Organisation for Economic Co-operation and Development

DAF/COMP/WD(2022)24

Unclassified

English - Or. English

30 May 2022

DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE

The Evolving Concept of Market Power in the Digital Economy – Note by Israel

22 June 2022

This document reproduces a written contribution from Israel submitted for Item 5 of the 138th OECD Competition Committee meeting on 22-24 June 2022.

More documents related to this discussion can be found at https://www.oecd.org/daf/competition/market-power-in-the-digital-economy-and-competition-policy.htm

Antonio CAPOBIANCO
Antonio.Capobianco@oecd.org, +(33-1) 45 24 98 08

JT03496430

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Israel

Market Research: P2P Transfer Apps[1]

1. Introduction and background

1. The Israel Competition Authority (**ICA**) has recently conducted a study in the industry of payment apps that provide payment transfer services between individuals. In view of the Routable on the Evolving Concept of Market Power in the Digital Economy, this contribution describes the ICA's study, its conclusion and the corresponding policy recommendations. It will also place the study in the broader context of the rising digital economy related competitive concerns, and depict the ICA's unique advocated policy measures.

2. The payment apps currently operating in Israel commenced operations in 2017 and are all owned by local banks (two of which are owned by the two largest banks): Bit by Bank Hapoalim Pay by Bank Leumi and Paybox by Bank Discount.[2] The main service provided by these payment apps up until recently was executing person-to-person payment transfers (hereinafter: **P2P transfers**).[3]

3. The ICA's focus on the field of P2P transfer services stems from the importance of competition in the provision of banking and payment services, alongside various concerns regarding the high level of concentration in this field. The main purpose of this study was establishing a factual infrastructure regarding developments between 2017 and 2020, enabling the drawing of evidence-based policy recommendations.

4. Furthermore, this study also serves an important role when viewed in the digital economy broader perspective. Over the recent years, competition authorities around the world are more frequently challenged by digital platforms that benefit from a network effect in the consumption of the services they provide.[4] The competitive dynamic that characterizes these markets is strong competition for the market, but once that's decided, competition tends to converge to a winner-takes-all market. At this stage, market entry barriers are so high that a potential entrant, even one offering a preferential service, will not be able to successfully enter the market.

5. Another characteristic of these markets is the central role of information, particularly user data obtained while using the platform. Obtaining this information enables firms to offer customers supplementary and additional services. As a result, a winner-takes-all market structure in a given market could give rise to high degree of concentration in other related markets as well.

[1] For more information and detailed results please see the full study: https://www.gov.il/en/departments/publications/reports/p2pmarketresearch

[2] During February 2022 Bank Leumi announced its intentions of terminating Pay's activity in April that same year. It has since indeed done so.

[3] This study focuses on the P2P transfer service that is provided by the aforesaid apps, and will not examine other services these apps may provide, such as payments to businesses.

[4] A direct network effect is characterized in that the multiplicity of users of a product increases the benefit of its use.

6. Key factors for preserving competition in digital platform markets are maintaining consumers' ability to consume the product from a number of suppliers (hereinafter**: multi-home**), and reducing barriers to transitioning between different service providers. That is mainly by ensuring interoperability of platforms and customers' data portability.[5]

7. ICA's study presented in this contribution provides empirical evidence for the manner in which digital markets evolve, focusing on its extremely rapid dynamics. It also offers a follow up discussion on mitigating competition concerns in such markets.

8. The main questions at the heart of the study, are the following: (1) Is there significant growth potential in the field of P2P transfers in payment apps beyond current use? (2) Is there a network effect in this market? (3) Does competition tend towards a-winner-takes-all market structure? (4) What is the scope of multi-homing in the market and can it diminish competition concerns? (5) Is there differentiation between existing payment apps? (6) What is the scope of payment apps' use by small and very-small businesses?

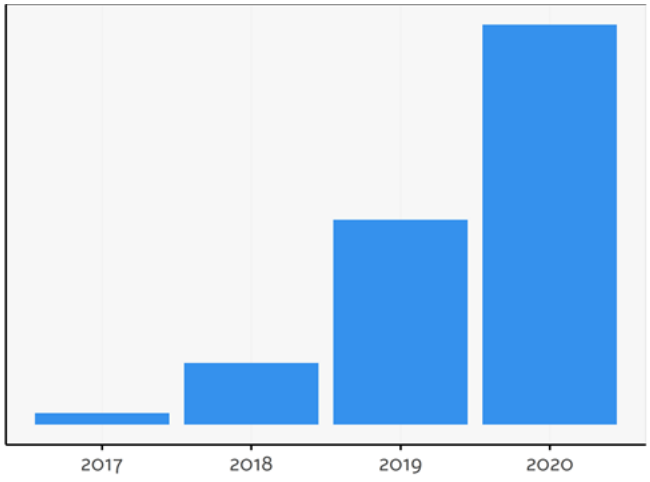
9. The database used in this study covers the vast majority of P2P transfers executed using payment apps between 2017 and 2020

2. Israel's P2P T-apps' Market Evolution

10. Since the start of its operation in 2017, the field of payment transfer apps has enjoyed accelerated yearly growth of hundreds of percent, in both number of transactions and volume of operations. Figure 1 depicts the development of app operations.

