

Concept of potential competition

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Foreword

This paper discusses the concept of potential competition as an important pro-competitive factor. While potential competition is inevitably subject to significant uncertainty, where it does exist, the paper suggests treating potential competition with a parity of esteem with respect to actual competition.

The paper considers the benefits of extending the timeframe used to evaluate potential competition and reviews the tools that are available to assess it. It suggests such tools may be helpfully placed within a specific framework to enable assessment under the different and greater uncertainty that exists over potential competitive constraints. These tools include many that are already widely used, such as the additional weight placed on credible contemporaneous internal documents, progress against regulatory checkpoints, understanding of business models and of competition to innovate. Similarly, on the counterfactual it suggests following existing best practices such as pro-actively exploring alternative counterfactuals. Other suggestions involve the use of what in some jurisdictions might be newer tools – valuation analysis, forward-looking consumer surveys, spillover analysis of non-overlapping products in adjacent markets, and the development of specialist progress-to-market expertise.

The paper also highlights existing trends by competition agencies to advocate for a change in existing decision-making frameworks to effectively protect against the loss of potential competition. In this respect, the paper suggests that there might be a case for using different thresholds for potential competition from those that are used when the concern is over the possible loss of an actual constraint.

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Table of contents

| | |
|---|----|
| 1. Introduction | 7 |
| 2. What is Potential Competition? | 9 |
| 2.1. Definitions | 9 |
| 2.2. Which types of markets feature potential competition? | 9 |
| 2.3. Theories of harm to potential competition | 10 |
| 2.4. The key parameters to identify potential competition | 13 |
| 3. Assessing Barriers to Entry | 14 |
| 3.1. Definitions and forms of barriers to entry | 14 |
| 3.2. What impact do barriers to entry have on potential competition? | 16 |
| 4. Assessing the Likelihood and Strength of Potential Competition | 20 |
| 4.1. How likely and how strong do the thresholds for potential constraint need to be? | 20 |
| 4.2. How do we assess likelihood and strength of a potential constraint? | 24 |
| 4.3. Ex-post assessment of potential competition | 31 |
| 4.4. Counterfactual analysis in potential competition cases | 32 |
| 5. Assessing the Timeframe in which Potential Competition will emerge | 34 |
| 5.1. Problems with a short timeframe | 35 |
| 5.2. How do we assess the timeframe of entry? | 36 |
| 6. Conclusion | 39 |
| References | 41 |

Boxes

| | |
|---|----|
| Box 1. Pacific Biosciences / Illumina - merger and monopolisation case | 11 |
| Box 2. Visa/Plaid – merger and monopolisation case | 11 |
| Box 3. What to do about cross-platform network effects and behavioural biases? | 15 |
| Box 4. Sabre/Farelogix merger | 21 |
| Box 5. GSK patent settlement agreement case in Korea | 23 |
| Box 6. Dow/DuPont merger | 26 |
| Box 7. Cornershop/Uber - Analysis of potential competition by the Chile competition authority | 28 |
| Box 8. Do's and don'ts when assessing potential competition | 31 |
| Box 9. Do's and don'ts for the counterfactual analysis in potential competition cases | 33 |
| Box 10. Analysis of potential competition in Siemens/Alstom | 37 |
| Box 11. TPG/Vodafone - Analysis of potential competition in Australia | 38 |

1 Introduction

Scholars of the Economic Anti-Monopoly movement have recently argued to the US Congress that antitrust laws, as interpreted and enforced today, are inconsistent with modern economic thinking and inadequate to confront and deter growing market power (Baker et al., 2020^[1]). They call for the strengthening of antitrust laws, and, in particular, for clarification that the antitrust laws protect *potential competition*. They also call for legislation that would remove existing precedent established by the courts that limit the scope for antitrust action for the establishment of legal rules that, in appropriate cases, require defendants to prove their conduct does not harm competition, and for increased penalties and enforcement resources.¹

In the same hearings before the US Congress where the Economic Anti-Monopoly movement made its proposals, the US Congress was told by a number of other prominent economists and lawyers that there exists a broad consensus about the analytical framework and economic toolkit for evaluating whether a merger is likely to substantially lessen competition, including with respect to nascent and *potential competition* in digital markets (Barnett et al., 2020^[2]).

The question that this debate raises is whether antitrust laws are inconsistent with modern economic thinking on potential competition. It would appear that if there is a 'broad consensus' on the modern economic thinking on potential competition, as (Barnett et al., 2020^[2]) suggest, then many leading economists do not consider that this consensus is adequately reflected in current antitrust law on potential competition.

The US is not the only jurisdiction where there is a lively debate on the importance of potential competition. In Australia, for instance, the ACCC has already recommended changes to Australia's merger laws to expressly require consideration of the effects of a merger on potential competition. In Japan, the merger guidelines and notification thresholds have been revised to ensure that the JFTC can identify mergers or conduct that damages potential competition (JFTC, 2019^[3]).

In Europe, there is also widespread concern at the elimination of potential competition, for example through acquisitions and exclusionary behaviour in digital and pharmaceutical markets (OECD, 2020^[4]). For example in the UK, the CMA's chief economist identified that it is now uncontroversial to say that there has been a record of under-enforcement in relation to the loss of potential competition (Walker, 2020^[5]). Indeed, the CMA has said that it has started to adapt its theories of harm in recent cases to take greater account of the impact on potential competition (CMA, 2019^[6]). Meanwhile in Germany and Austria, merger notification processes have been amended to allow both agencies to investigate acquisitions of nascent potential competitors.

However, there has also been debate in Europe over the treatment of entry by potential competitors which might mitigate otherwise anti-competitive mergers or conduct. In particular, this has become a fiercely contested issue in cases that sit at the intersection of competition and industrial policy. For example, the Siemens/Alstom merger (see Box 10) that would have formed a European rail-making 'champion' featured precisely such an assessment of the threat from potential competitors in China.

All the considerations above open up the debate on the concept of potential competition itself, its limits, its relationship with barriers to entry, how we assess the likelihood, strength and timing of potential constraints, and the thresholds that we use to make our decisions. This paper therefore explores each of these while linking the issues to relevant merger, collusion and exclusionary cases in which they have arisen in practice.

The structure of the paper is as follows:

- **Section 2** discusses the notion of potential competition and theories of harm to potential competition and introduces key parameters to identify it.
- **Section 3** explores barriers to entry that can influence the strength of potential competition and suggests that an assessment of barriers to entry might not provide as such a clear answer to potential competition in cases where a specific potential competitive constraint is allegedly lost.
- **Section 4** investigates how to assess the likelihood and strength of a potential competitive constraint. It also discusses how likely and strong a potential competitive constraint needs to be for it to be relevant for a decision.
- **Section 5** discusses the timeframe in which a potential competitive constraint needs to manifest.
- **Section 6** concludes.

2 What is Potential Competition?

Definitions

Potential competition could be defined as a *competitive constraint* on a firm's behaviour that might potentially arise, but has not yet actually done so.

Potential competitive constraints may therefore usefully be distinguished from a *potential competitor* or *entrant* who might already be imposing an *existing competitive constraint* on a firm's behaviour, despite itself not yet competing on that market. For instance, a potential competitor may currently be selling products that do not compete, or it may not be selling at all. In either case, if the possibility that it will enter is already affecting a firm's behaviour, then the constraint is an existing one. Focussing on existing constraints, whether from existing rivals or potential entrants, should be much easier since their impact should be observable within existing market data and internal documents (that is the market should already have priced these in).

These existing constraints have in the past been confusingly referred to as 'perceived potential competition'.² This refers to the fact that the competitive constraint is already perceived by the incumbent, even if entry is still 'potential' since it is yet to occur. These constraints have been contrasted with the equally confusingly named, 'actual potential competition'. These are not yet constraining the incumbent's behaviour but are expected to do so. (Werden & Limarzi, 2010_[7]) suggest that for 50 years the terms 'actual potential' and 'perceived potential' competition have fostered mistaken notions concerning the assessment of competitive effects. In particular, they point out that labelling the eliminated competition as potential is unhelpful and misleading when that competition already exists. For clarity, we will therefore refer to 'actual potential competition' as simply **potential competition**. In contrast, we will refer to 'perceived potential competition' as **actual competition**.

Which types of markets feature potential competition?

Potential competitive constraints are likely to be important in many markets across the economy, and can be subject to antitrust analysis. Areas of recent focus have been acquisitions of start-ups and pay-for-delay agreements in pharmaceutical and biotechnology markets (Cunningham, Ederer and Song, 2018_[8]) (Colino et al., 2017_[9]). In these markets, actual competition is often restricted by intellectual property rights, and potential competition can be observed and assessed using the regulatory pipeline of products going through trials with medical regulators. Similar processes apply to medical technology markets and agriculture markets (see for example Dow/Du Pont at Box 6). The development of new pipelines or other infrastructure which require planning or other regulatory permission also have highly structured procedures preceding access to market that allow for the identification of potential competitors.

The debate on the importance of potential competition and how to assess it under competition law, however, has also extended to unregulated markets in which innovation is important, for example in digital markets. These include multi-sided platform markets where large network effects can tip markets towards a single firm, meaning that there are few actual constraints, and hence any remaining potential constraint is particularly important (LEAR, 2019^[10]). Potential competition constraints are also important for any bidding market, for example for the award of concessions (OECD, 2019^[11]), as well as for any market where consumer demand requires a stream of innovative products, as for example in entertainment production markets that require new content and new design.

Theories of harm to potential competition

Potential competition can be harmed by the same firm conduct and agreements that can prevent, restrict or distort actual competition. This can take multiple forms, some of which are discussed below.

It should also be noted that there might be many other features of a market that prevent, restrict or distort potential as well as actual competition. For instance, anti-competitive regulations, such as those identified by the OECD's competition assessment toolkit, often raise barriers to entry that will predominantly damage potential rather than actual competition (OECD, 2019^[12]). Similarly, the use of competitive neutrality tools to ensure equal treatment of all firms, including State-Owned Enterprises, helps to create a level playing field that may not only strengthen the competitive constraints between the existing products on the market, but will also allow potential constraints to emerge and thrive.

Mergers

Mergers or acquisitions could remove the future constraint that a potential rival producer of a substitute product would have placed on the incumbent. These might in some cases result in the incumbent shutting down the acquired product or the (development of) its own rival version of the acquired product (a killer acquisition, (OECD, 2020^[4])). However, in other cases the loss of potential competitive constraints between the incumbent and the acquired products might simply slow innovation, reduce quality or increase price, but without affecting the choice of product as a killer acquisition would.

Alternatively, mergers or acquisitions might vertically integrate the incumbent's product with a future supplier or distributor, creating the same possibility of vertical input or customer foreclosure that might need to be investigated in the case of vertical integration between existing products. As in vertical mergers between existing products this would require that one of the products has a significant degree of market power that might be protected or extended using the up or downstream product.³

Exclusionary Practices

Dominant incumbents may have the incentive and ability to exclude potential competitors. Such exclusionary practices can take multiple forms, and may even involve (individual or systematic) merger and acquisitions, on their own or in tandem with other exclusionary practices. Indeed, in some cases it might be more profitable for an incumbent to purchase the potential rival instead of adopting more elaborate anti-competitive strategies through for instance exclusivity agreements or through predatory pricing. In these cases, the acquisition itself might constitute exclusionary conduct. This for instance is increasingly the allegation made by US agencies in cases such as Visa/Plaid (Box 2), PacBio (Box 1), Facebook/Whatsapp and Facebook/Instagram.

Box 1. Pacific Biosciences / Illumina - merger and monopolisation case

Illumina, a leading biotechnology firm active in sequencing technology sought to acquire rival Pacific Biosciences (PacBio). Reports suggest that PacBio had a current market share of just 2-3%. On 2 January 2020, the parties announced that they had agreed to terminate their merger agreement, following US and UK opposition.

The US FTC had alleged that Illumina had sought to “unlawfully maintain its monopoly in the U.S. market for next-generation DNA sequencing (NGS) systems by extinguishing PacBio as a nascent competitive threat”. In particular, along with claiming under section 7 of the Clayton Act that the deal will eliminate current and future competition between the two companies, the FTC also investigated under section 2 of the Sherman Act, which prohibits attempting to obtain or maintain a monopoly.

The UK CMA considered that the merger would result in a substantial lessening of competition in the supply of NGS systems in the UK. It noted that Illumina had approximately 80% market share of NGS systems worldwide and 90% in the UK. Through analysis of internal documents and customer feedback, the CMA found that the parties saw each other as a considerable threat, that there was some substitutability between their products and that competition between the parties would increase in the future due to PacBio’s advancements. The CMA noted that in the highly concentrated market, other small players in the sector would not exert a competitive constraint on the merged entity.

Sources:

- 1 FTC Complaint of 17 December 2019, In re Illumina, Inc., & Pacific Biosciences of California, Inc. (PacBio).
- 2 CMA, Anticipated acquisition by Illumina, Inc (Illumina) of Pacific Biosciences of California, Inc. (PacBio), Summary of Provisional findings.

Box 2. Visa/Plaid – merger and monopolisation case

In November 2020, VISA’s proposed USD 5.3 billion acquisition of Plaid was abandoned following the US Department of Justice’s challenge of the transaction based on potential competition concerns. The department said that Visa made an offer for Plaid worth more than 50-times the target’s annual revenue on “*strategic, not financial grounds*” to “*protect*” the credit card company’s debit business.

