# AI CHALLENGES IN COMPETITION LAW
## HOW ARE REGULATORS RESPONDING?

Aymeric de Moncuit, Daniel Vowden, Kathryn Lloyd, Nadia Dhorat, Ora Nwabueze and Sarah Wilks of Mayer Brown discuss the key risks that competition authorities in the EU, the UK and the US may think that AI could pose to competitive markets, and the tools that they may seek to use in this area.

The transformative potential of AI, together with its unprecedented global growth, has made competition authorities around the world take stock. AI offers significant benefits to businesses and consumers, such as reducing human error as well as enhancing efficiency and innovation. However, some competition authorities may believe that AI also brings new competition concerns, not least because the largest, and therefore most popular, language models need so much data and computer power. Competition authorities therefore see themselves as, on the one hand, facing the challenge of enabling consumers to experience the benefits of the emerging markets that are enabled by AI while, on the other hand, minimising the associated risks of potentially anti-competitive behaviour and practices.

AI encompasses a range of data-based tools, from problem-solving algorithms to large language models (LLMs) (*see box "AI basics"*). AI is "intelligent", which means that it can create and generate new content while being able to learn and refine its output over time, making it less predictable and less subject to human oversight. While competition authorities are familiar with electronic communications, algorithms and digital ecosystems, and have developed extensive expertise in the data sector more broadly, AI may be perceived as presenting new challenges.

One concern is that the rapid progression of AI technology means that traditional regulatory tools may be too slow to protect competition effectively. Although regulators have said that they are keen to learn lessons from earlier digital tools and not be too slow to act, at the same time, there is a risk that intervening before building up sufficient understanding reduces innovation and healthy competition.

This article explores how legislators and competition authorities are responding to these perceived risks, and the key challenges that AI may pose to competitive markets in different areas of competition law.

### REGULATORY APPROACHES

Competition authorities around the world have been seeking to better understand AI and are assessing how best to respond to the challenges of regulating it (*see News brief "International developments in AI governance: same goal, different paths", www.practicallaw. com/w-041-5134*). Regulators have stressed

the need to actively regulate and manage the development of AI markets, rather than allow for digital self-regulation. But different jurisdictions are taking divergent approaches to regulation. For example, while the EU has created an overarching AI law in the form of the AI Act, the UK is proposing a "pro-innovation" sector-specific approach (*see News brief "White paper on regulating AI: is a pro-innovation approach enough?", www.practicallaw.com/w-039-2427*).

New regulatory rules, such as in the EU's Digital Markets Act (DMA) and the AI Act, and the UK's Digital Markets, Competition and Consumer Bill (DMCC Bill), are expected to be the main basis for handling AI issues in competition law, especially in relation to the largest technology companies in the EU and the UK. In a webinar held on 28 September 2023, Mr Alberto Bacchiega, Director for Digital Platforms at the Directorate-General for Competition, emphasised that the European Commission (the Commission) now has "all the tools it needs" to regulate AI (*https://competition-policy.ec.europa.eu/about/reaching-out/lets-talk-competition/dma-compliance_en*). In the UK, the Competition and Markets Authority (CMA) has launched a Data, Technology and Analytics unit to equip it to better understand, and respond to, the competition questions that are arising from emerging technologies, including AI.

### Digital Markets Act

The application of the DMA to AI is somewhat ambiguous and, in comments made at the 6th W@Competition Conference held on 22 February 2024, Margrethe Vestager, the Executive Vice-President of the Commission, said that it will be interesting to see how the DMA works with AI, given the new market dynamics that AI introduces and the colossal speed at which it is advancing.

Only designated gatekeepers that provide a core platform service are bound by the DMA's obligations. While a narrow reading implies that foundation models, which are a form of generative AI, may not be in scope, senior Commission officials have advocated a more flexible application in order to regulate the surge in AI technologies. To this end, two outcomes may be possible: regulating AI services where they are integrated with gatekeeper-designated services and/or amending the text of the DMA so that it expressly encompasses standalone AI services.