Figure 1. Development of Volume of Transactions in Banking Payment Apps

2017-2020



Source: Bank Hapoalim, Bank Leumi and Bank Discount; ICA Research Division's calculations

[5] OECD (2021), Data portability, interoperability and digital platform competition, OECD Competition Committee Discussion Paper, http://oe.cd/dpic; Crémer, J., de Montjoye, Y.-A. and Schweitzer, H. (2018). Competition Policy in the Digital Era. Report for the European Commission; Joint Paper of the Competition Authority, The Privacy Protection Authority and the Consumer Protection and Fair Trade Authority on the Right to Data Portability, published on January 3, 2021.

11. The question of market penetration rate or the complementary market growth potential is an important one from a policy stand point, as growth potential signals to the possibility that new competitors enter the market. The ICA's estimates of current (end of 2020) market penetrations rate stands at approximately 65% of the number of overall potential users. This figure is low relative to the global leaders in use of P2P transfer apps countries (mainly Nordic countries), pointing to significant unrealized local growth potential, estimated at dozens of percent in the number of app users.

3. Market Share and Differentiation

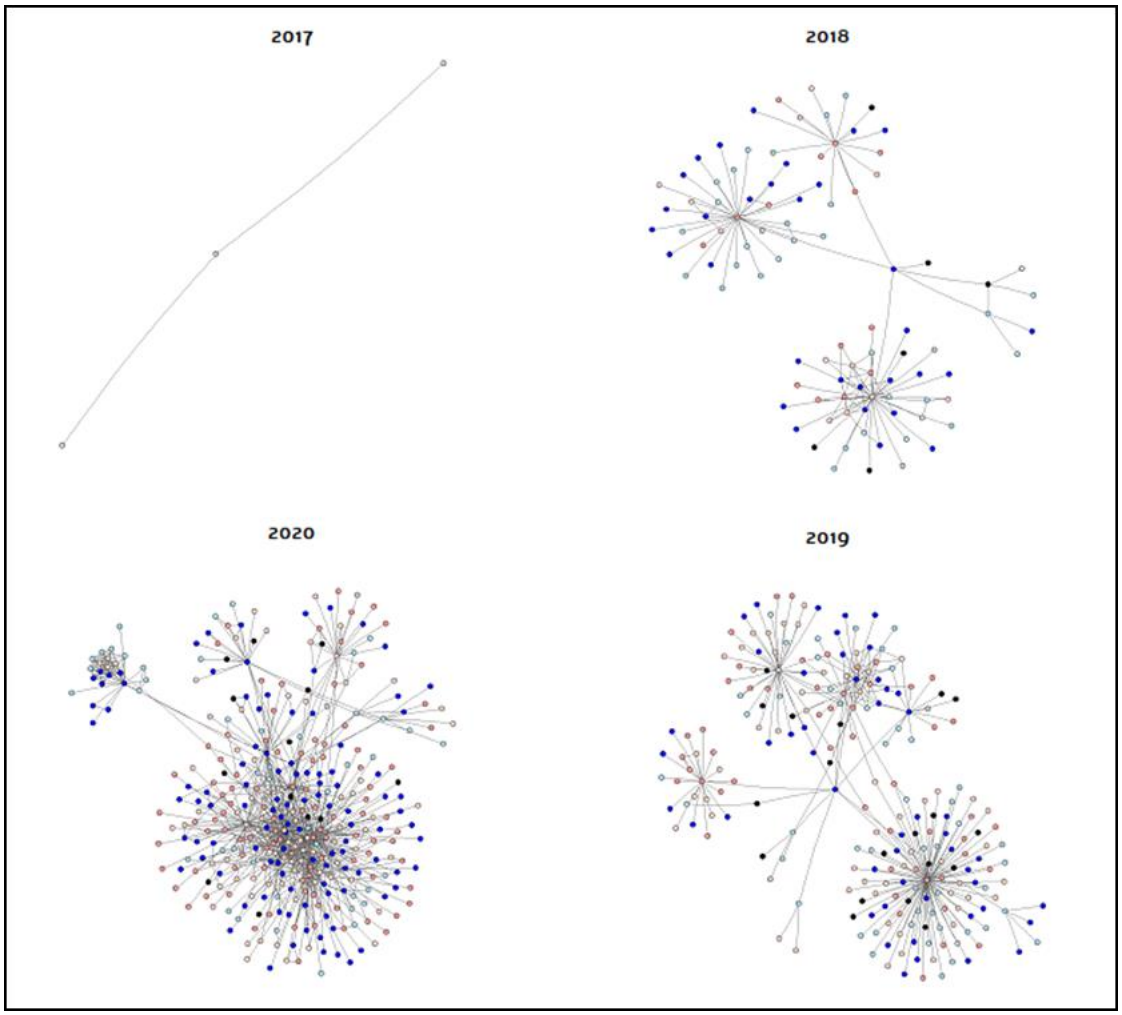
12. In digital markets, particularly markets in which a network effect exists, the ability of small competitors to distinguish themselves from the leading incumbent firm is often a necessary condition for their successful entry into the market, or for their business survival.[6] Although the ICA's examinations clearly shows that the leading competitor in the field of P2P transfer apps in Israel is Bit, it also shows evidence of Paybox's distinction from the other apps in a niche service – group transfers – where it (and not Bit) is the market leader.