Plaid’s technology provides an interface for fintech apps to connect to users’ bank with consumer permission. More concretely, when a consumer signs up with a Plaid-supported fintech app and provides her bank log-in credentials, Plaid uses those credentials to access the consumer’s financial institution and obtain the consumer’s financial data, which it transmits back to the fintech app. While this technology does not compete directly with Visa, the Department considered that Plaid’s extensive connections with banks and consumers acquired through this technology would give Plaid a unique position to offer a pay-by-bank debit service (a form of online debit that uses a consumer’s online bank account credentials rather than debit card credentials, facilitating payments to merchants directly from the consumer’s bank account). The department reported that Plaid indeed had plans to build on the success of its current services by creating a pay-by-bank debit service.

Since Plaid's future development of its own pay-by-bank debit service directly threatens Visa's online debit business, where Visa held a market share of approximately 70%, the department argued that Visa's proposed acquisition of Plaid would eliminate that nascent competitive threat and unlawfully maintain Visa's monopoly power in the online debit market. Similar to the FTC in Pacific Biosciences / Illumina, the department therefore challenged the merger under both section 2 of the Sherman Act and section 7 of the Clayton Act. Visa argued that potential competition theories of harm have for decades been evaluated under Section 7 and "have found almost no traction in the courts". In contrast, under section 2 it is not necessary to show that the potential competitive constraint that has been excluded was likely to have become a competitive constraint.

Source: USA v. Visa Inc. et al., Case number 3:20-cv-07810, in the US District Court for the Northern District of California.

It is also possible that an acquisition strategy (which individually might be pro- or anti-competitive) can be complemented by an associated threat to exclude (see (Kamepalli, Rajan and Zingales, 2020_[13]).⁴ For instance, such a threat might be deployed in order to bring reluctant targets to the negotiation table, and to reduce the price they obtain when they get there (thereby reducing the incentive to invest in start-ups). Investors often see the prospect of a start-up being acquired as an incentive to invest, since this can be a very profitable exit strategy for them.⁵ However, if the acquisition practices of an incumbent were to create the perception that there is a kill-zone where no new companies will be allowed to grow and compete, this could instead have the opposite effect of reducing investment and potential market entry.

Beyond this, there are numerous exclusionary practices that do not involve the acquisition of competitors.

For example, there is a risk for a nascent firm that a gatekeeping platform will copy its product and compete against it on the merits (i.e. within the boundaries of competition law). For example, Amazon has introduced a number of its private-label items that directly compete with the products of independent sellers on its platform. Such 'genericisation' is usually welcomed as pro-competitive, for example when a patent expires. However, when it comes as quickly as it can do in the cases of a gatekeeping platform, the static efficiency of the outcome can mask the damage done to dynamic competition, particularly when appropriability of an innovation⁶ is low.⁷

As with the possibility of kill zones created by merger practices discussed above, opportunistic conduct by the platform (extracting information and using it to copy and profit at the expense of an innovative originator) may create an investment hold-up problem that reduces the incentive for nascent firms to innovate or invest in obtaining efficiencies. Moreover, it creates downward pressure on any future acquisition price (which discourages investment in the first place). Indeed (Kamepalli, Rajan and Zingales, 2020_[13]) and data quoted by the (Stigler, 2019_[14])⁸ are each consistent with such an effect on innovation incentives, as is the testimony of some investors.⁹

Competition agencies have begun recently to examine these issues as potentially exclusionary behaviour (e.g. the Apple app store¹⁰ and Amazon probes¹¹ in the EU). However, several authors have concluded that such concerns are best addressed through ex-ante regulation and codes of conduct to ensure that such platforms behave fairly with their suppliers (e.g. Proposed Digital markets Act in the EU, (CMA, 2020_[15]), (Stigler, 2019_[14]) and (Wheeler et al., 2020_[16])).

Anticompetitive Agreements

Anticompetitive agreements may also be used to restrict or eliminate potential competition constraints.

These have been repeatedly investigated in pharmaceutical markets where pay-for-delay cases such as in the Actavis (US)¹² and Lundbeck (EU)¹³ cases. These judgements have confirmed that there does not

need to be an actual competitive constraint that is lost in order for a collusive agreement to be identified. It is sufficient that the parties agree to remove a future constraint. Notably the courts have identified such agreements as anticompetitive even where this future constraint is subject to a great deal of uncertainty (e.g. over possible patent infringement actions).

The key parameters to identify potential competition

We have distinguished potential competition from the actual competitive constraints imposed by potential entrants. That said, in many cases, potential and actual competitive constraints might co-exist simultaneously. For example, a start-up (or a firm in an adjacent market) might pose a threat that make the incumbent take certain steps to mitigate this threat (these steps reflect the strength of the actual constraint). For instance, it prices lower than it otherwise might, or produces a better quality product than it would do, absent that threat. However, at the same time, the very same start-up (or firm in an adjacent market), might also pose a much larger potential constraint, in that if it were to enter, it would spark a much more significant impact on price and quality.

Losing an actual constraint from a potential entrant has an impact that is certain (100%), because that actual constraint, which was presumably already benefiting consumers and observable in the data, is removed. However, while it is certain, it is likely to be smaller than the potential constraint, at least to the extent that the incumbent decides to take only *proportionate* steps to mitigate the risk (or perhaps that the incumbent unintentionally underestimates or entirely misses the risk and is blindsided). In contrast, the potential constraint is inevitably uncertain (for example it might be 30% likely to manifest), but the impact of losing that constraint, if indeed it is lost, might be more significant. That is, if the constraint were to materialise, the impact on price, quality and innovation would likely be much more significant than the actual constraint, since the incumbent would recognise the new certainty of the threat and react more dramatically.

A potentially even more important distinction is that between potential competition and simple speculation. That is to say, what are the limits of potentiality? Certainly, as every promising young musician or athlete knows, potential may materialise, it may exist but ultimately go unfulfilled, or it may be mistakenly and overoptimistically identified in the first place. How do we distinguish between these categories?

In the following Sections, we will consider some key parameters that need to be assessed in order to confirm the relevance of a potential competitive constraint:

- the relevance of barriers to entry;
- the likelihood and strength of potential competition; and
- the timeframe in which potential competition could emerge.

3 Assessing Barriers to Entry

One feature of a market that can influence the strength of a potential competitive constraint are barriers to entry into the market. This Section briefly sets out the definitions and forms of barriers to entry and suggest that, as a result of the ambiguous impact of barriers to entry, an assessment thereof could not provide as such a clear answer in cases where a specific potential competitive constraint is allegedly lost.

Definitions and forms of barriers to entry

In general, barriers to entry refer to an impediment that makes it more difficult for a firm to enter a market. However, there has long been debate over the definition of a barrier, and hence on what is, and what is not a barrier to entry. For competition enforcement purposes, this debate about what should be labelled a barrier to entry is often not informative. Instead, competition authorities can focus on the likelihood and timing of entry by specific firms into a market (OECD, 2005^[17]). However, to the extent that the likelihood of entry by a specific firm, and hence the potential constraint posed by that specific firm is influenced by the presence of cross cutting barriers to entry it is useful to explore the concept of a barrier to entry.

(Bain, 1956^[18]) said that the conditions of entry should be: “evaluated roughly by the advantages of established sellers in an industry over potential entrants, these advantages being reflected in the extent to which established sellers can persistently raise their prices above a competitive level without attracting new firms to enter the industry”.

This led him to identify that economies of scale can be a barrier to entry since they meant that a new entrant would have to choose between entering at a small, and hence less efficient scale, or entering at an efficiently large scale that risks flooding the market and depressing prices, making entry unprofitable. Notably, Bain did not require that incumbents had not faced the same obstacle in order to categorise it as a barrier. Nevertheless, it is possible that the incumbent will not have faced the same entry conditions. For instance, if the incumbent enjoyed a first mover advantage, or if market growth had been faster at the time of its entry.

In contrast, (Stigler, 1968^[19]) adopted a much more restrictive definition, arguing that a barrier to entry was: “... a cost of producing (at some or every rate of output) ... which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry”. He therefore did not consider economies of scale to be barriers to entry, since he assumed that incumbents faced the same economies when they entered. Similarly, product differentiation, capital costs, advertising costs, patents, or cost advantages were all not considered to be barriers.¹⁴

Following Bain and Stigler, numerous variations on these definitions have been proposed over the years (see (McAfee, Mialon and Williams, 2004^[20])). The most useful however is that offered by (Carlton and Perloff, 2005^[21]) who defined an entry barrier as “Anything that prevents a firm from instantly creating a new firm in a market”. This recognises that in the short run, there are almost always some barriers to entry, and so the textbook version of perfect competition is just that, a hypothetical example that amongst many other things, lacks any time-dimension.¹⁵

Under this broad definition of a barrier to entry, there are a host of potential barriers to entry. These include not only economies of scale and scope, sunk costs, product differentiation and cost asymmetries, but also network effects, behavioural biases and trade and regulatory barriers.

In recent years, the examples of demand side externalities such as network and cross-platform network effects have been identified as an important barrier in some markets (see for example (Furman Report, 2019^[22]), and (Stigler, 2019^[14])). Where these types of effects are strong, they make entry difficult, even for more efficient rivals. This is because a more efficient entrant needs to persuade users, not only that their product is better, but that it is sufficiently better to outweigh the loss of value that users would incur by switching to a network that is not interoperable with the mass of users on the incumbent platform. The difficulty in recruiting users when adoption is low means that entrants face an S-shaped adoption curve, and that incumbents, whatever their quality or efficiency, benefit from users valuing their product largely on the basis of who else uses the same product.

The fact that value depends on other users, means that in the absence of interoperability, each user recruited by a platform will raise its rivals' recruitment costs and soften competitive constraints. This creates a coordination problem that can mean that persistent bad equilibria can exist in which relatively poor quality or inefficient products continue to be in high demand despite users agreeing on their inadequacies. If the products are reasonably high quality, it then becomes extremely difficult for more innovative entrants to provide the additional value that is necessary to overcome these barriers and challenge them.

The behavioural biases of consumers (such as aversion to search or risk, or heavy discounting of future aftermarket purchases) can also form a barrier to attracting demand, again even for more efficient, better quality products and services. In the past, a more simplistic economic analysis might have mistakenly assumed that decisions exhibiting these biases were the expression of consumer preferences, and hence not a barrier to entry, rather evidence of markets giving consumers what they want. However, modern economic analysis is live to the possibility that these biases can create barriers to entry that may require intervention in order to ensure a competitive market (CMA, 2017^[23]). While it is true that one consumer's bias might be another's preference, a closer look at consumer decision-making is often sufficient to distinguish between markets in which choices largely reflect revealed preferences and those where they reflect biases. For instance, this analysis has helpfully identified that a lack of entry in some markets is not a result of anticompetitive behaviour by incumbents, nor anticompetitive regulation by government. In these cases, it has enabled competition policymakers to identify that effective competition requires interventions to improve the speed, reliability and security of switching services for mobile phone, banking accounts and electricity suppliers (OECD, 2018^[24]).

Box 3. What to do about cross-platform network effects and behavioural biases?

In the course of undertaking market studies agencies may identify barriers to entry such as cross-platform network effects and behavioural biases as features of the market that restrict potential competition (without necessarily finding any fault with the behaviour of the firms that benefit from them). Alternatively, they might find in the context of an abuse of dominance investigation that a dominant firm is able to exploit and strengthen such barriers. For instance, purchasing a default position might create de facto exclusive dealing in the same way that a fidelity rebate can do, and may therefore exclude potential rival's by raising their costs. Similarly a firm might withdraw or turn-off interoperability in order to undermine an entry strategy (see the shutdown of Vine and Twitter's access to Facebook's APIs (The Verge, 2018^[25]), and more generally (OECD, 2021^[26])).

Where there is preliminary evidence to support an exclusionary theory of harm based on these types of barrier to entry, agencies can, and have, launched investigations of the conduct of the dominant firm. Since the excluded rival is a potential entrant, and entry is highly time-sensitive, these are likely to require interim measures in order to have any hope of being effective. However, whether the barrier is in some sense a natural feature of the market that is identified through a market study, or an endogenous barrier that the incumbent is using to exclude, the problem of how to remedy the issue remains. Here the most promising answers are of a regulatory nature and so these feature heavily in the case being made for ex-ante pro-competitive regulation by Furman, Cremer, Stigler and others. For example, interoperability that requires that potential rivals have access to standardised open APIs (see (OECD, 2021^[26]) and (OECD, 2020^[27])).

Barriers to entry can also be regulatory or trade-related. These might for instance include tariff and non-tariff trade barriers, such as subsidies, advantageous tax rates for certain producers, or weak employment regulations (e.g. regulatory exemptions for ride-hailing platforms).

There can also be regulatory barriers of the type identified by the OECD's competition assessment toolkit (OECD, 2019^[12]). These can include regulations requiring licensing. However, as with other barriers to entry these might well be welfare enhancing. For example, standards for product labelling, either on a products origins, or on its contents, might improve consumers ability to make informed decisions while restricting entry into certain markets.

The expectation of future barriers to exit may also form a barrier to entry to the extent that they are factored into a firm's decision to enter. For example, the expected cost of redundancy payments and site clean-up might discourage a firm in some cases. Similarly, the lack of an effective bankruptcy regime might increase the risk of failure and hence discourage entry in the first place (OECD, 2019^[28]).