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### AI basics

While there is no commonly accepted definition of AI, it can be described as the development of computer systems that perform specific functions or tasks that would normally require human intelligence. Narrow AI refers to the performance of tasks that are linked to the performance of a particular function. Generative AI is a type of AI system that can be used to create new content that reflects the general characteristics of the training data on which it was trained.

Foundation models are large AI models that are trained on multiple data formats that can be used as the basis for many different types of tasks and operations. Large language models (LLMs) are a type of foundation model. LLMs are primarily focused on natural language understanding and generation, and are trained on a large amount of text data in order to understand, summarise, generate and predict new content.

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On 6 September 2023, the Commission formally brought six companies within the scope of the DMA by designating them as gatekeepers: Alphabet, Amazon, Apple, ByteDance, Meta and Microsoft (*https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4328*). These companies operate one or more core platform services and several of these services have AI technology embedded. Concurrently, the Director-General for Competition opened five market investigations to assess whether other services should be scoped in, including a market investigation into a generative AI chatbot that is integrated into Microsoft's Bing search engine. However, after an investigation lasting five months, the Commission found that the service was not in scope (*https://digital-markets-act.ec.europa.eu/commission-closes-market-investigations-microsofts-and-apples-services-under-digital-markets-act-2024-02-13_en*).

### AI Act

In February 2024, the EU's AI Act was approved and, when formally adopted, will regulate a significant number of AI-related issues in the EU (*see News brief "Artificial intelligence: the dawn of a new legal era", www.practicallaw.com/w-031-0858*). The AI Act will also have an impact on competition enforcement across the EU; for example, the broad procedural powers provided to the relevant supervisory agencies, which include examining evidence and accessing data and documents, can be transferred to national competition authorities. In addition, the enhanced transparency of AI systems promoted by the AI Act necessitates the sharing of important information between companies. Competition authorities may believe that this could potentially facilitate collusive behaviour and increase abuse of dominance concerns.

### DMCC Bill

In the UK, the DMCC Bill will introduce the ex ante regulation of firms designated as having strategic market status (SMS) and enhance the CMA's investigative and enforcement powers in relation to competition and consumer protection (*see feature articles "Digital markets regulation: comparing the new EU and UK regimes", www.practicallaw.com/w-040-0659 and "New consumer protection regime: a dramatic increase in compliance risk", www.practicallaw.com/w-041-8851*). The DMCC Bill is designed to help guide the CMA to positive competitive outcomes, while mitigating perceived potential harm, in digital markets that are susceptible to AI influence.

### MARKET STUDIES

In the UK, the CMA launched an initial review into AI foundation models on 4 May 2023 (*www.gov.uk/cma-cases/ai-foundation-models-initial-review*). The review is intended to explore the opportunities and risks of these models for competition and consumer protection, and focuses on fairness, open markets and contestability: language that competition lawyers are familiar with. Simultaneously, as part of its market investigation into public cloud infrastructure services that was launched on 5 October 2023, the CMA is considering the potential impact of AI on how competition works in the cloud services market (*www.gov.uk/cma-cases/cloud-services-market-investigation*).

In the EU, the Commission started 2024 by launching two calls for contributions on competition in virtual worlds and generative AI, along with information requests to several large digital companies (*https://ec.europa.eu/commission/presscorner/detail/en/IP_24_85*). National competition authorities within the

EU are also working in this area; for example, the French competition regulator launched a public consultation on 8 February 2024 looking at the practices of major digital companies in allegedly consolidating, or leveraging, their market power in the AI value chain (*www.autoritedelaconcurrence.fr/en/press-release/generative-artificial-intelligence-autorite-starts-inquiries-ex-officio-and-launches*).

