern Africa to Taipei.

So it's a really good feature of the workshop that we move it around and allow regional agencies to have more of the focus one year, then the next year there will be a different regional focus. Next year for example we have the workshop in Ottawa in Canada. Hopefully there'll be more of an opportunity for American agencies, Latin American and North American agencies to get together. Though we also expect that many agencies in Asia, Africa or Europe who have experienced the benefits of the workshop will come again to the next workshop in Ottawa.

VK: Maybe coming back to your question on the Hot Topics.

The Investigation cycle for cartel cases includes the following major stages - There's detection, proof and deterrence - and all of them are in fact Hot.

MB: Just on the detection side - Leniency has been an incredibly powerful tool. Now, it doesn't work very well in some jurisdictions, so it's always a hot topic as to what agencies need to do to change their leniency policies to make them work well. It is always a hot issue for agencies.

The other Hot Issue is what do you do when you don't have leniency. How do you find out about cartels? That's been an issue of interest to many agencies for a long time and you'll see it referenced in the program in a number of ways.

I think the other big topic frankly is Digital Evidence Gathering. People are all talking about DGE and the challenges of DGE… and also the advantages of it as well. My view is that there are significant advantages for agencies, massive amounts of data that you can get a hold of and analyse. Obviously there are challenges as well, but this continues to be a very Hot Topic

The ICN in general is the perfect place to share experiences about techniques, how different agencies do different things. But when it comes to specific cases, is it also the right place? Do you discuss specific examples in your jurisdiction to guide other agencies, or does the collaboration only go so far?

VK: I would say that this is a good place not for discussing specific Cases, because it's quite sensitive, but it's the perfect place for discussing specific techniques and specific issues of anti-cartel enforcement.

Generally, discussion of specific cases is something hard to do because of national confidentiality legislations. So if you have a pending case and you obtained the information from a company, whether voluntary or compulsory, this information is protected by the national confidentiality legislation and you cannot disclose it to anyone, including a foreign competition authority, with quite limited exceptions of some national treaties, like the one between Australia and New Zealand (Marcus can elaborate a little bit more on that) or the European Competition Network. Generally competition agencies are in such a position that they cannot exchange information related to particular cases. However, they can exchange here their approaches, their estimates of probabilities of cartelization in particular markets, and given this, the ICN Cartel Working Group has undertaken a project that is currently being led by the Japan Fair Trade Commission called the Framework for Information Exchange, and in fact it's quite easy but very effective tool to help contact persons in competition agencies of all the world, to link together via the contact details provided within the framework and actually it's kind of a database. So they can exchange opinions on cartelization issues both within their regions and globally. And this is a very helpful thing I think.

MB: It is, I agree, although I take a slightly different view. I know there are some agencies that are taking advantage of the workshop to have some discussions on specific cases that they're working on - not in the sessions, but in the sidelines - and this is also a very significant advantage for us.

In the end, for many it concerns the same problems and with the same actors…

MB: Sometimes with the same cases - they are parallel investigations. So there are some discussions happening in the sidelines about what's going on in those cases. And what Vladimir says is absolutely right, about the limits on sharing confidential information obtained from parties, but it is possible for agencies to share their own confidential information without limitation. And all of the other things you mentioned, Vladimir, that you can share, are incredibly useful to share and can be very productive. Actually at the ACCC we always take up the opportunity to meet with other agencies working on the same cases we're working on when we come to these workshops. Now, not every agency does that but I know we do, and it's another advantage of the workshop, those in-person meetings.

VK: Just going back to the call you made during the opening session that people should Network, and that helps bring a lot together. And after having met each other at the workshop, especially after having met at several workshops, they do familiarize with each other.

MB: And this is a very practical thing. If you've got to know someone from another agency and all of a sudden you have some issue - I had this six weeks ago, where we wanted to get some evidence that was in another jurisdiction and there was no formal method we could use to get the evidence. So we made a phone call to people who we'd got to know through the workshops to the other jurisdiction, we talked through the various possibilities, they gave us an idea we hadn't thought of, we used that idea and we've now got the evidence that we needed. Now, that agency was confident that nothing was done that was inconsistent with the law or the spirit of the law in their jurisdiction, but we got the evidence we needed from their jurisdiction to pursue our investigation. And it's from these personal connections, that would otherwise have made it very difficult to do that transaction.

VK: This is actually the merit of the ICN in general, because it is an informal organization of very formal persons and very formal institutions. So when the diplomatic channels and agency-to-agency channels are not sufficient people can just call - to the extent feasible under their national confidentiality law.

MB: We are of course very conscious of the limits on us in terms of what we can disclose, the confidential information that we can disclose, but there's an awful lot that you can disclose without coming anywhere near those limits actually.

VK: And actually both sides, both the requested and the requesting side are aware of those confidentiality limits, so the requesting side generally would not ask the questions that would put the requested site in this kind of awkward situation.

One topic becoming very popular in some jurisdictions - Criminal sanctions. Many jurisdictions and agencies are adopting this measure. My question is: Is this new sanction tool something that agencies are actually planning to enforce, or simply the mere fact of having this in the law is enough of a deterrent to bring more leniency applicants? Is this for real, or is it more for effect?

María Ortíz: First of all, the Spanish Competition Authority is very happy and proud of hosting the ICN meetings. it's a great opportunity to meet the ICN people here in Madrid as the meeting point and to fully participate in this workshop. I'm sure this is good for the enforcement of competition law, but also for markets and citizens.

Concerning your question on criminal sanctions, it will depend on the jurisdiction you are considering. At the moment, there are different systems, either criminal or administrative or a combination of both. Nevertheless, I think there is a broad opinion in the ICN that in any system there have to be tools to makeindividualsto internalize the risk of anticompetitive behavior.

In some jurisdictions there are criminal sanctions for that, in others like the Spanish jurisdiction for instance, we have administrative sanctions for individualsto make individuals take into account the risk of antitrust; sothere are different ways for the same objective. In Spain since 1989 our competition law envisages administrative sanctions (fines) to individuals, but it was used in very few occasions in the past. Just one year ago our Supreme Court has called the attention on this tool to reinforce deterrence. So, I think that even if a jurisdiction doesn't have criminal sanctions, there are other tools with which you can attain similar objectives. And there are also other deterrence tools like, for instance, the disqualification of firms to participate in public tenders which can have an important negative effect on the results of the companyAnyway,So considering that we have in hand different tools this ICN workshop is a good opportunity to exchange what the different jurisdictions are doing at the moment and explore how we, within the framework of our own jurisdictions, can improve our sanctioning systemsto deter antitrust infringements, which in the end I think is the key objective of any antitrust agency- Deterrence.

MB: Deterrence is the one goal and overriding goal of everything we do. Just specifically from an Australian point of view this is something that's very relevant to us, because we introduced criminal sanctions in 2009 and we had our first case this year. We have been very conscious of the need to be able to demonstrate that we are serious and it's not just something that's on the statute books.

We have put a lot of resources into investigating cases to a criminal standard, and we're very proud in the first case that's been begun by our prosecutor, that the defendant has pleaded guilty, because that demonstrates that we've developed the capacity to conduct an investigation to the very high standards that apply to criminal prosecutions. We've got a pipeline of cases -around a dozen cases- that we hope will be following on from this first one. Now, criminal investigations can take a long time in Australia, I think they take a long time in many other jurisdictions as well. But we're confident that we'll have a number of cases each year going forward, and we think that's really important. Unless you have cases and the regulated community can see that there are cases being run, then criminal sanctions will not be an effective deterrent.

VK: I can only echo Marcus on that, and I think that the major reason for criminalization is to improve deterrence. However, while getting engaged in all of that, we need to find a proper balance between deterrence of cartels and individual rights. And to ensure the proper balance indeed, the standard of proof should be very high, because eventually a person may go to jail for cartelization, and he is an individual, a citizen of the country, and his individual and human rights are protected by law. So there should be a very strong argument to always keep this protection.

So, in general I would agree that criminalization is something that we should be very cautious about. And as far as the Russian perspective is concerned: well, we do have criminal penalties for people directly involved in the organization of cartels, and moreover to people who urge other members to enter the cartel. So if this is proven a person may either go to jail or at least get a criminal record, even if he is released by a judge from serving a real term of sentence, he'll have a criminal record.

On the other hand, we have a provision in the Russian competition law, the one on coordinated or concerted activities that are a little bit easier to prove than a cartel. It's something that can be proven on behavioral analysis, economic analysis, and so on, and the sanction for it is less than the sanction for cartelizations. So the agency has already introduced some warning or some fine, but if it has sufficient deterrent effect - so it's a kind of Cease and Desist order, but quite a mild one. So then, we would not proceed to a real cartel investigation if they really withdraw from the cartel and compete fairly, and if we have significant and sufficient proof that they have begun to behave properly. But if not we'll proceed to the serious investigation, and if a person is proven guilty he'll receive a sentence or at least a criminal record, because we have a criminal law that applies to it.

EP: I just wanted to make something clear; as Marcus says the important thing is Deterrance. We are not talking about criminal law. We are applying now sanctions to individuals, but it's not a criminal issue, it's an administrative sanction. So the issue is fines on Individuals in addition to fines to Companies, not Criminal vs. Administrative.

It seems like individuals are being more and more pressured by the criminal than the administrative label.

EP: That's the point. The deterrence effect is much higher if you send somebody to jail, but also the possibility of sending somebody to jail is also much more difficult than imposing an administrative sanction. In our case our sanctions are very low actually. We have a maximum of 60,000 euros, and that is not a problem for company managers in most cases. So the thing is not the amount of the fine, but being involved in a proceeding, receiving, as Individual, a statement of objections and having a personal problem because you've been caught in a cartel case – either as collaborator, leader, inductor, or whatever. That makes executives and managers much more concerned about what they are doing, and when they see in the newspaper that somebody has been fined 30,000 euros - which is quite a low fine -, they may start to think twice about the consequences of their actions as individuals.

VK: In my country we also have such punishment for managers recognized as guilty in cartelization as disqualification - they are disqualified from taking managerial positions and business-forming for five years or so, so this is usually the end of their professional career - they have to go out and serve as a street cleaner.

MB: We find that often people we investigate are also very worried about disqualification. We can impose quite large fines, either criminally or civilly, but they can be more concerned about disqualification. I was involved in a meeting with an individual earlier this year who was much happier to pay a larger fine than to be disqualified from managing a business.

I think the point is, as agencies we need a range of tools to provide effective deterrence.

I was going to ask if there is a particular message to corporations, but I guess the message is to individuals.

MB: Well, corporations act through individuals.

What do you expect from this workshop, and what would you like to take home?

EP: We are very happy to host it. We want to contribute to the ICN because we think that these international workshops are of tremendous value to all of us as agencies. It serves as a forum to exchange, to learn, and to show others what you have learned and I think this is something very useful. Every sector has its annual conferences – car makers, doctors, etc.- to share their knowledge and to know each other. So from the Spanish perspective, we want to show the international community that we are very much committed to fight against cartels. For the last ten years we have been working very hard in this area and we would like the next ten years to be as successful as the last ones. For that we need to be in touch with other agencies in order to have the state of the art instruments and knowledge to be able to do it. Besides, we are recipients of that knowledge and we want to give it back to others too.

MB: I have two very concrete goals. First, to be able to identify two or three practical improvements I can take back to my agency. If I can do that, from my point of view this workshop will be a success. And the other thing I would like to do is to get to know a larger network of colleagues. That is why I issued the challenge during my opening statement for everyone to meet at least seven new people that they don't know. For me that's very important: building that network of competition enforcers who are focused on cartels. That's very important. The intangible benefits of that become tangible and concrete quite quickly in my experience.

VK: My goal is very similar to that of Marcus' from my agency's perspective: I just want to see how much in line what we are doing is with what other people are doing worldwide, and this intangible asset and exchange of techniques is very important. We are learning a lot from these events, and moreover we also have a strong capacity for cartel disclosure in Russia and we have several international cases so I can elaborate more if time permits.

But from the CWG perspective, I would say that we assign the agenda of this workshop based on the requests from the CWG membership, as well as topics indicated by officials and government advisors in the ICN segment. So this workshop was designed based on the bottom-to-top principle, not top-to-bottom.

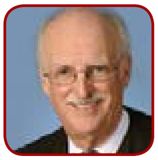
MB: That's another feature of the workshop that we're very proud of. We always get feedback at the end of each workshop about how it might be improved and that is always incorporated, together with the other sources of feedback from members, into the development of the program. So to the extent that you can look at the program and ask yourself 'what are the key issues'? - That program reflects the key issues. It reflects the collective thinking of the agencies within the subgroup.

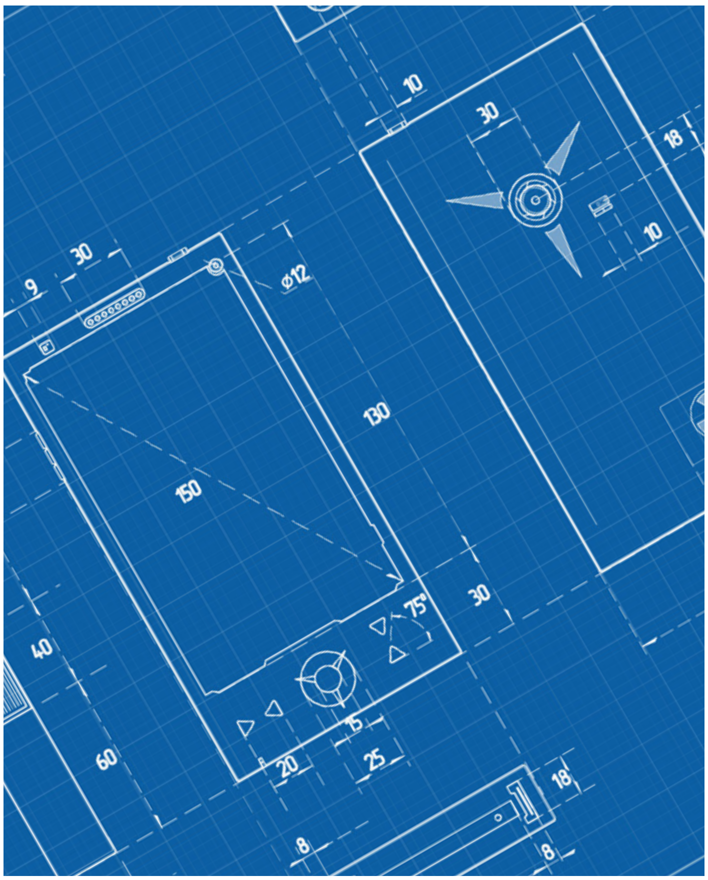
END

EXTRA-JURISDICTIONAL REMEDIES INVOLVING PATENT LICENSING

BY KOREN WONG-ERVIN, BRUCE H. KOBAYASHI, DOUGLAS H. GINSBURG & JOSHUA D. WRIGHT[1]





I. INTRODUCTION

In the last several years, competition agencies around the world have imposed or considered imposing extra-jurisdictional remedies on patent holders, particularly owners of standard-essential patents ("SEPs") upon which the patent holder has made a commitment to license on fair, reasonable and non-discriminatory ("FRAND") terms. For example, in January 2013, the U.S. Federal Trade Commission ("FTC") entered into a consent agreement with Motorola Mobility and its parent (Google) that, except in limited circumstances, prohibits the companies worldwide from seeking injunctive relief against infringers of any FRAND-assured SEP in its global portfolio.[2] Similarly, the Korea Fair Trade Commission and the Taiwan Fair Trade Commission are reportedly considering imposing worldwide restraints on Qualcomm's enforcement of its global patent portfolio in order to remedy alleged competition violations involving the company's patent licensing practices.

Imposing worldwide remedies can conflict with principles of international comity and result in significant substantive conflicts with the antitrust agencies of other countries given the wide variety of approaches taken globally on antitrust matters involving intellectual property rights ("IPRs"), particularly with respect to honoring an IPR holder's core right to exclude. This has the potential to produce significant negative effects on competition and welfare, particularly if conduct that is widely considered to be generally pro competitive is the object of the worldwide prohibition. Even when attacking universally condemned activity such as price fixing, global remedies risk over-deterrence when national authorities do not coordinate to adjust the penalties they impose. Moreover, extra-jurisdictional remedies are likely unnecessary to resolve any alleged harm to consumers in the jurisdiction imposing them.

Each competition agency forgoing global remedies does not prevent competition law solutions to global harms, and is appropriate to mitigate the risk of over-deterrence. Honoring principles of comity also can mitigate a race to the bottom in competition law enforcement by preventing the lowest common denominator approach to competition law remedies from governing across the board. Indeed, some, including officials at the highest levels of the U.S. government, have raised concerns that foreign governments may be "using numerous mechanisms, including [antitrust laws] to lower the val-

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2 Agreement Containing Consent Order, *Motorola Mobility LLC & Google Inc.*, FTC File No. 121-0120(Jan. 3, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolaagree.pdf; Final Order, *Motorola Mobility LLC & Google Inc.*, FTC File No. 121-0120 (July 24, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolado.pdf.

ue of foreign-owned patents" in order to benefit those within their countries who implement foreign technology;[3] that is, the competition authority may be enforcing competition law not solely to protect their consumers from potentially anticompetitive licensing practices, but also to benefit local implementers or a "national champion" in a way that is inconsistent with the pro competitive goals of the competition laws of other jurisdictions.[4] While competition officials across the globe have emphatically denied such claims, imposing welfare reducing global remedies on patent licensing, in addition to reducing competition and welfare, will also draw increased criticism and threaten to harm an agency's credibility with stakeholders, the international antitrust community, and the public.

This article discusses the various approaches taken thus far, as exemplified by four recent decisions: one by the FTC against Google/MMI; two by the European Commission ("DG Comp") against Motorola and Samsung, respectively; and one by China's National Development and Reform Commission ("NDRC") against QUALCOMM. In contrast with the FTC's investigation, the latter three limit remedies to the patent holder's domestic practices in the licensing of their domestic patents (i.e. activity and patents within the territory of the investigating authority), illustrating remedies that are consistent with principles of international comity.

II. THE ECONOMICS OF COMPETITION LAW CONFLICTS

The proliferation of competition laws across the globe was a predictable and potentially beneficial response to economic globalization, allowing more individual jurisdictions to address anticompetitive conduct. A consequence of the proliferation of distinct competition laws in multiple jurisdictions is the additional cost imposed on those subject to the laws of multiple jurisdictions.[5] There are two main types of costs generated by the existence of competition laws in multiple jurisdictions. The first are the transaction costs involved in having to deal with multiple jurisdictions. These costs are present even when the laws of the different jurisdictions are similar. The second type of costs is generated by multiple jurisdictions with different and often inconsistent laws applied to transactions or conduct with potentially distinct competitive effects in different jurisdictions or markets.

To examine the first type of costs, consider conduct that is universally and uniformly prohibited, such as naked horizontal price fixing. From an economic perspective, price fixing is a costly and inefficient way to transfer welfare from consumers to producers; it should be prohibited because, in addition to transferring consumer surplus from consumers to the cartel members, the deadweight losses reduce total welfare. Applying the theory of optimal penalties, optimal deterrence will be achieved when the cartel members fully internalize the costs caused by the behavior.[6] This is achieved through a total fine equal to the harm caused (in this case the transfer plus the deadweight losses) divided by the probability of punishment.[7]

In theory, optimal deterrence can be achieved at the lowest cost when one jurisdiction imposes the optimal fine on one cartel member, calculated on the basis of all the harm the cartel caused worldwide. The reason is that optimal deterrence requires only that the potential cartel members internalize *ex-ante* the full harm caused by their actions, so in this idealized setting it does not matter for this purpose that all guilty persons are not punished,[8] nor does it matter that all who are harmed are unable to sue and recover damages. Optimal damages[9] and penalties in such a case could certainly include extra-jurisdictional remedies.

However, even in the case of cartels, a strategy that allows one jurisdiction to impose optimal sanctions based on worldwide harms can generate over-deterrence costs, if other jurisdictions also impose sanctions based upon the same behavior. Under these conditions, the resulting fines and penalties can be greater than the optimal sanction, resulting in over-deterrence. This is especially true in cases where sanctions fall upon the shareholders of corporations rather than the individual agents responsible for the illegal activity of

3 Michael Martina & Matthew Miller, *As Qualcomm Decision Looms, U.S. Presses China on Antitrust Policy*, REUTERS (Dec. 15, 2014, 11:05 PM), http://www.reuters.com/article/us-qualcomm-china-antitrust-idUSKBN0JU0AK20141216 (quoting White House National Security spokesperson Patrick Ventrell and referring to a 2014 letter sent from U.S. Treasury Secretary Jack Lew to Chinese Vice Premier Wang Yang recommending that China avoid using antitrust law to lower royalty rates).According to Ventrell, "President Obama raised these concerns about the enforcement of China's anti-monopoly law directly with President Xi when they met in Beijing last month."Id.

4 See, e.g. Paul B. Stephan, *Against International Cooperation, in* COMPETITION LAWS IN CONFLICT: ANTITRUST JURISDICTION IN THE GLOBAL ECONOMY (Richard A. Epstein & Michael S. Greve eds., 2004); U.S. CHAMBER OF COMMERCE, COMPETING INTERESTS IN CHINA'S COMPETITION LAW ENFORCEMENT: CHINA'S ANTI-MONOPOLY LAW APPLICATION AND THE ROLE OF INDUSTRIAL POLICY (2014), https://www.uschamber.com/sites/default/files/aml_final_090814_final_locked.pdf; Laurie Burkitt & Bob Davis, *U.S. Treasury Warns China Over Anti-Monopoly Efforts,* WALL ST. J. (Sept. 14, 2014, 7:02 AM), http://www.wsj.com/articles/u-s-treasury-warns-china-over-antimonopoly-efforts-1410687635.

5 See Richard A. Epstein & Michael S. Greve, *Introduction: The Intractable Problem of Antitrust Jurisdiction, in* COMPETITION LAWS IN CONFLICT, *supra* note 4.

6 Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

7 See William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983); A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869 (1998).

8 See, e.g. Frank H. Easterbrook et al., *Contribution Among Antitrust Defendants: A Legal and Economic Analysis*, 23 J.L. & ECON. 331 (1980).

9 See, e.g. William M. Landes & Richard A. Posner, *Should Indirect Purchasers Have Standing to Sue Under the Antitrust Laws? An Economic Analysis of the Rule of Illinois Brick*, 46 U. CHI. L. REV. 602, 615-21 (1979).

the corporations that employed them.[10]

The second type of costs from extra-jurisdictional application of antitrust remedies is inconsistency costs, which include the error costs that result from applying a uniform rule to non-uniform circumstances. Consider the case in which the proposed remedy, although efficient in the jurisdiction imposing it, is not efficient in all jurisdictions. For example, consider a merger that has different competitive effects in different jurisdictions or markets. The imposition of a uniform worldwide remedy (enjoining the merger) will reduce welfare relative to a jurisdiction-by-jurisdiction approach that takes the jurisdiction-specific competitive effects into account. If jurisdiction or market-specific divestitures are feasible, then a uniform worldwide remedy, as opposed to remedies limited to activity in a particular jurisdiction, impose welfare losses on the margin. Extra-jurisdictional remedies also increase the probability that the transaction would be deterred in its entirety. This would also be true, *a fortiori*, where the proposed worldwide remedy is based upon a non-competition goal in the law of the jurisdiction imposing the remedy but is inconsistent with the pro competitive goals of competition laws in most other jurisdictions.

Another type of inconsistency cost is incurred when the best approach to a particular competition law problem is unclear, and different jurisdictions adopt different approaches. Those different approaches can promote experimentation that generates valuable information regarding the effect of the various policies without necessarily imposing upon other jurisdictions the costs of any one jurisdiction's approach[11]. An example would be the different approaches taken in various jurisdictions to certain vertical restraints, such as resale price maintenance. In contrast, the application of remedies that apply worldwide impose one jurisdiction's particular approach and related costs on all other jurisdictions, which can suppress the benefits of experimentation and the jurisdictional competition that would serve to mitigate the costs of antitrust enforcement in the long run.

The existence of the costs identified above does not necessarily imply that a regime in which each jurisdiction's remedies are limited to conduct or effects within its borders will be superior to a unitary enforcement strategy or a regime of international antitrust governed by a body of jurisdictional and territorial rules that attempt to coordinate enforcement.[12] But, in the absence of cooperation and effective coordination among those responsible for enforcement of the competition laws worldwide, such costs are likely to be significant insofar as there are aspects of competition policy as to which there is no consensus. Under these circumstances, territorial limits, including jurisdictional rules[13] and extraterritorial limits on remedies[14], can be a second-best efficient solution to the problems created by multiple and diverse laws.

