Comments from Digital Competition to the CMA Initial Report on AI Foundation Models

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Digital Competition (digital-competition.com) is an independent advisory firm that aims to develop open digital and competition policies for better innovation. We leverage expertise and dialogue with stakeholders while maintaining our commitment to providing open access, full transparency, and impartial advice to tech firms, law firms, consulting firms, competition authorities and international organisations. We did not receive funding for this comment.

1. Introduction

The Competition and Markets Authority (CMA) issued in September 2023 an initial report on AI foundation Models ("**the report**")[1]. It studies potential positive and negative outcomes on competition and consumer protection arising from AI foundation models ("**FMs**"), namely machine learning models that derive output, such as text, from vast amounts of input data. The report proposes principles to ensure FMs deliver positive outcomes. The CMA now seeks comments on the report and principles in the context of a collaborative approach with relevant stakeholders for a final report in March 2024.

We provide comments based on our publications on FMs, including Antitrust Issues Raised by Answer Engines[2], Competition in Generative AI FMs[3], and the Competitive Relationship between Cloud Computing and Generative AI[4]. We limit our comments to high-level competition aspects. We focus on the approach and the principles and propose policy recommendations. Finally, we look forward to working with the CMA and relevant stakeholders to provide market studies and policy recommendations in the context of our GenAI and competition policy Hub[5].

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[1] CMA, AI Foundation Models: Initial Report, 18 September 2023.

[2] Christophe Carugati, Antitrust Issues Raised by Answer Engines, *Bruegel*, 13 June 2023.

[3] Christophe Carugati, Competition in Generative Artificial Intelligence Foundation Models, *Bruegel*, 18 July 2023.

[4] Christophe Carugati, The Competitive Relationship between Cloud Computing and Generative AI, *Bruegel*, 11 December 2023.

[5] Digital Competition, GenAI and Competition Hub, (accessed 3 January 2024). The GenAI and Competition Hub strives for responsible generative AI (GenAI) development, ensuring favourable market conditions that benefit all. Available at: https://www.digital-competition.com/genaiandcompetitionhub

2. The Approach

The CMA proactively published the report in the year FMs entered the public domain with the release of the Open AI-owned chatbot, ChatGPT, in November 2022. This forward-looking approach is particularly pertinent considering that FM is an emerging technology with a potentially disruptive impact on the economy[6] and labour markets[7]. In this context, a study of how competition in FMs works is primordial to ensure that FMs responsibly deliver their full benefits thanks to healthy competition and innovation.

Furthermore, the outcome-based assessment is appropriate considering rapid market developments due to the frequent release and announcement of new products and services at all levels of the value chain. These include computing resources with new graphic cards and cloud computing offerings[8]; data with agreements with data holders[9]; FMs with new Large Language Models (LLMs) and On-device Models[10]; and AI-powered solutions via new stores and software[11]. In this context, a study can only predict the evolution of the market with potential negative and positive outcomes in which market shares and trends might turn out to be quickly ephemeral.

Finally, the report also rightly highlights international regulatory initiatives. The regulatory landscape is also evolving rapidly due to the frequent release of legislative initiatives to regulate

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[6] Jan Hatzius et al, The Potentially Large Effects of Artificial Intelligence on Economic Growth (Briggs/Kodnani), *Goldman Sachs*, 26 March 2023.

[7] Tyna Eloundou et al, GPTs are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models, 22 August 2023.

[8] For instance, AMD announced several products for AI workloads in December 2023. AMD Showcases Growing Momentum for AMD Powered AI Solutions from the Data Center to PCs, *AMD*, 6 December 2023 (accessed 3 January 2024). Available at: https://www.amd.com/en/newsroom/press-releases/2023-12-6-amd-showcases-growing-momentum-for-amd-powered-ai-.html

[9] For instance, the publisher Alex Springer agreed with the FM developer OpenAI to use Axel Springer's copyrighted data for training OpenAI models. Helen Coster, Global News Publisher Axel Springer Partners with OpenAI in Landmark Deal, *Reuters*, 13 December 2023 (accessed 3 January 2024). Available at: https://www.reuters.com/business/media-telecom/global-news-publisher-axel-springer-partners-with-openai-landmark-deal-2023-12-13/

[10] For instance, the FM developer Google released new FMs including one which can run on-device. Sundar Pichai and Demis Hassabis, Introducing Gemini: Our Largest and Most Capable AI Model, *Google Blog*, 6 December 2023 (accessed 3 January 2024). Available at: https://blog.google/technology/ai/google-gemini-ai/#sundar-note

[11] For instance, OpenAI launched an app store, enabling developers to propose their own GPTs on ChatGPT. Introducing GPTs, *OpenAI*, 6 November 2023 (accessed 3 January 2024). Available at: https://openai.com/blog/introducing-gpts

AI, including in the United States[12], G7 countries[13], and Europe[14]. Besides, Several competition authorities, including Portugal[15] and those of the G7, also closely monitor FM developments[16]. In this context, a study must consider international initiatives as they will impact FM developments at the local level due to the borderless nature of the technology and potential economies of scale in regulatory compliance.

