# FCA Discussion Paper DP22/5: The potential competition impacts of Big Tech entry and expansion in retail financial services

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Consultation response from the

# Centre for Competition Policy

**University of East Anglia, Norwich Research Park, Norwich NR4 7TJ**

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**Authors:**

- Professor Jens Prüfer
- Dr Andrea Calef

This consultation response has been drafted by named academic members of the Centre, who retain responsibility for its content.

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# FCA Discussion Paper DP22/5: "The potential competition impacts of Big Tech entry and expansion in retail financial services"

## Comments from the Centre for Competition Policy, UEA

### Motivation for these comments

The Financial Conduct Authority published DP22/5 in October 2022. P. 2 reads: "We are asking for comments on this Discussion Paper (DP) by 15 January 2023. You can send them to us using the form on our website at: https://www.fca.org.uk/publications/discussion-papers/dp22-5-potentialcompetition-impacts-big-tech-entryand-expansion-retail-financial-services"

Professor Jens Prüfer[1] attended the roundtable on payments at the FCA's premises on 7 December 2022. He provided verbal comments on the payments section of the DP, extending also to the other three core areas of the paper, on deposits, consumer credit, and insurance. These comments form the basis for the written feedback at hand. Dr Andrea Calef contributes by reflecting on the question from the DP, whether there may be new complementarities after big tech's entry into financial services markets.

### Scientific background for these comments

To put the specific feedback to DP22/5 into perspective, the following background is necessary to know.

1. Jens Prüfer co-authored the first economics paper on user-generated data on digital markets. It builds a simple model to study competition among search engines, shows how user-generated data about the users' preferences and characteristics, called *user information*, can explain the development of market shares in that industry (market tipping), constructs a theory of harm (market tipping leads to low innovation incentives for all firms!), and also proposes a remedy: mandatory sharing of anonymized user-generated data.

2. Prüfer/Schottmüller (2021) is the big brother of the first paper. It extends the scope of study from search engines to all "data-driven markets" (and defines those formally), constructs several dynamic models that show that the intuition of the first paper (data-driven markets always tip in the long run) is very robust, introduces the concept of "data-driven indirect network effects" (and delineates them from related but different concepts such as direct or indirect network effects), introduces the notion of "connected markets" (which allows an incumbent in one data-driven market to leverage their monopoly to another market and dominate that one, too), and shows that mandatory data-sharing could alleviate the strong tendency towards tipping. It ends by stating that mandatory sharing of user-generated data

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of an incumbent with competitors is a necessary, not a sufficient condition for viable competition (and, hence, higher innovation incentives).

3. Klein et al. (2022) is the empirical test of the two theory papers. It reports on an experiment with a small search engine (Cliqz) and shows that this search engine's algorithm is good enough to produce similar quality levels than Google and Bing for popular search queries (measured by various quality metrics). For "rare" queries, they show that more user-generated data improves search-engine quality --- but rare queries generate 74% of that search engine's traffic! Hence, in order to attract users, a search engine must be able to provide high quality on rare queries, which is impossible without access to the incumbent's user-generated data. Importantly, this shows that even in the search engine market, it is *not* Google's superior algorithm that explains its super-dominant position in most markets, apart from China. Instead, it is their exclusive access to significantly more user-generated data, which comes with having a higher market share.

4. Graef/Prüfer (2021) starts from the point where a market has been shown to be "data-driven" and a competition authority or other policy maker wants to know *how* to structure and implement mandatory data sharing in detail. The authors propose three different governance structures which are both economically efficient and in line with EU competition law, consumer protection law, privacy law and IP law. This study can serve as an example how to identify the optimal economic governance institution and organizational governance of an enforcement agency.

Notably, papers 1-3 have influenced the EU's Digital Markets Act, in particular Art. 6(10,11) on mandatory data sharing. The governance structure to regulate "very large online platforms" in the Digital Services Act is very close to the decentralized governance structure proposed in paper 4.

## Specific comments on FCA DP22/5

The discussion paper is well researched and written in a balanced way. It provides a good introduction into the four areas it covers (deposits, consumer credit, insurance, and payments) and contains lots of interesting and relevant information about market and technological details.