III. ALTERNATIVE APPROACHES TO EXTRA-JURISDICTIONAL REMEDIES

In 2013, the FTC entered into a consent order with Motorola Mobility and its parent (Google) that included extra-jurisdictional restrictions on the companies' exercise of their patent rights[15]. Specifically, the FTC alleged that Motorola, by seeking injunctive relief on FRAND-assured SEPs against "willing licensees," violated the "unfair methods of competition" provision in Section 5 of the FTC Act The order prohibits the companies from seeking or enforcing "injunctive relief," defined as "a ruling of any legal or administrative tribunal, whether in or outside of the United States[16]," on any "patent claim" on a patent "issued or pending in the United States or anywhere else in the world[17]." The FTC's remedy is controversial as a matter of economics, as critics have pointed out the potential welfare costs of preventing a patent holder from using injunctive relief to protect its property

10 Douglas H. Ginsburg & Joshua D. Wright, Antitrust Sanctions, COMPETITION POL'Y INT'L, Autumn 2010, at 3; Bruce H. Kobayashi, *Antitrust, Agency, and Amnesty: An Economic Analysis of the Antitrust Laws Against Corporations,* 69 GEO. WASH. L. REV. 715 (2001).

11 A regime of experimentation will generate transitory costs when welfare reducing policies are chosen. For example, domestic remedies can harm incentives to innovate in other jurisdictions if remedies are imposed to lower royalty rates of foreign companies below the level required to induce investment.

12 See, e.g. Stephan, *supra* note 4.

13 See Foreign Trade Antitrust Improvements Act of 1982, 15 U.S.C. § 6a (2012); *see also* Michael J. Trebilcock & Edward M. Iacobucci, *National Treatment and Extraterritoriality, Defining the Domains of Trade and Antitrust Policy, in* COMPETITION LAWS IN CONFLICT, *supra* note 4.

14 *BMW of North America, Inc. v. Gore*, 517 U.S. 559 (1996) (limiting use of extraterritorial activity as basis for punitive damages); but see Polinsky & Shavell, *supra* note 7 (optimal damages could include extraterritorial damages in the *Gore* case).See also *Morrison v. Nat'l Austl. Bank*, 561 U.S. 247 (2010) (limiting extraterritorial reach of the Securities Exchange Act).

15 Statement of the FTC, Motorola *Mobility LLC & Google Inc.*, FTC File No. 121-020 (Jan. 3, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolastmtofcomm.pdf; Complaint, *Motorola Mobility LLC & Google Inc.*, FTC File No. 121-020 (Jan. 3, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolacmpt.pdf.

16 Final Order, *Motorola Mobility LLC & Google Inc.*, FTC File No. 121-0120, at 4 (July 24, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolado.pdf.

17 Id. at 5.Before the change in the policies of the Antitrust Division of the U.S. Department of Justice with regard to patent licensing, see Abbott B. Lipsky, Jr., *Current Antitrust Division Views on Patent Licensing Practices*, 50 ANTITRUST L.J. 515 (1982) (text of remarks before the American Bar Association Antitrust Section, Washington, D.C. (Nov. 5, 1981)), the agency entered into settlements that imposed remedies on foreign patents, albeit not SEPs. See, e.g. *United States v. Inco, Ltd.*, 1978 U.S. Dist. LEXIS 19900 (E.D. Pa. 1978) (order requiring defendant to license foreign patents); *United States v. Imperial Chem. Indus.*, 105 F. Supp. 215 (S.D.N.Y. 1952) (granting antitrust relief covering foreign patents owned by a foreign company).

rights.[18] The prohibition is also unsupported by U.S. case law, which treats breach of FRAND assurances as a contract issue—absent evidence of deception that results in the unlawful acquisition of market power—and thus inappropriately exports a remedy that was extracted through the consent process but could almost certainly not have been obtained through litigation.[19]

In contrast, the antitrust agencies of the European Commission and of China limit their remedies to domestic conduct pertaining to domestic patents. In April 2014, DG Comp entered into a settlement with Samsung and issued a decision against Motorola Mobility essentially prohibiting the companies from seeking injunctive relief against willing licensees except under certain limited circumstances.[20] DG Comp specifically limited its remedy to conduct occurring in the European Economic Area ("EEA"), and only on patents granted in the EEA.

Likewise, in NDRC's 2015 penalty decision against Qualcomm for allegedly abusing a dominant position by charging unreasonably high royalties, bundling SEP and non-SEP licenses without justification, and imposing other challenged conditions in licenses and on the sale of baseband chips (such as waiving the right to challenge the license), the agency limited remedies to conduct occurring within China and related to Chinese patents[21]. Specifically, the NDRC approved the "rectification plan" submitted by Qualcomm, under which the company agreed: (1) not to bundle Chinese SEPs and non-SEPs and to provide patent lists during negotiations; (2) to charge royalties of not more than 5 percent for Chinese 3G SEPs and 3.5 percent for Chinese 4G SEPs using a royalty base of 65 percent of the net selling price of the device; (3) not to condition the sale of baseband chips on signing a licensing agreement with terms NDRC found to be unreasonable (i.e. a no-challenge clause); and (4) to provide existing licensees with an opportunity to elect to take the new terms for sales of branded devices for use in China[22].

IV. COMITY AND THE CASE AGAINST EXTRA-JURISDICTIONAL REMEDIES

As defined by U.S. antitrust agencies, comity "reflects the broad concept of respect among co-equal sovereign nations and plays a role in determining 'the recognition which one nation allows within its territory to the legislative, executive or judicial acts of another nation.'"[23] The Organization for Economic Cooperation and Development ("OECD") has described comity as the "international legal principle whereby a country agrees to take other countries' important interests into account while conducting its law enforcement activities."[24] According to the OECD, "for over 100 years, public international law has acknowledged comity as a means of tempering the effects of the unilateral assertion of extraterritorial jurisdiction."[25]

As set out above, following principles of comity can protect against multiple and excessive punishments for the same conduct, and are particularly important when the laws and the approach to enforcing vary among jurisdictions. Under these latter circumstances, the principles of comity allow individual jurisdictions to follow or experiment with unique approaches to competition law without necessarily imposing the costs of those approaches on other jurisdictions.[26] (However, as noted above, domestic remedies may also

18 See, e.g. Douglas H. Ginsburg et al., *The Troubling Use of Antitrust to Regulate FRAND Licensing*, CPI ANTITRUST CHRON., Autumn 2015, at 1 [hereinafter Ginsburg et al., The Troubling Use of Antitrust]; Douglas H. Ginsburg et al., *Enjoining Injunctions: The Case Against Antitrust Essential Patent Holders Who Seek Injunctions*, ANTITRUST SOURCE (Oct. 2014), http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/oct14_ginsburg_10_21f.authcheckdam.pdf.

19 See, e.g. Ginsburg et al., *The Troubling Use of Antitrust, supra* note 18, at 1; Douglas H. Ginsburg & Joshua D. Wright, Antitrust Settlements: The Culture of Consent, in 1 WILLIAM E. KOVACIC: AN ANTITRUST TRIBUTE—LIBER AMICORUM (Nicolas Charbit et al. eds., 2012). We note, however, that the FTC's remedy in the *MMI/Google* case also allows the parties to resolve disputes through worldwide portfolio arbitration, which is arguably the most efficient means of resolving such disputes.

20 Press Release, EUR. COMM'N, Antitrust: Commission Accepts Legally Binding Commitments by Samsung Electronics on Standard Essential Patent Injunctions (Apr. 29, 2014), http://europa.eu/rapid/press-release_IP-14-490_en.htm; Case AT.39985—Motorola—Enforcement of GPRS Standard Essential Patents (Apr. 29, 2014), http://ec.europa.eu/competition/antitrust/cases/dec_docs/39985/39985_928_16.pdf; see also generally Oren W. Wong-Ervin, *The European Commission's Safe Harbor Approach to the Seeking of Injunctive Relief on FRAND-Encumbered SEPs*, MONOPOLY MATTERS, Fall 2014, at 16, https://www.ftc.gov/system/files/attachments/key-speeches-presentations/wong-ervin_-_ecs_safe_harbor_approach_-_fall_2014.pdf.

21 Press Release, Qualcomm, Qualcomm and China's National Development and Reform Commission Reach Resolution-NDRC Accepts Qualcomm's Rectification Plan-Qualcomm Raises Midpoints of Fiscal 2015 Revenue and Non-GAAP EPS Guidance (Feb. 9, 2015), http://files.shareholder.com/downloads/QCOM/3864235320x0x808060/382E59E5-B9AA-4D59-ABFF-BDFB9AB8F1E9/Qualcomm_and_China_NDRC_Resolution_final.pdf [hereinafter Rectification Plan]; see also Koren W. Wong-Ervin, *Antitrust and IP in China: Quo Vadis?*, SPRING MEETING CLE (ABA Section of Antitrust Law) 5–6 (Apr. 16, 2015), https://www.ftc.gov/system/files/attachments/key-speeches-presentations/wong-ervin_-_2015_aba_spring_meeting_4-16-15.pdf.

22 Rectification Plan, *supra* note 21.

23 U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT GUIDELINES FOR INTERNATIONAL OPERATIONS § 3.2(1995).See alsoU.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR INTERNATIONAL ENFORCEMENT AND COOPERATION [PROPOSED UPDATE] (2016) (proposed update replacing 1995 guidelines).

24 ORG. FOR ECON. COOPERATION & DEV., INTERNATIONAL CO-OPERATION IN COMPETITION LAW ENFORCEMENT8(2014), https://www.oecd.org/mcm/C-MIN(2014)17-ENG.pdf.

25 Id.

26 See generally COMPETITION LAWS IN CONFLICT, *supra* note 4; Larry E. Ribstein & Bruce H. Kobayashi, *An Economic Analysis of Uniform State Laws*, 25 J. LEG. STUD. 131 (1996).

impose costs on other jurisdictions by, for example, punishing conduct that may be pro competitive or benign and thus reducing incentives to innovate.)

Two factors in particular underscore the importance of applying comity principles to antitrust matters involving IPRs: (1) the inclusion of non-competition factors in the competition decisions of some national agencies, and (2) the dramatically different approaches among national competition agencies to matters involving IPRs.

First, in contrast to the U.S. approach, under which competition law is supposed to be focused exclusively upon economic or consumer welfare, many foreign competition laws, particularly in Asia, explicitly provide for the consideration of non-competition factors, such as "fairness," "social public interest" and "promoting the healthy development of the socialist market economy."[27] Consideration of such non-competition factors can lead to significantly different analyses and conflicting outcomes. Imposing global remedies on foreign patents would lead to the lowest-common denominator governing globally.

Second, in addition to the use of non-competition factors, the substantive approach to antitrust matters involving IPRs varies widely, with the U.S. taking a less interventionist approach and certainly one that recognizes an IPR holder's core right to exclude as fundamental, indeed essential, to protect the incentive to innovate. For example, unlike that of many countries, U.S. antitrust law does not authorize the agencies to regulate licensing or to set prices, and instead protects the right of firms and IPR holders to set unilaterally or to negotiate privately the prices of their products. In addition, unlike many countries, U.S. antitrust law generally avoids remedies that directly regulate or set prices, and instead protects the right of firms and IPR holders unilaterally to set or privatively to negotiate the prices of their products. Similarly, the U.S. strongly disfavors requiring IPR holders to share them with others—especially their competitors—while some Asian competition agencies appear much more comfortable sanctioning refusals to license and making licensing compulsory. The U.S antitrust agencies also recognize that conduct such as tying and bundling, discriminatory licensing, cross-licensing and grant backs is often pro competitive and, therefore, such licensing restraints do not violate the U.S. antitrust laws unless they harm competition and have anticompetitive effects greater than their pro competitive virtues.[28] The U.S. approach is based on its view of economic theory and empirical evidence that vertical restraints are generally pro competitive or benign, and on the link between strong protection of IPRs and economic growth and innovation. In contrast, some competition agencies appear to presume that certain licensing practices are anticompetitive.

These differences suggest that principles of comity require that countries limit use of extra-jurisdictional remedies. As noted above, limiting remedies to the issuing jurisdiction can also be consistent with economic considerations of efficiency and welfare. The actions of both the EU and China in the examples discussed above are consistent with the principles of comity. In contrast, the worldwide prohibition on seeking injunctive relief, as the FTC has done under its stand-alone Section 5 authority, violates these principles.[29]

V. CONCLUSION

Worldwide antitrust law remedies in matters involving IPRs conflict with principles of international comity and can result in significant substantive conflicts among antitrust agencies given the dramatically different approaches taken globally on antitrust matters. They can have significantly negative effects upon competition and welfare if a single agency prohibits globally conduct recognized in other jurisdictions as generally pro competitive.

In addition, it is difficult to imagine when a global remedy would be necessary to resolve any harm to consumers in the jurisdiction imposing it. For example, any harm to consumers from conduct such as tying SEPs and non-SEPs would arguably be resolved by prohibiting the conduct with respect to domestic patents. A global remedy seems necessary only if the aim is to protect domestic manufacturers that export, which is not the goal of U.S. antitrust law nor even consistent with the mainstream approach to competition policy, which is focused upon harm to the competitive process and to consumers, as opposed to protection of domestic firms against foreign rivals. Global remedies also risk over-deterrence when national authorities are not coordinated to adjust penalties simultaneously. Therefore, avoiding global remedies is appropriate to mitigate that risk, and honoring comity principles would prevent the lowest common denominator from governing across the board.

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27 Anti-Monopoly Law art. 1 (China); see also Monopoly Regulation and Fair Trade Act art. 1 (Korea) (providing that the purpose of the Act includes the promotion of "fair" competition and the achievement of "balanced economic development"); Antimonopoly Act art. 1 (Japan) (stating that purpose of the Act is "to promote fair and free competition, . . . to heighten the level of employment and actual national income, and thereby to promote the democratic and wholesome development of the national economy as well as to assure the interests of general consumers"); Competition Act intro. (India) (stating that, in interpreting the Act, the Competition Commission should "keep[] in view . . . the economic development of the country.").

28 See, e.g.U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 3.4 (1995); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (2007).

29 See Joshua D. Wright & Douglas H. Ginsburg, *Whither Symmetry?: Antitrust Analysis of Intellectual Property Rights at the FTC and DOJ*, COMPETITION POL'Y INT'L, Autumn 2013.It is unclear whether the FTC could prohibit injunctive relief under its standalone Section 5 authority under its 2015 "Unfair Methods of Competition" Policy Statement. See, e.g. Joshua D. Wright & Angela M. Diveley, *Unfair Methods of Competition After the 2015 Commission Statement*, ANTITRUST SOURCE (Oct. 2015), http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/oct15_wright_10_19f.authcheckdam.pdf.

BIG DATA, BIG CONCERNS?

EU COMPETITION LAW IMPLICATIONS OF THE CHANGING ROLE OF BIG DATA IN THE FINANCIAL SERVICES INDUSTRY

BY MAIKEL VAN WISSEN & LODEWICK PROMPERS[1]

I. INTRODUCTION

The role that big data plays in the financial services industry is changing at a rapid pace. Financial services firms have access to large amounts of data, both from traditional internal sources and also increasingly from external sources such as social media and third-party databases. Data is no longer a lump of facts but rather a vibrant source of insight which enables innovative products to be developed and better business decisions to be made.[2] As a result, and similar to the impact it has had in other business sectors, big data is transforming the processes and organization of financial services firms.

In this article, we analyze these developments from an EU competition law perspective, providing insights into the relevant analytical framework, key considerations and potential concerns that may arise under EU competition law in relation to the use of big data in the financial services sector.

II. BIG DATA: INCREASED ATTENTION IN THE EU

At the EU level, there is currently no specific, uniform guidance in relation to the potential competition law implications of the use of large amounts of (personal) data by companies. However, European competition authorities are increasingly focusing their attention on the implications of big data on competition and consumer welfare. Indeed, we have recently seen a continuous stream of activity by competition authorities across Europe in the field of big data.

Even before Ms. Vestager entered office as the new EU Commissioner for Competition in 2014, she stated to the European Parliament that in her opinion, big data should be considered "the new currency of the Internet."[3] In a more recent speech, the Commissioner emphasized again that: "the benefits it has to offer can seem far away – almost like science fiction. But people's sense that they've lost control of their personal data, the sense that data is making companies so powerful that no one can control them – these things are very immediate. (…) So I will keep a close eye on how

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2 Accenture, *Exploring Next Generation Financial Services: The Big Data Revolution*, June 2016, available at: https://www.accenture.com/t20160602T025708__w__/us-en/_acnmedia/PDF-20/Accenture-Next-Generation-Financial-Services-Big-Data.pdf.

3 Hearing of Margrethe Vestager, Commissioner-Designate Competition, October 2, 2014,available at: http://www.europarl.europa.eu/hearings-2014/resources/library/media/20141022RES75845/20141022RES75845.pdf

companies use data. (…) I'm convinced that we can make big data, not a threat, but the key to a better future."[4]

So far, the European Commission has considered data related concerns in a number of merger control decisions, including *Facebook/WhatsApp*, *Google/Doubleclick* and recently *Microsoft/LinkedIn.*[5] The Commission is also currently reviewing Verizon Communications' proposed acquisition of Yahoo!'s core assets.[6] The Commision's review of these mergers focused on the impact on competition of the acquisition of large amounts of commercially valuable data. The recent decision of the Commission in *Microsoft/LinkedIn*, as well as the ongoing review of *Verizon/Yahoo!* is providing the Commission with opportunities to further develop the analytical framework in this area.[7]

In the UK, the Competition and Markets Authority ("CMA") published a report on June 17, 2015, on the commercial use of consumer data. While highlighting the "wide range of benefits for both firms and consumers from the use of data," the CMA also pointed to the concerns raised by consumers about the effectiveness of privacy policies, terms and conditions and cookie notices in enabling consumers to control the collection and use of "their" data.

In Germany, the Federal Cartel Office ("Bundeskartellamt") opened an investigation in March 2016 into Facebook's terms and conditions, more specifically on whether Facebook exploited its arguably dominant position in the market for social networks by adopting terms of service on the use of users data in violation of data protection provisions. In addition, on May 10, 2016, the Bundeskartellamt and the French Competition Authority ("Autorité de la Concurrence") published a paper on the impact of big data on competition law.[8] The paper considers the extent to which data confers market power, the types of data-related conduct that may give rise to an abuse of dominance and the interaction between competition and data protection rules.

The latest to the party is the Dutch Authority for Consumers and Marketsthat started an investigation in September of this year into the extent to which online (video) platforms may harm competition, and assess how their use of big data might grant them excessive market power.[9]

It has been suggested that these activities signal a change from what some have described as a "timid" attitude on the part of European competition authorities. According to the EU's data-protection chief, Giovanni Buttarelli, European antitrust watchdogs "now realize the power of big data and the impact on competition affairs, regardless of the free or changed dimension of certain services."[10] This development has spurred new discussions about the role of data in economic relationships and, by consequence, the application of competition law.

This holds equally true for the financial services industry. Although competition authorities have been mainly focusing their attention on social networks and search engines, this interest has already turned to other sectors, including the financial services sector. Most notably, on September 21, 2016, the UK's Financial Conduct Authority published the outcomes of an investigation into the use of big data in the retail general insurance sector.[11] Also, in their joint paper, the Bundeskartellamt and the Autorité de la Concurrence explicitly referred to the banking and insurance industries as sectors where data collection has been rapidly developing.[12]

III. BIG DATA AND ITS ROLE IN THE FINANCIAL SECTOR

There is no generally accepted definition for the term "big data," since its meaning is still evolving. The Bundeskartellamt and the Autorité de la Concurrence have referred to big data as a voluminous amount of structured, semi-structured and unstructured data that has the potential to be analyzed for information.[13] More specifically, big data has been identified as data characterized by four attributes (represented by four "V'"s): Volume, Velocity, Variety and Value. That is, data existing in large amounts, produced at high speed from multiple sources and providing an intrinsic, but apparent, value.

4 Speech at the EDPS-BEUC Conference on Big Data, Brussels, September 29, 2016, available at: http://ec.europa.eu/commission/2014-2019/vestager/announcements/big-data-and-competition_en.

5 Commission Decisions of October 3, 2014 in case COMP/M.7217 – *Facebook/WhatsApp* July 22, 2008 in case COMP/M.4731 – G*oogle/Doubleclick and December 6, 2016 in case COMP/M.8124 -Microsoft/LinkedIn.*

6 Case COMP/M.8180 – *Verizon/Yahoo!.*

7 According to the press release available at the date of writing of this article, the Commission would have cleared Microsoft'sacquisition of LinkedIn on the condition that Microsoft will continue allowing competitors access to its software such as Outlook and giving hardware makers the option not to preinstall a LinkedIn application after the acquisition. See http://europa.eu/rapid/press-release_IP-16-4284_en.htm.

8 "Competition Law and Data," joint study by the Bundeskartellamt and the Autorité de la Concurrence, published on May 10, 2016.

9 See https://www.acm.nl/nl/publicaties/publicatie/16333/Grote-platforms-grote-problemen/.

10 MLex, "Antitrust watchdogs are realizing 'power of big data,' EU data chief says," April 5, 2016.

11 "Feedback Statement on Big Data in retail general insurance" of September 21, 2016. The paper was aimed at determining whether the progressive implementation of big data in the insurance sector would foster or constrain competition. The paper identified a series of criticalities, such as the increasing risk of segmentation and of discriminatory pricing practices. Further, the paper argued that big data has the potential to become a considerable barrier to entry in the future.

12 "Competition Law and Data," joint study by the Bundeskartellamt and the Autorité de la Concurrence, published on May 10, 2016, page 3.

13 Ibid, page 4.

Historically, financial services firms have always had access to enormous amounts of (customer) data. In this context, the term big data traditionally referred to transactional (customer) data, which included structured or semi-structured information about payment transfers, purchases, subscriptions, income, insurance, cost of living, etc. However, with the influx of new technologies and the entry into the market of innovative FinTech companies,[14] the term big data has moved beyond its traditional meaning. Financial services firms now make use of all kinds of (external) sources, including social media, GPS data and governmental databases, to gather data.

Financial services firms are well aware of the advantages provided by big data, as evidenced by recent research findings. 71 percentof the firms active in the global financial services industry are exploring big data and predictive analytics, while 70 percentreport that big data is critically important to their firms.[15] Further, 54 percentof firms active in the industry have appointed a chief data officer.[16] Finally, financial services firms invested USD 6.4 billion in data-related programs in 2015.[17]

IV. COMPETITION CONCERNS AND BIG DATA IN THE FINANCIAL SERVICES SECTOR

In this section, we consider a number of potential theories of harm in relation to the use of big data in the financial sector. Our analysis is based on the general EU competition law framework and the few precedents that are available in the EU, mainly merger control decisions of the European Commission. From the outset, it is imperative to note that the role and analysis of big data as a parameter of competition is a market-specific question that requires a case-by-case analysis, rather than a one-solution-fits-all approach. The collection and use of big data is not a competition concern in and of itself, and is the exclusive domain of EU data protection laws. Competition law can only come into play if (the collection and use of) big data forms a relevant parameter of competition.[18] This point was also emphasized by Commissioner Vestager in a recent speech:

> That doesn't mean there's a problem, just because you hold a large amount of data. After all, the whole point of big data is that it has to be big. Because, with the right tools, you can find patterns in a large set of data that you just wouldn't see in a smaller one. And we don't want to discourage companies from putting in the effort to collect that data … But it's possible that in other cases, data could be an important factor in how a merger affects competition.[19]

A. Big Data Holds the Key: Exclusive Access to Big Data

A first theory of harm is based on the potential effects on competition resulting from the exclusive access by financial services firms to big data. Such data may stem from their own service offerings or from third party databases. Exclusive access to big data can be a source of market power and, in turn, be used to raise a rival's costs or otherwise disadvantage rivals (e.g. by preventing entry or expansion).

This theory of harm was investigated in a merger control context by the European Commission in several cases, including *Facebook/WhatsApp, Telefonica UK/Vodafone UK/Everything Everywhere/ JV* ("*M-commerce* Decision") *and Google/Doubleclick.*[20] In relation to the financial services sector specifically, in the M-commerceDecision, the Commission analyzed whether the collection of personal data through mobile wallet services offered by the three leading wireless operators in the UK would raise competition concerns.[21] During the review, concerns were raised that the joint venture company ("JV Co") would come to possess essential personal data generated by users of the mobile payment services and that this could be used to exclude rivals.[22] More specifically, the Commission assessed whether JV Co would foreclose competing providers of data analytics or advertising services by combining personal information, location data, response data, social behavior data and browsing data and by so creating a unique database that would become an essential input for targeted mobile advertising that no competing provider of mobile data analytics services or advertising customer would be able to replicate.[23] In the end, the Commission rejected this theory of harm, concluding that:

14 Financial Technology is an industry made up of companies using novel financial technologies to support or enable financial services, or drive technological innovation in the provision of financial services. This industry includes both start-ups and established companies applying technology to their financial services.

15 "Exploring Next Generation Financial Services: The Big Data Revolution," Accenture, May 2016.

16 "Just Using Big Data Isn't Enough Anymore," Harvard Business Review, February 9, 2016.

17 *"Global Big Data IT Spending in Financial Sector – Market Research 2015-2019,"* Technavio.