While these kinds of fact-finding exercises are not new, it is interesting that, at the moment, competition authorities are giving their work a lighter touch feel than the full force of a traditional sector inquiry. There is a slightly different approach in the AI context, with competition authorities showing significant flexibility in the form that responses are sent in and asking strikingly open-ended questions. Nevertheless, the prevailing trend points clearly in the direction of stronger intervention. Indeed, in the past, these kind of information-gathering exercises have been a precursor to enforcement action, which there have already been signs of, such as in the area of merger control (*see "Merger control" below*).

The same seems to be true in the US. In a speech published on 29 February 2024, US Assistant Attorney General Jonathan Kanter made clear that, based on the US government's 9 July 2021 executive order on promoting competition in the American economy, the Department of Justice is "laser focused on breaking up existing monopoly chokepoints across the economy and preventing new ones before they arise", and considering what enforcement policy and other tools can be used to open up the market (*www.justice.gov/opa/speech/assistant-attorney-general-jonathan-kanter-delivers-remarks-22nd-international*). To this end, the Department of Justice is currently undertaking a significant amount of work with respect to AI and competition, including numerous active investigations.

## MERGER CONTROL

Recent developments indicate that AI-related partnerships could fall within the ambit of traditional merger rules.

### UK developments
In a keynote speech published on 1 November 2023, Marcus Bokkerink, chair of the CMA, said that the CMA will be vigilant in keeping an eye on potentially problematic mergers in the AI area (*www.gov.uk/government/speeches/consumers-competition-and-artificial-intelligence*). For example, the CMA's 2023 decision on Microsoft's acquisition of Activision Blizzard resulted in Microsoft divesting the online cloud streaming rights to Activision's games to a competitor for the next 15 years (*see feature article "UK merger control: what's in store for 2024?", www.practicallaw.com/w-042-2435*). In addition, on 8 December 2023, the CMA began investigating the partnership between Microsoft Corporation and OpenAI Inc using its merger control powers (*www.gov.uk/cma-cases/microsoft-slash-openai-partnership-merger-inquiry*).

Under the DMCC Bill, there are plans to introduce an "acquirer-focused" merger control threshold targeting so-called "killer acquisitions", which may be relevant to transactions where large acquirers buy start-ups such as generative AI software companies. As firms with SMS status will be obliged to inform the CMA of relevant transactions under the DMCC Bill, it is unlikely that acquisitions in digital markets will escape the increasingly bold interventions of the UK regulator.

### EU developments
In the EU, Article 22 of the EU Merger Regulation (*139/2004/EC*) (EUMR) and Article 14 of the DMA may be used to justify merger control in the AI sphere. Article 22 of the EUMR allows for the examination of certain mergers that do not meet the EU merger control thresholds but affect trade between EU member states and threaten to significantly affect competition. Article 14 of the DMA imposes an obligation on gatekeepers to inform the Commission about certain mergers.

The Commission has already shown itself willing to analyse mergers in a forward-looking context and has also delved deeply into online ecosystems, both of which will be useful groundwork for future mergers concerning AI; such as in Adobe/Figma and Booking Holdings/ETraveli Group (*www.practicallaw.com/w-040-7939*).

As part of its calls published on 9 January 2024, the Commission stated that it was also considering whether the partnership between Microsoft Corporation and OpenAI Inc falls within the scope of its merger control powers. In a speech on 19 February 2024, Margrethe Vestager emphasised that the Commission is keeping an eye on other partnerships in the AI sphere and that it will take account of the impact of AI in how it assesses mergers, as well as how AI may lead to new kinds of algorithmic collusion (*https://europa.eu/newsroom/ecpc-failover/pdf/speech-24-931_en.pdf*).

### US developments
In the US, the Federal Trade Commission (FTC) issued orders to five companies on 25 January 2024 that required them to provide information regarding recent investments and partnerships involving generative AI companies and major cloud service providers (*www.ftc.gov/news-events/news/press-releases/2024/01/ftc-launches-inquiry-generative-ai-investments-partnerships*). Specifically, the FTC is looking into whether investments and partnerships pursued by dominant companies risk distorting innovation and undermining fair competition; largely, the same issues that are concerning competition authorities in the EU and the UK.