Finally, barriers need not be absolute, in the sense that they may simply delay rather than prevent entry. Such delays can have lasting effects as Mark Zuckerberg noted when considering Facebook's acquisition of Instagram: "*There are network effects around social products and a finite number of different social mechanics to invent. Once someone wins at a specific mechanic, it's difficult for others to supplant them without doing something different. [...] One way of looking at this is that what we're really buying is time. Even if some new competitors springs up, buying Instagram, Path, Foursquare, etc now will give us a year or more to integrate their dynamics before anyone can get close to their scale again. Within that time, if we incorporate the social mechanics they were using, those new products won't get much traction since we'll already have their mechanics deployed at scale.*" (US House of Representatives, 2020^[29])"

What impact do barriers to entry have on potential competition?

Low barriers to entry mean that more entrants will have the opportunity to enter and compete, and make it easier for those potential entrants to enter. We can consider the effect this has on both *actual* competitive constraints, and *potential* competitive constraints, as well as on the overall constraints, and the importance of a specific constraint.

Barriers to entry on overall constraints

The *actual* constraint posed by potential entrants as a *group* should be larger when barriers to entry are low because there is a higher likelihood that one or more of the many possible entrants will enter. In this case, a pre-emptive strategy taken by the incumbent against possible entrants would need to be significant. However, even if barriers to entry are low, such the pre-emptive response may well be very small or

non-existent because the incumbent may choose to hold back its mitigation strategy until it is triggered by actual entry, at which point it might then cut price to compete. In these cases, the *actual* constraint posed by potential entrants *as a group* are likely to be small regardless of the strength of the barrier to entry.

Meanwhile, the *potential* competitive constraint that would materialise in the event that entry occurs will not necessarily be any different when barriers to entry are low. However, since the probability of entry increases as barriers fall, there will be less uncertainty as to *whether* that potential constraint will materialise. Therefore, the likelihood and weighting attached to a group of potential competitive constraints by an agency will be larger when barriers to entry are low.

Barriers to entry on specific constraints

However, what matters in mergers and exclusionary cases is a *specific* assessment of the prospects of entry for an individual firm, while an analysis of cross-cutting barriers to entry discussed above might be useful within the context of a market study,

The impact of high barriers

An analysis of the specific prospects of entry by an individual firm would consider the specific characteristics and circumstances of a specific firm. It might therefore find that while there are generally high barriers to entry, there is nevertheless a realistic prospect that these could be overcome by the firm in question.

This matters because for an individual firm's constraint on an incumbent to have a more significant effect on competition, this would require that other potential third party entrants are *less likely* to pose a constraint. Therefore, by reducing the threat of third party entry, higher barriers to entry will tend to increase the substantiality of a constraint posed by an individual rival that does have a viable route to entry (a way over the barrier). This is true of both potential and actual constraints posed by potential entrants.

Therefore, it does not follow from the above that we would worry more about a loss of potential competition when barriers to entry are low and our confidence in the existence and strength of that potential constraints is high. Rather, it is precisely when barriers are high and potential competitive threats are rare and perhaps uncertain that we would worry about losing those rare threats that do have the potential to enter.

Identifying the existence of generally high barriers to entry which make potential entry less certain is therefore likely to help support a theory of harm that acquisition, exclusion or collusion with a *specific* firm is likely to restrict potential competition. However, this does rely on there being evidence that despite the high barriers to entry, the acquired or excluded firm nevertheless has a credible specific route through that barrier. This might, for example, be clearest where the entrant posed a threat based on a disruptive innovation, or a maverick business model, or access to specific intellectual or physical property that others might lack. In addition, the fact that the entrant has entered into similar markets in the past could also constitute such evidence. The relative specificity of its ability to clear a high entry hurdle might also be demonstrated if it has already entered while others either have failed, or have yet to try.

It is also possible that the firm that is most capable of overcoming otherwise high barriers to entry is a third party that might mitigate the effects of a merger or exclusion. In such cases, the strength of barriers to entry may provide interesting background, but a *specific* assessment of the prospects of entry for that individual firm will again be necessary.

The impact of low barriers

Should we therefore instead be relaxed about a loss of potential competition if barriers to entry are low? Unfortunately, this is not straightforward either.

Lower barriers should, as noted, increase the likelihood that a specific potential competitive constraint materialises, and hence increase the weight that agencies can place upon the loss of that specific potential constraint. However, as also noted above, while the likelihood of the specific constraint arising might increase, the likelihood of other constraints arising may also increase and make the loss of the particular constraint less relevant. In order for the greater likelihood of a specific potential constraint to be relevant, there would therefore need to be clarity on why further entry was not likely to follow (given the low barriers that would do little to prevent it).

A theory of harm would therefore need to coherently explain that while further entry would not be prevented (since barriers are low) by the incumbent's conduct, it would not be expected to exert the same strong constraint once in the market as the acquired, excluded or co-opted entrant would have. An asymmetry between potential entrants would therefore need to be identified. This might, for instance, include differences in their efficiency, their assets, or their product differentiation and hence the substitutability of the products of the different potential entrants, or simply a strong first mover advantage.

Furthermore, low barriers to entry could also be consistent with a theory of harm in which an incumbent was alleged to be engaged in a sustained attempt to prevent entry (e.g. by acquiring or excluding or forming agreements with a *series* of potential rivals in order to build artificial barriers to entry). While Selten's (1978) chainstore paradox suggests this to be unlikely (Selten, 1978^[30]), this, as Selten recognised, rests on assumptions of perfect information and simultaneous, rather than sequential, entry, each of which are unlikely to hold in practice. In such cases, the conduct itself seeks to create a higher barrier to entry in order to substitute for the lack of exogenous barriers to entry. Indeed, the post-Chicago school of thought has now identified numerous theories of harm under which there is an ability and incentive to exclude. The possibility of such strategies might therefore deter highly rational potential entrants, and perhaps many more potential entrants with more risk averse investors.

Finally, barriers might be endogenous in that they are determined by the behaviour of firms within the market, or exogenous and therefore unaffected by that behaviour. Low *exogenous* barriers to entry might therefore co-exist with high *endogenous* barriers. Therefore, Sutton's point that competition in markets with endogenous sunk costs can deter entry without any anticompetitive behaviour might still apply in markets with low exogenous barriers. Endogenous barriers to entry are therefore one of the important features of a market which can lead to the market working poorly for consumers, and which could therefore be amenable to intervention via a market investigation, rather than through antitrust enforcement. For instance, the responsiveness of demand to branding in certain markets can create the incentives that lead to the creation of endogenous barriers to entry.

Summary

- As a result of the ambiguous impact of barriers to entry, the height of such barriers does not provide a reliable bright line safe harbour in cases where a specific potential competitive constraint is lost. For instance, the height of a barrier to entry matters much less in cases where the barrier applies to all, or whether it can be, is likely to be, or has already been, overcome by specific firms.
- This means that the existence of barriers to entry is not determinative, but rather one of the elements that agencies will rely on to assess the likelihood of entry in the context of the alleged theory of harm. As the European Commission has noted: “Rather than focusing on whether “entry barriers” exist according to some definition, competition authorities should explain how the industry will behave over the next several years and how rapidly and to what extent entry could enhance competition. This means competition authorities should assess the likelihood of entry, not whether entry barriers are high or low in any given case. This implies that factors such as economies of scale, product differentiation or access to scarce resources may all be entry barriers if their presence implies entry will be unprofitable and thus unlikely”.
- Simply measuring the height of barriers to entry will therefore rarely be an informative exercise for competition authorities, which perhaps explains why such an exercise is rarely ever carried out. We therefore turn in Sections 4 and 5 to the assessment of the likelihood and strength of entry, and the timeframe within which it might occur.

4 Assessing the Likelihood and Strength of Potential Competition

If an assessment of barriers to entry provides few answers, and an entrant-specific inquiry is instead required, then how do we assess *the likelihood* of a potential competitive constraint emerging? How do we assess *how strong that constraint* would be? And how likely and how strong would a potential competitive constraint *need to be in order for it to be relevant for a decision*?

This last question is a matter of thresholds, while the first questions focuses on the methodology for the assessment of potential competition. We begin with the question of thresholds.

How likely and how strong do the thresholds for potential constraint need to be?

The different options that can be used as thresholds are easy to identify when we know probabilities and the potential outcomes. Where we know these, as in the case of a coin toss (50% heads, 50% tails) or a lottery ticket, they are risks (Knight, 1921^[31]). When dealing with markets however, competition agencies do not know the probabilities, nor the possible outcomes. They therefore have to assess these uncertainties by estimating the shape or form of a specific entrant, the impact that it might have, and then the likelihood of that combination occurring.

Having made an assessment, agencies compare this against the relevant thresholds and decision rules. There might however, be a case for using different thresholds for potential competition from those that are used when the concern is over the possible loss of an *actual* constraint. For example, the unobservable nature of a potential constraint introduces considerable and inherent uncertainty. Moreover, it is not straightforward to conclude that this inherent uncertainty should be treated in the same way as uncertainty that arises from the possible mismeasurement of an actual competitive constraint. We explore this further in the context of mergers and antitrust cases.

Mergers

The logical and economic approach would be to treat the potential constraint as equivalent to a certainty (an actual constraint) by calculating an expected value for the constraint (likelihood multiplied by magnitude). For example, the loss of a potential constraint that is *expected* to be significant, could then be equivalent to an actual constraint that *is* significant. This for example was the proposal of the UK's Furman Review for a 'balance of harms' test which has also received support from many others (Furman Report, 2019^[22]).¹⁶

Traditionally, however, merger control has not been based on this economic approach. Instead, we only worry about the loss of entrants that were *likely* to enter, and, of those entrants that were likely to enter, we only worry about those that would then apply a *significant* constraint.

For example, Wu & Hemphill note that in the US mergers can be prohibited only where the competitor ‘probably’ would have entered the market and its entry would have had pro-competitive effects.¹⁷ They argue that, under this rule, the acquisition of a nascent competitor is nearly impossible to challenge, given the difficulty in establishing the “but-for” counterfactual world with sufficient precision and certainty. Indeed, the courts’ rejection of the US DoJ’s bid to block the recent Sabre/Farelogix merger (see Box 4) illustrated this difficulty. As such, they argue for a theory of harm based on ‘nascent competitors’ that reflects the innovation potential of such companies to be adopted.

Box 4. Sabre/Farelogix merger

The planned acquisition of Farelogix by Sabre was ultimately abandoned following close scrutiny of the deal by the US DoJ and the UK CMA.

Sabre and Farelogix both provide technology solutions that facilitate airline bookings. Sabre is a major supplier of Global Distribution System (GDS) which facilitates transaction between airlines and travel agents. GDSs are two-sided platforms with sellers of travel services on the one side of the platform and airlines on the other. Farelogix does not operate a GDS but operates a separate technology, New Distribution Capability (NDC), which allows airlines to connect directly to travel agencies for bookings, without having recourse GDSs.

The US DoJ challenged the transaction arguing that it would allow Sabre, the largest airline booking services provider in the US, to eliminate a disruptive competitor that has introduced a new technology to the travel industry and is poised to grow significantly. However, the DoJ’s attempt to block the transaction was denied by the court. The court held that Sabre’s GDSs, two-sided platform facilitating transactions between airlines and travel agencies, did not compete with Farelogix’s NDC, which only interacts with airlines and is not a two-sided platform, relying on the US Supreme Court’s American Express decision which held that “only other two-sided platforms can compete with a two-sided platform for transactions”. The court further noted that, even assuming that Sabre and Farelogix competed in the same market, the deal would not result in reduction in innovation.

A few days after the US court’s decision, the UK CMA decided to block the transaction. Contrary to the findings of the US court, the UK CMA examined the potential competitive constraints and considered that GDSs compete with technologies that enable GDS bypass (e.g. NDC developed by Farelogix). While noting that Sabre and Farelogix were not close competitors, the UK CMA considered that Farelogix was a differentiated competitor to Sabre and the potential competition from Farelogix on Sabre’s GDS would be eliminated. It also noted that, absent the merger, Sabre could become a competitor to Farelogix’s NDC within the space of three to five years.

Following the UK ruling the transaction was abandoned, and the US court judgement was vacated at the request of the DoJ who argued they would otherwise be unfairly denied the opportunity to appeal.

Sources:

1. United States v. Sabre Corp., No. 1:19-cv-01548-LPS, 8 April 2020.
2. UK CMA, 9 April 2020, “Anticipated acquisition by Sabre Corporation of Farelogix Inc.: Final Report”.

This same iterated framework is also applied to assess potential third party entry that might mitigate the anti-competitive effects of a merger or conduct. In that context, this means that potential competitive constraints need to firstly be likely to emerge, and then also likely to impose a significant constraint when

they do emerge. Only potential entrants that meet both thresholds would provide reassurance that a merger that removed an actual constraint would in fact cause no harm.

Other thresholds for the merger test have been proposed, and many of them suggest the use of a different threshold when assessing acquisitions of start-ups. For example, (Valletti, 2018^[32]), (Crémer et al., 2019^[33]), (Motta and Peitz, 2020^[34]), (Salop, 2020^[35]) and (US House of Representatives, 2020^[29]) each suggest that there should be a rebuttable presumption that acquisitions by dominant digital platforms are anti-competitive unless the firms are able to demonstrate otherwise.