18 See Jonas Koponen and AnnamariaMangiaracina, *"No Free Lunch: Personal Data and Privacy in EU Competition Law,"* Competition L. Int'l (2013).

19 Speech at the EDPS-BEUC Conference on Big Data, Brussels, September 29, 2016, available at: http://ec.europa.eu/commission/2014-2019/vestager/announcements/big-data-and-competition_en.

20 Commission Decisions of October 3, 2014 in case COMP/M.7217 – *Facebook/WhatsApp*; March 19, 2014 and July 22, 2008 in case COMP/M.4731 – *Google/Doubleclick*.

21 Commission Decision of March 7, 2013 in case COMP.6314 ("*M-Commerce* Decision").

22 More specifically, JV Co had access to: (i) basic customer data collected by the mobile network operators, such as age, residential status, profession, location, which wouldbe provided to the JV Co in an anonymized form; (ii) data collected via the mobile wallet; and (iii) data collected on the basis of contracts with merchants.

23 *M-Commerce* Decision, paragraph 593.

> JV Co would indeed be able to collect a broad range of consumer information, which will be very valuable for its (mobile) data analytics services and advertising services. However, many other strong and established players are also able to offer comparable solutions to the JV Co. Therefore, other providers of advertising services competing with the JV Co would not be foreclosed from an essential input and the creation of the JV Co would not have a negative effect on competition on the market for (mobile) data analytics, as well as for market research services or marketing information services.[24]

In *Facebook/WhatsApp* and *Google/Doubleclick*, the Commission again raised concerns in relation to data collection. However, one should bear in mind that neither *Facebook/WhatsApp* nor *Google/Doubleclick* involved an actual concentration of data. Until recently, WhatsApp did not mine its users' personal data. Google/Doubleclick essentially involved the acquisition by one company that collected vast amounts of personal data (Google) of another with the technology to target ads and monitor their performance (Doubleclick). Concerns about access to data post-transaction might give rise to different issues and can even lead the parties involved to provide commitments to guarantee rivals access to data after closing.

For example, in Thomson/Reuters,[25] the Commission did raise concerns regarding the elimination of competition between the two key suppliers of financial databases. According to the Commission, the merged entity was, among other things, likely to have a negative impact on providers of desktop products thatobtained and integrated the content provided by Thomson and Reuters into their own competing offerings to customers. According to the Commission, the merged entity would have the ability and the incentive to foreclosesuch competitors, thereby adversely affecting competition. In order to address these concerns, the merging parties committed to divesting copies of their databases to a third party so that a credible competitive force would remain in the marketplace post-merger.

In *Microsoft/LinkedIn*[26] the Commission very recently analyzed the possible negative impact on competition resulting from the concentration of data sets. In particular, the Commission assessed whether a possible denial of access to LinkedIn's database by Microsoft could harm competition. However, the Commission found that access to LinkedIn's database was "not essential" to compete on the market. The Commission did raise concerns in respect of the possible use by Microsoft of its strong market position in operating systems and software to strengthen LinkedIn's position, and thus foreclose other professional networking sites from the market. Microsoft addressed the Commission's concerns by agreeing to continue offering LinkedIn's competitors access to its cloud computing system, as well as interoperability with its productivity software.

Outside a merger control context, access to data of financial services firms may also raise competition concerns under both Article 101 and Article 102 TFEU.

As to the situation under Article 101 TFEU, although the granting of access to big data itself is unlikely to raise questions under EU competition law (but rather under data protection financial regulation laws), this could be different if such access would be granted on an exclusive basis. An illustrative example in this respect could be a national retail bank exclusively selling transaction data about customers' spending on travel bookings to an international travel agency.[27] From a competition law perspective, such an agreement would be analyzed as a vertical exclusive supply agreement under Article 101 TFEU, where the data provided would function as an input to the travel agency. The main competition risk of such an agreement would relate to the potential foreclosure of competing travel agencies.

To assess whether anticompetitive effects are likely to arise, the assessment under Article 101 TFEU should take account of the following factors: (i) whether the data provided by the retail bank is "unique" or can be replicated or bought by competing travel agencies; (ii) what the data can be used for; and (iii) whether the (potential) use of the data couldlead to anticompetitive foreclosure of the travel agency's competitors. This test may seldom be met in practice, if the parties to the agreement do not hold considerable market power on the relevant markets.[28] Also, it must be assumed that if financial services firms possess unique data which they wish to commercialize, they would not, in principle, have an incentive to limit the use of that data only to a limited number of market players.

As to the situation under Article 102 TFEU, unilateral actions by a dominant undertaking in relation to the access to, or use of, its customer data may under certain circumstances have exclusionary effects. Indeed, the Commission's interpretation of "dominance"within the meaning of Article 102 TFEU (on abuse of a dominant position) encompasses a broad range of competitive parameters which can include (depending on the market context) access to (personal) data.

The existence of different competitive parameters is a well-established notion in the case-law of the European Court of Justice. For example, in *Post Danmark I*, the Court stated that:

24 *M-Commerce* Decision, paragraph 557.

25 Commission Decision of February 19, 2008 in case COMP/4726. Both Thomson and Reuters sourced, aggregated and disseminated real-time and historical market data and other types of financial content to respond to the needs of financial professionals, such as traders and sell-side people in the on-trading floor space, of investors on the buy-side and of analysts in the off-trading floor space within banks, investment funds and corporations.

26 Commission Decision of December 6, 2016 in case COMP/M.8124.

27 To illustrate, in October 2013, British Barclays Bank started selling targeted retail benchmarks to UK retail chains. See: http://www.blinklane.com/nl/blognl/banks-sell-data#.WDmllXKQxeU.

28 In order to assess whether anticompetitive effects are likely to arise, one would have to consider among other things: (i) the market shares of the parties on the relevant markets; (ii) the duration of the agreement; and (iii) any efficiencies resulting from the agreement.

> […] Competition on the merits may, by definition, lead to the departure from the market or the marginalization of competitors that are less efficient and so less attractive to consumers from the point of view of, among other things, price, choice, quality or innovation.[29]

The Bundeskartellamt and the Autorité de la Concurrence consider in their joint paper that data collected on a given market could be considered a competitive parameter and could be used by an undertaking to develop or to increase its market power on another market in an anticompetitive way.[30] A relevant example could be the use of big data developed by a national retail bank to identify customers who are likely to move within a certain timeframe in order to target these customers with tailor-made mortgage products. To the extent that this data would be so unique and difficult to duplicate for competing lending companies, the refusal by the retail bank to make such data available to them may raise abuse of dominance concerns under Article 102 TFEU.

The threshold for intervention by the European competition authoritiesis, however, (very) high. The European Court of Justice established in *Oscar Bronner* and *Microsoft* that the refusal must: (i) concern a product which was (technically or economically) indispensable for carrying on the business in question (i.e. there is no actual or potential substitute for the facility); (ii) prevent the appearance of a new product or hamper innovation; (iii) exclude all effective competition in the relevant market; and (iv) not be justified by objective considerations.[31]

Commissioner Vestager recently confirmed that the Commission's interventions should be limited to exceptional circumstances, stating that: "the problem for competition isn't just that one company holds a lot of data. The problem comes if that data really is unique, and can't be duplicated by anyone else. But really unique data might not be that common."[32] In the context of the financial services industry, this seems even truer. Although financial services firms have access to a quickly growing amount of data, such data may seldom be unique and essential to competitors, given the existence of numerous competitors.

B. Banking on Cooperation

Financial services companies may collect significant amounts of data by themselves or acquire data from third parties. Another way to collect data could be for firms to share data between themselves. Against this background, a second theory of harm could relate to cooperation between different financial services firms in respect of the collection and processing of big data (e.g. data pooling) which may have an anticompetitive object or effect.

In recent years, the conduct of financial services firms has been under close scrutiny for alleged infringements of EU competition law. The Commission's EUR 1.7 billion fines in relation to Euro-based and Yen-based interest rate derivatives has attracted a lot of attention, but other investigations have recently ended or are still underway.[33] In fact, Commissioner Vestagerrecently stated that "[the] work in the financial sector is not done" and "the common goal is to make sure that financial markets are competitive to the benefit of European consumers and business".[34] This again underlines that the financial services sector is not immune to competition law risks.

It is centralto Article 101 TFEU that cooperation between competitors which affects key parameters of competition may lead to competition concerns if ithas the object or effect of restricting competition. However, the Commission's Horizontal Cooperation Guidelines also explicitly recognize that cooperation between competitors can lead to substantial economic benefits, in particular if competitorsshare risk, save costs, increase investments, pool know-how, enhance product quality and variety and launch innovation faster.[35] A recent example of cooperation in the retail banking sector that did not raise any competition concerns can be found in Germany where the Bundeskartellamt recently approved the cooperation between a number of small savings banks over a joint payment service that allows money transfers from mobile to mobile, via a smartphone app. [36]

Indeed, if bigger is better, then combining companies' data into a single, big pool might give them insights that they could not

29 Judgment of the ECJ of March 27, 2010 in Case C-209/10 *Post Danmark A/S v.Konkurrencerådet*, point 22.

30 "Competition Law and Data" joint study by the Bundeskartellamt and the Autorité de la Concurrence, published on May 10, 2016.

31 Judgment of the ECJ of 26 November 1998 in Case C-7/97 *Oscar Bronner v. Mediaprint*. Judgment of the General Court of 17 September 2007 in Case T-201/04 *Microsoft v. Commission.*

32 Speech by Commissioner Vestagerat the Data Ethics event on Data as Power, Copenhagen, September 9, 2016, available at: https://ec.europa.eu/commission/2014-2019/vestager/announcements/making-data-work-us_en.

33 On December 7, 2016, the Commission fined another three banks a total of over €485 million for their participation in what has become known as the EURIBOR cartel. The European Commission is said to continue its investigation into alleged manipulations of foreign exchange. In addition, antitrust investigations against MasterCard (regarding inter-bank fees in relation to payments made by cardholders from non EEA countries) and Visa (regarding inter-regional interchange fees) are still pending. The Commission's investigation into Credit Default Swaps ended in July 2016 with the Commission accepting commitments offered by ISDA and Markit that will make it easier to trade Credit Defaults Swaps on exchanges and improve transparency.

34 Statement by Commissioner Vestager, December 7, 2016, available at http://europa.eu/rapid/press-release_STATEMENT-16-4307_en.htm.

35 Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements (2011/C 11/01), para. 2.

36 See: https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2016/14_09_2016_Sparkasse_App.html.

obtain on their own. Data pooling might even help competition, by allowing smaller players to bundle their data and compete more effectively. This is in essence what led the Commission to approve Microsoft's acquisition of Yahoo!'s search business in 2010. The Commission concluded that the merger could make the market more competitive by increasing Microsoft's scale – and the amount of data it had – and improving its abilityto compete with Google.

Particularly in the area of the provision of financial services, there is a clear case for cooperation in the context of big data. An example could be found in the identification of customers of different banks under the "know-your-customer" ("KYC") rules. While the exchange of commercially sensitive information may raise competition law concerns (e.g. *T-Mobile Netherlands and Others*),[37] this does not necessarily have to be true where financial services firms grant access to or exchange customer data with competing firms. Although big data may form a parameter of competition, this does not automatically mean that the exchange of some of the data would be detrimental to competition or innovation. In the context of KYC data, customers are likely to benefit from smooth communications between different financial services firms, allowing them to transfer payments from one bank to another. The granting of access to or the exchange of KYC data – to the extent permitted by financial regulation and data protection rules – may facilitate such communications between different financial services firms and enhancethe user experience.

Such cooperation is unlikely to raise competition concerns under Article 101 (1) TFEU and in any event would likely benefit from an exemption under Article 101 (3) TFEU if the cooperation (i) contributes to innovative developments; (ii) benefits consumers, e.g. by lowering transaction costs; (iii) is indispensable; and (iv) does not eliminate competition in respect of a substantial part of the services or products involved. Commissioner Vestager recently stated in relation to data pooling arrangements between competitors that "there's no reason why that should harm competition. As long as companies make sure they do it the right way. In fact, data pooling might even help competition."[38]

Of interest in this respect is the Revised EU Payment Services Directive ("PSD2"), which will need to be implemented by EU Member States in 2018. PSD2 mandates the cooperation between financial services firms in relation to payment initiation by third-party payment providers ("TTPs"). Under the new directive, TTPs will be granted direct access to users' bank account information in order to initiate payments directly on behalf of a customer of that bank. This development is likely to give a significant boost to the exchange of data between financial services providers.

C. Race to the Bottom: Lower Standards of Data Protection

A third theory of harm may be found in the possibility for financial services firms to impose lower standards of data protection on their customers. Particularly in two-sided markets where services are offered for "free" and are considered essential to its users, users may feel forced to accept lower standards of privacy.

Indeed, the Bundeskartellamt on March 2, 2016 started an investigation into Facebook's data protection setting. More specifically, the Bundeskartellamt argued that Facebook may have exploited its dominant position in "the market for social networks" by adopting terms of service on the use of user data "in violation of data protection provisions." Users, in Bundeskartellamt's reasoning, would not accept Facebook's terms of service, should the company enjoy a lesser degree of market power.

The investigation ventures into new competition fields and represents the first attempt to bring pure data protection concerns within the realm of competition law. The Bundeskartellamt faces a number of hurdles, not least to show that (i) Facebook is dominant (in the market for social networks); (ii) it has abused its dominant position; and (iii) there is a link between itsdominant position and the abusive conduct. As to the first hurdle, Facebook may argue (as Google has) that competition is only a click away: if users are unhappy or unwilling to agree to its conditions, it would generate a competitive opportunity. As to the second challenge, the possibility of an infringement in one area of law being tied back to another, such as competitionlaw, is quite remote. It does, however, fit within a broader development of the extending "special responsibility" that rests upon a dominant firm to not only comply with competition law but with any law. As to the third and final hurdle, Germany's higher court, the Bundesgerichtshof, already ruled in November 2013 that the "use of illegal general terms and conditions by a dominant company can constitute an abuse under the terms of German competition law."[39] This judgment may indeed be the backbone of the Bundeskartellamt's case.

Also in the financial services sector, standards of personal data protection may come under pressure with the growing trend touse customer data for commercial purposes. Already today, there are numerous examples of financial institutions that have placed big data at the heart of their commercial strategy. For example, Fidor bank, a German bank which modeled itself as a social network, is using socialinteractions to build new products, share information, market the bank, and offer targeted products to customers.Also traditional retail banks in Europe such as Royal Bank of Scotland have made the (commercial) use of customer data central to their business model.[40] The implementation of PSD2 will only stimulate these developments as it facilitates the entry of innovative financial payment solutionsand the transfer of data from one financial services provider to another.

37 Judgment of the ECJ of June 4, 2009 in case C-8/08, *T-Mobile Netherlands v. Commission.*

38 Speech by CommissionerVestager, EDPS-BEUC Conference on Big Data, Brussels, September 29, 2016.

39 Judgmentissued by the Bundesgerichtshof in the case KZR 58/11– VBL-GegenwertonNovember 6, 2013.

40 See http://www.forbes.com/sites/bernardmarr/2016/04/13/the-wonderful-big-data-strategy-at-royal-bank-of-scotland/#45f8cc103e22.

This being said, a theory of harm on the basis of which financial services firms would be held liable for an abuse of dominance pursuant to Article 102 TFEU in relation to the lowering of data protection seems unlikely to become a reality in the near future. Although European financial markets are generally considered concentrated, customers still have ample opportunity to switch if they are dissatisfied with their financial services firm and, in particular, with the way it treats customer data. In the advent of the implementation of PSD2, new, innovative financial services firms are likely to enter the European marketplace, increasing the options available to customers. As in other technology sectors where privacy standards have increasingly become a differentiating factor of competition (for example in the telecommunication sector in relation to the processing of location data),[41] it is not unimaginable that privacy standards applied by financial services firms would become an important competitive factor.

V. CONCLUSION: BIG DATA, BIG CONCERN?

In this article we have explained the role of big data in the financial sector and identified a number of potential concerns that the use of this data may raise under EU competition law. It is evident that big data is changing the competitive landscape in the financial services sector in Europe at a rapid pace. These developments pose interesting, but complex questions under EU competition law as regards potential anticompetitive effects related to the collection and processing of big data. European competition authorities have only just begun to analyze the relevance of big data as a parameter of competition and the applicability of EU competition law thereto.

There is no reason for special treatment of big data under EU competition law. Particularly in the financial services sector where big data is increasingly becoming an important force for innovation, European competition authorities should not intervene lightly in market dynamics butshould recognize the positive effects that big data brings to consumer welfare. As long as parties play by the European competition rules, the use of big data by financial services firms should not be a big concern but rather the key to innovation.

41 Article 9 of Directive 2002/58/ECrequires that information giving a user's location - other than traffic data - may only be processed if made anonymous or with the prior consent of the individual to the extent and for the duration necessary for the provision of a value added service.

BANK MERGERS AND SYSTEMIC RISK

BY ZSOLT MACSKASI[1]

I. INTRODUCTION

Big banks have been a recent topic of much debate. Are banks above a certain size so important that the government should not let them go bankrupt? Where exactly is the separation between too big to fail and the rest of the banking industry? If certain banks do indeed fall into the "too big to fail" category, shouldn't we do something about it? Would stricter merger enforcement be the answer? Should big banks be broken up? These questions were widely discussed well before the Great Recession and perhaps even more so since then.

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This essay begins with a brief description of the regulatory environment and the recent history of bank mergers in the U.S. After that, we discuss the regulatory practices regarding the analysis of the likely effects of bank mergers on the stability of the financial system. The paper contrasts systemic risk analysis as practiced before and after the financial crisis. The paper concludes with suggestions of how current practices might be improved.

II. WHY ARE BANKS REGULATED?

Banking is a special industry. Banks occupy a central place in the economy, and they also usually – at least in developed countries – require a special license from supervisory authorities. Governments regulate the banks for two main reasons. The first reason is that individuals and households typically park a significant part of their wealth at the banks, in the form of checking and savings accounts and other financial assets. Since the majority of these individuals and households are neither particularly wealthy nor particularly savvy about their finances, the government tries to protect their interests by regulating the banks. The second reason is that banking, by its very nature, is a risky business. Banks tend to have a much higher debt-to-asset ratio than non-financial companies. Banks typically borrow on a short-term basis, while their investments are long-term. Their high ratio of indebtedness and the liquidity transformation they perform make them vulnerable to "runs." To prevent runs, banks typically preserve the contractual right to temporarily suspend the payment of deposits. To do their part, the government often provides a deposit insurance scheme and the central bank acts as the lender of last resort.

III. BANK MERGERS IN THE U.S. – HISTORICAL TRENDS

Are U.S. banks too big? Until recently, the concentration of the banking industry used to be far smaller in the U.S. than in other developed countries. The main reason for this was that after the Great Depression and until the 1990s, federal and state laws made it very difficult for banks to acquire other banks or even open branches in states other than their home states. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 removed many of these restrictions. Moreover, with the passage of the Gramm-Leach-Bliley Act in 1999, Congress repealed certain parts of the Glass-Steagall Act, which for more than half a century, separated commercial banking from investment banking. However, federal law still prevents any bank merger whereby the resulting entity would hold more than 10 percent of the total deposits (and liabilities) nationwide. A merger also cannot be approved if the resulting entity would control more than 30 percent of the total deposits in any state where both the acquirer and the organization to be acquired operate pre-merger.[2] Although the nationwide deposit cap prohibits interstate acquisitions by a company that controls deposits in excess of the cap, it does not prevent a company from exceeding the nationwide deposit cap through internal growth or through acquisitions entirely within the home state of the acquirer.

Due to the relaxation of regulatory constraints on mergers, banking concentration has systematically increased over the past three decades. The number of banks dropped from about 14,500 in the mid-1980s to about 5,600 in 2015.[3] In 2015, of the nation's total deposits, the top four bank holding companies, Bank of America, JP Morgan Chase, Wells Fargo, and Citigroup held 16 percent, 15 percent, 15 percent, and 6 percentof total deposits, respectively. These banks are, in large part, the outcome of large-scale mergers that occurred throughout the 1990s and 2000s.[4] The recent financial crisis also triggered a wave of mega-mergers, but this time the acquired companies were either bankrupt or nearly bankrupt.[5] After the financial crisis, merger activity in banking has been relatively subdued. The largest deal since 2009 was Capital One's 2012 acquisition of ING Bank, fsb, whose total assets were USD $92 billion – this merger was significantly smaller than many of the pre-crisis mergers. Despite the paucity of activity recently, another large-scale merger will eventually be proposed, and it is worth thinking through how authorities are likely to respond.

2 These provisions were added to Section 3(d) of the Bank Holding Company Act in 1994 when Congress broadly authorized interstate acquisitions by bank holding companies and banks in the Riegle-Neal Act.

3 Kowalik, Davig, Morris, and Regehr (2015), "Bank Consolidation and Merger Activity Following the Crisis," Economic Review

4 In 1998, Travelers Group, an insurance giant, acquired Salomon Brothers, then one of the largest securities firms in the U.S. In the same year, Citigroup merged with Travelers Group. This was one of the largest mergers at the time, resulting in an entity holding more than USD $700 billion in assets. Bank of America acquired FleetBoston in 2003, MBNA in 2006, and then U.S. Trust and LaSalle Bank in 2007. Each of these acquisitions increased the asset size of Bank of America by more than USD $100 billion. In 2000, JP Morgan merged with Chase Manhattan, resulting in a combined entity with USD $650 billion in assets. In 2004, JP Morgan Chase acquired Bank One, the largest commercial bank in the Midwest. Wachovia acquired First Union in 2001 and SouthTrust in 2004. Wells Fargo acquired First Interstate Bancorp in 1996, the Northwest Holding Company in 1998, First Security in 2000, and Wachovia in 2008.

5 Bear Stearns, one of the largest investment banks at the time, suffered heavy losses from its exposures to subprime mortgages and was near collapse in March 2008. Despite the Federal Reserve's efforts, the company could not be saved, and was sold to JP Morgan Chase. In September 2008, Washington Mutual, the largest thrift organization in the U.S., went bankrupt and was sold again, to JP Morgan Chase. After the collapse of Lehman Brothers, fearing that Merrill Lynch might be the next to fall, the government pressured Bank of America into acquiring the former. Finally, in December 2008, seeing its imminent failure, the government took receivership of Wachovia and the bank was sold to Wells Fargo.

IV. BANK MERGER REVIEW IN THE U.S.

In the U.S., bank mergers are subject to a dual review. Merger proposals are reviewed by both the Department of Justice ("DOJ") and the relevant federal banking regulator.[6] The DOJ's review focuses on traditional analysis of market concentration and structure. The banking regulator reviews the proposed transactions according to criteria set out in various banking laws.[7] The principal purpose of the regulatory review is to ensure that the merged entity has adequate assets and managerial resources to conduct business in a prudent manner and that it continues to serve the diverse interests of the local community. The Dodd-Frank Act of 2011[8] added to this list a requirement that the regulator consider whether a proposal would result in greater or more concentrated risks to the stability of the nation's banking or financial system.[9]

V. SYSTEMIC RISK IN THE MERGER REVIEW PROCESS BEFORE DODD-FRANK

Systemic risk is a key concern for regulators charged with safeguarding overall financial stability. Systemic risk arises when there is a potential for multiple banks to fail and to impose costs on the financial system, and ultimately, threatening the stability of the whole economy. The failure or weakness of multiple banks at the same time could arise through four main mechanisms: (i) direct bilateral exposures between banks ("domino effect"); (ii) correlated exposures of banks to a common source of risk; (iii) feedback effects from endogenous fire-sale of assets by distressed institutions; (iv) informational contagion: whereby market participants conclude from the firm's distress that other firms holding similar assets or following similar business models are likely themselves to be facing similarly dire problems.[10]

6 The Federal Reserve Board supervises bank holding companies and state-chartered banks that are members of the Federal Reserve System. State-chartered banks that are not members of the Federal Reserve System are supervised by the Federal Deposit Insurance Corporation ("FDIC"). Finally, banks that were issued a federal charter and are not bank holding companies, are supervised by the Office of the Comptroller of the Currency ("OCC"), a division of the U.S. Treasury Department.

7 At the federal level, the principal banking statutes that govern bank mergers are the Bank Holding Company Act of 1956 and the Bank Merger Act of 1960. There are additional federal laws that have important implications on the regulatory review process, including the Home Owners' Loan Act and the Change in Bank Control Act.

8 Officially referred to as the Wall Street Reform and Consumer Protection Act (Pub.L. 111–203, H.R. 4173).

9 This requirement was added by Section 604(d) of the Dodd-Frank Act, which amended Section 3(c) of the Bank Holding Company Act.

10 For an excellent discussion of these transmission channels see, for example, Nier, Yang, and Alentorn (2008) "Network Models and Financial Stability" and Upper (2011).