The subpoena nature of these requests reflects the seriousness of the FTC's interest in this area, as well as more recent comments by the FTC's chair, Lina Khan, who said that in all of its work, the FTC is "making clear that there is no AI exemption from the laws on the books. Firms cannot use claims of innovation as cover for lawbreaking" (*www.ftc.gov/policy/advocacy-research/tech-at-ftc/2024/02/few-key-principles-excerpt-chair-khans-remarks-january-tech-summit-ai*).

## COLLUSION

Both UK and EU competition law prohibit agreements, arrangements and concerted practices that, by object or by effect, prevent, restrict or distort competition in the relevant market (*Chapter I, Competition Act 1998 (1998 Act); Article 101, Treaty on the Functioning of the European Union (TFEU)*). The restriction of competition can arise from horizontal restrictions, such as price-fixing, or vertical restrictions, such as exclusivity agreements. Cartels are associations or arrangements between two or more competing companies that discuss or exchange information about their businesses, or make agreements about future conduct, in order to limit competition between them and to increase their own prices or profitability. Cartel members may take part in price-fixing, bid-rigging, output quotas or restrictions, or market sharing.

In collusion cases, competition authorities must show that there was an agreement to collude; that is, a meeting of the minds. Unilateral, individual decisions by companies to use algorithmic pricing with no proof of agreement is legal. However, interest is growing into whether AI could inadvertently lead firms to become party to anti-competitive practices, such as the use of algorithmic pricing tools that leads to unlawful collusion (*see box "Algorithms and theories of harm"*).

In this context, some competition authorities may think that AI introduces the following unique challenges:

- While companies that use AI are often well aware of the risks of sharing competitively sensitive information, their AI may inadvertently be trained to do this.

- AI offers much greater speed and ease of gathering, assessing and acting on marketplace intelligence.

- There is potential for autonomous AI programs to raise prices.

- AI is better at enforcing agreements than humans, since it can monitor the market and "punish" deviations without human input.

At the same time, co-operation in AI markets is key for research feasibility and developing responsible AI systems and governance.

A competition authority's theory of harm in AI collusion cases may be that an AI tool replaces the risks of competition with the certainty of collaboration. In a transparent marketplace, AI may use other companies' prices as a variable in setting its own prices. Where other companies follow the same approach, competition authorities may fear that a practice of price signalling, or even price-fixing, could develop. They may be concerned that what may initially appear to be unilateral behaviour could veer into grey areas and, eventually, illegal co-ordination, with authorities making clear that price-fixing using AI is still price-fixing. Competition authorities are likely to keep a close eye on this kind of behaviour.

Another issue yet to be tested is whether an agreement could be inferred from the conduct of an autonomous tool, potentially accompanied by a spectrum of human

oversight and override powers. A scenario that may risk infringing UK and EU competition rules is conscious parallelism, also known as autonomous tacit collusion. This is where companies independently adopt a common course of conduct without any agreement or communication. It may occur where regulators fear that a pricing algorithm has "learned" to collude without requiring other information sharing or existing co-ordination.

An additional concern for competition authorities may occur in contexts where companies use the same pricing algorithm to set prices. This could be through using a third party's software or AI service, or by delegating prices to a common intermediary, creating a "hub-and-spoke" structure (*see box "Hub-and-spoke structure"*).

Due to the challenges involved in intervening on AI markets, at this stage, competition authorities may prefer to consider collusion in related markets first, such as labour markets. The development of AI requires significant human resources and competition authorities are already working in this area, as demonstrated by the CMA's 25 January 2024 report on labour market concentration,

employer market power and worker outcomes (*www.gov.uk/government/publications/competition-and-market-power-in-uk-labour-markets*). Interestingly, the French competition authority's current consultation in the AI sphere includes an explicit question about contractual clauses that limit the ability of highly qualified people in the generative AI sector to be recruited by competing companies (*www.autoritedelaconcurrence.fr/sites/default/files/2024-02/AI-questions_eng.pdf*).