3. The Principles

The CMA proposes principles to ensure FM developments deliver positive competition and consumer protection outcomes. The overarching principles are accountability, access, diversity, choice, flexibility, fair dealing, and transparency. For each overarching principle, the CMA also describe underpinning principles.

The principle-based approach is adequate in fast-moving markets as principles provide soft guidance to economic actors in how they should develop their products and services without mandating or prohibiting a particular behaviour. Principles also offer predictability in the competition authority's view about potentially unproblematic business practices. In other words, principles offer flexibility and legal certainty in product development.

The proposed overarching principles are already outlined in several expert reports aiming to foster competition in digital markets[17]. They also underpin digital competition regulations, including the EU Digital Markets Act (DMA) and the forthcoming UK Digital Markets, Competition and Consumers (DMCC) Bill.

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[12] Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, *White House*, 30 October 2023 (accessed 3 January 2024). Available at: https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/

[13] Hiroshima Process International Guiding Principles for Advanced AI system, *G7*, 30 October 2023 (accessed 3 January 2024). Available at: https://digital-strategy.ec.europa.eu/en/library/hiroshima-process-international-guiding-principles-advanced-ai-system

[14] Artificial Intelligence Act: Council and Parliament Strike a Deal on the First Rules for AI in the World, *European Council*, 9 December 2023 (available at: https://www.consilium.europa.eu/en/press/press-releases/2023/12/09/artificial-intelligence-act-council-and-parliament-strike-a-deal-on-the-first-worldwide-rules-for-ai/

[15] Autoridade da Concorrência, Issues Paper Competition and Generative Artificial Intelligence, 16 November 2023.

[16] G7 Competition Authorities and Policymakers' Summit Digital Competition Communiqué 2023, 8 November 2023.

[17] See for instance, Jason Furman et al, Unlocking Digital Competition Report of the Digital Competition Expert Panel, March 2019.

The underpinning principles only specify the meaning of each overarching principle. However, they do not provide actionable measures on how to achieve them.

4. Policy Recommendations

The approach and principles are appropriate to ensure that FMs deliver their full benefits to the economy and consumers. Based on our above observations, we propose the following policy recommendations.

First, the CMA should thoroughly study key elements of the value chain to identify and remedy potential competition concerns. For instance, the graphic card market, in which a dominant provider of IT equipment is currently under antitrust investigations in France, Europe, the US and China[18], is primordial for the provision of FMs. Problematic business practices in this sector might negatively impact FM developments. The relationship between cloud computing resources and FMs also deserves scrutiny, as most FM developers rely on cloud computing to develop and deploy their FMs. The CMA should investigate this relationship in the context of its ongoing market investigation in the cloud sector[19].

Second, the CMA should work with its international counterparts examining FMs to ensure international coherence and experience-sharing. In particular, it will be appropriate to avoid the production of similar studies while considering jurisdictional differences when relevant to ensure an efficient allocation of resources and time by public authorities and stakeholders[20]. In this context, the CMA should closely work with the European Commission to consider market and regulatory developments arising from the implementation of the DMA, the Data Act, and the AI Act. The CMA should also propose to lead a working group on FMs to G7 competition authorities as they are closing monitoring FMs.

Finally, the CMA should propose actionable measures on how to achieve the principles. The CMA should develop them based on evidence from appropriate legislation, case laws, and literature[21]. When appropriate, the CMA should design them in cooperation with relevant stakeholders and authorities, particularly when they involve technical issues, such as interoperability between FMs, and legal issues, such as privacy for accessing personal data.

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[18] Form 10-Q Nvidia Corporation, 21 November 2023 (accessed 3 January 2024). Available at: https://investor.nvidia.com/financial-info/sec-filings/sec-filings-details/default.aspx?FilingId=17074143

[19] CMA, Cloud Services Market Investigation (Accessed 3 January 2024). Available at: https://www.gov.uk/cma-cases/cloud-services-market-investigation

[20] For instance, competition authorities in Australia, France, Germany, Italy, Japan, Mexico, Sweden, the UK, and the US did similar market studies into the online advertising sector.

[21] For instance, the CMA could draw from our compliance principles for the implementation of the DMA. See Christophe Carugati, Compliance Principles for the Digital Markets Act, *Bruegel*, November 2023.