Prior to Dodd-Frank, the systemic risk aspect of bank mergers was not a high priority for bank regulators. When it came to financial stability, the Federal Reserve Board ("Fed") was simply required to consider the financial and managerial resources and the future prospects of the banks involved in the merger proposal. There has not been a lot of detail made public about these past analyses.[11] From the reports released after the investigations closed, it can be inferred that the Fed's analysis was limited to checking capital adequacy measures. To pass the test, the merging parties simply needed to show that they had enough capital relative to their balance sheets. The Fed also considered the extent to which the merger was financed through the issuance of new debt (as opposed to cash or equity shares), because issuing new debt negatively influenced capital adequacy ratios.[12] Beyond that, the Fed only considered some less quantitative factors such as whether the parties involved were sufficiently "well managed" and whether they had adequate risk management systems and policies in place.

VI. SYSTEMIC RISK IN THE MERGER REVIEW PROCESS AFTER DODD-FRANK

The adoption of the Dodd-Frank legislation reflects the significantly greater focus on systemic risk among politicians and economists. In fact, financial stability has become an entirely new chapter in the orders that conclude merger reviews. To assess the proposed transaction's likely effect on the stability of the U.S. banking or financial system, the banking regulator is now required to consider a variety of metrics that purport to capture the systemic "footprint" of the merged firm and the incremental effect of the transaction on the systemic footprint of the acquiring firm. These metrics include the size of the resulting firm; the availability of substitute providers for any critical products and services offered; the inter-connectedness of the resulting firm with the banking or financial system; the extent to which the resulting firm contributes to the complexity of the financial system; the extent of international activities of the resulting firm; and the opaqueness and complexity of an institution's internal organization that are indicative of the relative degree of difficulty of "resolving" the resulting firm in the event it becomes bankrupt.

11 The Fed has published its orders regarding those bank mergers the Board has reviewed from 1996 through 2016: https://www.federalreserve.gov/newsevents/press/orders/2016orders.htm.

12 For example, in the approval of the Bank of America/Fleet Boston merger, the Fed stated: "Bank of America and FleetBoston and their subsidiary banks are well capitalized and would remain so on consummation of the proposal. The Board has considered that the proposed merger is structured as a share-for-share transaction and would not increase the debt service requirements of the combined company. The Board also has carefully reviewed other indicators of the financial strength and resources of the companies involved, including the earnings performance and asset quality of the institutions." In terms of how the merger would affect the stability of the financial system, nothing else appears to have been considered. The quoted statement appears to be fairly representative of the merger reviews conducted prior to 2011.

Academic research is often several steps ahead of regulatory practice. Such is the case to a certain degree when it comes to the analysis of a merger's effects on systemic risk. After discussing two current analytical practices, we draw on academic work to comment on them.

VII. FINANCIAL CONTAGION DUE TO INTER-BANK ASSETS AND LIABILITIES

The first practice is how the Fed assesses the "inter-connectedness" of the merging parties. The Fed does this by relying on two metrics: the bank's share of total U.S. intra-financial system assets, and the bank's share of total U.S. intra-financial system liabilities.[13] Typically, if the combined entity's share of intra-financial assets and liabilities remain small after the merger, the Fed does not raise concerns from the standpoint of systemic risk. To conclude that the intra-financial share is small, the Fed sometimes compares it to the merged entity's share of the total assets/liabilities of the U.S. financial system.[14]

The problem with this line of analysis is that it is not sufficient for the task; considering only two nodes of the network fails to analyze the network of bilateral exposures as a whole. In order to accurately assess the stability of the inter-bank market, the entire network of bilateral relationships needs to be considered because financial contagion might spread through direct bilateral exposures between banks. Starting with the seminal article of Allen and Gale,[15] there has been a wealth of literature about contagion effects through a network of bilateral relationships.[16] This and many follow-on pa-

13 Intra-financial system assets and liabilities represent the amount of financial obligations of U.S. banks vis-a-vis other U.S. and foreign financial firms. These metrics, along with short-term funding liabilities, are used to measure the inter-connectedness of U.S. banks.

14 In 2012, when reviewing the proposed merger between Capital One and ING Bank, the Fed noted that "[t]he combined entity's use of wholesale funding, as a share of the entire U.S. financial system ("USFS") wholesale funding usage, is less than 1 percent and is well below its corresponding share of USFS consolidated assets. The combined entity's shares of USFS intra-financial system assets and liabilities also are less than 1 percent." In the same year, regarding the proposed merger between PNC and RBC Bank, the Fed noted that "[t]he pro forma merged entity's expected use of wholesale funding is lower relative to all U.S. financial institutions than is its corresponding share of consolidated assets."

15 Franklin Allen and Douglas Gale (2000), "Financial Contagion", Journal of Political Economy, Vol 108, Issue 1, pp. 1-33.

16 Allen and Gale compare two network structures: a "complete" network, in which all banks lend to and borrow from all other banks, and an "incomplete" network, in which each bank borrows from only one bank and lends to only one other bank. In the case of the complete network, banks benefit from diversified funding streams. A liquidity shock to one bank is less likely to cause the bankruptcy of another bank since the shock can be distributed among all banks in the system. In the incomplete network, funding is not diversified. A liquidity shock to one bank is more likely to cause liquidity problems at other connected banks because the same shock is spread over fewer banks and is therefore larger and more destabilizing.

pers show how network properties influence the likelihood and the severity of financial contagion.[17] A merger of two entities could make the network more or less stable depending on the circumstances. A recent paper published in the American Economic Review argues that the relationship between inter-connectedness and stability is not monotone.[18] At low levels of inter-connectedness, a more densely connected financial network (corresponding to a more diversified pattern of inter-bank liabilities) enhances financial stability. However, beyond a certain point, dense inter-connections serve as a mechanism for the propagation of shocks, leading to a more fragile financial system. Since bank regulators have ample access to relevant data, they are well-positioned to conduct analyses that take the entire inter-bank network into consideration.[19]

VIII. FINANCIAL CONTAGION DUE TO COMMON EXPOSURES

The second practice concerns how financial contagion can arise from a common source of risk. What motivates this practice is the possibility that the merging parties have similar types of assets that gain and lose value in a parallel fashion, which could trigger large losses to the merged entity. To address this issue, the Fed investigates whether there are certain counterparties to which both of the merging parties are significantly exposed. In 2012, when reviewing a proposed merger between PNC and RBC Bank, the Fed noted that "[o]n a pro forma basis, the transaction also would not concentrate exposure to any single counterparty that was among the top three counterparties of either PNC or RBC Bank before the merger." Similarly, in the same year when evaluating Capital One's acquisition of ING Bank's U.S. assets, the Fed noted that "[t]he transaction under review in this case also would not increase exposure to any single counterparty that is among the top three counterparties of either Capital One or [ING Bank] before the merger."

The problem with this approach is that it only addresses one type of correlated exposures. It addresses commonality in counterparties, but it does not address commonality of asset types. What if both parties have large exposures to subprime mortgages in a particular geographic area? What if both parties have significant long (or short) positions in the same over-the-counter derivative? What if both parties have entered into similar Credit Default Swap deals (i.e. they speculated for or against the default of the same entity)? These commonalities are not addressed by analysis that solely identifies whether the merging parties have common counterparties.[20] Again, since bank regulators have access to high quality data, they could, in principle, consider various kinds of commonalities when assessing the effects of a proposed merger.

IX. WHAT DETERMINES OPTIMAL INVESTMENT AND FINANCING DECISIONS?

When reviewing bank mergers for their potential effects on financial stability, the standard regulatory analysis does not treat the merging parties as strategic agents, whose incentives and consequent business decisions might change as a result of the merger. The analysis more or less assumes that the parties' business decisions remain unchanged.

First, when it comes to capital adequacy, the assumption is essentially that the total assets of the merged entity will be equal to the sum of the assets of the parties, and the total debt will be equal to the sum of the debts of the parties. In this sense, estimating post-merger capital-adequacy ratios is purely an accounting exercise. But, the merger might change the calculus that determines the optimal level of debt and equity. It might also change the calculus of the optimal division between long-term and short-term debt. For example, an acquisition might give a bank access to a larger customer base, allowing this bank to substitute wholesale financing with deposits (which is considered a more stable form of financing). These possibilities are usually not addressed by the regulatory review.

Second, when it comes to inter-connectedness due to bilateral exposures in the inter-bank markets, the analysis largely assumes that the merged entity will inherit the bilateral exposures of the parties. The regulators likely net out offsetting positions, i.e. if one of the parties was lending to some third party while the other was borrowing from the same third party, those relationships cancel out when calculating post-merger inter-bank assets and liabilities. But what is not accounted for is the possibility that the successor entity will not necessarily follow the same inter-bank financing and investment strategies as its predecessors did.

Third, when it comes to commonality of assets, the regulator's assumption is essentially that the successor will inherit the assets of its predecessors. This may be a plausible assumption for long-term, less liquid investments, but less so for short-term, more liquid investments. For example, consider the possibility that the merging parties have large but opposing derivative positions. Suppose that one of the merging parties is long while the other is short in interest rate swaps, that is, one of them stands to profit from an increase in interest rates, while the other stands to profit from a decrease in

17 Anne-Caroline Hüser (2015), "Too Interconnected to Fail: A Survey of the Interbank Networks Literature", SAFE Working Paper No. 91 gives an excellent survey about this literature.

18 Daron Acemoglu, AsumanOzdaglar, and AlirezaTahbaz-Salehi, "Systemic Risk and Stability in Financial Networks," American Economic Review 2015, 105(2): 564–608.

19 Some argue that inter-bank linkages are often complex and opaque, and the sources of contagion are therefore hard to predict. For example, in September 2008, policy makers reasoned that market participants and policy makers had had several months after the rescue of Bear Stearns to prepare for the failure of Lehman Brothers, so allowing it to enter bankruptcy should not be disruptive. That assumption turned out to be very wrong.

20 Beale et al. (2011) "Individual versus Systemic Risk and the Regulator's Dilemma," presents a model of financial contagion arising from commonalities on the asset-side of banks' balance sheets.

interest rates. The regulator may just assume that since these positions cancel each other out, the merged entity will not be exposed to any interest rate risk. But it is far from clear that the merged entity will in fact keep a neutral position.

It has long been an area of interest for Industrial Organization ("IO") economists and antitrust practitioners how a merger changes the behavior of the parties and their competitors. How the merger induces changes in prices and products offerings is in fact the main focus of the competitive review of mergers. However, financial economists and banking regulators typically assume away the strategic interactions that give rise to these kinds of merger effects. Perhaps the justification for doing so is the assumption that financial markets are perfectly competitive. But many financial markets are far from perfectly competitive. Instead, they are characterized by large firms with significant market shares and sustained positive economic profits. Consequently, economists and regulators cannot afford to ignore the kinds of strategic interactions that may induce merger effects.[21]

X. CONCLUSION

With the adoption of Dodd-Frank, the review process now devotes significantly greater attention to bank merger effects on the stability of the financial system an area that generated relatively little interest prior to the financial crisis. This is not to say that policies and regulatory practices that contributed to the creation of large banks were responsible for the financial crisis. By international standards, the U.S. banking system is still relatively unconcentrated. Since legislative changes made it a priority to look for systemic risk, it is worthwhile to investigate how effective banking regulators are in this regard. This paper made a few suggestions where current practices might be improved. The financial crisis spun a wealth of academic research on financial inter-connectedness, financial contagion, and many other topics that are immensely relevant for regulators that watch over the stability of the financial system. Theoretically, these methodologies improve our abilities to measure and forecast risks, but it would also be important to know how much of an improvement they represent. Quantitative evidence to date appears to be scarce, yet this seems to be a key area of future research.

21 A similar argument was made by Fed governor Daniel K. Tarullo, in a conference speech a few years ago: "Industrial Organization and Systemic Risk: An Agenda for Further Research", Conference on Regulating Systemic Risk, in Washington DC, September 15, 2011.

ANALYZING THE GEOGRAPHIC MARKET IN HOSPITAL MERGERS: TRAVEL PATTERNS TAKE A BACKSEAT TO PAYER RESPONSE

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I. INTRODUCTION

In December, 2015, the Federal Trade Commission ("FTC") filed complaints in federal district court seeking preliminary injunctions to halt two separate proposed hospital mergers pending the outcomes of the FTC's administrative challenges.[2] The first action, filed in the Middle District of Pennsylvania, sought to block Penn State Hershey Medical Center from merging with PinnacleHealth System. The second complaint, filed in the Northern District of Illinois, challenged the proposed merger between Advocate Health Care Network and Northshore University HealthSystem. Six months later, both district court judges sided with the hospitals, finding that the FTC's proffered geographic markets were too narrowly drawn, and handed the FTC its first set of losses in hospital merger challenges in nearly a decade.[3] But, in the end, the FTC was vindicated on appeal when both the Third and Seventh Circuits reversed the lower court decisions.[4] These cases highlight not only the importance of a properly defined geographic market in hospital mergers, but also courts' definitive shift away from relying on patient travel patterns in making this determination.

As many commentators have noted elsewhere, the FTC consistently lost hospital merger challenges in the 1990s due in large part to findings that the FTC's alleged relevant geographic markets were too narrow. That changed with the new millennium when the FTC conducted a thorough retrospective analysis of consummated hospital mergers, including joint hearings with the Department of Justice ("DOJ"), and concluded that its recent losses were due in part to the acceptance by courts of the Elzinga-Hogarty method for delineating the boundaries of geographic markets.[5] The Elzinga-Ho-

2 In conjunction with its requests for preliminary injunctive relief, the FTC simultaneously filed administrative complaints alleging that the proposed mergers would violate the antitrust laws.

3 See *FTC v. Penn State Hershey Med. Ctr.*, No. 1:15-cv-2362, 2016 WL 2622372 (M.D. Pa. 2016), rev'dand remanded, 838 F.3d 327 (3d Cir. 2016) *("Hershey I"); FTC v. Advocate Health Care Network*, No. 1:15-cv-11473, 2016 WL 3387163 (N.D. Ill. 2016), rev'd and remanded sub nom. *FTC v. Advocate Healthcare Network,* No. 16-2492, 2016 WL 6407247 (7th Cir. Oct. 31, 2016) ("Advocate I").

4 See FTC *v. Penn State Hershey Med. Ctr.*, 838 F.3d 327 (3d Cir. 2016) *("Hershey II"); FTC v. Advocate Health Care Network*, No. 15-cv-11476, -- F.3d -- , 2016 WL 3387163 (N.D. Ill. 2016) ("*Advocate II*").

5 See Press Release, FTC, FTC Chairman Announces Public Hearings on Health Care and Competition Law and Policy to Begin in February 2003 (Nov. 7, 2002), available at: http://www.ftc.gov/opa/2002/11/murishealth-

garty approach requires analysis of both "little in from outside" and "little out from inside" to properly articulate the relevant geographic market.[6] In hospital mergers, this approach looks to patient travel patterns into and out of the proposed geographic market for hospital services.[7] The FTC relied on its findings from the retrospective—that the use of patient flow data results in implausibly broad geographic markets and that other analyses (e.g. competition among hospitals to be included in health plans' networks) and sources of information (e.g. strategic documents, commercial payer testimony) should be employed to define the relevant geographic market[8] — in successfully challenging the consummated merger between Evanston Northwestern Healthcare Corporation ("ENH") and Highland Park Hospital ("Highland Park") before an administrative law judge ("ALJ").[9] In Evanston, based in part on the expert testimony of Dr. Elzinga himself, the ALJ explicitly rejected the use of patient flow data and the Elzinga-Hogartymethod to define the relevant geographic market for healthcare services.[10]

With the patient-in and patient-out Elzinga-Hogarty framework so discarded, the Evanston decision paved the way for a string of successful FTC challenges to proposed hospital mergers. But, while geographic markets in hospital mergers may have narrowed in the past 20 years, a close look at these matters reveals that patient travel patterns continued to play a role whenever the relevant geographic market was seriously contested by the parties. Now that two appeals courts have clearly rejected the Elzinga-Hogarty framework as inconsistent with the hypothetical monopolist test in the hospital merger context, practitioners will be wise to place greater emphasis on how payers are likely to respond to theoretical price increases than the distance patients are willing to travel for treatment.[11]

care.shtm; FTC & DEP'T OF JUSTICE, IMPROVING HEALTH CARE: A DOSE OF COMPETITION, at 4-10 (July 2004), available at: http://www.ftc.gov/reports/healthcare/040723healthcarerpt.pdf ("IMPROVING HEALTH CARE"); Julie Brill, Commissioner, FTC, Keynote Address at the 2014 Hal White Antitrust Conference: Competition in Health Care Markets (June 9, 2014), available at: https://www.ftc.gov/system/files/documents/public_statements/314861/140609halwhite.pdf.

6 See Kenneth Elzinga& Thomas Hogarty, *The Problem of Geographic Market Delineation in Antitrust Suits*, 18 ANTITRUST BULL. 45, 72-76 (1973).

7 IMPROVING HEALTH CARE, at 7.

8 Id. at 14-21.

9 Initial Decision,*In re Evanston Northwestern Healthcare Corp.*,F.T.C. Docket No. 9315 (Oct. 21, 2005).

10 Id. at 30.

11 The hypothetical monopolist test evaluates whether "a hypothetical monopolist could impose a small but significant non-transitory increase in price ("SSNIP") in the proposed market." *Hershey II*, 838 F.3d 327, 338 (3d Cir. 2016). If so, then the geographic market is properly defined. Id. But if enough consumers would respond to a SSNIP by purchasing the product from outside the proposed market, so as to make the SSNIP unprofitable, then the proposed market is too narrow. Id. In the context of hospital mergers, because payers rather than patients pay most hospital costs, the hypothetical monopolist test must look at the likely response of payers to a price increase. See *Advocate II*, 2016 WL 3387163, at *7.

II. GEOGRAPHIC MARKET IN RECENT HOSPITAL MERGERS

In both Hershey and Advocate, reliance on patient travel patterns was central to the district and appeals courts' decisions. Where the district courts rejected the FTC's geographic markets for being too narrowly drawn in light of demonstrated patient travel patterns, the appeals courts rejected the district courts' decisions as ignoring the commercial realities of the healthcare markets by focusing primarily on patient travel patterns.

A. Hershey/Pinnacle

In challenging the Hershey/Pinnacle merger, the FTC argued that the relevant geographic market was a four-county region roughly equivalent to the Harrisburg Metropolitan Statistical Area (Dauphin, Cumberland and Perry Counties) and Lebanon County because (i) patients who lived in this region primarily relied on the merging hospital systems for care; and (ii) the region's two main commercial health insurance payers both recognized the area as a distinct market.[12] The merging hospitals disagreed, arguing that the FTC's view was too narrow as it did not account for the actual travel preferences of the merging hospitals' patients, thousands of whom traveled from outside of the FTC's alleged geographic market to receive care at the defendants' hospitals.[13] Specifically, defendants alleged that 43.5 percent of Hershey's patients resided, and more than half of Hershey's revenue was generated from, outside of the Harrisburg area.[14] Finding defendants' evidence compelling, Judge Jones held that the FTC did not appropriately account for where the hospitals drew their business, incorrectly excluded from the market the 19 other hospitals within a 65 minute drive of Harrisburg, and therefore failed to establish its prima facie case under the Clayton Act.[15]

On appeal, the Third Circuit thoroughly rejected the district court's approach to defining the geographic market.[16] In the Third Circuit's view, by relying exclusively on patient flow data, the district court ignored "two problems: the 'silent majority fallacy' and the 'payorproblem.'"[17] First, the Third Circuit held that reliance on

12 *Hershey* I, 2016 WL 2622372, at *3.

13 Id. at *4.

14 Id.

15 Id.

16 See *Hershey II*, 838 F.3d at 339, 344 (characterizing the district court's position as "economically unsound and not reflective of the commercial reality of the healthcare market").

17 Id. at 340-41. The Third Circuit also held that the district court "erred in resting part of its analysis of the relevant geographic market on the private agreements between the Hospitals and the payors," since private contracts are irrelevant to "whether a *hypothetical* monopolist could profitably impose a [small but significant non-transitory increase in price]." Id. at 343-44.

patient flow data falsely assumes that "patients who travel to a distant hospital to obtain care significantly constrain the prices that the closer hospital charges to patients who will not travel to other hospitals."[18] As the Third Circuit reasoned, however, because "patient decisions are based mostly on non-price factors, such as location or quality of services," the travel preferences of a few cannot reliably be attributed to those in the "silent majority."[19] Second, the Third Circuit found that the district court "completely neglected any mention of the insurers in the healthcare market," which misunderstands the commercial realities of the healthcare market.[20] In short, the Third Circuit's rejection of the district court's approach made clear that proper application of the hypothetical monopolist test in hospital mergers looks to payers' likely response to a price increase, not patients'.[21]

Further emphasizing the role of payer response, the Third Circuit proceeded to apply the hypothetical monopolist test and found that the FTC sufficiently established that "payors would accept a price increase rather than exclud[e] all of the hospitals in the Harrisburg area."[22] In so holding, the Third Circuit relied on payers' testimony that they could not successfully market a network that did not include a large hospital in the Harrisburg area, and evidence of another payer's unsuccessful attempt to sell a network with only a smaller hospital in the Harrisburg area but with large hospitals in two neighboring counties.[23] The court also considered payers' testimony that "the Harrisburg area [was] a distinct market."[24] Thus, the Third Circuit concluded that the FTC met its burden to properly define the relevant geographic market.[25]

B. Advocate/Northshore

The Third Circuit's reasoning was echoed in the Seventh Circuit shortly thereafter. In seeking to block the *Advocate/Northshore* merger, the FTC similarly relied on patients' preference to receive general acute care services locally, arguing that the relevant geographic market was the "North Shore Area" — a region in the Chicago suburbs no broader than northern Cook County and southern Lake County.[26] The merging hospitals responded that the FTC's geographic market contrasted sharply with the one it defined in *Evanston* when five FTC Commissioners specifically rejected a geographic market including both Advocate and NorthShore, and argued that the FTC's decision to ignore the competitive effects of "destination" hospitals — i.e. hospitals for which patients will travel greater distances for care — was arbitrary and contradicted by patients' actual travel patterns.[27] Finding the evidence regarding patients' preferences "equivocal," Judge Alonso ultimately agreed with the merging hospitals that the FTC's geographic market was too narrow since it excluded destination and other hospitals without sufficient economic basis or other justification.[28]

The Seventh Circuit reversed, making clear that exclusive reliance on patient travel patterns to define the geographic market in hospital merger challenges is now a relic of the past.[29] According to the Seventh Circuit, the district court's central problem was that it misunderstood the hypothetical monopolist test, "overlook[ing] the test's results and mist[aking] the test's iterations for logical circularity."[30] Specifically, in the Seventh Circuit's view, the district court erred when it criticized the FTC's expert for advancing a narrow geographic market without explaining why a broader market would provide incorrect results.[31] The Seventh Circuit reasoned that such explanation is unnecessary because, "if a candidate market is too narrow, the [hypothetical monopolist] test will show as much, and further iterations will broaden the market until it is big enough." As the Seventh Circuit explained, "the hypothetical monopolist test is an iterative analysis."[32] If payers could defeat the hypothetical monopolist's attempt to impose a SSNIP by looking to providers outside the region, then it is not a relevant geographic market for antitrust purposes and "the test should be rerun using a larger candidate region."[33] Like the Third Circuit, the Seventh Circuit also addressed the "silent majority fallacy" and the non-price factors that inform patient travel patterns: "[P]atients vary in their hospital preferences. Getting an appendectomy is not like buying a beer; one Pabst Blue Ribbon or Hoegaarden may be as good as another, no matter where they are bought. For surgery patients, who their surgeon will be matters, the hospital's reputation matters, and the hospital's location matters."[34]

18 Id.

19 Id. at 341.

20 Id. at 341-42 The Third Circuit described the healthcare market as being "represented by a two-stage model of competition" where "hospitals compete to be included in an insurance plan's hospital network" and "to attract individual members of an insurer's plan." Id.

21 Id. at 342-45.

22 Id. at 345-46.

23 Id.

24 Id.

25 Id.

26 See Mem. In Supp. Of Pls.' Mot. for a Prelim. Inj. at 13-17, *Advocate I*, ECF No. 170.

27 See Defs.' Opp. to Pls.' Mot. for a Prelim. Inj. at 6-13, *Advocate I*, ECF No. 210.

28 *Advocate I*, 2016 WL 3387163, at *3-5.

29 *Advocate II*, 2016 WL 6407247, at *1.