An alternative approach is to leave the initial burden of anticompetitive harm with the agency, but require it only to show that there is a *realistic prospect* that an acquisition would be *expected* to reduce potential competition.¹⁸ Where the agency manages to do so, this would then create a rebuttable presumption that the merger would harm consumers, which the parties could then seek to overturn. This might be combined with a shift to assessing the magnitude of harm as well as likelihood (as recommended by (Furman Report, 2019^[22]) and (Caro de Sousa & Pike, 2020^[36])). The (CMA, 2020^[15]) have recently adopted a proposal along these lines, and recommended that the UK legislate to change the evidentiary standard to one of a realistic prospect of harm, at least in the case of acquisitions by firms with strategic market status.

Exclusionary Practices

The thresholds that are typically applied in mergers may not apply in anti-competitive exclusion cases. For instance, in the US Microsoft case the courts were clear that it was not necessary to show that the potential competitive constraint that had been excluded (Navigator and Java) were *likely* to have become a competitive constraint. Instead it noted that “*it would be inimical to the purpose of the Sherman Act to allow monopolists free reign to squash nascent, albeit unproven competitors at will—particularly in industries marked by rapid technological advance and frequent paradigm shifts.*”¹⁹

This same approach is evident in the US DoJ’s challenging of the Visa/Plaid merger (see Box 2). This merger was recently abandoned by the parties after the DoJ argued that the acquisition amounted to unlawfully maintaining Visa’s monopoly over the online debit market in violation of Section 2 of the Sherman Act (in addition to substantially lessening competition under Section 7 of the Clayton Act).

However, there is a strong case that despite this, the burden of proof in exclusionary cases remains too high. For instance, (Gavil and Salop, 2020^[37]) argue that using decision theory to set burden of proof would lead to US courts setting a lower burden on the plaintiff in exclusionary conduct cases when the defendant has substantial market power. This would reflect the fact that anticompetitive effects are more likely when the defendant has substantial market power, and that there are asymmetric litigation incentives that tend to produce false negatives.

This recognition of the need to shift burdens in the case of dominant firms is also evident in Europe. For example, in Germany following the revisions to the Competition Law, the new Section 19a specifies that in the case of undertakings with paramount significance for competition across markets, the burden of proof in abuse cases now lies with the firms rather than the Bundeskartellamt. Similarly, the EU’s Digital Markets Act specifies in articles 5 and 6 a series of obligations that will pre-empt the need to assess the exclusionary or exploitative nature of conduct by digital gatekeepers.

Anticompetitive Agreements

How likely and how strong do the thresholds for potential constraint need to be in collusion cases? The issue of potential competition has been relevant when assessing collusive agreements, for instance, in the pharmaceutical industry. In some of these cases, entry has yet to materialise, such as in cases where incumbents agree to pay-for-delay, and the generics manufacturers are, at the time of the agreement, not

exerting an actual competitive constraint on the patent holder (Colino et al., 2017^[9]). In other cases, the entry has occurred and then been suspended as a result of a patent settlement agreement (see Box 5 on the GSK/Dong-A case in Korea).

Where entry has already occurred, the magnitude of the potential constraint is clear, but the likelihood of the entry remains uncertain while the patent dispute continues. Where entry has not occurred, there may be additional uncertainty over the strength of the constraint. However, the potential constraint can be clear to see, and US courts have been clear that there is no point in arguing that the lack of a current competitive constraint means there can be no anticompetitive agreement (see *FTC vs. Actavis*, 2013).²⁰

In Europe the ECJ has suggested that it is necessary to show that there are ‘real, concrete possibilities’ that entry will occur.²¹ (Colomo, 2020^[38]) suggests this would mean showing that entry is ‘more likely than not’ to occur, while Dunne in (Colino et al., 2017^[9]) suggests that “*to demonstrate such ‘real concrete possibilities’, the likelihood of prospective competition must be more than ‘purely theoretical’ and not ‘unrealistic’. Entry must therefore represent an ‘economically viable strategy’ for the would-be competitor.*”

Recent judgements of the ECJ confirmed that “in order to assess whether an undertaking that is not present in a market is a potential competitor of one or more other undertakings that are already present in that market, it must be determined whether there are **real and concrete possibilities** of the former joining that market and competing with one or more of the latter” (emphasis added).²² The ECJ has also made clear that, in the context of pay-for-delay agreements between a manufacturer of originator medicines and manufacturers of generic medicines, a manufacturer of generic medicines is a potential competition if it has “a firm intention and an inherent ability to enter the market” and “does not meet barriers to entry that are insurmountable”.²³ In practice, “a firm intention and an inherent ability to enter the market” can be assessed by determining “whether, at the time when those agreements were concluded, that manufacturer had taken sufficient preparatory steps to enable it to enter the market concerned within such a period of time as would impose competitive pressure on the manufacturer of originator medicines”.²⁴

Box 5. GSK patent settlement agreement case in Korea

In 2011, the Korean Fair Trade Commission (KFTC) found that patent settlement agreements between GSK and a domestic generic pharmaceutical company Dong-A violated Korean competition rules. The KFTC imposed a fine of KRW 5.34 billion (approx. USD 4.5 million).

The agreements originated from patent disputes between GSK and Dong-A. GSK held a patent for Ondansetron (an antiemetic agent for the treatment of nausea and vomiting) used for its product Zofran. Dong-A later launched a product Ondaron based on a generic version of Ondansetron at prices as low as 90% of the price of Zofran. GSK introduced a lawsuit against Dong-A’s alleged patent infringement.

These patent disputes ended with an agreement between the parties which required that: (i) Dong-A withdraw its product Ondaron from the market and refrain from developing, manufacturing or selling any products capable of competing with GSK’s Zofran and Valtrex (an antivirus agent) and (ii) GSK will provide Dong-A economic profits such as the dealership of Zofran for national hospitals in Korea and the exclusive dealership of Valtrex.

The KFTC found that these agreements violated Korean competition rules because: a) the agreements were made with the intention of sharing the profits or advantages realised from avoiding competition; b) the agreements limited competition by removing Ondaron from the market, and prevented future competitive products from being launched by Dong-A. Consequently, consumers had no choice but to

purchase higher-priced medicines instead of generic ones; and c) the agreements went beyond the scope of GSK's due exercise of patent rights.

Source: KFTC's decision No. 2011-300 of 23 December 2011, OECD (2011), Annual Report on Competition Policy Developments In Korea

How do we assess likelihood and strength of a potential constraint?

Whether or not the assessment of potential competitive constraints requires different thresholds, the challenge of assessing the likelihood and strength of those constraints and comparing them against the selected threshold will remain.

However, in looking for evidence on substitutability between future products, or new products that are rapidly growing, we cannot rely on analysis of historic data, since such data either does not exist, or is expected to provide an unreliable indication of future substitutability. Fortunately, there are a number of tools that can in practice help to assess these constraints, and thereby help us evaluate concerns over horizontal mergers, (OECD, 2020^[39]) vertical mergers, (OECD, 2019^[40]) conglomerate mergers, (OECD, 2020^[41]) anticompetitive agreements, or exclusionary conduct (OECD, 2020^[42]). However, they are not available in every market. We consider these below.

Market definition

Where it is possible to obtain a good understanding of substitutability between the existing products in the market, and hence to define the relevant market, this may help to identify whether entry by a potential competitive constraint would exert a strong constraint or not (though not the likelihood of entry).

For example, a reliable geographic market definition would identify the geographic space in which a potential constraint would provide a strong constraint if it were to successfully enter. However, it might also be ambiguous in the sense that a location outside the existing set of in-market constraints, but closer than the existing out-of-market alternatives, might offer a strong constraint or it might not.

Similarly, a reliable product market definition might prove helpful in indicating the likely strength of constraints that might be expected to emerge. However, again this might prove less informative if the entry is expected to occur outside the bounds of the existing market. For example, a constraint that is entering at a point that lies outside the existing market, but which is closer than the existing out-of-market alternatives, might turn out to offer a constraint or it might not.

Moreover, product space is more complex than geographic space since there are more dimensions in which products might differ. This suggests that there might be fewer potential entry events that are clearly within the product space on all dimensions, and more that are in ambiguous positions.

The above considerations would suggest that the value of market definition in identifying the strength of a constraint might therefore be limited in many cases, and so agencies might not wish to invest time and resources in a market definition exercise which already yields limited insight in an ever increasing category of markets (OECD, 2018^[43]).

Views and internal documents

A better place to start is therefore to ask the firms, their input suppliers, their regulators, their rivals, their customers and independent market analysts whether there are potential competitive constraints, and if so

what shape the constraint might take and how significant they would be. In each case these parties may well have their own bias, as well as each having insight and visibility on some aspects of the question while having blind spots in relation to other aspects. However, a careful evaluation of these views, particularly on narrow questions on which the respondent might be more likely to have an impartial view, may well add insight.

Documents will be particularly valuable if they shed light on what executives think, what their worries are over the risk of future sales losses, and whether they have concerns over the threat posed by a specific product. These might include statements or presentations to investors, risk assessments, internal emails, board minutes, quarterly reports and business cases. Questionnaires may be used to collect this evidence. However the most valuable documents will be those that are contemporaneous and whose credibility can be evidenced. Insights supported by documentary evidence recorded outside the context of the investigation, contemporaneous private correspondence or internal documents drafted for different purposes for example, will carry great weight.

Agencies will recognise however that careful acquirers may leave important views unstated in written documents. It may therefore be that, as (LEAR, 2019^[10]) suggests, dawn raids and seizure of email and messaging content, have a useful role to play in gathering evidence on such cases. Such exercises come at a cost however, and so might be used judiciously or randomly in order to deter non-disclosure. The absence of any assessment relating to a rival product line may in itself be revealing.

In evaluating this evidence, there is not only the question of what type of potential constraint is likely to manifest, and hence which type of potential constraint has actually been lost. There is also the slightly different question of the shape and strength of constraint that rivals *expect*. This is not about whether the rivals anticipate the constraint and start to compete. That would signify an *actual* competitive constraint, which could be important to the case, but would not contribute to an assessment of the *potential* competitive constraint. Instead, the perceived or expected shape of the potential constraint, which might well turn out to be mistaken, might nevertheless help to identify anti-competitive conduct to pre-empt the emergence of a potential constraint. This might for instance include pay-for-delay agreements, killer acquisitions, monopolisation or abuse of dominance offences such as unilateral conduct to remove a nascent rival's interoperability.

Agencies will therefore quite rightly place increased and significant weight on evidence from credible contemporaneous internal documents in cases involving potential competition. They are also likely to need to dig further to obtain such evidence as firms seek to anticipate this line of inquiry, by means of dawn raids for example (LEAR, 2019^[10]).

Regulatory checkpoints

A neutral and objective perspective on the likelihood and strength of a potential constraint, can in some markets be found in a new product's progress through regulatory checkpoints (e.g. progress through the different phases of clinical trials). (Oldale, Sayyed and Sweeting, 2020^[44]) identify 82 merger cases in the US where the strength of a potential competitive constraint was assessed. Most of these were in pharmaceutical or medical device markets. It is notable that innovation in such markets is heavily regulated for safety reasons, and so the progress of an innovation through the pipeline of development can be easily measured by relying on regulatory checkpoints.

Regulatory progress therefore can provide strong evidence on the likelihood of market entry of a new product. Regulatory processes can often include an assessment of therapeutic novelty, a licensed use or purpose, and comparative metrics for effectiveness, all of which help to provide a basis for identifying whether a particular product's entry is likely, and whether it will improve upon the existing products within

the market, and hence have a pro-competitive effect. This information enables agencies to identify those products that are likely to enter, and that are likely to be considered a good substitute by potential buyers.

Innovation programmes

However, in markets where there is little health and safety or environmental risk, the innovation process is usually unregulated, and so agencies are unable to rely on progress against regulatory checkpoints as an indicator of likelihood. An alternative way in which to assess the likelihood of entry is to examine the firm's innovation programmes.

Such programmes lack the independent regulatory checkpoints that are present in pharmaceutical cases. The internal assessment may therefore be prone to optimism bias (either naturally occurring, or strategically designed in order to attract investors), or to strategic downplaying, in order to provide false reassurance to competition agencies.

However, an independent assessment of the programme can provide a good degree of certainty over the present intentions and competitive investment by firms. This then allows agencies the option of basing their findings on the effects of the reduction in competition in continuing R&D efforts, instead of on the final impact on consumers via price, quality and choice that would occur if or when the innovation leads to entry. The impact on these factors will however take time, and is likely to be subject to greater uncertainty than the more immediate and tangible impact on innovation competition.

As an example, the European Commission has examined theories of harm based on detrimental effects on innovation 'spaces' that are not yet linked to a specific product market. Under this approach, the Commission has focused on the elimination of competitive threats by looking at competitive relationships in an innovation phase that precedes product market competition (i.e. by identifying potentially competing research poles, see Box 6). The sectors where this approach has been adopted – mainly the pharmaceutical and the agro-chemical industries – typically involve R&D that again takes the form of a distinct, well-structured heavily regulated process preceding product market competition (Crémer et al., 2019^[45]). However, this focus on competing research programmes that may lead to future product market competition, rather than on the potential products, does offer a generalizable approach that could be applied to research programmes into unregulated or less regulated innovations.

Box 6. Dow/DuPont merger

In its 2017 decision regarding the merger of Dow Chemical Company and E.I. du Pont de Nemours and Company, the European Commission extensively analysed the degree of innovation rivalry in the relevant markets (especially related to pesticides and petrochemical products). It focused on this innovation rivalry rather than the potential competitive constraints that the firms could be expected to exert upon one another when or if the innovation led to the production of new products.

The Commission analysed recent trends in research and development in the crop protection industry. It found that, with increased concentration and expanded regulatory requirements, overall R&D spending as a proportion of revenue, and overall R&D output, had fallen.