### ABUSE OF DOMINANCE

Chapter II of the 1998 Act prohibits companies from engaging in any conduct that amounts to the abuse of a dominant position in a marker insofar as it may affect trade in the UK. Similarly, Article 102 of the TFEU prohibits the abuse by companies of a dominant market position in the EU or a substantial part of the EU.

Competition authorities may consider whether companies that they think might be dominant in a market could use AI to increase their market power and exclude competitors, for example:

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## Algorithms and theories of harm

On 19 January 2021, the Competition and Markets Authority published a research and analysis paper to explore how algorithms can reduce competition and harm consumers (*www.gov.uk/government/publications/algorithms-how-they-can-reduce-competition-and-harm-consumers/*). It identified a number of different ways in which consumers can be harmed from algorithmic systems, including:

- The personalisation of prices in a way that is opaque to the consumer.

- The manipulation of choice architecture or user journeys.

- Algorithmic discrimination based on protected characteristics, including geographic targeting and advert targeting.

- Unfair ranking and design, including facilitating the preferencing of others for commercial advantage and the use of dark patterns; that is, user interface designs that trick users into making unintended and potentially harmful decisions.

- Exclusionary practices, such as self-preferencing, manipulating ranking algorithms to exclude competitors and changing an algorithmic system in a gateway service that unintentionally harms businesses that rely on it.

- Collusion by pricing algorithms.

- Ineffective platform oversight, where a lack of transparency can make it difficult to externally evaluate whether an algorithmic system is effective, and therefore drive improvements.

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## Hub-and-spoke structure

A hub-and-spoke structure is where horizontal collaboration occurs at the level of suppliers or retailers through the common use of a vertical participant, such as a common manufacturer or service provider. The "spokes" are the horizontal participants and the "hub" is the vertical participant. The hub facilitates the co-ordination of competition between the spokes without direct contact between the spokes. This means that a horizontal cartel can be created based on indirect communication between the horizontal participants, making it difficult to prove that the horizontal participants engaged in concerted action. Competition authorities may therefore consider that price-monitoring software and algorithms could facilitate the exchange of competitively sensitive information without any communication between sellers.



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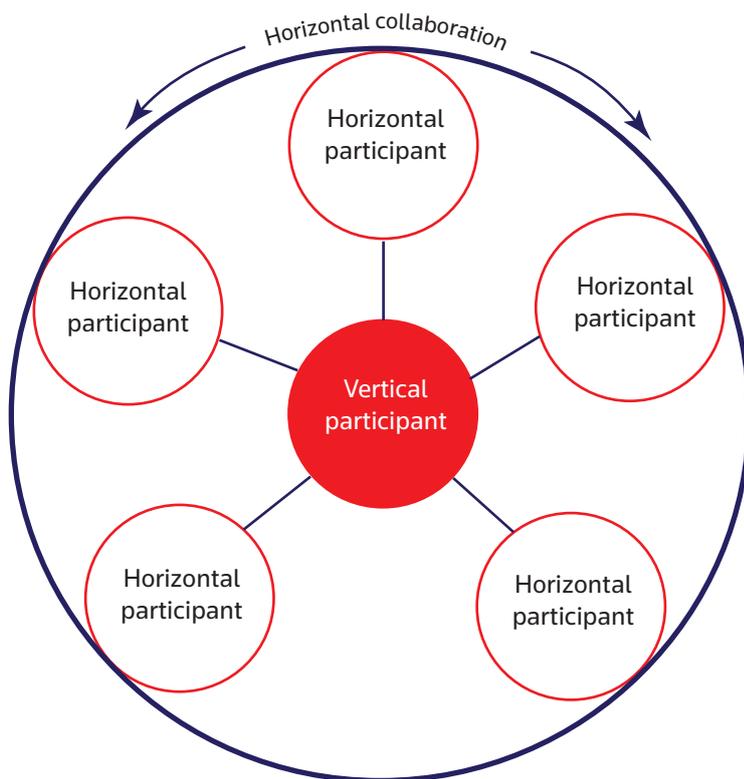
- Companies with successful AI foundation models may leverage these to impose high prices on downstream players for access to their technology.