30 Id. at *9.

31 Id.

32 Id. at *9.

33 Id. at *5.

34 Id. at *9-11.

III. GEOGRAPHIC MARKETS IN HEALTHCARE MERGERS LEADING UP TO HERSHEY AND ADVOCATE

From 2005 until the recent decisions in Hershey and Advocate, the FTC collected a series of wins challenging healthcare mergers in federal and administrative court, beginning with Evanston. After a more than 10-year hospital merger losing streak, the FTC challenged the already consummated acquisition of Highland Park by ENH, relying on empirical pricing data to establish that the merger raised prices to commercial payers in the relevant geographic market — a narrow triangular area formed by drawing lines connecting the three ENH hospitals.[35] While the ALJ rejected the FTC's narrowly drawn market, he also rejected the Elzinga-Hogarty test to determine the geographic market for hospital services, an approach that had historically led to very broad geographic market definitions and a series of losses by the federal antitrust authorities.[36] Relying in part on the empirical data showing actual and substantial post-merger price increases by ENH relative to other hospitals in the market, the ALJ ultimately found that the merger violated Section 7 of the Clayton Act and ordered ENH to divest all of the Highland Park assets acquired by ENH.[37]

Following the Evanston decision, the FTC filed complaints in and prevailed on six subsequent hospital mergers challenged in the federal district courts.[38] These successes have sometimes been attributed to a change in the way the FTC approaches geographic market definition — arguing for courts to analyze health care mergers "through the lens of contract negotiations between health care providers and commercial health plans," not patient travel patterns.[39] But a closer look reveals that, prior to its recent wins before the Third and Seventh Circuits, the FTC's successes rarely turned on the court's analysis of the relevant geographic market. For starters, in two of these cases the parties abandoned the merger before ever reaching the preliminary injunction hearing[40] and, in a third case, the parties stipulated to a preliminary injunction without a hearing on the merits of the FTC's substantive claims.[41] In two additional cases, the court acknowledged that the merging hospitals did not seriously contest the geographic market proffered by the FTC.[42] Moreover, in confirming that the relevant geographic market was Lucas County, as the FTC had alleged, the court in ProMedica relied in part on the FTC's expert's findings that "[o]nly 2.1% of Lucas County residents leave the county for [general acute care] services, and only 0.6% leave the county for OB services."[43]

In fact, prior to the Advocate/Northshore and Hershey/Pinnacle merger challenges, there was only one post-Evanston hospital merger challenge where a court had to seriously evaluate and rule on the appropriate geographic market. In challenging St. Luke's Health System, Ltd.'s ("St. Luke's") acquisition of Saltzer Medical Group, P.A. ("Saltzer"), the FTC alleged that a series of zip codes around Nampa, Idaho was the relevant geographic market[44] and that defendants' much larger geographic market of at least "Canyon County

35 Initial Decision at 137, *In re Evanston Northwestern Healthcare Corp.*, FTC Docket No. 9315 (Oct. 21, 2005).

36 See, e.g. IMPROVING HEALTH CARE, at Ch. 4.

37 Initial Decision at 1-2, *Evanston*, F.T.C. Docket No. 9315.

38 FTC *v. Inova Health Sys.* Found., No. 1:08-cv-460 (E.D. Va. 2008); *In re Reading Health Sys.*, F.T.C. Docket No. 9353 (2012); *FTC v. Phoebe Putney Health Sys., Inc.*, No. 1:11-cv-0058-WLS (M.D. Ga. 2013); F*TC v. OSF Healthcare Sys.*, No. 3:11-cv-50344 (N.D. Il. 2012); *FTC v. ProMedica Health Sys.*, No. 3:11-cv-47 (N.D. Ohio 2011); *Saint Alphonsus Medical Ctr. – Nampa, Inc. v. St. Luke's Health System, Ltd.*, No. 1:12-cv-00560-BLW-REB (D. Idaho 2014).

39 Mem. of Law in Supp. of Pls.' Mot. for Inj. Pending Appeal at 6, *Hershey I*, ECF No. 133-1.

40 See Joint Stipulated Mot. for Order Dismissing Compl., FTC *v. Inova Health Sys. Found.*, No. 1:08-cv-460 CMH/JFA (E.D. Va. 2008); Order Dismissing Compl., *In re Reading Health Sys.*, F.T.C. Docket No. 9353 (Dec. 7, 2012) (parties abandoned before the FTC filed its complaint in federal court).

41 See Stipulated Preliminary Injunction Order, FTC v. *Phoebe Putney Health Sys., Inc.*, No. 1:11-cv-00058-WLS (M.D. Ga. 2013). *Phoebe Putney* was adjudicated in the federal courts to determine whether, as defendants alleged, state action immunity exempted the transaction from the antitrust laws. FTC *v. Phoebe Putney Health Sys. Inc.*, 793 F. Supp. 2d 1356 (M.D. Ga. 2011), aff'd,663 F.3d 1396 (11th Cir. 2011), rev'd, 133 S. Ct. 1003 (2013). Following the Supreme Court's decision that state action immunity did not apply, the parties reached a consent agreement in the administrative proceeding, obviating the need for an adjudication on the merits. See Order Withdrawing Matter From Adjudication for the Purpose of Considering a Consent Proposal, *In re Phoebe Putney Health Sys., Inc.*, F.T.C. Docket No. 9348 (2015).

42 SeeMem. Opinion and Order at 11, *FTC v. OSF Healthcare Sys.*, No. 3:11-cv-50344 (N.D. Il. 2012) ("[D]efense counsel indicated at the hearing that defendants are not contesting the geographic market in this case."); Findings of Fact and Conclusions of Law at 18, F*TC v. ProMedica Health Sys.*, No. 3:11-cv-47 (N.D. Ohio 2011) ("Indeed, Defendant has not seriously disputed that Lucas County is the relevant geographic market for GAC.").

43 Findings of Fact and Conclusions of Law at 16-17, *ProMedica Health Sys.*, No. 3:11-cv-47 (N.D. Ohio 2011), ECF No. 121. While the FTC has argued against reliance on patient flow data to delineate the relevant geographic market in hospital mergers, the FTC continues to put forth such evidence when the data is consistent with and supported by other non-empirical evidence of a narrow geographic market. See, e.g.Br. of FTC and the Commonwealth of Penn. at 10, Hershey II (arguing that defendants' documents and testimony evidence "aggressive competition" between the merging parties, especially in the Harrisburg area, and that "[t]he evidence showed that 91% of Harrisburg area patients sought care at hospitals located in the four-county area, within a median travel time of 15 minutes").

44 See Compl. for Permanent Inj. at 11, *FTC v. St. Luke's Health System, Ltd.*, No. 1:13-cv-00116-BLW (D. Idaho 2014), ECF No. 98 (Relying on "both quantitative and qualitative evidence, including Defendants' own executives and St. Luke's ordinary-course documents," the FTC alleged that the "relevant geographic market . . . is no larger than the five zip codes that encompass Nampa and Caldwell, Idaho.").

plus the western portion of Ada County" was improper because it relied on the Elzinga-Hogarty test, whose application to healthcare mergers had (according to the FTC) "been thoroughly discredited."[45] While the court in St. Luke's adopted the FTC's geographic market, it did so relying in part on the FTC's own patient flow data, finding that "68% of Nampa residents get their primary care from providers who are located in Nampa" and "only 15% of Nampa residents obtain their primary care in Boise . . . near where they work."[46] Moreover, the court made no mention of the FTC's criticism of the Elzinga-Hogarty framework.

Thus, while the decision in Evanston rejected a strict reliance on patient flow data to define the relevant geographic market in hospital mergers, it appears that patient flow data continued to aid both the FTC and the courts in defining the proper geographic market, albeit also with the assistance of testimony and documents from market participants, including commercial insurance payers, on the competitive dynamics and the likely effects of a merger between the hospital defendants.[47]

IV. THE PATH FORWARD FOR MERGING HOSPITALS

Several explanations have been offered as to why hospital mergers and, in particular, geographic market definitions, created such difficulties for the FTC, notwithstanding its successes in other contexts throughout the same timeframe.[48]

In the hospital merger context, the presence and role of commercial payers often makes it difficult to pin down the boundaries of the relevant geographic market. Through a form of bilateral bargaining, commercial payers negotiate reimbursement rates directly with healthcare providers and then sell insurance plans to employers and consumers. The importance of a healthcare provider to a commercial payer's network often depends on the provider's location and an assumption that patients prefer to receive care close to home. But, as the merging hospitals in numerous cases have successfully argued, actual patient travel patterns can undercut this assumption. And, because commercial payers generally cover all of a patient's healthcare costs except for the patient's co-pay, patient travel patterns cannot be explained by pricing considerations. Thus, properly defining the relevant geographic market in any given case has traditionally required balancing a number of factors unique to hospital mergers.

Also complicating hospital merger challenges is the Patient Protection and Affordable Care Act ("Affordable Care Act")[49] and its general emphasis on reimbursement for the quality of care ("paying for performance") as opposed to the traditional fee-for-service structure ("paying for volume"). Indeed, this policy shift — encouraging integrated care for all of a patient's needs to improve patient outcomes — was acknowledged in St. Luke's, where the court recognized the acquisition of Saltzer by St. Luke's as a means to "practice integrated medicine to improve the quality of care," and going so far as to state that "St. Luke's is to be applauded for its efforts to improve the delivery of health care in the Treasure Valley."[50] While the court granted the FTC's request for a permanent injunction, it also noted that "[i]n a world that was not governed by the Clayton Act, the best result might be to approve the Acquisition and monitor its outcome to see if the predicted price increases actually occurred. In other words, the Acquisition could serve as a controlled experiment."[51]

More recently, the lower court in Hershey took a stronger stance on the paradox of promoting integrated care while seeking to block healthcare mergers that would allow hospitals to provide a more complete array of services to care for all of their patients' needs. Specifically, the district court stated that:

> [w]e find it no small irony that the same federal government under which the FTC operates has created a climate that virtually compels institutions to seek alliances such as the Hospitals intend here. . . . It is better for the people they treat that such hospitals unite and survive rather than remain divided and wither.[52]

On appeal, although the Third Circuit acknowledged that increased scale may increase the hospitals' ability to engage in risk-based contracting in some ways, it ultimately found that the hospitals had not demonstrated that any such benefits would be passed on to consumers.[53]

While these factors may explain why the use of patient travel patterns continued to play a role in geographic market definitions until recently, the Third and Seventh Circuits have made clear that such

45 Pls.' Joint Pre-Trial Mem. at 9, 10, n.34, *Saint Alphonsus Medical Ctr. – Nampa, Inc.* v. St. Luke's Health System, Ltd., No. 1:12-cv-00560-BLW (D. Idaho 2014), ECF No. 203.

46 Findings of Fact and Conclusions of Law at 15, *St. Luke's*, No. 1:12-cv-00560-BLW (D. Idaho 2014), ECF No. 464 (internal citations omitted).

47 See, e.g. *Advocate I*, 2016 WL 3387163, at *3-5 (rejecting the FTC's expert's exclusion of destination hospitals in the relevant geographic market, but also noting that evidence on whether patients prefer to receive care near their homes is "equivocal").

48 See, e.g. *FTC v. Staples, Inc.*, No. 15-cv-02115, -- F. Supp. 3d -- , 2016 WL 2899222 (D.D.C. 2016); *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1 (D.D.C. 2015).

49 Patient Protection and Affordable Care Act, Pub. L. No. 11-48, 124 Stat. 119 (2010).

50 Findings of Fact and Conclusions of Law at 3-4, 46, *St. Luke's*, No. 1:12-cv-00560-BLW (D. Idaho 2014), ECF No. 464.

51 Id. at 51.

52 *Hershey I*, 2016 WL 2622372, at *9.

53 *Hershey II*, 838 F.3d at 351 ("It is not clear from the record how this would be so beyond the mere assertion that it would save the Hospitals money and such savings would be passed on to consumers.").

analyses are relevant only to the extent they inform how payers are likely to respond to the proposed merger. As such, instead of relying on patient travel patterns to argue for a broader geographic market, parties should seek to understand how payers would respond to a 5 percent price increase by a hypothetical monopolist healthcare provider in the alleged geographic market.[54] Relatedly, parties should also consider how non-price factors, such as convenience and quality of care, inform payers' understanding of what employers and other customers demand in their health plan.[55] Finally, as a way of further evaluating payers' likely responses, parties should review available healthcare data to determine where patients would seek care if their first choice hospital were to become unavailable.[56] While this data still looks to patient rather than payer preferences, diversion ratios better predict post-merger travel patterns and may therefore be afforded more weight than patient travel patterns.[57]

V. CONCLUSION

Despite the decision in Evanston, a close look at the ensuing hospital merger challenges shows that patient flow data — and even some semblance of the Elzinga-Hogarty test — continued to inform geographic market analysis in hospital (and physician group) mergers until recently. But now that two appeals courts have issued opinions clearly rejecting the Elzinga-Hogarty framework and its reliance on patient travel patterns to define the geographic market in hospital mergers, practitioners should no longer rely on these previous decisions and should instead prepare to present as much evidence as to payers' likely response to a five percent price increase by the merging parties.

54 See *Hershey II*, 838 F.3d at 344-45; *Advocate II*, 2016 WL 6407247, at *10.

55 See *Advocate II*, 2016 WL 6407247, at *10.

56 See id. at *10-11.

57 Id.

MARKET DOMINANCE UNDER THE ANTI-MONOPOLY LAW: SAIC'S LANDMARK DECISION ON TETRA PAK

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I. INTRODUCTION

On November 16, 2016, the State Administration for Industry and Commerce ("SAIC") issued a press release on its over-four-year investigation against Tetra Pak, a Switzerland based liquid food packaging and service provider, for abuse of market dominance.[2] A fine in the amount of RMB 667,724,176.88, approximately US $97 million was imposed. In its forty-seven-page long decision ("the Decision")[3], SAIC elaborated on several issues in this case, including the market definition, the market power, the abuse of market dominance and the corresponding penalties. As a landmark antitrust decision made by SAIC, it is well-rounded with thorough legal and economic analysis and reasoning.

In this paper, we briefly describe the food packaging industry in China, highlight the main decision of the case, and discuss some implications.

II. BACKGROUND

Liquid food such as milk products and beverages is a fast-growing industry in China with great potential and a high rate of return, which attracts more and more new entrants.China is a huge market for liquid food producers and still has tremendous room for growth.For example, in 2015, the average consumption of milk products in China was 36 kilograms, which was only one third of the world average.[4]

Furthermore, the liquid food packaging industry is seeing rapid development due to the growing demands in the downstream liquid food industry.According to the Acceptance Specification of Packaging Equipment for Liquid Food,[5] liquid food packaging equip-

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2 *SAIC Imposes Administrative Penalty on Tetra Pak for Abusing Market Dominance,* Antimonopoly and Anti-Unfair Competition Enforcement Bureau of China's State Administration for Industry and Commerce, November 16, 2016, available at: http://www.saic.gov.cn/zwgk/zyfb/qt/xxzx/201611/t20161116_172376.html. Unofficial translation is attached at the end of the article.

3 *Administrative Punishment Decision of State Administration for Industry and Commerce,* China's State Administration for Industry and Commerce, Gong Shang Jing Zheng An Zi [2006] No.1, November 9, 2016, available at: http://www.saic.gov.cn/zwgk/gggs/jzzf/cfjd/201611/P020161116513025279743.pdf.

4 *Status and Import and Export Data in the Milk Product Processing Industry in China 2016*, China Industry Development Research Web, August 31, 2016, available at: http://www.chinaidr.com/tradenews/2016-08/102703.html.

5 *Acceptance Specification of Packaging Equipment for Liquid Food,* Gen-

ment may be divided into several categories, including aseptic packaging, ultra-clean filing, fresh keeping packaging, hot filing and general packaging based on the characteristics of the packaging equipment; or be divided into the categories of packaging of paper based compound material, packaging of plastic andcompound materials, packaging of glass materials and packaging of metal materials, based on the packaging materials.

Besides Tetra Pak, there are more than ten other liquid food packaging equipment enterprises, including well-knownmultinational companies operating in China, such as SIG Combibloc (Suzhou) Co., Ltd. and Shanghai Shikoku Food Packaging Machinery Co., Ltd., and Chinese indigenous manufacturers such as Shanghai Precise Packaging Co., Ltd., Guangzhou Leiwest Pak Co., Ltd., GreatView Aseptic Packaging Co., Ltd.,Shanghai Tianlong Packaging Machinery & Set Equipment Co., Ltd., BIHAI Machinery, Zhejiang Taizhou Weili Packing Co., Ltd., Xi'an Heiniu Machinery Co., Ltd., etc.

Customers of liquid food packaging equipment enterprises are mainly major liquid food producers in China, including Inner Mongolia Yili Industrial Group Co., Ltd., Beijing Sanyuan Foods Co., Ltd., Bright Dairy and Food Co., Ltd., China Green (Holdings) Limited, Blackcow Food Company Limited, Dali Foods Group Company Limited, etc.

A major upstream industry of liquid food packaging is the packaging material industry that produces paper, plastic, glass, metal, etc.In the Tetra Pak case, the upstream industry is mainly the raw paper industry.Raw paper for packaging includes kraft base paper and white base paper.In mainland China, only two companies have scale production of kraft base paper and supply kraft base paper to Tetra Pak, which are Foshan Huaxin Packaging Co., Ltd. and its subsidiary Zhuhai Hongta Renheng Paper Co., Ltd.Most of the other packaging companies use white base paper.

III. HIGHLIGHTS OF THE DECISION

As explained in the Decision, SAIC has conducted a deep and thorough investigation into the food packaging industry. The investigation has lasted for over four years and during the process, SAIC has conducted on-site inspection, market surveys and interviews. SAIC claims it has collected hard evidence and data and conducted comprehensive research on technical, economic and legal issues. During the course of the investigation, SAIC has also consulted with industry, academic and professional experts regarding those issues. Bilateral communication was frequent and involved parties were allowed to give comprehensive and thorough statements.

A. Market Definition

First, SAIC applied the standard approach to define the relevant product markets and geographic market. They started their analysis on demand-side substitution and supply-side substitution in terms of product characteristics, function and prices. The relevant product market has been defined as paper-based aseptic packaging equipment for liquid food ("equipment"), technology service for paper-based aseptic packaging equipment ("technology service"), and paper-based aseptic packaging materials ("packaging materials"). In particular, SAIC found that paper-based aseptic packaging is widely used and could replace other forms of aseptic packaging, while it could not be fully substituted by other forms of aseptic packaging, i.e. other forms of aseptic packaging could not provide full competitive constraints to paper-based aseptic packaging. They also found that when a liquid food manufacturer considers different packaging suppliers, it usually takes into account the technological characteristics, the cost of packaging equipment and packaging materials, and the affiliated technological service, etc. Once a packaging equipment is selected, it would be costly to convert to another one, which brings substitution barriers between paper-based aseptic packaging equipment and other equipment based on other materials. Due to the high switching cost, liquid food manufacturers rarely change the equipment and usually choose affiliated services and packaging materials to secure production stability and minimize operational risks. As for supply substitution, due to technical specifications, paper-based aseptic packaging equipment could not be quickly supplied by its adjacent equipment manufacturers. Similar analysis has been applied in technology services and packaging materials which constitute individual service and product markets. The relevant geographic market is mainland China.

B. Market Dominant Position

In assessing market power of Tetra Pak, SAIC considered market share, and the competitive situation of the relevant market, the ability that Tetra Pak could control the market, financial and technology conditions, the dependence of other undertaking on Tetra Pak, and the difficulties of market entry. It was found that during the period of 2009-2013 both inventory capacity and sold equipment volume of Tetra Pak had over 50 percent market shares, although such shares had dropped overtime.For high-end and middle-and-low end equipment, Tetra Pak has strong market power. The profit margin of low-speed equipment has increased and become even higher than that of high-end equipment. SAIC considered that it is evidence that competitive constraints from Tetra Pak are not strong enough to reduce its pricing power and product competitiveness.

Furthermore, SAIC analyzed transaction terms between Tetra Pak and its clients and found that these terms show strong control of Tetra Pak on transaction price and conditions, which is evidence of strong market power. Liquid food manufacturers that use paper-based aseptic packaging equipment, especially large companies, tend to choose Tetra Pak's and have high reliance on Tetra

eral Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and Standardization Administration of the People's Republic of China, effective as of December 1, 2009, available at: http://www.tech-food.com/kndata/detail/k0045428.htm.

Pak. For the top two diary companies in China, for example, a large percentage of their equipment is high-speed liquid food packaging equipment.In addition, due to high entry barriers in areas of financing, research & development, core parts, and patented technology, it isdifficult to enter into the relevant equipment market, according to SAIC.

Moreover, SAIC used a similar analysis into technology services market and packaging materials markets, and reached asimilar conclusion. In particular, when analyzing market power of packaging materials market, SAIC found that the Tetra Pak's prices were higher than the average level of the industry during 2009-2013, even in consideration of its complicated conditional discounts. The fact that Tetra Pak could charge higher packaging material prices than the industry average, that it could impose conditional discounts, and that its profit margins were well above other companies' profit margins would jointly constitute evidence to demonstrate Tetra Pak's market power. All these conclusions are supported by market survey and data, the marketing materials of Tetra Pak and other industry data provided by Tetra Pak, research reports and other statements.

C. Abuse of Market Dominance

The decision mainly includes three major conducts in analyzing Tetra Pak's abuse of market dominance, i.e. tying, exclusive dealing and loyalty rebates.

1. Tying

SAIC concluded that Tetra Pak tied packaging materials when providing paper-based aseptic packaging equipment, requesting its customers to use Tetra Pak packaging materials or packaging materials "accepted by Tetra Pak" during the period of performance confirmation, and use Tetra Pak packaging materials or packaging materials of "equivalent quality" during the warranty period.The two periods would cover 12 months after the equipment was put into production or 18 months after the equipment delivery.Tetra Pak also tied packaging materials when renting packaging equipment and when providing technical services.Tetra Pak's tying conduct mentioned above limits the options of the equipment users with respect to packaging materials, affects the sales of other packaging material producers, raises rivals' costs and ultimately hampers competition in the packaging material market.

Tying of products is a common business practice and is certainly not illegal in many countries including China. But a tying practice coupled with a dominant position in one of the tied product runs the risk of abuse of dominance according to China's Antimonopoly Law, which states, in Article 17(5), that tying is illegal without any justifiable cause, premised upon a dominant market position. This implies that the legality of tying in China is a "rule of reason" issue as opposed to a per se illegal offense. The exact meaning of "without any justifiable cause" is then the center of the economics and legal analysis.

Tying can be economically efficient and welfare enhancing under some circumstances, even including some contractual tying behavior. Tying may lower production costs to realize certain economy of scope. For example, in this case using Tetra Pak's packaging materials may work better with the Tetra Pak equipment and increase productivity. Tying may also reduce transaction costs and information costs. For example, in this case, using competing companies' packaging materials may incur additional costs of testing and qualifying these products, and may increase inspection and investigation costs when equipment breaks down.

SAIC appears to have refuted all of these typically pro-tying arguments in its ruling. Instead, it postulated four arguments in its "rule of reason" analysis against Tetra Pak. It referred to an industry standard regarding packaging materials, GB/T 18192-2008, to deliver the point that packaging materials meeting this standard are perfect substitutes for Tetra Pak's own packaging materials. It argued that these perfect substitutes have no significant direct bearings on the operations of Tetra Pak's equipment and do not add any complexity and costs to analyzing and discerning responsible parties in the event of equipment breakdown. And finally SAIC argued that the exclusive use of Tetra Pak packaging materials during the period of performance confirmation constitutes an entry barrier for its equipment customers to use alternative packaging materials from other vendors in that it adds significant equipment retooling and testing costs.

The second accusation for the tying matter regards Tetra Pak's conduct during its equipment warranty period. Here SAIC raised three issues. First, it refuted Tetra Pak's argument that the exclusive use of Tetra Pak's packaging materials is out of concerns for food safety and consumer protection. SAIC argued that such concerns have no direct relationship to the exclusive use of Tetra Pak's packaging materials, and there is no convincing evidence that other vendors' products constitute a reasonable threat to food safety. And besides, this is an issue already addressed by relevant government food safety regulations. Second, Tetra Pak has been vague and elusive with respect to the exact definition of alternative packaging materials of "equivalent quality." Tetra Pak's specification of such "equivalent quality" products is a proprietary document that is not readily available to its customers, even though it claims to be available upon request. But in reality, the exact details of the specification and relevant product parameters are hardly exposed to customers. And the last argument in this matter concerns the large volume of packaging material sales by Tetra Pak that effectively precludes use of alternative materials and thus precludes competition as well.

The third accusation pertained to the same tying behavior with respect to packaging materials for Tetra Pak's leased equipment, and the fourth accusation pertainedto tying behavior for Tetra Pak's aftersales service contracts. Both are essentially based on the same line of arguments as discussed above.

Our impression of SAIC's analysis is that it appears to have built up a solid case against Tetra Pak based on solid economic arguments. However, as there are always two sides to every story, we do not get to see much of Tetra Pak's defense in this matter. And there are plenty of areas that can be debated with respect to the economic benefits of tying. For example, testing, qualifying and certifying alternative packaging materials even in the event of meeting certain national standards do increase transaction costs, and how much cost savings can be realized by the exclusive use of Tetra Pak materials remains largely an empirical question. SAIC does not disclose much of Tetra Pak's defense in this ruling. Nevertheless, it appears that it adopted a decent "rule of reason" approach with a decent "rule of reason" analysis.