Specific concerns about the transaction were identified by the Commission with respect to the elimination of overlapping research efforts, and a reduction in overall innovation competition in an already concentrated industry.

To assess these concerns, the Commission did not undertake a separate market definition exercise for innovation efforts, noting that “innovation should not be understood as a market in its own right, but as an input activity for both the upstream technology markets and the downstream [product] markets” (¶ 348).

The former “technology markets” referred to the sale or licensing of technology developed by companies conducting research and development. Rather, the Commission sought to understand (1) which firms had the ability to compete in the development of new products, and (2) identify the “innovation spaces” in the industry, since R&D efforts were increasingly targeted at a given subset of current or future product markets within the industry.

Concentration was analysed within each “innovation space” based on the share of patents held by each firm, weighted according to citations as a measure of patent quality (based on data from the merging parties on their patents and their competitive intelligence on competitors’ patents, as well as third-party data on patent citations). The Commission found that there was a concentrated innovation market, with 5 players on a global level – a higher level of concentration than in the product market.

In addition, the Commission analysed innovation competition with respect to its importance in driving innovation effort, the degree of overlaps between Dow and DuPont, and barriers to entry (for example in terms of R&D lab capacity).

Based on these results, the Commission concluded that: the merging parties would likely discontinue overlapping innovation efforts; the transaction would reduce their incentives to innovate; cost-cutting would reduce total innovation capacity; and that there were not likely to be countervailing action from remaining rivals. Specific R&D asset divestiture remedies were therefore developed.

Source: Commission Decision of 27 March 2017, Case M.7932, Dow/DuPont.

This approach of assessing innovation programmes constitutes a slightly uneasy compromise that allows agencies to challenge mergers that threaten to reduce potential competition, while working within a framework which largely precludes them from doing so on the basis of the effect on potential competition. The compromise is uneasy because, as (Langus et al., 2020^[46]) notes, by treating this solely as *actual* innovation competition rather than uncertain *potential* competition, these cases have provoked much debate over whether competition to innovate works in the same predictable way that competing on price and quality does.

However, providing sufficient evidence that the innovation programmes would have been likely to deliver products that would then have likely constrained one another might be extremely difficult under the existing framework, which focuses on the likelihood of harm occurring regardless of its potential magnitude and effects.

Even if the impact of magnitude were recognised, as proposed by the Furman review suggesting to “use a ‘balance of harms’ approach which takes into account the scale as well as the likelihood of harm in merger cases involving potential competition and harm to innovation” (Furman Report, 2019^[22]), the present framework would nevertheless remain unable to deal with uncertainty arising from a scarcity of evidence of either likely presence or likely absence of anti-competitive effects. As should be clear, a framework that requires a showing of likelihood (or a strong likelihood) is set up to fail to address uncertain anti-competitive risks that at best can be demonstrated as realistic prospects.

This matters, for two reasons. First, where there is a presumption of lawfulness of mergers and it is incumbent on the agency to prove that the merger should be prohibited, this difficulty to prove uncertain but potentially significant anticompetitive effects will lead to the approval of mergers that should have been prohibited.

Second, competition authorities may not only be under a duty to prove that a merger should be prohibited (under the SLC or SIEC test), but may also be under a duty to adduce sufficient evidence that the merger should be allowed.²⁵ Given the difficulty to prove both that the transaction has anti-competitive effects and that it does not have them, an agency could on occasion be unable to reach a decision. For example, there may be sufficient evidence to reach a realistic prospect of both anti-competitive effects occurring or not occurring, but it might well remain impossible to demonstrate that either of those effects are likely. In such circumstances, the rules governing how this uncertainty should be resolved become pivotal.

These problematic consequences may arise in any case where there is uncertainty over possible mismeasurement. However they are more likely to arise when assessing the impact on potential competition, since this involves inherent uncertainty that will only manifest over a longer time horizon. It is to this time horizon that we will turn in Section 6.

Adjacency in geographic or product space

One of the factors that can help to identify the likelihood and strength of a potential constraint is the firm's presence in existing adjacent markets. This is often more intuitive in geographic space (Box 7), where a firm's presence in an adjacent geographic market might indicate that there are a range of spillovers that they might take advantage of to successfully enter. For instance, the cost of serving the neighbouring market might be relatively low, requiring the outlay of fewer fixed or sunk costs. Geographic proximity might also suggest that they are familiar with the nature of demand in the area, and that they have a degree of brand recognition.

Box 7. Cornershop/Uber - Analysis of potential competition by the Chile competition authority

Harm to potential competition was closely scrutinised by the Chilean competition authority (FNE) in its 2020 review of Uber's plan to acquire Cornershop which was ultimately approved without conditions. The merging parties' horizontal overlaps were minimal since, in Chile, Uber offers ride-hailing services via Uber Rides and food delivery from restaurants via Uber eats, while Cornerstone operates an online platform for grocery delivery from supermarkets. The FNE's main competitive concerns related to an elimination of Uber as a potential competitor against Cornerstone for online grocery delivery from supermarkets.

In its decision, the FNE noted that Uber had a serious intention and a real probability of entering the online grocery delivery segment within a limited period. For example, Uber had conducted a pilot test a few months earlier in collaboration with a supermarket chain Tottus with a view to start offering online grocery delivery services and Uber's internal documents demonstrated its intention to enter the segment. However, the FNE concluded that the elimination of Uber as a potential entrant in the segment would not have resulted in a substantial reduction in competition considering that other supermarket chains were also developing online grocery delivery services and that this entry was accelerated by the COVID-19 outbreak and planned to be materialised within the year. In addition, other digital platforms also had plans to enter the segment which were at a relatively advanced stage, making them capable of exerting competitive pressure to the Uber/Cornershop combination.

Source: FNE resolution of 29 May 2020 re acquisition of Cornershop par Uber Technologies, Inc.

However, an important question on the likelihood of entry into an adjacent geographic or product market space is to ask: what has, or what will change? If the firm is not already in that adjacent market now, why would they be in a year or 2 years' time? Why is the current picture an out of equilibrium observation?

The same can be true in product market space. As (Salop and Culley, 2014^[47]) suggest, “Established firms competing in adjacent markets may be well-situated to enter because they may have expertise relevant to that market or easier access.” Note that ‘adjacent in product space’ is a quite generic ‘concept’ that might mean that the firm is currently offering a potentially complementary product, or a downstream or upstream product. What matters is that there is some spillover for it to work off and give it a small foot in the door with a segment of consumers or buyers.

For instance, when a digital platform announces its plans to enter into a different digital platform market, some see this as a demonstration of a brand new form of competition. A more straightforward interpretation is that such entry reflects the activation of potential competition (and competitors). The triggering of inter-platform competition also demonstrates that often potential entrants are not optimistic start-ups, but instead incumbent producers in other near-monopolised platform markets, some of which are substitutes and some of which are complements. In other cases, the potential entrant is a producer of complementary goods that sells on the same platform.

The existence of such experienced potential entrants does not mean that the market in question is highly competitive. Entry may remain a slow, painful, high-risk process, and if that is the case for experienced firms, then it is doubly true for start-ups and other outsiders. After a market has tipped, often only residual competition is possible. However, this does not mean that competition (and potential competition) is not valuable. Potential competitive threats might be uncertain, and small for now, but if there is little or no other credible threat for incumbents, then the loss of even that small uncertain constraint might be substantial.

As far as more traditional markets are concerned, in some cases, agencies will have the advantage of there being evidence on past behaviour. For example, in bidding markets or concessions, insights on the potential competitors might be found by identifying the likely credible bidders in forthcoming and potential future procurement processes. By way of illustration, a seller might be expected to consider a rival bidder as a strong substitute if:

- it has experience providing the same or similar products in different geographic markets;
- it has operated services of similar scale, in similar locations;
- it has a good reputation from work on previous projects (no defaults);
- it has submitted high quality competitively priced plans for providing or operating the service in past tenders; and
- it offers strong guarantees on the promised performance.

In such cases agencies might be able to use a number of quantitative tools to assess the closeness of competition:

- Participation analysis, which looks at how often the merging parties competed in the tenders²⁶.
- Win/loss analysis, which looks at how often the merging parties lose to each other.
- Winner/runner-up analysis, which looks at how often the merging parties are winner and runner-up.
- Margin analysis, which looks at whether the margins of one party are affected by the participation of the other party in the same process.
- Probit analysis, which looks at whether the probability of one of the merging parties winning is affected by the participation of the other party in the same tender (after controlling for other factors that affect their probability of winning)²⁷.

Notably, the type of competitive process that is used for the concession can impact which of these tools are most useful. For instance, in a descending price auction the winner/runner-up analysis is particularly useful since the impact in those auctions comes down to the difference between bids 2 and 3 (where the

merging parties were winner and runner-up). (Coublucq and Federico, 2017^[48]) suggest that in those cases agencies should look at the average margins made by bidder 2 in other tenders where bidder 2 wins and bidder 3 is the runner-up, since these can be a proxy for the price effect.

Valuation analysis

In the context of a merger, an emerging quantitative approach is to breakdown the components of the price that the acquirer has offered to pay for the target. For example, in Visa/Palid (see Box 2), the DoJ noted the acquisition price was worth more than 50-times the target's annual revenue, and suggested that this was on "*strategic, not financial grounds*" to "*protect*" the credit card company's debit business. This type of analysis is not straightforward.

Competition authorities could use such valuation analysis for assessing nascent acquisitions by focussing not on the components of existing profit, but instead on the components that make up the valuation behind the bidding price. An example of this valuation analysis is set out by (CRA, 2019^[49]) in a memo describing their work on the acquisition of iZettle by Paypal. They suggest that when valuing start-ups, firms typically use either a comparator analysis or a discounted cash flow analysis (DCF) to assess the profitability and hence, the bid price. Other methodologies include the Berkus method (Dave Berkus), scorecard valuation (Bill Payne), the Venture Capital method (popularised by Bill Sahlman), Risk Factor summation, Asset-Based Valuation, cost-to-duplicate, or a combination of some or all of the above (Richards, 2019^[50]).

This could help to understand whether the price includes an unexplained premium that might for instance reflect the value to the incumbent from the reduction in future competition. Similarly, the analysis might identify that value has been assigned to non-existent synergies in order to cover for value that reflects a reduction in future competition.

Such analysis is difficult because there are many reasons for an acquirer to pay a premium for the target, such as to obtain real synergies that are specific to its acquisition of the target (and would not be available to a rival acquirer), or simply because the target has a strong bargaining position (e.g. exclusive IP, reliable funding), or good bargaining skills. At the same time, it may well be that the premium is paid for the potential value of the target that is not reflected in its current value.

Customer surveys

Customer surveys might also be used to understand the degree of substitutability between what might at the time be hypothetical products. For instance, this may help to understand what price points and what aspects of quality a product would need to fulfil in order to provide a relevant competitive constraint. These might already have been undertaken by the parties or by market analysts, but if not then agencies themselves may want to commission them.

This information can then be used to narrow the question to whether and when a potential competitor might realistically be able to reach a certain price or to provide a certain type of feature or quality.

Box 8. Do's and don'ts when assessing potential competition

- Do place significant weight on evidence from contemporaneous internal documents within the boundaries of relevant legal framework.
- Do consider using interviews and dawn raids, if possible, to delve deeper and obtain contemporaneous internal views.
- Do consider innovation theories of harm, but do not do so at the expense of investigating the impact of a loss of potential competition on the final product market. If the existing legal framework is unable to protect against the loss of potential competition, then advocate for it to be changed.
- Do consider possibilities that firms in adjacent markets with advantages in entering the market and thereby exercise a potential constraint.
- Do explore and understand the relevant business models, and how these might evolve and monetise in future, but use that understanding to identify, for each product, which relationships are complementary, which are substitutable, and which are potentially substitutable. Do not get distracted by terminology.
- Do consider the insight offered by valuation analysis and consumer surveys. While these might be unlikely to offer all the answers, they each offer a useful line of inquiry that can help focus on the questions that matter (e.g. substitutability), and which can help to update, inform and nuance decision-makers default presumptions. They can therefore help to corroborate other sources of evidence.

Ex-post assessment of potential competition

Ex-post assessment of cases involving potential competition remains rare. This is perhaps unsurprising given the absence of success of merger cases. For instance, (Werden & Limarzi, 2010^[7]) noted that “*the Department of Justice’s last successful merger challenge on a “potential” competition theory came in 1973. The FTC’s last “potential” competition came later (in 1981), but it has now been three decades since a federal court has held a merger unlawful on the basis that it eliminated “potential” competition.*” As they quite rightly identify, “*one reason is that the courts raised the bar in applying the “reasonable probability” test to claims that mergers would substantially lessen competition.*”

In this context, the authors were able to congratulate the new US Horizontal Merger Guidelines on the fact that although they state that they apply to mergers eliminating potential, as well as actual, competition, they set out no distinct analyses or criteria for mergers eliminating potential competition. Meanwhile, (Wong-Ervin and Moore, 2020^[51]) note that the Supreme Court has twice reserved judgement on whether potential competition states a claim under section 7 of the Clayton Act. Taken together, this demonstrates the uncertain and superficial nature of the recognition of the concept of potential competition, and illustrates the need identified by (Baker et al., 2020^[1]) for clarification that US Antitrust law protects potential competition.