- A foundation model provider may stop, or reduce, application programming interface (API) access. API is a software interface that allows two or more computer programs or components to communicate with each other.

- A company could employ algorithms in a manner that favours its own products or services, along the lines of the Commission's decision in relation to allegations that Google LLC had infringed Article 102 of the TFEU by positioning and displaying its own comparison shopping service more favourably in its general search results compared to competing comparison shopping services (*Google Search (Shopping) AT39740; see News brief "Google competition charges: Commission raises the stakes", www. practicallaw.com/2-610-2845*).

The classic theories of harm, such as self-preferencing, tying and bundling, and the use of data, may be invoked to govern behaviour in the AI sphere and competition authorities may leverage past experience in addressing allegedly dominant behaviour related to algorithms and digital ecosystems. Furthermore, since the categories of abuse are not definitive, the technicality and complexity of AI models could constitute fertile grounds for imaginative theories of

harm by competition authorities that are keen to be seen as active in this nascent market. Indeed, concepts that were used in some of the Commission's pharmaceutical cases relating to abuses of dominance where access to IP was key seem to have some application to future potential AI dominance investigations, where the protection of IP is proving critical in terms of the data sets used by LLMs.

However, defining the relevant market in AI cases may prove a challenge for competition authorities, and this is key in dominance cases. The Commission's new market definition notice, which was published on 8 February 2024, includes updated guidance for defining digital markets (*https://ec.europa.eu/commission/presscorner/detail/en/ip_23_6001*). While this does not apply to companies that are designated as gatekeepers under the DMA, it is likely to still assist competition authorities that are eager to step in when faced with digital companies abusing market power in this area. Given the cumbersome and lengthy nature of abuse of dominance investigations, the forthcoming new regulations, such as the DMA and the DMCC Bill, seem better suited to interventions in this area.

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### KEY TAKEAWAYS

Given the speed and vibrancy with which AI is transforming markets, competition regulators may believe that they need to act quickly. All participants on the AI market should therefore be careful to stay on the right side of the constantly changing rules. Start-ups and smaller companies should leverage regulatory attention to their advantage. In particular:

- Companies are free to gather public information and use it in making competitive decisions. However, given increased regulatory scrutiny and the nascent nature of the law in this area, companies should evaluate whether any algorithms that are being used in areas where competitors are also active can be programmed on non-competitively sensitive data only. In addition, the underlying methodologies of algorithmic and AI tools should be regularly reassessed from a competition compliance perspective.

- Engagement with regulators should be planned strategically. At the

moment, competition authorities are keen to speak with large and smaller participants on the technology markets as they seek to better understand how AI works and consider its potential impact on a market and the relevant participants. For example, it may be both harder and easier to infer agreement based on an AI learning tool compared to a tool based solely on algorithms: harder as the AI tool is unpredictable and not pre-programmed, and easier as it is clearer that the AI tool is learning to focus on particular parameters. Strong arguments and advocacy will be essential. However, companies should plan carefully when and how to discuss these issues with competition authorities, if at all, especially during these early stages of development.

• Companies must not let the protection of their fundamental rights slip. While AI may give the impression of dealing with robots and codes, competition authorities are engaging with businesses and individuals whose rights are protected by law. Safeguards and due process must be preserved, however ''artificial'' the intelligence might seem.

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