According to the DP, parts of the market for retail financial services have been dominated by a small set of traditional banks, lately complemented by a few fintech start-ups. This has led to market power and to sometimes underdeveloped technological solutions aka innovation. In this respect, the market entry of big tech firms, in principle, can play a very positive role, e.g. as visible in payments, where Google Pay and in particular Apple Pay offer services with clear consumer benefits. This will also lead to reactions of incumbent banks and thereby benefit consumers more widely than the actual market shares of those big tech firms leads to suggest.

These benefits, however, come with significant risks. Most notably, the risk of market tipping if (!) one market (segment) is found to be *data-driven*, as defined in Prüfer/Schottmüller (2021).

The economically critical question on all markets, where big tech firms are active, is, whether that specific market is *data-driven*, or not. If the market is not (sufficiently) data-driven, it can be treated as any other market and be subjected to the usual competition law and/or regulatory treatment. If, however, a market is found to be data driven, competitors of the dominant firm and potential entrants

stand no chance in competition and, hence, will have low incentives to innovate. As a best response, the dominant firm will also moderate its (costly) innovation activities.

A formal test, establishing when a market is data-driven, is described in Klein et al. (2023) and complements the specific analysis of the search engine market in Klein et al. (2022). The description is already publicly available --- however, only in German --- in a report prepared for the German Finance Ministry (2021).

In a highly simplified version, the *test for data-drivenness* asks: ***Does it help a (big tech) firm to offer a better service to consumers if they know a lot about consumer's individual and aggregate preferences and characteristics?***

If this question is tentatively answered with *yes*, it may be appropriate to fully apply the test, which involves answering three sub-questions empirically:

1. Does access to more users lead to more data on users' preferences and characteristics?
2. Does more data on users' preferences and characteristics lead to higher quality of the service?
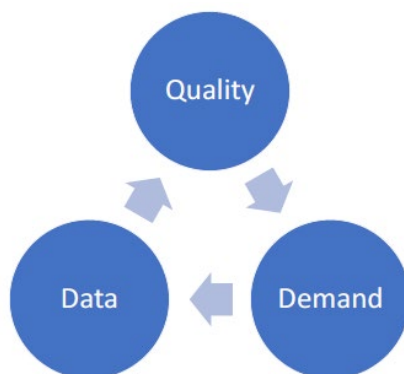3. Does higher quality lead to higher user demand for the service?



*Figure 1: Structure of a Test for Data-Drivenness of a Market. Source: Prüfer et al. (2021).*

Klein et al. (2022, 2023) showcase how to apply the test in detail to the search engine industry. Prüfer et al. (2021) even contains a handbook-style step-by-step guidance how to apply the test to a specific industry and how to draw conclusions from it (albeit, only in German language).


## A Test for Data-Drivenness in Retail Financial Services?

It is important to underline the fact that the concept of data-drivenness relates to the relationship between a provider of digital services and a user. Thereby, data-driven markets are B2C-markets, by nature.[2] FCA's DP 22/5 treats exactly such retail markets. Therefore, all four submarkets studied in the DP are candidates for data-driven markets. Trying to tentatively answer the above-mentioned critical question for these four markets leads us to the following very cautious conjectures:

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[2] One could consider to which extent the concept of data-drivenness can also be applied to B2B markets, e.g., the largest parts of cloud computing services, but this is beyond DP 22/5 and the comments at hand.

1. **Deposits**: As long as deposits are a commodity, which is not personalized but an off-the-shelf product for individual consumers, this segment does not seem to be prone to data-drivenness.

2. **Consumer credit**: Here, it clearly helps a provider of financial services to know a lot about the preferences and characteristics of individual consumers, e.g. their previous loan-repayment behaviour, exquisite hobbies or social relationships that come with payment obligations but are not easy to monitor for banks. This could go as far as analysing the location profile of a loan applicant (automatically and by using a machine-learning algorithm that compares this person's profile to those of millions of others) and then to correlate it with other individual and aggregated socioeconomic data. Therefore, consumer credit looks like a good candidate for a data-driven market.

3. **Insurance**: The same that was said for consumer credit is valid for the retail insurance market. If one provider knows much more about the personal situation, preferences, and not-so-obvious liabilities of an individual insurance applicant, this provider can assess the risk profile of the applicant much more precisely, which can be translated into an insurance contract offer that is highly personalized (and, hence, more attractive for the individual consumer). Competitors with less access to such information about consumers' preferences and characteristics have to put consumers in coarser categories and, hence, can make less sharp insurance contract offers. Consequently, the insurance market also seems to be a good candidate for a data-driven market.