4. Network Effect

13. As aforementioned, a network effect is a phenomenon in which the value that users or consumers of a product or service derive from its usage, increases as the overall number of users using the same (or a compatible) product or service, increases. Thus, in the field of P2P transfers, the larger the number of customers who use the app, the larger the number of potential transaction partners per user. Therefore, the potential number of transfers that each user might make in the app increases as the network grows. Higher usability gives rise to greater utility for potential new customers considering using an app, leading to the principal source of the network effect P2P transfers. Figure 2 below suggests the existence of a network effect in Bit's P2P transfers network.

[6] Crémer, J., de Montjoye, Y.-A. and Schweitzer, H. (2018). Competition Policy in the Digital Era. Report for the European Commission. (pp. 35-38)

Figure 2. Illustration of the Network Effect



Source: Bank Hapoalim; ICA Research Division's calculations

14. The above figure illustrates the development of the transactions' partners network of a randomly chosen Bit user between 2017 and 2020. Each node on the network illustration describes a user, and each edge indicates that the two connected users performed one or more payment transactions between them. The described network is a second-degree network. That is, the network describes transactions between the randomly chosen user, his transaction partners, and the transaction partners' transaction partners. The different nodes colors represent different levels of activity.[7] We should note that the size of the transaction partner network of the selected user is between the 25th percentile and the 50th percentile among Bit users.

15. Previous economic literature demonstrates how a network effect can lead to a winner-takes-all market structure.[8] Such markets are often characterized by the incumbent

[7] The colors of the nodes were set out to reflect the "heat map" of financial sum of all of the transactions of the represented user. The pink toned nodes describe a high level of activity, the blue toned nodes describe a medium level of activity and the gray ones describe a low level of activity.

[8] Katz, M., & Shapiro, C. (1994). Systems Competition and Network Effects. The Journal of Economic Perspectives, 8(2), 93-115. The dynamic on the market is described as follows: "In markets with network effects, there is natural tendency toward de facto standardization, which

firm holding significant market power, which can be exploited on either the primary market or on adjacent markets. The network effect greatly increases the entry costs of new firms into the market, so much that it can even prevent market entry of firms offering preferential services. As a result, innovation incentives on the market might be harmed.

16. The incumbent firm's market power can be reduced when a sufficient number of customers are willing to consume the service from several suppliers (i.e. multi-home). We shall expand on this subject in the next Chapter.

17. Two main quantitative signals may support the existence of a network effect in the field of payment apps in Israel: (1) an increase in the usability of Bit as the number of users has increased; (2) greater usability of apps with a larger number of users. The study's finding show that Bit's usability increase was indeed positively correlated with the number of users. Furthermore, evidence of the existence of a network effect can also be seen in the recruitment of new users. The study's findings do indeed point to established users tendency to "recruit" new users to their preferred network, once again supporting the conclusions regarding the existence of a significant network effect and app differentiation.