2. Exclusive Dealing

Foshan Huaxin Packaging Co., Ltd. and its subsidiary Zhuhai Hongta Renheng Paper Co.,Ltd. ("Hongta") supply kraft base paper to Tetra Pak, which is its only client.In the agreements that Hongta signed with Tetra Pak, Hongta is required to produce raw paper for liquid packaging exclusively for Tetra Pak and its affiliated companies. It cannot use Tetra Pak technologies except for producing products for Tetra Pak, and cannot sell products produced with Tetra Pak technologies to any other third parties. As Hongta actually owns the patent of producing kraft base paper, its supply of kraft base paper to third parties wouldn't affect its cooperation with Tetra Pak.Tetra Pak's restriction on Hongta's use of its own patents abused its market dominance and hampered competition in the packaging material market.

Article 17 (1) IV has specific provision regarding exclusive dealing.[6] A business operator with a dominant market position is prohibited from "requiring a trade party to trade exclusively with itself or trade exclusively with a designated business operator without any justifiable cause." The focus is whether an undertaking has a "justifiable cause" to engage in exclusive dealing conduct. According to SAIC, Tetra Pak's causes were not justifiable.

First Hongta has its own patented technology and in the contract relationship Tetra Pak did not transfer its manufacturing technology of kraftbase paper to Hongta. Second, Hongta has production capacity to supply competitors of Tetra Pak. Although Hongta has joint R&D with Tetra Pak, Hongta's sales to other customers doesn't impact its cooperation with Tetra Pak. Third, Tetra Pak restricts Hongta from using two kinds of technical information which are not exclusive to Tetra Pak and sometimes common knowledge of the industry. Fourth, restricting such technical information which is not exclusive to Tetra Pak directly impacts the production of kraftbase paper to other packaging material customers rather than Tetra Pak, which further harms competition of packaging materials market.

6 Art 17 (1) IV of the Antimonopoly Law of the People's Republic of China, effective as of August 1, 2008, available at: http://www.gov.cn/flfg/2007-08/30/content_732591.htm.

3. Loyalty Rebates

The Tetra Pak case is the first antitrust ruling involving loyalty rebates in China. Although the academic debates regarding loyalty rebates in China have been going on for several years,[7] antitrust legal enforcement against loyalty rebates is rare. SAIC took the "rule of reason" approach and acknowledged both procompetitive and anticompetitive aspects of the conduct. The quasi-per se illegal approach undertaken by the General Court of the E.U. dealing with exclusive rebates in the Intel case has received many criticisms.[8] SAIC, which is quite influenced by the E.U., however, stepped forward the"rule of reason" and applied robust economic analysis in its reasoning. Acknowledging the pros and cons of different analytical methods, SAIC officials emphasized the importance of taking into account the special characteristics of the Chinese market when analyzing loyalty rebates.[9]

The Anti-Monopoly Law ("AML") doesn't have specific provision on loyalty rebates. In the Provisions on Anti-Price Monopoly issued by NDRC and the Rules of the Administration for Industry and Commerce on Prohibition of Abuse of Dominant Market Position issued by SAIC in late 2010, loyalty rebates are explicitly prohibited to abuse undertaking's market dominant position.[10] SAIC applied Art. 17(1) of the AML and defined loyalty rebates as "other forms of conducts to abuse market dominance."[11]

SAIC found that retroactive rebates are the core of Tetra Pak's loyalty rebate system. Their characteristics include both retroactiveness in terms of time and accumulativeness in terms of volume. Tetra Pak's retroactive rebates mainly refer to single product retroactive rebates ("single retroactive rebates") and compound product retroactive rebates ("compound retroactive rebates"). Besides loyalty

7 See Deng Feng, *Divergence of One Rule and Diversity of One Case: A Comparative Case Study on Intel Loyalty Rebates*, Peking University Law Review, 2013 Vol. 2, available at: http://pkulaw.cn/fulltext_form.aspx?Db=qikan&Gid=1510132127&EncodingName=; Gaofen Ye, Research on Loyalty Rebate in Europe and the US and Its Enlightenment to China, Journal of Comparative Law, 2010 Vol. 5, available at http://article.chinalawinfo.com/ArticleHtml/Article_62117.shtml#m38.

8 See Damien Geradin, *Loyalty Rebates after Intel: Time for the European Court of Justice to Overrule Hoffman-La Roche*, Journal of Competition Law & Economics, 11(2015), available at: https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2586584.

9 See Yiqin Zhao, Thoughts on Loyalty Rebate, March 2015, available at:http://www.euchinacomp.org/attachments/article/465/CN/ZHAO_b.pdf.

10 Provisions on Anti-Price Monopoly, China's National Development and Reform Commission, effective as of February 1, 2011, available at: http://www.gov.cn/flfg/2011-01/04/content_1777969.htm; Rules of the Administration for Industry and Commerce on Prohibition of Abuse of Dominant Market Position, China's State Administration for Industry and Commerce, effective as of February 1, 2011, available at: http://www.gov.cn/flfg/2011-01/07/content_1779980.htm.

11 Art 17(1) of the Antimonopoly Law of the People's Republic of China, effective as of August 1, 2008, available at: http://www.gov.cn/flfg/2007-08/30/content_732591.htm.

rebates, Tetra Pak also gives special discount ("SD") or exceptional discounts to certain clients as additional discounts in its packaging materials sales. For special packaging materials and content, Tetra Pak also gives category discount ("CD"). Special discount and category discount are often combined with retroactive rebates.

On the one hand, SAIC admitted that rebates are common business practice, benefiting consumers and promoting market competition. On the other hand, it also recognized that loyalty rebates imposed by an undertaking that has a market dominant position might bring anticompetitive effect when combined with special market conditions. Such loyalty rebates should be regulated.

According to SAIC, loyalty rebates have loyalty inducing effect (sometimes also called "leverage effect"). For a firm which possesses a dominant position facing non-contestable demand from customers, such a firm may leverage its dominance into lowering price of the contestable portion, which customers may otherwise switch to other suppliers. Such a lower price of the contestable portion may put more pressure on other suppliers to decrease their prices in order to match the prices of the dominant firms and eventually may induce customers to still purchase from the dominant firm. By this way, it brings loyalty enhancing effect.

In this case, SAIC explicitly demonstrated that Tetra Pak had specific market conditions to impose loyalty rebates. First of all, certain customers rely on Tetra Pak's product category and production capacity, which is one of the major factors for non-contestable demand. Second, Tetra Pak tied packaging materials with equipment and technology services, and induced customers to use its own packaging materials via contract terms, which expanded the scope of non-contestable demand. Third, Tetra Pak combined multiple rebates such as target rebates which may lock in certain customers' purchase percentage and volume, transform contestable demand into non-contestable demand and eventually increase the total scope of non-contestable demand. Additional category rebates and special rebates will further reduce the prices of other suppliers to match Tetra Pak's, which enhances the anti-competitive effect of retroactive accumulated rebates.

Therefore, in the short run, although Tetra Pak's loyalty rebates benefit customers with lower total prices, other competing packaging materials suppliers have to not only match the Tetra Pak's rebates for contestable portion, but also further reduce their prices to compensate customers' rebates loss in non-contestable portion. Such a situation brings difficulty for other packaging materials suppliers to compete with Tetra Pak and may force them get out of market.This will further induce customers to choose Tetra Pak and foreclose its competitors, which eventually restricts market competition. In the long run, royalty rebates will also restrict other packaging materials suppliers' sales and profit margins, causing under-utilization of their production capacity and further impact the competition of packaging materials market and consumer welfare. Evidence has been found by SAIC that during 2009- 2013 gross margins of many small-and-medium packaging materials firms in mainland China stayed low, which explains the reality that their growth has been restricted.

IV. IMPLICATIONS

As a landmark antitrust ruling by SAIC, the Tetra Pak case is a good example to study the new enforcement pattern by SAIC. There are several implications of this case in our opinion. First, tying is clearly a "rule of reason" offense under China's AMLthat particularly requires the presence of a dominant market position in at least one of the tied product. Second, SAIC's "rule of reason" analysis appears to have followed the established antitrust economic analysis in the U.S. and the EU to identify Tetra Pak's motivation to stymie and suppress competition and that it had indeed succeeded in doing so. The details of the analysis are not disclosed and we do not know much about Tetra Pak's defense. But it is safe to state that a dominant market player engaged in tying practices, particularly contractual tying practices, runs the risk of colliding with China's AML. Finally, one could make the analogy in this case to the IBM's punched card case (IBM v. United States, 298 U.S. 131 (1936)), which eventually went all the way to the U.S. Supreme Court. There are plenty of similarities in these two cases, although one is an administrative rule, while the other is a judicial one. Second, exclusive dealing is a common conduct covered under the AML. The main focus of SAIC's reasoning falls into the proof of justifiable causes. It leaves undertakings the responsibility to bring solid and convincing evidence to support their justifiable causes.Third, Tetra Pak decision is the first ruling which involves loyalty rebates. Although the U.S. and EU enforcement agencies have divergence on loyalty rebates, SAIC took a further step to adopt a "rule of reason" approach in its analysis by taking into account both procompetitive and anticompetitive effects. It will leave the companies being investigated by SAIC, industry and economic experts to provide convincing evidence and robust analysis to support their arguments.

Unofficial press release translation

SAIC Imposes Administrative Penalty on Tetra Pak for Abusing Market Dominance

Antimonopoly and Anti-unfair Competition Enforcement Bureau of the State Administration for Industry and Commerce (SAIC)

November 16, 2016

http://www.saic.gov.cn/zwgk/zyfb/qt/xxzx/201611/t20161116_172376.html

Recently, the State Administration for Industry and Commerce ("SAIC") imposed administrative penalty on Tetra Pak Group ("Tetra Pak") for abusing market dominance, and published the administrative punishment decision on its official website on November 16, 2016.

Originated in Sweden and established in 1951, Tetra Pak is a large multinational group, which provides design of liquid food packaging, relevant technology services, and packaging materials on a global scale, as well as providing design schemes of production lines for liquid food manufacturers.

The parties concerned include six Tetra Pak companies, including Tetra Pak International S.A., which is registered in Sweden, is Tetra Pak Group's operating headquarter, and is in charge of the group's global business operations; Tetra Pak China Limited, which is registered in Hong Kong, China, is Tetra Pak Group's operating headquarter in Greater China, and is in full charge of the group's businesses in China; Tetra Pak Packaging (Kunshan) Limited, Tetra Pak Packaging (Beijing) Limited, Tetra Pak Packaging (Foshan) Limited, and Tetra Pak Packaging (Hohhot) Limited, which are registered in mainland China, and are mainly engaged in paper-based aseptic packaging equipment for liquid food, relevant technology services, production and sales of packaging materials, and relevant businesses in the mainland China market.

SAICinitiated the case against Tetra Pak's alleged monopoly behavior in January 2012, and launched the comprehensive and deep investigation which lasted for more than four years. During this period of time, through the investigation measures such as on-site inspection, market survey, interviews investigation, etc., SAIC collected the documentary evidence and electronic data from the involved parties and relevant enterprises, conducted thorough research and demonstration and asked for expert consultation regarding the involved professional and technical, economics, and legal issues, and communicated with the involved parties face to face many times, while the involved parties made thorough statements.

According to the investigations, SAIC concluded that from 2009 to 2013, Tetra Pak had dominant position in the three markets including paper-based aseptic packaging equipment for liquid food ("equipment"), technology service for paper-based aseptic packaging equipment ("technology service"), and paper-based aseptic packaging materials ("packaging materials") in mainland China. From 2009 to 2013, Tetra Pak abused its dominant position in the equipment market and the technology service market, and bundled packaging materials when providing equipment and technology services; abused its dominant position in the packaging materials market, and restrained the supplier of raw paper from cooperating with its competitors or using its relevant technology information, in order to prohibit the supplier of raw paper from providing raw paper to its competitors; made use of its dominant position in the packaging material market, carried out retroactive and cumulative sales discounts, individualized purchase-target rebates, and other loyalty rebates that eliminated and restricted competition, and harmed fair competition in the packaging materials market.

SAIC decided that Tetra Pak's conducts above violated the regulations in the Anti-Monopoly Law (AML) of the People's Republic of China, and constituted tying without legitimate reason, restricting trade without legitimate reason, and other acts of abuse of market dominance as stipulated in Article 17 (4), (5) and (7) of the AML. Pursuant to the AML, SAIC ordered Tetra Pak to stop the illegal conducts, including tying packaging materials without legitimate reason when providing equipment and technology services, restraining suppliers of raw paper packaging materials without legitimate reason from providing white coated kraft cardboard to third parties, and from formulating and carrying out loyalty discounts, which eliminate and restrict competition in the packaging material market; the penalty amounts to RMB 667,724,176.88

UNEXPLAINED MYSTERIES OF THE ENERGY MARKET INVESTIGATION

BY MARK FRIEND[1]

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I. PUBLICATION OF THE CMA'S FINAL REPORT

The UK Competition and Markets Authority ("CMA")'s final report on the Energy Market Investigation was published on June 24, 2016, the last working day before the 24 month deadline for publication.[2] The timing was perhaps unfortunate, as it meant that media coverage for the report was largely non-existent, being overshadowed by the shock news of the Brexit referendum result. A conspiracy theorist might question whether the timing was deliberately chosen to avoid too much media scrutiny of a report that has been seen in some circles as a whitewash.[3] Indeed, that was precisely the thrust of a question put to the CMA inquiry chair, Roger Witcomb, by the chair of the Energy and Climate Change Select Committee, Angus Brendan MacNeil, on July 5, 2016.Mr Witcomb explained in response that the CMA felt that it would have been:

> Inappropriate and possibly even more controversial to publish the report in the pre-referendum period, and so we found ourselves in the position where it couldn't be before 24 June and it couldn't be after 24 June, which made the decision quite easy.

Such media coverage as there was at the time, and that has appeared in the weeks following the report, has tended to focus on the headline customer detriment figure of £1.4 billion, being the average annual amount by which the CMA claims the Big 6 energy firms have been over-charging customers.[4] It is this figure which forms the central plank of the CMA's decision to opt for one of its most controversial remedies, a temporary price cap for pre-payment customers since, in the absence of a very large measure of customer detriment;[5] it is doubtful whether such an intrusive remedial intervention could be justified on proportionality grounds.

2 See: https://www.gov.uk/government/news/cma-publishes-final-energy-market-reforms.

3 See: *The Guardian June 23, 2016, CMA energy market report expected to whip up storm of criticism* https://www.theguardian.com/business/2016/jun/23/cma-energy-market-report-expected-criticism-overcharging-uk-consumers-big-six-suppliers.

4 See for example: *Utility Week, June 24, 2016, CMA final report: the industry reacts:* http://utilityweek.co.uk/news/cma-final-report-the-industry-reacts/1256162#.V9FGDSb2bqM; *Daily Telegraph, July 23, 2016, CMA's Roger Witcomb. energy inquiry 'ran the risk of being hijacked':* http://www.telegraph.co.uk/business/2016/07/23/cmas-roger-witcomb-energy-inquiry-ran-the-risk-of-being-hijacked/.

5 The CMA estimated the detriment suffered by prepayment customers to be £388 million: see final report, para 14.18.

Although several of the CMA's recent market investigations have resulted in (judicial review) appeals to the Competition Appeal Tribunal ("CAT"), with varying degrees of success,[6] by 5:00 p.m. BSTon August 24, 2016 the two-month deadline for an appeal had passed without any of the parties involved having chosen to challenge the CMA's findings. As a result, the CMA's customer detriment calculations and the analysis on which they are based have avoided judicial scrutiny. It is true that the Energy and Climate Change Committee has been examining the CMA's report and hearing evidence from some of the main protagonists, including representatives from the CMA itself, but that is no substitute for the level of forensic detail that one would typically encounter in judicial review proceedings before the CAT, which can sometimes resemble a full merits review. Although there are doubtless many in the industry who will be relieved at the absence of an appeal, in one sense this is unfortunate, as the CMA's detriment calculations leave many questions unanswered. Significant elements of the CMA's detriment calculations are not in the public domain, as the published version of the final report contains extensive redactions.[7] In the absence of full disclosure of the CMA's workings, there is no way of knowing how robust the analysis is. However, there are reasons to be cautious before accepting the CMA's conclusions at face value given certain analytical errors made by the CMA at earlier stages of the investigation, as explained below.

II. ORIGINS OF THE £1.4 BILLION DETRIMENT FIGURE

The £1.4 billion estimate of customer detriment appeared for the first time in the final report, without any prior consultation on certain key elements of the methodology used to arrive at that figure. The calculation was based on the so-called "direct "method: a comparison of the prices charged by the Big 6 suppliers with a "competitive benchmark price," constructed from the average prices of the two most competitive smaller (or "mid-tier") suppliers in the market, Ovo and First Utility. The CMA adjusted the prices of Ovo and First Utility to allow for a normal return on capital[8] and to reflect differences in suppliers' size and rate of growth. In addition, the CMA adjusted the data for cost differences which were considered to be largely outside suppliers' control (exogenous cost differences).[9] At an earlier stage in the investigation, with the publication of the provisional decision on remedies in March 2016, the CMA had estimated the level of customer detriment using the same "direct "method at £1.7 billion.[10] The CMA's detailed workings were made available to parties' legal and economic advisers by way of a confidentiality ring. This led to extensive criticism from some of the main parties' advisers, and by the time of the final report the CMA was forced to concede that this estimate needed to be revised as the comparison between the costs of the Big 6 and the two benchmark suppliers had not been carried out on a like-for-like basis. In particular, the CMA had failed to take into account that the cost bases of Ovo and First Utility were lower than those of their Big 6 competitors because, as small (but rapidly growing) suppliers, they did not have to bear the full costs of the various social and environmental schemes that were in operation during the period under consideration.[11] In the early years of their existence those suppliers would have been fully or partially exempted due to their lower customer numbers. In later years their rapid growth would have meant that, in any given year, their level of obligation would have been lower than for a company with a stable customer base, as the obligation costs per supplier were calculated on the basis of the supplier's customer numbers in the previous financial year.[12]

In its response to the provisional decision on remedies, it was argued by one of the Big 6 suppliers that correcting for this issue alone would reduce the scale of the customer detriment by around £1.3 billion, while additional adjustments to the actual costs of Ovo and First Utility to correct for other conceptual errors in the CMA's analysis would wipe out the detriment entirely.[13] In the final report,

6 There were appeals in Groceries, *PPI, BAA, Aggregates and Private Healthcare.*

7 In line with its standard practice, the CMA states at page 3 of the final report that it has excluded from the published version of the report "information which the inquiry group considers should be excluded having regard to the three considerations set out in section 244 of the Enterprise Act 2002 (specified information: considerations relevant to disclosure)."Essentially these refer to (i) information the disclosure of which the CMA thinks would be contrary to the public interest, (ii) commercial information whose disclosure the CMA thinks might significantly harm the legitimate business interests of the undertaking to which it relates or information relating to the private affairs of an individual whose disclosure the CMA thinks might significantly harm the individual's interests, and (iii) the need to consider the extent to which the disclosure of information mentioned in (ii) above is necessary for the purposes for which the CMA is permitted to make the disclosure.

8 The CMA explained that the prices of Ovo and First Utility were adjusted to give a competitive benchmark price that was consistent with an EBIT margin of 1.25 percent. The CMA argued that this was the level of EBIT margin that a large stand-alone retail energy supplier should earn (on average) in order to deliver returns on capital employed ("ROCE") in line with its weighted average cost of capital ("WACC"): see final report, paras 10.29, 10.69.However, the use of ROCE as a measure of profitability in an asset-light business, such as energy supply, is controversial, with most of the Big 6 suppliers voicing strong objections as a matter of principle, and some (RWE, Scottish Power and E.ON) arguing that the high degree of volatility observed in the ROCE results from year to year meant that it was unreliable as a measure of profitability. See: final report, Appendix 9.10, paras 17-18.

9 Final report, paras 10.13-10.14.

10 See: https://www.gov.uk/government/news/cma-sets-out-energy-market-changes.

11 There were seven social and environmental schemes in operation during 2012-2015: final report, Appendix 10.1, para 23.

12 Final report, Appendix 10.1, para 28.

13 Scottish Power response to the provisional decision on remedies at para 1.6, available at: https://assets.publishing.service.gov.uk/media/571a07e9e5274a2017000006/ScottishPower_response_to_PDR.pdf. The net effect of these adjustments would have been to translate the £1.7 billion detriment figure into a negative figure of around £700 million,

the CMA accepted the need to amend its detriment calculations to ensure a like for like comparison between the Big 6 and the benchmark comparators in relation to social and environmental costs,[14] albeit that the full scale of the adjustment and its impact on the level of detriment are not disclosed. What seems reasonably clear, however, is that the impact must have been substantial. How, therefore, did the CMA arrive at the figure of £1.4 billion in the final report? The answer is that it did so by making two further adjustments to the costs of Ovo and First Utility that had not featured at earlier stages in the investigation. Conveniently for the CMA, these appear to have had largely the opposite effect to the adjustment made to account for differences between the Big 6 and the two benchmark comparator firms in relation to social and environmental costs. Again, the details are redacted, so one cannot be sure what the CMA has done. A cynical observer could be forgiven for wondering whether there was perhaps an element of reverse engineering in the methodology used to derive such a large a detriment figure, so that the CMA could more easily justify its decision to impose a price cap. Absent an appeal to the CAT, we will never know as the CMA did not make its underlying calculations available even to parties' legal and economic advisers.

III. THE TWO LAST-MINUTE ADJUSTMENTS

The first adjustment related to the treatment of the customer acquisition costs of Ovo and First Utility. Because both these suppliers were rapidly growing their customer bases, the CMA argued that their profits would have been artificially depressed, as the costs would have been incurred at the point of acquisition, but the income from those customers would largely be earned in future years. In order to correct for this, the CMA decided to amortise the costs over a six year period, arguing that six years corresponded to the average customer life seen in the industry as a whole.

The logic for amortising these up-front costs over some period does not seem unreasonable, but what is surprising is the choice of six years. One of the key findings of the CMA's investigation was that the market is characterised by weak customer engagement. This meant that large numbers of Big 6 customers were found to be paying relatively high "standard variable tariff "charges and failing to switch to more competitively priced fixed-term deals. But Ovo and First Utility are recent entrants to the market and have had to grow their customer base by targeting their offer at customers who are willing to switch (and who therefore do not suffer from the "disengagement "syndrome).It seems implausible that customers who have already switched to a new entrant will exhibit the same level of stickiness as the industry average, which will include many customers who have never switched. On that basis, it seems doubtful that the average life of an Ovo or First Utility customer will be anything approaching six years. The CMA does not disclose what assumption it has made about customer lifetimes. It notes that using a (redacted) shorter period would not make much difference to the calculation, but it is not clear whether the CMA had in mind a period of (say) five years, or a much shorter period.[15] Potentially, the choice of the amortisation period could make a very substantial difference to the calculation.

The second adjustment related to the treatment of overhead costs. The CMA argued that Ovo and First Utility would have incurred infrastructure costs that reflected an expectation of future growth in customer numbers, and that as their customer base grew in future their overhead costs were likely to decline as a proportion of revenue.[16] Details of the adjustments made by the CMA are once again redacted, so it is not clear exactly what has been done. But it seems the CMA decided to assume overhead costs equal to a fixed percentage of revenues, based on the actual overhead costs already incurred by First Utility, and seemingly disregarding the actual costs incurred by Ovo, on the basis that they had been affected by factors that made them an unreliable benchmark.[17] Effectively, therefore, the CMA used the results of one single company as a benchmark comparator.

IV. CONCLUSION

The net impact of these two cost adjustments appears to cancel out the adjustment for social and environmental costs, allowing the CMA to conclude that the level of customer detriment was £1.4 billion. It is unfortunate, however, that the CMA has redacted core elements of its calculations, thereby preventing interested parties from being able to verify whether the results are robust. Media commentators may be willing to take the CMA's findings at face value, but absent any disclosure of the underlying workings even to parties' legal and economic advisers, this seems a highly unsatisfactory basis for politicians and regulators to make judgments about whether the prices charged by the Big 6 reveal evidence of an "over-charge."

indicating that Ovo and First Utility were operating below minimum efficient scale.

14 Final report, Appendix 10.1, paras 24-28.

15 Final report, Appendix 10.1, para 31.

16 Final report, Appendix 10.1, para 37.

17 Final report, Appendix 10.1, para 38.

BATHTUB CONSPIRACIES – AN INDIAN COMPETITION LAW PERSPECTIVE

BY RAVISEKHAR NAIR & AAKARSH NARULA[1]

Having imposed a penalty of approximately USD $2 billion in the seven years since the enforcement of the Competition Act, 2002 ("Competition Act"), the Competition Commission of India ("CCI") has become one of India's most active regulators. The wide-ranging commercial implications of competition law enforcement on domestic and international business groups present in India have made it imperative for them to insulate their legitimate commercial practices from conduct which may be abusive or anti-competitive. One such area within which the mandate of CCI's intervention remains largely untested is the regulation of business groups' internal cooperation and arrangements, and their resultant obligation to ensure parity of treatment between a competitor and owned verticals.