4. **Payments**: The question is whether big tech firms are able to offer superior payment products, including Google Pay and Apple Pay, because of their technological leadership or because they have more information on individuals' preferences and characteristics. Without having too much insight in these markets, it seems to us that the first is the case. Hence, the probability that the payment market is data-driven seems to be lower than for the consumer credit or the insurance market.

Importantly, however, Prüfer and Schottmüller (2021) also formulate a theory of the *connectedness* of markets. In a nutshell, two markets A and B are connected if access to user information on market A is to some degree valuable on market B and, hence, helps the provider to tip market B (and potentially, vice versa). We recommend that this mechanism is borne in mind when studying both the payments market and the deposits market. Only if it is clear that having more user information on these markets is neither particularly helpful on these markets and on potentially connected markets, the exclusive access to such information is innocent and should not be regulated.

## New Complementarities and Threats through Big Tech Entry in Financial Services

Complementing these remarks related to the data-drivenness of financial retail markets, here we briefly comment on **question 8 on page 48 of the FCA Working Paper**, which reads: **"If Big Tech firms enter and expand in financial services, will they create new complementarities between markets or their activities that we have not identified?"**

In the FCA Working Paper, there is no mentioning of **direct lending** that could be offered to customers (with the exception of deposits). To be more specific, Big Tech firms could enter in the following markets:

1. **Direct lending to nonfinancial corporations** (through the use of customers' deposits); and/or
2. Offering **microcredit/crowdfunding services** to both nonfinancial corporations (lenders) and to all other customers (borrowers).

As point 1. would be a service offered only to nonfinancial corporations in need of funding and would increase competition to traditional commercial banks' lending activities, this may have an impact on traditional commercial banks' stability, potentially leading to higher systemic risk. Point 2. is not novel,[3] as concepts of concentration-fragility and concentration-stability have been confronted with reconciling views provided by Martinez-Miera and Repullo (2010) and Calef (2020). Stulz (2019) corroborates the risks for banks stemming from a significant entry of Big Tech companies into lending markets.

Microcredit and crowdfunding (point 2.) are services that can be offered both to nonfinancial corporations (lenders) and to all other customers (borrowers). The actual service could take multiple forms, e.g., crowdfactoring, crowdfunding and crowdinsurance.

This type of lending could be facilitated by a Big Tech firm like Amazon, which already works with companies of very different sizes. It could be especially relevant for SMEs, who have more difficulties to finance themselves through financial markets and are, on average, more dependent on bank lending than large cap corporations[4]. This could work both in a traditional manner (centralised finance) or in a decentralised way (blockchain). The latter would not be surprising, given what Meta has been trying to do in the last few years with their launch of Libra/Diem[5], and should be carefully considered by regulators.

Due to their complementary capabilities and the issues described above, Big Tech firms may try to turn the lending market into a data-driven market and then dominate it. If they seriously enter the lending market, they could not only grow easily and outpace incumbents, but could even affect banking competition for business lending, not just for deposit taking and consumer credit, as mentioned in the FCA consultation paper. This could be beneficial both in the short term and in the longer term if it increases financial inclusion. This, however, also depends on the impact on competition. The overall outcome is uncertain in the long term.

Notably, big tech's entry is not an "if", as they have already entered.[6] The question is how disruptive the entry will be. Carstens (2018) discusses the implications for policy makers and highlights the

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[3] See Badarau and Lapteacru, 2020, for a recent literature review.
[4] There is also an indirect impact to consider: as BigTech companies work in multiple jurisdiction, SMEs that, in general, suffer higher costs to advertise their products/services on international markets, would immediately get some visibility. The latter would be especially relevant to tradable goods producing / services providing firms. Albeit this is not directly relevant to FCA, the increase in competition would be consumer welfare-enhancing, other things been equal.
[5] For an analysis of its features in comparison to other crypto currencies, please see Pierro and Tonelli (2022).
[6] See Zhang and Cao, 2021; Cornelli et al., 2022a and 2022b.

People's Bank of China's conservative approach that has required "a 100% reserve requirement on the custodial accounts" since January 2019.

## Conclusion

As said above, these conjectures are *not* the results of well-crafted research. We therefore strongly recommend applying such "pre-testing" to all relevant market segments and, for the cases where it seems conceivable that the respective market (segment) is data-driven, we recommend applying a fully-fledged test for data-drivenness.

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