However, more recently the FTC (Oldale, Sayyed and Sweeting, 2020^[44]) has identified 82 mergers between 1995 and 2020 in which they alleged harm to potential competition (including 41 prior to 2010). If (Werden & Limarzi, 2010^[7]) are correct (and (Wong-Ervin and Moore, 2020^[51]), who join them in pointing out that the actual potential competition has rarely been successful in court), and the FTC experience in its administrative process is similar to that of the DoJ, then this suggests that many if not all of these challenges failed, perhaps as a result of the courts raising the bar in applying the “reasonable probability” test as (Werden & Limarzi, 2010^[7]) describe. In any case, the FTC work suggests that there was a sharp increase in such challenges during the 2012-2016 administration, and after a quieter spell, this same high level was evident again in 2020.

Meanwhile in the UK, the CMA has in recent years commissioned two important ex-post assessments on potential competition. The first, (KPMG, 2017^[52]) identified through ex-post review that in half of the eight reviewed cases, an entry event that was relied upon to clear a merger did not occur as expected.²⁸ As the CMA noted, this suggests a degree of optimism bias on the prospects of entrants. Since these entrants were not involved in the merger, this led to a tendency to under-enforce.

The second *ex post* assessment, (LEAR, 2019^[10]) examined the lack of challenges to the acquisition of potential rivals by large digital platforms, and the quick clearance of those that were examined. This had previously been flagged by the Furman Review as a cause for concern, and LEAR found that *“In the assessment of potential competition, and most notably in Facebook/Instagram and Google/Waze, the Authorities identified the correct evidence and found that Instagram and Waze had witnessed constant and significant growth in the years leading up to the merger, had promising business models and plans for an expansion that might have increased their relevance in the markets where their acquirers were active. Yet, the Authorities dismissed this evidence mostly due to the uncertainty surrounding whether Instagram’s and Waze’s potential would have been realized. Rarely, if ever, will the Authorities find conclusive evidence of future growth: potential competition ToHs will always entail a certain degree of uncertainty. If the Authorities wish to pursue this type of ToH in the future, then they should be willing to accept a greater degree of uncertainty in their evaluations.”*

This has no doubt informed the CMA’s proposals to lower the evidentiary bar in relation to acquisitions of potential rivals, at least in the case of the large digital platforms, though surprisingly not in the case of monopolists in other markets.

Counterfactual analysis in potential competition cases

The tools set out above in Section 4 can help to assess the likelihood and strength of a given potential constraint emerging. They therefore offer agencies tools to assess the likelihood and probability of different counterfactuals, with each their own competitive effects. For instance, they might lead an agency to the view that there is a realistic prospect of three possible counterfactuals, each of which would imply different magnitudes of competitive effect.

For example, a common possible counterfactual is that the potential constraint that is allegedly excluded, acquired or colluded with, would otherwise have emerged via acquisition by a third party. As set out in (OECD, 2020^[39]), it is important to remember that the relevant question when analysing the competitive effects of the conduct, merger or agreement is the strength of the competitive threat that the nascent rival would have posed. It is not whether the rival would have enjoyed more or less growth.²⁹

The question of the relevant counterfactual is, analytically, a different question to the more commonly discussed question of identifying the presumptive *effects* of the case (though it will of course have a bearing on that). Allocating the presumptive *effect* of a case requires a use of decision-theory to steer between the risks of under and over-enforcement. Ideally, this can be done on the basis of the economics of what we know about the general likelihood of the effects of the specific conduct (see (Salop et al., 2020^[53]) and (Salop, 2015^[54]), setting out why this is not the same thing as the traditional Chicago school error-cost framework). In contrast, allocating the presumption over the counterfactual is a narrower issue.

Box 9. Do's and don'ts for the counterfactual analysis in potential competition cases

- Do pro-actively explore alternative counterfactuals, such as alternative purchasers, and set out clearly how decision-making takes account of those counterfactuals which are on balance unlikely, but for which there is a realistic prospect.
- Do not get bogged down in how successful a potential rival might be, focus on the binary question of whether or not it can be expected in future to provide a competitive constraint that is substantial within the context of the market in question (either as an independent entity or after acquisition by a less anti-competitive alternative).

5 Assessing the Timeframe in which Potential Competition will emerge

Putting aside the challenge of assessing the likelihood and magnitude of entry, when would a potential competitive constraint need to manifest in order for it to be relevant to a decision that is taken today?³⁰

In principle, the timeframe for the assessment should follow from the expected period over which the decision would have an effect. For example, the cost-benefit analysis on the construction of a nuclear reactor is not limited to the period of over which we can be confident in our ability to foresee effects, but to the expected lifetime of that reactor and the timeframe on its waste products. A discount factor would then be applied to reflect the diminishing importance of results 100 years away. The analysis would consider the distribution of costs and benefits to different groups over that period. It might also explore possible compensatory mechanisms that might be used to balance those out and ensure that where there is a net positive effect, the project is given the green-light, despite the likely unequal distribution of the costs and benefits across different groups and across time.

Following this type of approach in the context of a competition analysis is of course complicated, and most competition agencies instead limit themselves to examining foreseeable effects.³¹

Indeed, while in theory agencies need not limit the period over which they assess entry, in practice, the timeframe for the analysis is typically just two or three years. For example, in their guidance, both the European Commission and the UK competition authorities explain that, when examining whether entry would be sufficiently swift and sustained to deter or defeat the exercise of market power, entry is normally only considered timely if it occurs within up to two years.³² The guidance does however leave scope for agencies to extend that timeframe where they are more confident on their ability to see.

In part, a condensed timeframe helps agencies build confidence both internally and externally (in court and in government) in their technocratic ability to predict future effects. It also helps them to build consensus, since while views may increasingly differ as uncertainty rises, it is easier to reach agreement on the effects over a narrower window of time. In addition, the fact that harmful price effects should manifest almost immediately in most markets where price can be quickly adjusted, while the efficiencies made possible by the merger may take longer to unlock, means that a shorter timeframe for the analysis can often make enforcement decisions easier to justify.

There is another important – though seemingly mistaken - rationale for adopting a short timeframe. This is that when determining whether a merger is likely to produce anti-competitive effects, there is a common assumption that in time those effects are likely to be mitigated by future entry that is triggered by the merger. This leads proponents to expect that any adverse effects would have to register quickly or they will be resolved by the market (an infallible market hypothesis).

Problems with a short timeframe

The best case for using such a short timeframe therefore boils down to caution and respect of the relevant legal framework. However, this caution comes at a cost, because using a short timeframe entrenches a bias that carries us away from an approach that delivers decisions that increase expected consumer welfare.

For example, the term *foreseeable* itself explicitly limits us to examining effects within the window in which we have confidence in our ability to see, rather than the window over which the effects will actually occur. By relying on foreseeability to determine the timeframe, competition agencies therefore risk answering the question they can answer confidently, rather than the question they have actually been asked.

Seen in this light, the requirement of foreseeability constrains the merger assessment in problematic ways. Most notably an assessment that limits itself to the foreseeable future will - by design - ignore those potential effects that we are not yet sufficiently confident of in our ability to see, despite the murky outline being discernible.

In contrast, adopting a longer timeframe that requires us to look past the strictly foreseeable future, no matter how inconvenient that is, and instead to the longer term, would allow time for otherwise unrecognised harms and efficiencies to manifest. It would also allow more immediate harms and efficiencies to stack-up over time, and of course, it would allow greater scope for third party entry to somewhat mitigate a short-term loss of competition (see discussion above, para 0).

In any case, correcting the analytical issue caused by an excessively short timeframe would naturally require the use of a longer timeframe of analysis. Precisely how much longer will depend on the product, since product development or lead times can differ enormously between products. However, a rule of thumb might be that the current 2-3 year timeframe that has been used in cases where an *actual* and *mature* constraint is lost, should be applied only at the point at which the potential constraint is expected to have *entered and matured*. If, for example, a firm is nascent in that it has already entered and is on the market, but has yet to mature, then the 2-3 year timeframe for a mature constraint might be added to perhaps a 2 year window to allow for its growth. Year 2 being the traditional expectation for a start-up to break-even, though it is of course notable that in some markets break-even is not expected for much longer. In contrast, if entry were expected within 3 years, and the same 2 year growth window were applied, then the 2-3 year timeframe for a mature constraint would begin at 5 years and therefore run up to 7-8 years.

In some products, the existence of a longer lead time might mean that the constraint is mature upon entry (e.g. a new phone or a film might be at its strongest at the point of entry when its novelty has yet to fade). This flexible approach would then have the advantage that if entry of a product were expected in 5-10 years time, say a train line, a pipeline, an autonomous vehicle or a space-shuttle, and for the constraint to be mature upon entry, then the estimate of the potential constraint would begin at the estimated launch date. It would of course also imply that any entry that would be expected to occur up until the end of the 2-3 years that follow the estimated time of entry would also be potentially relevant and would need to be assessed.

Alternatively, a different approach is to take 6 years, which was the upper bound on the duration of effects that was tentatively proposed by Professor Steve Davies in his OECD note on impact assessment for competition cases (Davies, 2013^[55]). The rationale here is that the upper bound would be more likely to reflect the loss of those nascent constraints within the cases on which agencies based the assumptions upon which the tentative proposal relied. In contrast, the lower bound presumably reflected those cases featuring the loss of an actual constraint.

There is also a question of whether the same timeframe for assessing the impact of a lost constraint should be used to assess the prospects of third party entry that might mitigate the loss of a constraint. Logically, the answer here must be that the timeframe for a case should be determined by the constraint that is lost.

Therefore, if the constraint that is possibly lost is an actual and mature one and hence normally carries a 2-3 year timeframe, then a possibly mitigating entry event within 5 years would not be relevant. However if the constraint that is possibly lost is a potential one that carries a 5-6 year constraint, then a possibly mitigating entry event within 5 years would certainly be relevant.

However, whichever longer timeframe is selected, there will come a greater uncertainty and risk on both the probabilities and the magnitude of the outcome. As set out in Section 4, a longer timeframe would therefore require competition law and economics to embrace uncertainty, without that simply turning out to be a helpful cover for a policy of precautionary inaction.

How do we assess the timeframe of entry?

Regardless of the timeframe for the analysis that is ultimately adopted, agencies will need to assess the timing of the emergence of a potential constraint in the light of the available evidence. This might, as suggested, then determine the selection of the timeframe for the analysis, or it might instead need to be compared against an established timeframe. Either way, an assessment is required.

As with an assessment of the likelihood and strength of entry, the obvious place to start when considering the timing of entry is to ask the firms, their input suppliers, their regulators, their rivals, their customers and independent market analysts when they expect the entry to occur. These will again carry greater weight where they are supported by documentary evidence recorded outside the context of the investigation, such as contemporaneous private correspondence or internal documents drafted for different purposes.

In assessing the timing of the point at which a potential competitive constraint might arrive in the market, it is important to guard against optimism bias.³³ For example, the report that the CMA commissioned to KPMG identified through ex-post review that in four out of eight reviewed cases, an entry event that was relied upon to clear a merger did not occur as expected.³⁴ The report suggested focusing on:

- The costs of entry for firms in closely related markets (such as firms already having developed relevant technology, which might require minimal modifications to adapt for the specific market in question);
- Consumer preferences and demand patterns which might support entry from closely related markets;
- Evidence that competitors in closely related markets have already shown some commitment to entering or repositioning their offering;
- Evidence that actual competitors are already actively monitoring the threat from suppliers in closely related markets; and
- Evidence on factors such as patterns of innovation and product take-up of innovative products in other geographic markets.

The Siemens/Alstom case also sets out a number of factors that were used to assess the timing of a potential competitive constraint arriving in the form of CRRC, the Chinese Rolling Stock Manufacturer.³⁵ Most notably, the Commission was able to conclude that even if a 10 year timeframe were considered, new market entry could not be deemed sufficiently likely to exercise a significant competitive constraint on the merged entity (see Box 10, also see Box 11 for the TPG/Vodafone case where the Federal Court considered the timeframe of 5 years (or beyond)). While the merger was ultimately blocked, the desire amongst policymakers in European governments to construct an industrial policy to respond to the perceived threat of such potential competitors to European jobs is clear (Reuters, 2019^[56]).

In this context, Commissioner Vestager has announced her intention to review and amend the notice on the definition of the relevant market.

Box 10. Analysis of potential competition in Siemens/Alstom

In the Siemens/Alstom deal blocked by the European Commission (2019), the European Commission concluded that Asian suppliers CRRC (China Railway Rolling Stock Corporation), Hyundai-Rotem and Kawasaki could not be considered as potential competitors to Siemens/Alstom in the EEA markets for high and very high-speed rolling stock, which are characterised by high barriers to entry. While the European Commission did not agree with Siemens/Alstom's proposed timeframe of 5-10 years for the assessment of potential competition, it nevertheless noted that, even if a 10 years timeframe was considered, new market entry could not be deemed sufficiently likely to exercise a significant competitive constraint on the merged entity.

With respect to the Chinese manufacturer CRRC, the European Commission's assessment was mainly based on the following elements:

- The parties had been claiming that entry was imminent for almost 10 years already without any sign of it occurring. The credibility of their view was therefore diminished;
- CRRC had yet to even apply for certification for its product which would be required to enter (a regulatory checkpoint);
- CRRC did not have a single high-speed train in operation outside of China;
- Rolling stock manufacturers including CRRC itself unanimously consider that it will take CRRC more than 5 years to become a credible bidder in the EEA. Obtaining certification alone is a lengthy multi-year process;
- Customers confirmed that, over the past 10 years, none have even engaged in discussions with CRRC for the supply of high or very high-speed trains, let alone pre-qualified the company to bid; and
- Customers also explained that they do not take account of sales outside of the EEA when assessing the credibility of a prospective bidder in a high or very high-speed rolling stock tender.