Enforcement of competition law rules on conduct within an enterprise, or a group, is widely known as theintra-enterprise conspiracy doctrine or "bathtub conspiracies."[2] Across jurisdictions, intra-enterprise coordination is protected from competition law interference by operation of the single economic entity doctrine("SEE Doctrine"), which presumes unity of interest between a parent and its subsidiary. The SEE Doctrine allows legally separate entities pursuing the same commercial goals and under common ownership and control to be treated as integrated economic units. The SEE Doctrine shields intra-enterprise conduct, which may otherwise be held as anti-competitive, from competition law interference.

The Competition Act classifies its behavioral prohibition between anti-competitive agreements(regulated by Section 3) and abuse of dominant position (regulated by Section 4). Principally, Section 3 deals with coordinated or concerted offenses, which requires an "agreement" between two "enterprises"(or persons or association of persons). Section 4, on the other hand, prohibits certain categories of unilateral or single-firm conduct by dominant enterprises or groups.

The Competition Act does not expressly recognize the SEE Doctrine, and as such, does not convey an express protection to intra-enterprise conduct. However, in line with internationally recognized principles, the CCI and the Competition Appellate Tribunal ("COMPAT") have acknowledged the protection of the SEE Doctrine to Section 3 offenses (i.e. anti-competitive agreements) on multiple occasions. The CCI dealt with the SEE Doctrine for the first time in 2012, when it held that an exclusive arrangement between Automobili Lamborghini S.p.A. and its group company, Volkswagen Group

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2 "The so-called "intra-enterprise conspiracy" doctrine provides that § 1 liability is not foreclosed merely because a parent and its subsidiary are subject to common ownership." *Copperweld Corp. Et al. v. Independence Tube*,467 u.s. 752 (1984), available at: https://www.law.cornell.edu/supremecourt/text/467/752.

Sales Pvt. Ltd. could not be considered as an agreement between two enterprises under Section 2(h) of the Competition Act, and consequently, could not be examined under Section 3 of the Competition Act.[3] On the question of what constitutes a single economic entity, the CCI noted that so long as two enterprises form part of the same group,[4] any internal agreement between them is not considered an agreement for the purpose of Section 3. The COMPAT upheld the CCI's finding, albeit by deviating slightly in the line of reasoning adopted by the CCI.[5] The latest CCI decision concerning the SEE Doctrine, i.e. *Association of Third Party Contractor v. General Insurers' Associationre*-affirmed the group-test.[6] In *ShamsherKataria*, the CCI also held "inseparability of economic interest"to be a vital ingredient in the rebuttable presumption of the SEE Doctrine available to enterprises belonging to the same group.[7] Further, moving away from an enterprise-level control,the CCI in theInsurance Cartel Case narrowed its assessment to de facto and de jure control over specific business decisions which were the subject-matter of the allegations.[8] Clearly, due to the statutory requirement of showing an "agreement"between "enterprise[s]"under Section 3, these decisions of the CCI and the COMPAT only extend the SEE Doctrine to Section 3 offenses. Its application to Section 4 offenses remains elusive, and a matter of potential debate.

Section 4 of the Competition Act, which is the corresponding provision to Section 2 of the U.S. Sherman Antitrust Act of the 1890 and Article 102 of the Treaty on the Functioning of the European Union ("TFEU"), deals with certain categories of unilateral conduct by a dominant enterpriseorgroup. By its very nature, Section 4 is aimed at combatting single-firm conduct. What stands out, however, is the prohibition on enterprises onimposing discriminatory conditions or price inpurchase or sale of goods or service, which forms part of the prohibition contemplated by Section 4(2)(a) of the Competition Act ("Anti-Discrimination Provision"). The Anti-Discriminatory Provisions have a unique requirement of showing a discriminatory price or condition to be in relation to a "purchase or sale." A "purchase or sale"cannot be purely unilateral in nature, and arguably, should be subject to the same SEE Doctrine principle as Section 3.

The Anti-Discrimination Provision of the Competition Act is based on the provisions of Article 102(c) of the TFEU, which prohibits dominant undertakings from "applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage" and the Robinson-Patman Act, which prohibit "discriminating in price between different purchasers of commodities of like grade and quality."Relying on these very provisions of the TFEU and the Robinson-Patman Act, the COMPAT in *Schott Glass*[9] recognized two vital ingredients for establishing an offense under the Anti-Discrimination Provision, i.e.first,dissimilar treatment to equivalent transactions; and second,harm or likely harm to competition.

An offense of abusive discrimination in India, therefore, must be established on the basis of juxtaposing multiple equally placed purchases or sales (transactions), and establishing an element of discrimination in either the price, or condition (dissimilar treatment) imposed by a dominant enterprise. This naturally raises an important question, that is, whether one of these transactions could be a transaction within a single economic unit. To answer this, it must be tested whether an intra-enterprise arrangement could amount to a purchase orsale (or as the COMPAT puts it, a "transaction") for Section 4(2)(a), and therefore, be used as a benchmark for requiring a dominant enterprise in affording the same treatment to similarly placed market players. In other words, does the Anti-Discrimination Provision prevent conglomerates from favoring their group entities? The CCI has penalized enterprises under the Anti-Discrimination Provision on seven occasions. Out of these, the CCI has found preferential treatment to affiliated entities (or to the dominant entity itself) to be in violation of the Anti-Discrimination Provision on two

3 "To establish a contravention under Section 3, an agreement is required to be proven between two or more enterprises. Agreement between opposite party and its group company 'Volkswagen India' cannot be considered to be an agreement between two enterprises as envisaged under section 2(h) of the Act. Agreements between entities constituting one enterprise cannot be assessed under the Act. This is also in accord with the internationally accepted doctrine of 'single economic entity'." *Exclusive Motors Pvt. Limited v.Automobili Lamborghini S.P.A*, CCI's order dated November 6, 2012 in Case No. 52 of 2012.

4 The "group" test gets satisfied with any of the three conditions under Explanation (b) to s.4 being met, i.e. being able to i) exercise 50 percentvoting rights; or ii) appoint 50 percentmembers on the board, or iii) control the management or affairs of the enterprise.

5 The COMPAT in *Exclusive Motors Pvt. Ltd.v. Automobili Lamborghini SPA*, deviating from CCI's reliance on the definition of "enterprise" to reach its findings, noted "There can be no dispute that the Volkswagen India is an enterprise like appellant Lamborghini. There can also be no dispute that this was an agreement between the two enterprises. However, the question is as to whether agreement between these two enterprises could be viewed as contravening of Section 3". Instead, the COMPAT relied on "control" and held "In both the cases, almost 99% of the shareholding is directly or indirectly controlled by the mother company and therefore, we have no hesitation in endorsing the finding of the CCI that these two companies amount to a single economic entity." COMPAT's order dated February 28, 2014 in Appeal No. 1 of 2013, available at: http://compat.nic.in/upload/PDFs/febordersApp2014/28_02_14.pdf.

6 *Association ofThird Party Contractor v. General Insurers' Association*, CCI's order dated January 4, 2016 in Case No. 107 of 2013, available at: http://www.cci.gov.in/sites/default/files/Order_107_of_2013.pdf.

7 *ShamsherKataria v. Honda Siel*, CCI's order dated August 25, 2016 in Case No. 3 of 2011, available at: http://www.cci.gov.in/sites/default/files/032011_0.pdf.

8 In Re: *Cartelization by public sector insurance companies*, CCI's order dated July 10, 2015 in Suo Moto Case No. 02 of 2014, available at:http://www.cci.gov.in/sites/default/files/022014S.pdf.

9 *Schott Glass India Pvt. Ltd v. Competition Commission of India*, COMPAT's order dated April 2, 2014 in Appeal No. 91 of 2012, available at: http://compat.nic.in/upload/PDFs/aprilordersApp2014/02_04_14.pdf.

occasions, i.e. in *Schott Glass*[10] and *ITPO*[11]. In Schott Glass, the CCI penalized an enterprise operating in an upstream market for providing favorable discounts to its own joint-venture("JV") operating in the downstream market, as opposed to the JV's competitors, while in ITPO, the CCI found an organization in violation of Section 4(2)(a) for giving preferential treatment to its own fairs over competing fairs. Both these decisions of the CCI have not survived the appellate scrutiny of the COMPAT, albeit not on a reasoning which would permit intra-group preferential treatment.

Interestingly, while dealing with Anti-Discrimination Provision of the Competition Act, neither the CCI, nor the COMPAT, have dealt with the two-sale requirement for application of Section 4(2)(a), and therefore, have tacitly accepted transfers between affiliated enterprises as purchase or sale of goods or services. The dissenting order of Dr. Geeta Gauri (former Member, CCI) in Schott Glass, however, partially recognized the extension of the SEE Doctrine to hold internal sales as intra-group transfers, and observed: "Generally, a lower input cost charged by the dominant firm to its own joint venture partner vis-à-vis the other buyers in the market should be looked at as internal transfer of profits, unless an adverse effect on downstream competition due to the differential treatment can be clearly established."[12] Unfortunately, the COMPAT, while upholding the other findings of the dissenting order, did not deal with these observations. Relatedly, the COMPAT in ITPO has recognized that the Competition Act does not impose an obligation on dominant enterprises to part with their own assets for the benefit of others, which may be detrimental to the enterprise's own interest.[13] This is the underlying rationale of the SEE Doctrine. COMPAT's observations in ITPO, although not necessarily hitting the nail on the head, are extremely helpful in questioning the expectation of parity that the CCI appears to have imposed in one's dealings with its own enterprises versus the market participants.

The courts in the U.S. have repeatedly extended the SEE Doctrine to the Robinson-Patman Act, the principal anti-discrimination provision of the U.S. They have held that the Robinson-Patman Act is not concerned with transfers between single economic undertakings.[14] For instance, in *BMW*,[15] the U.S. Courts of Appeal observed:"we find nothing special in the Robinson-Patman Act context that militates against Copperweld's reasoning or result." The Court also recognized that"...M's sale of a good to a wholly owned subsidiary D is not a "sale" for Robinson-Patman Act purposes; rather, it is simply a transfer; and that is so whether D is, or D is not, somehow "independent" in reality." Similarly, the U.S. Courts of Appeal in *Security Tire*[16] affirmed the two-transaction test, and held "Courts have interpreted the Section 2(a) language to require that a plaintiff establish two separate and contemporaneous sales transactions made by the same seller to two distinct purchasers." It recognized that "For price discrimination to occur, […] one purchaser must pay more than another purchaser; there must be two or more transactions at different prices." Similarly, in the context of Article 102(c) of the TFEU, Faull and Nikpay recognizes that to establish an offense of price discrimination, the buyer must be independent from the seller. The authors note: "Price discrimination does not occur where there are differences between the internal transfer price the seller agrees with its own group companies and the price agreed with third parties. However, such price differences may be investigated as a margin squeeze."[17]

Since an internal transfer between single economic undertakings does not amount to an"agreement"between two "enterprises"for Section 3 (as acknowledged by the CCI), it may be difficult to term it as a "purchase or sale"for Section 4. Such a construction may not only be inconsistent with foreign jurisprudence surrounding the Robinson-Patman Act in the U.S., and Article 102(c) of the TFEU in the European Union, but could also lead to a situation where an unincorporated division of an enterprise will not be exposed to the Anti-Discriminatory Provision, whereas distinct legal entities will be. Finally, with there being no order of the CCI penalizing abusive discrimination involving single economic units – which has been upheld by the COMPAT – it would be interesting to see whether the CCI imposes an obligation on dominant enterprises to treat internal arrangements among owned entities on par with dealings with their market participants, as if they qualified the "equivalent transactions" test.

10 *Kapoor Glass Private Limited v. Schott Glass India Private Limited*, CCI's order dated March 29, 2012 in Case No. 22 of 2010, available at: http://www.cci.gov.in/sites/default/files/Case22of2010MainOrder_0.pdf

11 *Indian Exhibition Industry Association v. Ministry of Commerce & Industry & Indian Trade Promotion Organization*, CCI's order dated April 3, 2014 in Case No. 74 of 2012, available at: http://www.cci.gov.in/sites/default/files/742012_0.pdf and COMPAT's order dated July 1, 2016 in Appeal No. 36 of 2014, available at: http://compat.nic.in/upload/PDFs/judgement-orders-2016/FINAL%20ORDER%20FOR%20UPLOADING%20%20-%20ITPO%20-%20for%201st%20July,%202016.pdf

12 *Kapoor Glass Private Limitedv.Schott Glass India Private Limited*, Dissenting Order of Dr. Geeta Gauri dated March 29, 2012, Former Member CCI in Case No. 22 of 2010 atParagraph 8.3, available at: http://cci.gov.in/sites/default/files/Case22of2010OrderMemberGG.pdf.

13 The COMPAT in *ITPO* observed: "It is beyond comprehension of any reasonable person as to how a person/entity can be compelled to part with, permanently or temporarily, his/its own assets for the benefit of others, which may, at times detrimental to his/its own interest."

14 *Mumford v.* GNC Franchising LLC, 437 F. Supp. 2d 344, 348 (W.D. Pa. 2006), available at: https://casetext.com/case/mumford-v-gnc-franchising-llc/case/alarmax-distribs-inc-v-honeywell-intl-inc#cited-link-1.

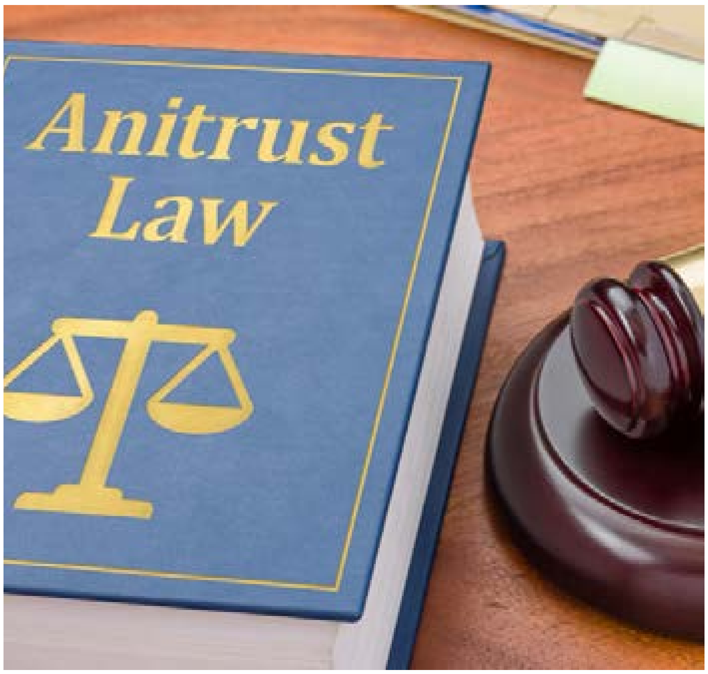
15 *Caribe BMW v. Bayerische Motoren Werke*, order of the U.S. Courts of Appeal, First Circuit dated March 25, 1994, 19 F.3d 745, available at: http://openjurist.org/19/f3d/745/caribe-bmw-inc-v-bayerische-motoren-werke-aktiengesellschaft.

16 *Security Tire & Rubber Co. v.Gates Rubber Co.*, order of the U.S. Courts of Appeal, Fifth Circuit dated July 12, 1979, 598 F.2d 962 (1979), available at: http://www.leagle.com/decision/19791560598F2d962_11424/SECURITY%20TIRE%20&%20RUBBER%20CO.%20v.%20GATES%20RUBBER%20CO.

17 Paragraph 4.890, Faull &Nikpay: The EU Law of Competition (3rd Edition).

CHALLENGE RESTRAINTS AND THE SCOPE OF THE PATENT

BY ERIK HOVENKAMP[1]



I. INTRODUCTION

Patents are often described as providing "the right to exclude."But this characterization obscures the more specific authorizations actually conferred by the Patent Act ("Act").As a result, it is sometimes embraced to the detriment of sound patent policy, particularly when used as a basis for delineating the boundary between patent law and antitrust. An important example is the courts' troubled history of applying the "scope of the patent" test, which serves to provide safe harbor to competitive restraints that are authorized by patent law – or, alternatively, to deny safe harbor for (and potentially condemn[2]) restraints that are not so authorized.[3]

For example, any commercial restraints (e.g. royalty obligations) applied after patent expiration are outside the scope of the patent, and are virtually always held unlawful.[4] Consistent with this, some courts have focused principally on patent term as the relevant limit on patent scope. But it is clear that patent term alone is not the only important limit. For example, the courts have held that a tie of a patented product and an unpatented one may be outside the scope of the patent.[5] Similarly, a patentee is not entitled to exclude no infringing products – for example, by paying a rival not to "invent around" its patent. The most logical and useful interpretation of the scope of the patent test is that it looks to the entirety of the Act's authorizations to ascertain what restraints the patentee is permitted to impose with its patent.[6]

This appears to have been the Supreme Court's interpretation in Line Material, which queried whether anything "in the patent statute specifically gives a right" to engage in the disputed conduct[7]. But not all courts have embraced this interpretation. So disfigured are some conceptions of the scope of the patent test that it is sometimes cited as a basis for antitrust immunity, when in fact it provides the clearest basis for denying safe harbor.[8] The most salient example is the dissenting opinion in the Supreme Court's recent Actavis decision, which echoed several lower court opinions. In Actavis, the

1 PhD candidate, economics, Northwestern University; Fellow of Law and Science, JD-PhD Program, Northwestern University Pritzker School of Law. My work on this project was supported by the Ewing Marion Kauffman Foundation. I am grateful to Michael Carrier and Joshua Fischman for their helpful feedback and suggestions.

2 Such condemnation, if it occurs, need not come from antitrust; it may be supported by a holding of "patent misuse," which is prohibited by the Patent Act. See 35 U.S.C. § 271(d).

3 See, e.g.Carbice Corp. of Am. v. Am. Patents Dev. Corp., 283 U.S. 27, 33 (1931) (condemning a tie of a patented product and an unpatented product on the ground that this arrangement goes "beyond the scope of the patentee's monopoly");Coupe v. Royer, 155 U.S. 565, 576 (1895); Motion Pictures Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502 (1917). For a detailed account of the use (and abuse) of the scope of the patent test, See Herbert Hovenkamp, The Rule of Reason and the Scope of the Patent, 52 SAN DIEGO L. REV. 515 (2015).

4 See Kimble v. Marvel Enterp., Inc., 135 S. Ct. 1697 (2015) (condemning post-expiration royalty obligations). The Kimble decision is unnecessarily restrictive. For example, if a licensee has little cash on hand, the parties may agree that the licensee will pay a smaller royalty but for a longer term that extends beyond expiration. This may not be meaningfully different from, say, a financing agreement for a car.

5 SeeCarbice Corp., 283 U.S. at 33.

6 SeeHovenkamp, supranote __, at 534.

7 United States v. Line Material Co., 333 U.S. 287, 310–11 (1948) ("remarking that "[n]othing in the patent statute specifically gives a right to fix the price at which a licensee may vend the patented article.")

8 A number of other scholars have similarly criticized the modern application of the scope of the patent test. See, e.g., Michael A. Carrier, Why the "Scope of the Patent" Test Cannot Solve the Drug Patent Settlement Problem, 16 STAN. TECH. L. REV. 1 (2012); Hovenkamp, note __, supra

majority held that "reverse payment"[9] patent settlements may violate the antitrust laws.[10] The dissent's view is that, because a patent provides the right to exclude, a patentee must be entitled to pay a rival to stop challenging its patent and stay offs the market, so long as this exclusion does not extend beyond the patent term. Itt thus concluded that reverse payment settlements are within the scope of the patent.

The majority's treatment of the scope of the patent doctrine is more ambivalent. At one point, the opinion states that reverse payment's anticompetitive effects "may fall within the scope of the exclusionary potential of Solvay's patent, [but] this does not immunize the agreement from antitrust attack."This might be read to suggest that the dissent is correct in asserting that reverse payment is within the scope of the patent, but that antitrust may nevertheless condemn such agreements. By contrast, the Court later came much closer to the ideal application of the scope of the patent test, remarking that "[t]he dissent does not identify any patent statute" that authorizes reverse payment settlements. Here the majority seems to embrace the more logical position that the scope of the patent test should hinge on whether the relevant restraint is authorized (expressly or impliedly) by any particular provision within the Act, as opposed to being merely consistent with colloquial generalizations about what patents do.

The majority's decision is correct. But it is also very narrow, and the antitrust analysis is fairly nonspecific. The Court shed little light on what particular aspects of the defendants' settlement – as distinguished from the entirety of the agreement – are critical to the antitrust claim.[11] Investigation of these more foundational issues could have helped to clarify the proper role of antitrust in other kinds of patent agreements, and to delimit the often-obscure boundary between antitrust and patent law.

This brief article lays the foundation for a more comprehensive theory of antitrust's proper role in policing patent agreements. It hinges on the distinction between ordinary patent rights and "challenge rights" – the (statutory[12]) rights of third parties to challenge patents as invalid or uninfringed. These two classes of rights serve very different policy functions. And, importantly, they receive different treatment by the Act, most notably with respect to their alienability. The result is that "challenge restraints"– contractual restrictions on the exercise of a party's challenge rights – are plainly not within the scope of the patent. Accordingly, such agreements are not entitled to safe harbor, but rather exist within antitrust's domain.[13]

Of course, this does not suggest that all challenge restraints should be condemned, regardless of context. Rather, it means that antitrust should operate as it normally does: by evaluating the reasonableness of the restraint in light of any countervailing procompetitive effects, and taking into account any salient policy concerns, including those underpinning the patent system.

II. CHALLENGE RIGHTS

The Actavis dissenters, along with many jurists, appear to focus exclusively on the patent rights held by the patentee when engaging the scope of the patent doctrine. But these are not the only important rights conferred by the Act. It also confers challenge rights to third parties who would like to market their products without the hovering threat of infringement liability. Section 282 of the Act permits an accused infringer to argue "noninfringement" or "invalidity of the patent" as a defense to infringement liability, and the Declaratory Judgment Act ensures that these challenges can also be raised offensively.[14] Additionally, Section 311 permits a party to challenge a patent's validity in the Patent Trial and Appeal Board. As such, a patent challenge is a privileged competitive act. However, a serious problem – which persists both in patent scholarship and the case law – is that patent challenge rights have not been recognized as distinct legal entitlements that are important in their own right. This is particularly problematic in light of the very disparate policy roles played by these two classes of rights.

The patent system seeks to elicit a desirable tradeoff between competition and the rate of innovation. In facilitating this balance, patent rights and challenge rights perform countervailing functions. Patent rights are the reward used to encourage innovation: they permit patentees to sue (and potentially enjoin) infringers; to collect damages for past infringement; and to license or assign the right to use the patented invention. By contrast, challenge rights provide a check against potential over-enforcement of patent rights, helping to clear the way for privileged competition. Accordingly, challenge rights promote the interests of competition policy, while patent

9 In a reverse payment settlement, a monopolist-patentee pays a potential market entrant not to challenge its patent, and to stay off the market for some material period of time (but no longer than the date of patent expiration). They almost always occur in pharmaceutical markets, with a branded drug monopolist paying a generic manufacturer not to challenge the patents covering its drug.

10 FTC v. Actavis, Inc., 133 S. Ct. 2223 (2013).

11 For example, the court did not articulate whether a noncash payment – for example, a promise by the patentee not to launch its own "authorized generic" drug – can support an antitrust claim, although lower courts have answered that question in the affirmative. SeeSmithKline Beecham Corp. v. King Drug Co. of Florence, 791 F.3d 388 (3d Cir. 2015) (holding that a no authorized generic agreement may violate the antitrust laws under Actavis); See also, Aaron S. Edlin et al., The Actavis Inference: Theory and Practice, 67 RUTGERS L. REV. 585, 600 (2015).

12 35 U.S.C. § 282(b).

13 Two recent and insightful articles also address the antitrust implications of agreements that prevent someone from challenging a patent, although their focus is specifically on "no-challenge clauses" in conventional patent licensing agreements (generally between non-competitors), which is just one of many possible contexts in which such restrictions might be utilized. See Alan D. Miller & Michal S. Gal, Licensee Patent Challenges, 32 Yale J. Reg. 121 (2015); Thomas K. Cheng., Antitrust Treatment of the No Challenge Clause, 5 NYU J. I.P. & Ent. L. 437 (2016).

14 28 U.S.C. §2201-2202.

rights are directed principally at encouraging invention. As such, patentees – who internalize profits, but not consumer surplus – always want patent rights to be as strong as possible, but challenge rights to be as weak as possible. By contrast, society at large is best served by an equitable balance between the two.