This suggests that evidence related to the progress against regulatory checkpoints, the views of rivals and customers, and entry into adjacent geographic markets was all considered to provide valuable insight, while the views of the parties and the politicians they lobbied to support them lacked credibility.

Source: Commission decision of 6 February 2019, Case COMP/M.8677, Siemens/Alstom.

Box 11. TPG/Vodafone - Analysis of potential competition in Australia

A proposed merger between TPG (one of the major competitors in the fixed broadband market in Australia) and Vodafone (one of the 3 major competitors in the mobile services market in Australia) was opposed by the Australian Competition and Consumer Commission (ACCC) on the basis that, in the absence of the merger, TPG was likely to enter and become a vigorous and innovative competitor against Vodafone, Telstra and Optus in the mobile services market.

ACCC's decision took into account the fact that, prior to the announcement by TPG and Vodafone of their intention to merge, TPG had announced that it intended to become a mobile network operator in Australia, including an investment of AUD 600 million (approx. USD 439 million) to deploy equipment. TPG had indeed successfully bid for necessary spectrum to become a mobile network operator and started rolling out a 4G network using Huawei equipment with a view to update it to 5G in the future. TPG also announced that it would be offering very competitive mobile plans once its mobile network became operational. However, TPG had ceased the planned rollout of its mobile network, referring to the impact of the Australian Government's 5G security guidance banning Huawei from supplying 5G network technology in Australia.

The ACCC nevertheless considered that "TPG has the capability and commercial incentive to resolve the technical and commercial challenges it is facing, as it already has in other markets. TPG already has mobile spectrum, an extensive fibre transmission network which is essential for a mobile network, a large customer base and well-established telecommunications brands". The ACCC's decision was rejected by the Federal Court which considered that it was extremely unlikely and there was no real chance that TPG would roll-out a mobile network or become an effective competitive mobile network operator in the next five years (or beyond). According to the Court, while there was a moment prior to the announcement of the merger for a business opportunity for TPG to be taken to roll out a retail mobile service, "that moment has now passed".

Upon completion of the merger, Telstra, one of the two market leaders responded by increasing its prices (see p. 7 of https://www.accc.gov.au/system/files/20-47RPT_Communications_Market_Report_FA.pdf).

Sources:

1 ACCC Press Release dated 8 May 2019, "ACCC opposes TPG-Vodafone merger", available at <https://www.accc.gov.au/media-release/accc-opposes-tpg-vodafone-merger>.

2 Judgement of Federal Court of Australia dated 13 February 2020, Vodafone Hutchison Australia Pty Limited v Australian Competition and Consumer Commission [2020], Case NSD818/2019.

6 Conclusion

Potential competition is a key concept within the antitrust and competition law toolkit. While barriers to entry certainly effect the strength of potential competition, they may do so in complex ways and therefore competition agencies could consider not spending too much time and energy attempting to quantify the size of general barriers to entry but instead should focus on the likelihood of entry by specific firms.

The likelihood of potential competition has, in the past, been obscured by misleading terminology and attracted less attention than actual competition. In recent years, killer acquisitions have highlighted the need to better protect potential competition and shown it to be an area in which firms may have been able to restrict competition without the risk of enforcement action. As a result, in recent years competition agencies have been increasingly pro-active in searching for impacts on potential competition and in proposing new rules and processes for dealing with it.

It seems that we would welcome clarity on the treatment of potential competition, on the optimal timeframe to evaluate it, and new tools to assess it, which we suggest may be helpfully placed within a specific framework to enable assessment under the different and greater uncertainty that exists over potential competitive constraints. For instance, clarity that potential competition should be treated with a parity of esteem with actual competition can be provided within legislation and guidance (see for instance (ACCC, 2019^[57])) and by setting precedents in the way that cases are analysed.

Extending the timeframe could be similarly useful. A change of timeframe would introduce greater flexibility. In particular, the current 2-3 year timeframe that has been used in cases where an *actual* and *mature* constraint is lost should be applied only at the point at which the potential constraint is expected to have *entered and matured*. This may in some cases lead to timeframes of 8 years.

Different analytical tools are also needed, and it may be useful to set these out within the context of a specific framework for analysing potential competition, albeit one that is closely related to the classical assessment framework of actual competition. For example, in the same way that different horizontal and vertical merger guidelines are provided, or that the framework for bidding markets is somewhat distinct (indeed this is perhaps unsurprising since bidding markets are an example where concerns over potential competition often dominate). This specific framework might begin by recognising that uncertainty is intrinsic and inescapable, and needs to be managed, rather than being about whether we are able to precisely measure actual competitive relationships. It might also clarify the case for a different decision-making framework.

The paper also reviewed the analytical tools that might be used within a potential competition toolkit. These tools include many that are already widely used, such as the additional weight placed on credible contemporaneous internal documents, progress against regulatory checkpoints, understanding of business models and of competition to innovate. Similarly, on the counterfactual we suggest following existing best practices such as pro-actively exploring alternative counterfactuals. Other suggestions involve the use of what in some jurisdictions might be newer tools – valuation analysis, forward-looking consumer surveys, spillover analysis of non-overlapping products in adjacent markets, and the development of specialist progress-to-market expertise.

If the existing decision-making framework cannot effectively protect against the loss of potential competition, it could be envisaged to reform it in ways that allow it to do so. This paper highlighted existing trends by competition agencies to advocate for a change in existing decision-making frameworks to effectively protect against the loss of potential competition. For example, there might be a case for using different thresholds for potential competition from those that are used when the concern is over the possible loss of an actual constraint.

References

- ACCC (2019), *Digital platforms inquiry - final report*, [57]
<https://www.accc.gov.au/publications/digital-platforms-inquiry-final-report>.
- Bain, J. (1956), *Barriers to New Competition*, [18]
<http://dx.doi.org/10.4159/harvard.9780674188037>.
- Baker et al. (2020), *Joint Response to the House Judiciary Committee on the State of Antitrust Law and Implications for Protecting Competition in Digital Markets*, [1]
https://privpapers.ssrn.com/sol3/papers.cfm?abstract_id=3632532.
- Barnett et al. (2020), *Joint Submission of Antitrust Economists, Legal Scholars, and Practitioners to the House Judiciary Committee on the State of Antitrust Law and Implications for Protecting Competition in Digital Markets*, [2]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3604374.
- Bryan, K. (2020), *Antitrust Limits on Startup Acquisitions*, [59]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3350064.
- Carlton, D. and J. Perloff (2005), *Modern industrial organization*. [21]
- Caro de Sousa & Pike (2020), *How Soon Is Now?*, [36]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3706772.
- CMA (2020), *A new pro-competition regime for digital markets - Advice of the Digital Markets Taskforce*, [15]
https://assets.publishing.service.gov.uk/media/5fce7567e90e07562f98286c/Digital_Taskforce_-_Advice.pdf.
- CMA (2019), *Call for information - Digital mergers*, [6]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/805962/CMA_call_for_information_on_digital_mergers.pdf.
- CMA (2019), *Summary of provisional findings*, [58]
https://assets.publishing.service.gov.uk/media/5db1685940f0b609bdf449fc/Summary_of_the_provisional_findings.pdf.

- CMA (2017), *Online search behaviour: literature review*, [23]
<https://www.gov.uk/government/publications/online-search-behaviour-literature-review>.
- Colino et al. (2017), *The Lundbeck Case and the Concept of Potential Competition*, [9]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931411.
- Colomo, P. (2020), *Pay-For-Delay and the Structure of Article 101(1) TFEU: Points of Law Raised in Lundbeck and Paroxetine*, [38]
<https://academic.oup.com/jeclap/article-abstract/10/10/591/5734959?redirectedFrom=fulltext>.
- Coublucq, D. and G. Federico (2017), *Bidding studies in mergercontrol: insights from recent ECexperience*, [48]
<http://www.antitrustitalia.it/wordpress/wp-content/uploads/2017/04/Consolidated-Coublucq-Federico-Bidding-A-Italia-April-2017-Final.pdf>.
- CRA (2019), *Acquisitions of Potential Rivals in Digital/Tech: Valuation Analysis as Key Economic Tool – PayPal/iZettle*, [49]
<https://ecp.crai.com/wp-content/uploads/2019/06/Use-of-valuation-analysis-in-merger-assessment.pdf>.
- Crémer et al. (2019), *Competition policy for the digital era*, [33]
<https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>.
- Crémer et al. (2019), *Competition policy for the digital era*, [45]
<https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>.
- Cunningham, C., F. Ederer and M. Song (2018), *Killer Acquisitions*, [8]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3241707.
- Davies, S. (2013), *Assessment of the impact of competition authorities' activities - Note by Prof. Stephen Davies*, [55]
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2\(2013\)1&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2013)1&docLanguage=En).
- de la Mano, M. (2006), *Entry Barriers*, [60]
<https://ec.europa.eu/dgs/competition/economist/delamano3.pdf>.
- Demsetz, H. (1982), *Barriers to Entry*, [61]
<https://www.jstor.org/stable/1808574>.
- DOJ (2020), *Venture Capital and Antitrust - Transcript of Proceedings at the Public Workshop Held by the Antitrust Division of the United States Department of Justice*, [62]
<https://www.justice.gov/atr/page/file/1255851/download>.
- European Commission (2020), *Public consultations - Impact Assessment for a possible New Competition Tool*, [67]
https://ec.europa.eu/competition/consultations/2020_new_comp_tool/index_en.html.
- Furman Report (2019), *Report of the Digital Competition Expert Panel - Unlocking digital competition*, [22]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf.

- Gavil and Salop (2020), *Probability obability, Presumptions and E esumptions and Evidentiari videntiary Burdens in Antitrust dens in Antitrust*, [37]
<https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=3236&context=facpub>.
- GCR (2020), *Simons: Scale of potential harm should not be overlooked in merger review*, [63]
<https://globalcompetitionreview.com/gcr-usa/federal-trade-commission/simons-scale-of-potential-harm-should-not-be-overlooked-in-merger-reviews>.
- JFTC (2019), *Amendments to Guidelines to Application of the Antimonopoly Act concerning Review of Business Combination and to Policies concerning Procedures of Review of Business Combination*, [3]
<https://www.jftc.go.jp/en/pressreleases/yearly-2019/December/1912172Summary.pdf>.
- Kamepalli, S., R. Rajan and L. Zingales (2020), *Kill Zone*, [13]
https://www.nber.org/system/files/working_papers/w27146/w27146.pdf.
- Knight, F. (1921), *Risk, Uncertainty, and Profit*. [31]
- KPMG (2017), *Entry and expansion in UK merger cases - An ex-post evaluation*, [52]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/606693/entry-and-expansion-in-uk-ex-post-evaluation-kpmg.pdf.
- Langus et al. (2020), *Innovation as a standalone concern in horizontal mergers*, [46]
<https://www.e-ca.com/publication/innovations-as-a-standalone-concern-in-horizontal-mergers/>.
- LEAR (2019), *Ex-post Assessment of Merger Control Decision in Digital Markets*, [10]
https://www.learlab.com/wp-content/uploads/2019/06/CMA_past_digital_mergers_GOV.UK_version-1.pdf.
- McAfee, R., H. Mialon and A. Williams (2004), *What Is a Barrier to Entry?*, [20]
<https://www.jstor.org/stable/3592928>.
- Motta, M. and M. Peitz (2020), *How to deal with Big Tech mergers*, [34]
<https://voxeu.org/article/how-deal-big-tech-mergers>.
- Nazzini et al. (2020), *Addressing the 'kill zone' of antitrust enforcement without killing legal certainty*, [65]
<https://buscaintegrada.ufjr.br/EDS/Search?lookfor=Antitrust+law&type=SU>.
- OECD (2021), *Data portability, interoperability and competition*, [26]
<https://www.oecd.org/daf/competition/data-portability-interoperability-and-competition.htm>.
- OECD (2020), *Abuse of Dominance in Digital Markets*, [42]
<http://www.oecd.org/daf/competition/abuse-of-dominance-in-digital-markets-2020.pdf>.
- OECD (2020), *Lines of Business Restrictions – Background note*, [27]
[https://one.oecd.org/document/DAF/COMP/WP2\(2020\)1/en/pdf](https://one.oecd.org/document/DAF/COMP/WP2(2020)1/en/pdf).

- OECD (2020), *Roundtable on Conglomerate Effects of Mergers - Background Note*, [41]
[https://one.oecd.org/document/DAF/COMP\(2020\)2/en/pdf](https://one.oecd.org/document/DAF/COMP(2020)2/en/pdf).
- OECD (2020), *Start-ups, killer acquisitions and merger control*, [4]
<https://www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control.htm>.
- OECD (2020), *Start-ups, Killer Acquisitions and Merger Control*, [39]
<http://www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control-2020.pdf>.
- OECD (2019), *Barriers to Exit – Background Note*, [28]
[https://one.oecd.org/document/DAF/COMP\(2019\)15/en/pdf](https://one.oecd.org/document/DAF/COMP(2019)15/en/pdf).
- OECD (2019), *Competition Assessment Toolkit*, [12]
<https://www.oecd.org/competition/assessment-toolkit.htm>.
- OECD (2019), *Competition for-the-market - Background note by Secretariat*, [11]
[https://one.oecd.org/document/DAF/COMP/GF\(2019\)7/en/pdf](https://one.oecd.org/document/DAF/COMP/GF(2019)7/en/pdf).
- OECD (2019), *Merger Control in Dynamic Markets*, [66]
<http://www.oecd.org/daf/competition/merger-control-in-dynamic-markets-2020.pdf>.
- OECD (2019), *Vertical Mergers in the Technology, Media and Telecom Sector*, [40]
[https://one.oecd.org/document/DAF/COMP\(2019\)5/en/pdf](https://one.oecd.org/document/DAF/COMP(2019)5/en/pdf).
- OECD (2018), *Consumer-facing remedies*, [24]
[https://one.oecd.org/document/DAF/COMP/WP3\(2018\)2/en/pdf](https://one.oecd.org/document/DAF/COMP/WP3(2018)2/en/pdf).
- OECD (2018), *Rethinking Antitrust Tools for Multi-Sided Platforms 2018*, [43]
<https://www.oecd.org/daf/competition/Rethinking-antitrust-tools-for-multi-sided-platforms-2018.pdf>.
- OECD (2018), *Summary of Discussion of the hearing on Market Concentration*, [64]
[https://one.oecd.org/document/DAF/COMP/M\(2018\)1/ANN6/FINAL/en/pdf](https://one.oecd.org/document/DAF/COMP/M(2018)1/ANN6/FINAL/en/pdf).
- OECD (2005), *Barriers to Entry*, [17]
<http://www.oecd.org/daf/competition/abuse/36344429.pdf>.
- Oldale, A., B. Sayyed and A. Sweeting (2020), *A review of cases involving the loss of potential and nascent competition at the FTC, with*, [44]
http://econweb.umd.edu/~sweeting/SWEETING_nascent.pdf.
- Reuters (2019), *Germany, France agree industrial policy plan for Europe*, [56]
<https://www.reuters.com/article/us-germany-france-industrial-policy-idUSKCN1Q81IO>.
- Richards, R. (2019), *How to Value a Startup Company With No Revenue*, [50]
<https://masschallenge.org/article/how-to-value-a-startup-company-with-no-revenue>.

- Salop et al. (2020), *Probability, Presumptions and Evidentiary Burdens in Antitrust Analysis: Revitalizing the Rule of Reason for Exclusionary Conduct*, [53]
<https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=3236&context=facpub>.
- Salop, S. (2020), *The 2010 HMGs Ten Years Later: Where Do We Go From Here?*, [35]
<https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=3303&context=facpub>.
- Salop, S. (2015), *The Evolution and Vitality of Merger Presumptions: A Decision-Theoretic Approach*, [54]
<https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2313&context=facpub>.
- Salop, S. and D. Culley (2014), *Potential Competitive Effects of Vertical Mergers: A How-To Guide for Practitioners*, [47]
<https://scholarship.law.georgetown.edu/facpub/1392/>.
- Selten, R. (1978), *The chain store paradox*, [30]
<https://link.springer.com/article/10.1007/BF00131770>.
- Stigler (2019), *Stigler Committee on Digital Platforms - Final Report*, [14]
<https://research.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf>.
- Stigler, G. (1968), *The organization of industry*. [19]
- The Verge (2018), *Mark Zuckerberg personally approved cutting off Vine's friend-finding feature*, [25]
<https://www.theverge.com/2018/12/5/18127202/mark-zuckerberg-facebook-vine-friends-api-block-parliament-documents>.
- US House of Representatives (2020), *Investigation of Competition in Digital Markets - Majority Staff Report and Recommendations*, [29]
https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf?utm_campaign=4493-519.
- Valletti, T. (2018), *Après moi, le déluge! Tech giants in the digital age*, [32]
<https://ecp.crai.com/wp-content/uploads/2018/12/Tommaso-Valletti-2018.pdf>.
- Walker, M. (2020), *Competition policy and digital platforms: six uncontroversial propositions*, [5]
<https://www.tandfonline.com/doi/full/10.1080/17441056.2020.1730063>.
- Werden & Limarzi (2010), *Forward-Looking Merger Analysis and the Superfluous Potential Competition Doctrine*, [7]
<https://www.jstor.org/stable/23075590>.
- Wheeler et al. (2020), *New Digital Realities; New Oversight Solutions in the U.S.*, [16]
https://shorensteincenter.org/wp-content/uploads/2020/08/New-Digital-Realities_August-2020.pdf.

Wong-Ervin, K. and J. Moore (2020), *Acquisitions of Potential Competitors: The U.S. Approach and Calls for Reform (working draft)*, [51]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3677443.

Wu et al. (2020), *Nascent Competitors*, [68]
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3624058.

Endnotes

¹ This is certainly not the first call for reform of antitrust law in the US, or elsewhere in OECD countries. The Economic Anti-Monopoly movement can be contrasted with a structuralist, neo-Brandeisian Anti-Monopoly movement. In recent years, this latter movement has led a wave of fierce criticism of antitrust law that largely focused on the consumer welfare objective of the law, and has often argued that antitrust laws are excessively reliant on economics (rather than being inconsistent with it), while simpler structural rules would be more effective in protecting competition.

² Paul Denis, at FTC hearings, see transcript:

https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_3_10-17-18fullupdated.pdf

³ If the vertical arithmetic makes it profitable to seek to do so, and if the bargaining model suggests that the merged entity would be able to do so.

⁴ Note however that the model in (Kamepalli, Rajan and Zingales, 2020_[13]) relies on the risk of incumbent entry undermining early adopter incentives to adopt new innovation and hence the incentives of start-ups to develop them.

⁵ Note however that permitting start-ups to fix prices would create a similar innovation incentive.

⁶ Appropriability of an innovation refers to the ability of an innovator to capture the rents from its innovation. In general, the appropriability of an innovation is determined by how easily and quickly firms can imitate the innovation.

⁷ Such harm might actually be facilitated by the market power that the copycat firm holds elsewhere. For example, a gatekeeping platform that controls access to users might exploit that bottleneck in order to set terms and conditions that allow it to obtain competitively sensitive data from nascent firms that help it to identify opportunities and weaknesses.

⁸ See also Hathaway, 'Platform Giants And Venture-Backed Start-ups' (2018)

<http://www.ianhathaway.org/blog/2018/10/12/platform-giants-and-venture-backed-startups>

⁹ See, Albert Wenger quoted in (Kamepalli, Rajan and Zingales, 2020_[13]) and Paul Arnold in (DOJ, 2020_[62])

¹⁰ Press release of the European Commission dated 16 June 2020, "Antitrust: Commission opens investigations into Apple's App Store rules", available at https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1073.

¹¹ Press release of the European Commission dated 10 November 2020, “Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices”, available at https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2077.

¹² Actavis, Inc., 570 U.S. 136 (2013).

¹³ European Commission Decision of 19 June 2013 in Case At.39226 – Lundbeck. Judgment in Cases C-586/16 P Sun Pharmaceutical Industries and Ranbaxy (UK) v Commission, C-588/16 P Generics (UK) v Commission, C-591/16 P Lundbeck v Commission, C-601/16 P Arrow Group and Arrow Generics v Commission, C-611/16 P Xellia Pharmaceuticals and Alpharma v Commission, and C-614/16 P Merck v Commission.

¹⁴ Equally, a physical barrier to entering an actual market (e.g. a country or a fruit market) would not be a barrier to entry under this definition if incumbents had in the past faced the same barrier, and for example, had had to pay a toll to pass (see (Demsetz, 1982^[61]) on taxi medallions). Strictly, however, Stigler’s definition is a comparison of the actual barriers to entry at the time of the incumbent’s entry, with the actual barriers to entry at the present time (which is what Bain’s definition measures. In fact, Bain measures the incumbent’s costs at the present time (which provide a baseline as none are related to entry since the incumbent’s ‘entry’ is over), with a current/potential entrant’s costs, in order to deduct its likely operating costs and to leave a cost that reflects its entry cost.). It is therefore not a definition of an actual barrier to entry, but instead a definition of a relative barrier to entry. As such, this definition does not seriously challenge Bain’s definition of an actual barrier, but rather seeks to shift the ground, and to suggest that the concept of a relative barrier to entry is in fact more important to competition analysis than the strength of actual barriers to entry that entrants face.

¹⁵ (Carlton and Perloff, 2005^[21]) also specified a definition of a long-run barrier to entry as being a cost that entrants must bear but incumbents do not, or did not, have to bear. However, this suffers the same issue as Stigler’s definition. Furthermore, as Carlton recognised —as a practical matter, the long run may be of no interest whatsoever. It may take so long to get there that the persistence of supra-competitive profits until then turns out to be the fact of practical importance, not that these excess profits are eliminated in some far-off future year.

¹⁶ This economic test has been criticised by (Nazzini et al., 2020^[65]) as likely to create significant uncertainty.

¹⁷ Tim Wu, C. Scott Hemphill ‘Nascent Competitors’ University of Pennsylvania Law Review (Forthcoming), p.18, building on *FTC v. Steris Corp.*, 133 F. Supp. 3d 962, 966 (N.D. Ohio 2015) (quoting FTC’s view of its burden); see also *id.* at 978 (accepting this view).

¹⁸ Note the use of *expectation* rather than *likelihood* in line with the Furman Review recommendation for a balance of harms (expected value) test rather than a balance of likelihood test.

¹⁹ *United States v. Microsoft Corp.*, 253 F.3d 34, 79 (D.C. Cir. 2001) (en banc) (per curiam).

²⁰ Actavis, Inc., 570 U.S. 136 (2013).

²¹ See e.g. T-374/94, T-375/94, T-384/94, and T-388/94, *European Night Services and others v Commission*, EU:T:1998:198, para. 137.

²² Judgment in Cases C-586/16 P *Sun Pharmaceutical Industries and Ranbaxy (UK) v Commission*, C-588/16 P *Generics (UK) v Commission*, C-591/16 P *Lundbeck v Commission*, C-601/16 P *Arrow Group and Arrow Generics v Commission*, C-611/16 P *Xellia Pharmaceuticals and Alpharma v Commission*, and C-614/16 P *Merck v Commission*.

²³ Judgment in Cases C-586/16 P *Sun Pharmaceutical Industries and Ranbaxy (UK) v Commission*, C-588/16 P *Generics (UK) v Commission*, C-591/16 P *Lundbeck v Commission*, C-601/16 P *Arrow Group and Arrow Generics v Commission*, C-611/16 P *Xellia Pharmaceuticals and Alpharma v Commission*, and C-614/16 P *Merck v Commission*.

²⁴ Judgment in Cases C-586/16 P *Sun Pharmaceutical Industries and Ranbaxy (UK) v Commission*, C-588/16 P *Generics (UK) v Commission*, C-591/16 P *Lundbeck v Commission*, C-601/16 P *Arrow Group and Arrow Generics v Commission*, C-611/16 P *Xellia Pharmaceuticals and Alpharma v Commission*, and C-614/16 P *Merck v Commission*.

²⁵ See Case C-413/06 P *Sony Impala* ECLI:EU:C:2008:392, paras. 44-55, which sets out that: there is no general presumption that a notified concentration is compatible with, or incompatible with, the common market; and that the Commission does not have to comply with a higher standard of proof in relation to decisions prohibiting concentrations than in relation to decisions approving them.

²⁶ See Decision of the European Commission in Case M.8536 - *Atlantia / Abertis Infraestructuras* and in Case M.7555 - *Staples / Office Depot*.

²⁷ See, for instance, Decision of the European Commission in Case M.1404 - *GE / Alstom*.

²⁸ (OECD, 2018_[64]). The CMA selected eight mergers it had approved over the last ten years on the assumption that entry and expansion of rivals would occur. It looked at key factors that drove its clearance decisions, and looked back at the public and private data to assess whether there had been a post-merger entry and expansion or not. The ex post analysis revealed that in four out of the eight mergers the CMA probably made the wrong decision, which suggested a tendency towards inflated optimism about the likelihood of entry and expansion. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/606693/entry-and-expansion-in-uk-ex-post-evaluation-kpmg.pdf, pages 80-82.

²⁹ For example, if an agency were to expect that as an independent firm, an emerging rival would have been successful in producing a highly substitutable product, then the potential constraint would be considerable. However, agencies will also recognise that smaller innovative 'maverick' firms can have a similar or even greater competitive impact. In any case, whether the agency thinks that a nascent rival's success would have been greater, or less, than the success that it would have found as a result of a merger is not relevant to the assessment of competitive effects.

This is because even a large and successful sub-division of the same firm would pose no competitive constraint, while a smaller independent or third-party owned rival will do. However, an improvement in the target's growth prospects might sometimes suggest the existence of pro-competitive efficiencies.

³⁰ (OECD, 2019_[66]) looked at merger control in dynamic markets and focused not on the appropriate timeframe but instead on the challenges in using existing tools to identify existing competitive constraints in markets for products that are dynamic in the sense that the products can evolve quickly. Unfortunately, competition in these markets is often less dynamic as can be seen by the persistent dominance of incumbents over the last 15 years.

³¹ See, e.g. European Commission 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings', para. 9; UK's Merger Assessment Guidelines, section 4.3; US Horizontal Merger Guidelines.

³² European Commission 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings', para. 74; UK's Merger Assessment Guidelines para. 5.8.11.

³³ See (OECD, 2018_[64]), page 10.

³⁴ (KPMG, 2017_[52]), pages 80-82.

³⁵ Decision of the European Commission in Case M.8677 - Siemens / Alstom, para. 488.

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