III. PATENT CHALLENGE RESTRAINTS

Challenge restraints – agreements that bar or penalize the exercise of a party's challenge rights – may arise in a variety of different patent agreements, and within different commercial relationships.[15] Reverse payment settlement is an obvious example, as the drug monopolist is paying the generic firm to stop challenging its patents, and to abstain from challenging them again in the future. But they may also take the form of "no challenge clauses" in ordinary patent licensing agreements between non-competitors, with the licensee agreeing not to challenge the validity of the licensed patent (or to suffer a penalty upon filing a challenge).Alternatively, rivals may agree not to challenge each other's patents, but without any party being excluded from the market. For example, in U.S. v. Singer Mfg., the Supreme Court condemned an agreement in which competing sewing machine manufacturers agreed not to challenge each other's patents and to refuse to license Japanese rivals.[16]

Importantly, reciprocal promises not to challenge are not necessarily equivalent to cross-licensing. The agreement might also prevent the parties from practicing each other's patents, in which case it looks more like market division.[17] This could be accomplished by imposing reciprocal challenge restraints, but withholding any exchange of licensing rights. In such an agreement – and in reverse payment –the challenge restraint is "naked" in the sense that it is not accompanied by a technology transfer to the restrained party, which will tend to make it more difficult to justify under the rule of reason.

The nature of the restraint may also vary. It can take the form of a waiver, which is generally the strongest restraint. Alternatively, it could consist in an economic inducement that discourages the exercise of challenge rights. For example, some licensing agreements stipulate that the license is terminated immediately if the licensee challenges the patent.[18] The nature of the restraint may be germane to antitrust analysis under the rule of reason. For instance, even if the parties are competitors with market power, it might be perfectly reasonable for them to agree simply that the potential challenger will have to reimburse the patentee's litigation expenses if it files and loses a patent challenge.

A. Antitrust Evaluation of Challenge Restraints

Consistent with the Actavis and Singer examples, the courts have occasionally adjudicated antitrust claims surrounding patent agreements that happen to involve challenge restraints. But they have failed to recognize challenge restraints as a distinct antitrust issue that is common to many of the patent agreements that have been attacked as anticompetitive. Further, some challenge restraints – namely those arising in ordinary licensing agreements between non-competing firms – have never been recognized by the courts as a potential antitrust issue. In Lear, a non-antitrust case, the Supreme Court held that, as a default, licensees have the right to challenge the licensed patent.[19] This led to the widespread inclusion of challenge restraints within ordinary licensing deals. Thomas Cheng, who discusses these licensee no-challenge clauses, notes that, "[i]n the U.S., no court seems to have ruled on the legality of no challenge clauses under antitrust law."[20]

But it is easy to see that challenge restraints are exactly the kind of thing that antitrust is intended to police. A patent challenge is a privileged competitive act. And if a party has a right to perform a competitive act against a rival – for example, to expand its business into the rival's territory – the antitrust laws generally prohibit the firms from entering into an agreement that restraints that act, at least unless there is a procompetitive justification for it. Even if the agreement is vertical rather than horizontal, the restraint may be unlawful if the parties have market power and the restraint lacks a satisfactory justification. Thus, the only question is whether patent law creates an exception that precludes application of the same antitrust standards to challenge restraints. The answer is no. The Act explicitly states that patent rights are generally alienable. It provides that they may be licensed or assigned, for instance. But the Act never provides that challenge rights are similarly alienable – not even impliedly.[21] Indeed, agreements that suppress challenge rights may often belie the very policies that motivated the conferral of those rights. Challenge rights are an instrument of competition policy. They serve essentially the same interests that underpin the scope of the patent doctrine: to prevent patentees from effecting unearned or overreaching restraints on commerce. It is thus ironic that some regard the suppression of challenge rights as falling within the scope of the patent.

15 See Miller & Gal, note __, supra.

16 United States v. Singer Mfg. Co., 374 U.S. 174 (1963).

17 Alternatively, it could be that the patents are overlapping (ostensibly implying that at least one of them is invalid), or that they cover substitute technologies, in which case there may not be the two-way technology transfer that characterizes cross-licensing.

18 See Miller & Gal, note __, supra.

19 Lear, Inc. v. Adkins, 395 U.S. 653, 670-71 (1969) (holding that there is no doctrine of "licensee estoppel" that automatically bars a licensee from challenging the licensor's patent.

20 Cheng, note __, supra, at 447. However, the author notes that some courts have addressed the enforceability of such no challenge clauses under patent law.

21 See also Miller & Gal, note __, supra ("patent law … does not grant [patentees] the right to be free from challenges.")

When evaluating a patent agreement involving a challenge restraint, antitrust's proper role is to ask whether the restraint is reasonably justified in light of any procompetitive effects created by the agreement, taking into account any relevant policy concerns. It is beyond the scope of this article to present a comprehensive discussion of how antitrust ought to view different kinds of challenge restraints. But a few simple observations may prove helpful in future research efforts.

Licensing is the most obvious procompetitive efficiency that might justify a challenge restraint. In an ordinary "vertical" licensing agreement (i.e. one in which the parties are in a purely vertical relationship[22]), a challenge restraint may be reasonably justified on the ground that it eliminates a potential holdup problem. If both parties know that the licensee could use the threat of litigation opportunistically – for example, if the patentee's business falls upon hard times – then their relationship may be detached, contentious, or otherwise unstable. The prospect of a lingering litigation threat might even deter the patentee from seeking out a licensee in the first place. If the parties bargain exante – i.e. before the prospective licensee has committed itself to the patented technology – then the patentee knows that the licensee will likely have a stronger incentive to challenge the patent later on, after it has committed itself. At the margin, a patent challenge has larger expected value for the licensee if the fixed costs of implementing the patented technology are already sunk. This makes contracting precarious, because the patentee cannot be sure whether the royalty rate imposed ex-ante will hold up expost, when the licensee may have a heightened incentive to challenge the patent. A challenge restraint could eliminate this holdup problem and facilitate commitment to the relationship.

Viewed in this light, vertical challenge restraints may operate essentially as a special case of exclusive dealing.[23] After all, the agreement commits the licensee to buy the rights to use the patented invention from the patentee, and not acquire them by other means. The only difference here, which appears largely immaterial to the antitrust inquiry, is that "other means" refers to litigation of a patent challenge, as opposed to switching to a different upstream provider.[24] This is an important point that has been missed in recent scholarship on no-challenge clauses in licensing agreements.[25] It implies that vertical challenge restraints are merely a novel embodiment of a well-understood antitrust issue, suggesting we can use longstanding antitrust machinery to evaluate them.

As with exclusive dealing, market power should be an important element of the antitrust claim. If there is no inter-party competition (which is true in any purely vertical relationship), challenge restraints should probably be viewed as competitively benign if the parties lack market power. Similarly, the agreement probably does not raise antitrust concerns if the patents in question are impotent to influence the relevant product market. If the agreement seems capable of impacting market structure, then it should be evaluated under the rule of reason, as with exclusive dealing and other vertical restraints.

An important aspect of the market structure analysis relates to the challenge rights of third parties. A challenge restraint does not preclude nonparty firms from challenging the relevant patents, just as an exclusive dealing agreement does not prevent third parties from contracting with alternative upstream providers. If the market is sufficiently competitive such that restraining just one producer is unlikely to threaten the product market, then there may be no viable antitrust claim. However, there may be context-specific factors such that unrestrained third party producers have a limited incentive to challenge. The best example is the Hatch-Waxman Act's provision of 180-day exclusivity to first-filling generics, which serves to diminish the incentive to challenge by later-filers.[26] Alternatively, in non-pharmaceutical markets – namely those in which products are differentiated – it may be that there are only a small number of producers in the market that actually have an interest in challenging the patent in question. For example, if a patented invention is directed at diesel car engines, then only car manufacturers that produce a large number of diesel cars have a strong interest in acquiring the patent rights. These are fundamentally antitrust questions.

One important feature of pharmaceutical markets is that products tend to be highly undifferentiated; generic drugs and their branded counterparts are essentially fungible. This makes competition very intense, suggesting that a single challenge restraint would not be very valuable if third parties were not also somehow discouraged from challenging. However, if products are differentiated, then a single challenge restraint can be profitable even if third party firms are not discouraged from bringing their own challenges. Those third party challenges would likely result in licensing agreements –

22 This implies the firms are not competitors in any relevant product market. If the parties are competitors in products, then their relationship is not purely vertical, since they are horizontally related in the product market.

23 Exclusive dealing refers to a (usually purely vertical) agreement that restrains a party's right to transact with firms in competition with the other party. For example, a wholesaler and retailer might agree that the retailer is barred from buying any competing versions of the wholesaler's good.

24 On the other hand, the worst interpretation of a vertical challenge restraint would be that it acts like a vertical agreement prohibiting the downstream firm from integrating into the upstream market. That would be market division, since it prevents inter-party competition in the upstream market. But a vertical challenge restraint would not prevent inter-party competition in the upstream market (a market for licensing rights), since a successful patent challenge would not transform the licensee into a competing licensor; it just eliminates the royalty obligation.

25 See Miller & Gal; Cheng, note __, supra. Neither article discusses the instructive similarities between vertical no-challenge clauses and exclusive dealing, nor the related point that such restraints might eliminate a holdup problem. However, they do acknowledge the relevance of market power to a potential antitrust claim.

26 This is a result of some badly drafted provisions of the Hatch-Waxman Act. See, e.g.C. Scott Hemphill & Mark A. Lemley, Earning Exclusivity: Generic Drug Incentives and the Hatch-Waxman Act, 77 ANTITRUST L.J. 947 (2011).

the usual settlement format in most non-pharmaceutical markets. But, because products are differentiated, this does not necessarily extinguish market profits. And the original challenge restraint remains valuable, since it still serves to preclude a competing use by at least one important firm, helping to soften competition. For example, an equilibrium might involve firms entering into licensing deals with their least similar competitors (in which case licensing might enhance their joint profits), but entering into challenge restraining agreements with their closest rivals (in which case licensing might erode joint profits).

Naked challenge restraints in horizontal agreements are much harder to justify. Reverse payment settlement is a good example of this. The value of settling litigation might be regarded as a justification for a reverse payment settlement. (This could also justify a challenge restraint in a vertical licensing relationship.[27]) But, of course, this explanation is unsatisfactory if the payment is large and the exclusion period is long. Such characteristics suggest that the payment's role is not really to effect a settlement, but rather to forestall a patent challenge that might leave the market much more competitive. That is, the challenge restraint is being used to facilitate delay, not merely to end litigation. Another point is that, if the parties are genuinely in agreement that the patent is valid and infringed, and if litigation costs are genuinely large enough such that their avoidance constitutes a cognizable procompetitive efficiency, then litigation costs alone should be large enough to deter a repeat challenge by the defendant. That would suggest that the settlement need not include a restraint on expost challenge rights in order to produce a stable resolution to the dispute. Note that this is not an argument about the likelihood of invalidity. Rather, the question is whether such a strong challenge restraint is reasonably necessary to effect a settlement.

The avoidance of litigation costs is not the only thing that could in principle justify a reverse settlement. A number of scholars have noted that, while a reverse payment's consumer injury is probabilistic, it offers at least at least one certain benefit to consumers: pre-expiration entry by the generic firm.[28] Most reverse settlements involve a delay period that ends prior to patent expiration, but a final judgment could result in an injunction that keeps the generic firm off the market for the full remainder of the patent term. However, in a recent article, my coauthor and I argue that the delay period that the firms will actually choose will be longer than that which leaves consumers indifferent between settlement and litigation to judgment.[29] In fact, we show this is so even in a "pure delay" settlement where the patentee gives no payment or other consideration to the generic firm (which would involve a less lengthy delay than a paid agreement).Intuitively, by preserving patent validity – which acts like an entry barrier by forcing third party generics to challenge prior to entry – the settlement will slow the rate of third party entry (relative to invalidation) for the remainder of the patent term. This increases total profits in the product market, and the patentee takes its share of these rents by demanding a longer delay period than that which would leave consumers indifferent between settlement and full litigation. Thus, in practice, reverse settlements' accommodation of pre-expiration entry will generally be insufficient to generate a net-benefit for consumers (relative to continued litigation).

Naked challenge restraints need not achieve exclusion at the product-level, as occurs in a typical reverse settlement. For example, suppose two car manufacturers each offer some patented features that are not offered by the other. The firms might have a joint interest in agreeing that they will neither challenge nor practice one another's patents, thus softening competition at the feature-level. Like reverse payment, this is essentially a form of market division, and it may warrant antitrust intervention. But in this case the agreement does not exclude an entire product from the marketplace.

The prospect of third party challenges is less consequential in horizontal agreements involving naked challenge restraints. Third party competition is often less important in evaluating horizontal agreements that impose naked restraints on inter-party competition. For example, if two firms agree to stay out of each other's territory, they cannot hope to justify their market division agreement by pointing out that it does not stop any third parties from entering either firm's territory. Similarly, even if third parties can still challenge the relevant patent, a naked challenge restraint imposed between rivals may still warrant antitrust intervention to the extent that there is no reasonable justification for it.

IV. ACQUIRING A MORE DURABLE PATENT MONOPOLY

A patent provides a temporary monopoly over the patented technology. However, patents are probabilistic.[30] Until a patent is actually litigated to judgment, its validity – and hence its capacity to achieve exclusion through the litigation process – remains uncertain. The result is that a patent monopoly may not be very durable.[31] That is, the patent may not be of sufficient quality to permit the patentee to act like a true monopolist, which can set whatever terms it likes, since there are no competitive pressures to compel a more generous offering. Challenge rights entitle rivals or prospective licensees

27 If vertically related parties want to settle and begin a licensing relationship, then a challenge restrain may be helpful by eliminating the lingering threat of litigation and thereby making the relationship more stable and productive, as was already discussed above.

28 Daniel A. Crane, Actavis, the Reverse Payment Fallacy, and the Continuing Need for Regulatory Solutions, 15 Minn. J. L. & Tech. 51, 55 (2014).

29 Erik Hovenkamp & Jorge Lemus, Reverse Settlement and Holdup at the Patent Office, (submitted for publication). Available at: https://papers.ssrn.com/abstract=2814532.

30 See Mark A. Lemley & Carl Shapiro, Probabilistic Patents, 19 J. ECON. PERSP. 75 (2005).

31 Aaron S. Edlin et al., note __, supra(noting that, when the "delay" period of a reverse settlement concludes, the resulting duopoly between the generic firm and the patentee is often not "durable" after the generic firm's 180 exclusivity period runs, because third party generic firms will then challenge the patent).

to target the patent's potential vulnerabilities. Since the patentee strongly prefers not to have its patent invalidated, it may be obliged to put up with some competition – to accept royalties when what it really wants is an injunction – or to set a lower royalty rate than it would prefer. After all, if the patentee refuses to make any such concessions, it might end up with nothing.

This result – that lower quality patents are less durable and thus impose smaller restraints in commerce – performs a socially valuable function. Judgments on patent validity are binary; each disputed claim with be held either valid or invalid. But patent quality is non-binary, since patentability criteria like novelty and no obviousness exist along a spectrum. But because lower quality patents are less durable, the patent system can nevertheless ensure that commercial restraints are somewhat proportionate with patent quality. Importantly, however, it is challenge rights that ultimately facilitate this proportionality. If patents could not be challenged as invalid, then bad patents would be no less durable than good ones, and their exclusionary effects would be just as strong.

This sheds further light on why challenge restraints are not within the scope of the patent. The courts occasionally emphasize the enlargement of the patent monopoly – i.e. the magnification of the patent's exclusionary power – as a hallmark of restraints beyond the scope of the patent. For example, this language is used in justification of the prohibition on post-expiration royalty obligations.[32] But an alternative way to enlarge the patent monopoly is to increase its durability by entering into horizontal agreements that restrain the challenge rights of some prominent rivals. This makes the market less contestable, allowing the patentee to behave less competitively than it could afford to do if armed with the patent alone. As such, even under the less formal "enlargement of the patent monopoly" interpretation, challenge restraints plainly go beyond the scope of the patent.

V. THE TWO MODES OF EXCLUSION

There are two ways a patentee can exclude a rival that plans to sell a potentially-infringing product. The first is through infringement litigation. This, of course, is not certain to succeed, since it is not certain that the patent will be held valid and infringed, nor that such a holding would be remedied through an injunction order. The second possible mode of exclusion is to enter into an agreement under which patentee provides some consideration (but not a license) to the rival in exchange for a restraint on the rival's challenge rights. This is the most helpful way to characterize a reverse settlement. And, unlike infringement litigation, this approach is certain to achieve exclusion of the rival (at least in lieu of antitrust intervention), regardless of whether the patent is valid and infringed.

As such, the latter strategy can be used to achieve exclusion beyond the scope of the patent, and not only because it may facilitate exclusion based on an invalid patent. It could also be used to achieve exclusion of no infringing competition. For example, suppose that two duopolists, A and B, know that B's product almost certainly does not infringe A's patent. Suppose further that, as is true in most markets, monopoly provides larger total profits than duopoly. Then, despite the parties' actual beliefs about the infringement claim, the firms can mutually benefit from an agreement (which might be stylized as a settlement) in which Apays B to give up its challenge rights. This leaves B defenseless against a future patent infringement claim, eliminating any incentive it might have had to try and enter the market. In fact, the agreement could accomplish this indirectly by relying on claim preclusion as an indirect restraint on B'schallenge rights. The settlement could simply memorialize the parties' joint agreement that the patent is valid, and that it would be infringed by B's product; it might even stipulate that B is enjoined from making sales.[33] The default rule is that this settlement will have a claim-preclusive effect – the practical effect of which is to extinguish B's right to challenge the patent – provided that it culminates in a dismissal with prejudice, or that it is entered as a consent decree.[34] The result is a robust legal barrier that keeps B's no infringing product off the market.

This clarifies why it is problematic to characterize a patent as simply conferring "the right to exclude."Indeed, there are two distinct ways to achieve exclusion, but only one of them is authorized by the Act. The other way – contractual restraints on challenge rights – is not so authorized, and may be used to the detriment of patent policy objectives.

VI. REMOVING THE VALIDITY QUESTION FROM THE ANTITRUST ANALYSIS

A reverse settlement harms consumers only if the patent is either invalid or uninfringed.(In what follows, I will focus on the former prong.)But a reverse settlement typically occurs before – and thus precludes – a final judgment on patent validity as between those two parties. As a consequence, antitrust intervention occurs at a time when the patent's validity remains uncertain. The Actavis dissenters regarded this manner of intervention as conclusory and inappropriate.[35] Their unease is echoed by a number of scholars. For example, one recent article argues that the decision is jurisprudentially un-

32 See, e.g. Brulotte v. Thys Co., 379 U.S. 29, 33 (1964) (condemning post-expiration royalty agreement on the ground that it amounts to "an effort to enlarge the monopoly of the patent.")

33 In a recent paper on reverse settlements, my coauthor and I discuss a settlement (which was entered as a consent decree) that stated precisely these things. See Hovenkamp and Lemus, note __, supra.

34 Pactiv Corp. v. Dow Chemical Co., 449 F.3d 1227, 1231 (Fed. Cir. 2006) (holding that a settlement of litigation triggers res judicata, barring the defendant from later challenging the patent, unless the parties' settlement expressly reserves the defendant's right to challenge the patent in the future).

35 Actavis, 133 S.Ct. at 2241 (disputing the majority's arguments that antitrust intervention does not compel adjudication of patent validity). A large number of scholars support the majority's contention that the patent need not be litigated to judgment. See, e.g.Edlin et al, note __, supra.

sound because it makes an implicit legal determination about patent strength based only on the parties' beliefs about how a court would rule on the validity issue.[36]

But the more common critique of antitrust intervention in reverse settlement cases seems to be that, because the patent's validity remains uncertain, the antitrust plaintiff has not made a showing that consumers are likely to suffer a but-for injury.[37] For example, in discussing the uncertain impact a patent judgment would have had on competition, one commenter writes that "the uncertain competition analysis is difficult to reconcile with standard analyses under the antitrust laws."[38] The problem with this argument is that it presumes – incorrectly – that antitrust enforcement requires proof that the defendants' agreement caused a but-for injury to consumers, as distinguished from a showing that the agreement restrains competition without justification. Antitrust violations are not like torts; they do not include harm as an element of the offense.[39] They are more similar to, say, traffic violations: they are directed at conduct itself. The exception is that private antitrust enforcement operates more like conventional tort law (at least in damages actions); because a private plaintiff must prove that the antitrust violation caused it to suffer an injury.

As this suggests, the question of whether an antitrust plaintiff must prove a consumer injury depends entirely on the nature of the enforcement. It does not hinge on the nature of the restraint, nor on the distinction between per se rules and the rule of reason. Under the Sherman Act, the Department of Justice is given broad authority "to prevent and restrain violations of this Act."[40] Similarly, the Federal Trade Commission is empowered to prevent parties from "using unfair methods of competition in or affecting commerce[41] and unfair or deceptive acts or practices in or affecting commerce." These provisions authorize public enforcement based simply on a showing of anticompetitive conduct, i.e. that which unreasonably restraints competition. In contrast, a private plaintiff seeking damages must prove not only conduct "forbidden by the antitrust laws," but also "damages by him sustained."[42] Similarly, to obtain an injunction, he must prove "threatened loss or damage by a violation of the antitrust law."[43] The courts have interpreted these provisions to mean that a private plaintiff must prove the violation caused him to suffer an injury in order to receive damages, but that injunctive relief may be available even if he fails sufficiently to quantify the injury.

As a result of these enforcement standards, antitrust courts frequently condemn agreements without inquiring into their (often speculative) likelihood of injuring consumers. In broad outline, if an agreement restrains some competitive activity, and if the defendants fail to offer a satisfactory justification for it, then an antitrust court may condemn the agreement on these findings alone. The most conspicuous example of this is the absence of a market power requirement for price-fixing claims. If two firms fix prices, they injure consumers only if they command sufficient market power to influence the market. But the courts do not require evidence to that effect in order to find a violation.

However, the more instructive analogue is naked market division in territories. Suppose that two car dealers, A and B, currently operate in neighboring states, but stumble into one another at a trade association gathering. Dealer Aoffers B $25K if it agrees never to expand into A's state, despite the fact that A does not know whether B would otherwise have expanded in its direction. And B accepts the offer, despite not knowing whether it would otherwise have wanted to expand into A's territory. This market division agreement is plainly unlawful. And yet the probability of consumer harm is completely uncertain. We do not know whether B would have moved into A's territory but for the agreement, which is just like saying that we do not know whether a patent would have been invalidated but for a reverse settlement. The point is that this uncertainty is not germane to the antitrust claim. There is no procompetitive justification for the restraint on B's right to enter A's territory, and hence antitrust intervention does not require a showing that consumers are likely to suffer a but-for injury.[44]

The same logic applies to challenge restraints. A patent challenge is a privileged competitive act, just like expansion into a rival's territory. Thus, if an agreement between competitors serves to restrain a party's challenge rights, there must be a good reason for it. If there is not, then the court need not concern itself with the patent's uncertain validity. It is enough that the agreement creates an unjustified barrier to possible competition.

36 Joshua Fischman, The Circular Logic of Actavis, 66 AM.U. L. REV. 91 (2016) (arguing that the Actavis decision "relies on the prediction theory of law – the widely disparaged conception of law as consisting merely of predictions about what courts will do.").

37 See, e.g. Marc G. Schildkraut, Patent-Splitting Settlements and the Reverse Payment Fallacy, 71 ANTITRUST L. J. 1033, 1055-56 (2004) (advocating the need for a "traditional standard of proof" such that "any time the antitrust plaintiff fails to establish that the alleged infringer would have prevailed in the patent litigation, the court should dismiss the antitrust case.").

38 Id.

39 For example, Section 1 of the Sherman Act, which delimits the scope of antitrust intervention in collusive arrangements, focuses entirely on anticompetitive conduct, not consumer harm. 15 U.S.C. §1 (prohibiting every "contract, combination, … or conspiracy in restraint of trade").

40 15 U.S.C. §25.

41 15 U.S.C. §45(a).

42 15 U.S.C. §15 (emphasis added).

43 15 U.S.C. §26.

44 See, e.g. Cross & Blue Shield United of Wis. v. Marshfield Clinic, 152 F.3d 588 (7th Cir. 1998), cert. denied, 525 U.S. 1071 (1999). Even if a private plaintiff asserts and provesa per se antitrust violation, it still cannot obtain damages without proving it suffered an injury. See, e.g. Campos v. Ticketmaster, 140 F.3d 1166, 1172 (8th Cir. 1998), cert. denied, 525 U.S. 1102 (1999).

VII. CONCLUSION

This short article demonstrates that patent challenge restraints are not within the scope of the patent. This clarifies a specific – but broadly applicable – basis for applying the antitrust law to a wide range of patent agreements. Of course, this is not to suggest that patent policy concerns should not enter into the analysis. Antitrust very regularly takes patent and innovation policy concerns into account when appraising the reasonableness of private conduct. Nor indeed does this suggest that all patent challenge restraints are antitrust violations. That challenge restraints are not authorized by the Act merely suggests that they do not enjoy safe harbor. Whether such a restraint violates the antitrust laws thus depends on its reasonableness, as determined based on the nature and context of the agreement, and taking into account any applicable innovation policy concerns.

CPI COMPETITION POLICY INTERNATIONAL