5. Multi-Homing

18. In theory, the willingness of consumers to consume a product or a service from more than one supplier (multi-home) might restrain the ability of the incumbent firm that enjoys a network effect to exploit its power against them. In particular, it might enable a new firm that offers an innovative product or a niche product to enter the market and possibly eventually challenge the incumbent firm. In terms of the extent of multi-homing in registration for P2P apps, the data indicates that the share of users registered to more than one app ranges between 40% and 65%. The data also points to a significant difference between Bit and the other apps – whilst a large percentage of Bit users are exclusively registered on Bit, the majority of Paybox and Pay users are also registered on at least one other app. A closer examination into patterns of app use in transactions where both parties are pre-existing users of the chosen app shows that ~50% of non-group transfers were executed where the transaction partners' common app was Bit only; that is as opposed to only a small share of transactions in which the both users' only mutually shared app was Paybox or Pay.[9] This finding establishes further evidence of the magnitude of the network effect in P2P transfers, i.e., of the fact that a larger number of users increases usage potential. Furthermore, even when both transaction parties had both Bit and another app in common, the vast majority of non-group payment transactions are executed using Bit. A mirrored result appears regarding Paybox, when group payments transfers are examined.

19. The conclusion that arises from these findings is that the substantial rate of multi-homing in registration is not evidence of a high willingness of consumers to use more than one payment app in order to perform the same transaction. Rather, they serve as evidence

means everyone using the same system. Because of the strong positive-feedback elements, systems markets are especially prone to "tipping," which is the tendency of one system to pull away from its rivals in popularity once it has gained an initial edge …" In other words, once one of the competitors on the market with network effects reaches a competitive advantage point, the market tips in his favor, and a gap is opened between the market leader and his competitors.

[9] A group payment (or **group transfer**) is a type of P2P transfer that is used for various group arrangements such as PTA staff appreciation gifts, shares take-out meals, group gifts, etc. Group transfers constitute a small portion of all of the transfer transaction executed using the apps, and make for a small percentage of the monetary volume of P2P transfers.

of the differentiation between Bit and Paybox, in the context of group payments. The findings that are set out in this section provide additional evidence of the existence of a network effect in P2P transfers and reinforce the concern of a winner-takes-all market structure.

6. Business Transaction on P2P Transfer Apps

20. Two types of businesses make use of payment apps. The first type is medium and large-sized businesses, such as insurance companies, fast food chains and restaurants. In our understanding, the prevalent practice is that these businesses sign an agreement with the app that they use, prior to their joint operations, in order to settle the joint venture commercially and technologically. This covers a very small number of businesses. The common uses that these businesses make of the app include receipt of sums of money from their customers, such as payment for ordering food (P2B - person to business), or transfers of payments from the business to the user, such as insurance reimbursements (B2P - business to person).

21. The second type of businesses identified in this study are small and very small businesses, including the self-employed. These make use of P2P transfer apps without necessarily having pre-arranged their activities with the apps. The state of affairs where a small share of beneficiaries has extensive activities suggests **a kind of two-sided platform is being formed, connecting tens of thousands of small and very small businesses on the one hand, to millions of consumers on the other**. As regulatory measures mandate a yearly receipt cap on the P2P transfer apps, we were able to estimate the effect of very small businesses reaching the annual receipt cap on their operations. The estimation findings show that where a business reached the receipt cap on Bit, its total average weekly receipts on the other apps increased. The estimated increase in the group of beneficiaries that made use of several apps prior to treatment is even higher. However, this diversion is not sufficient to fully "compensate" for the loss of ability to receive money via Bit. This examination provides evidence that Bit has a leading position under a dynamic test as well. The other apps do not provide a proper alternative for beneficiaries to receive payments. The reasonable explanation for this finding is that the beneficiaries are unable to divert payers to making use of other apps.

7. Insights, Concerns, Recommendations and Future Directions

22. ICA's study on the field of payment apps P2P transfers in Israel points to these main findings: **(1) There is a significant network effect in the consumption of P2P transfer services; (2) this field tends towards a winner-takes-all – Bit; (3) this field still holds significant growth potential; and (4) Paybox is differentiated from other payment apps by its group payment transfer services.**

23. These insights suggest that despite the growth potential of the field of P2Ptransfer apps in Israel. This field approaches a winner-takes-all market structure. Hence the ability of a new competitor to successfully enter the market may be hindered, even if it will be able to offer consumers higher utility and has the ability to distinguish itself.

7.1. Concerns Regarding Abuse of Market Power in the Field of P2P

24. Firstly, the state of affairs that is described above might give rise to a competition concern regarding the increasing ability of the leading app, Bit, to abuse its emerging

dominance in the field of P2P transfers in order to harm the conditions of users of payment platforms later on. Thus, for instance, Bit might harm the quality of the services that it provides to all users by giving a unilateral notice of its intention to collect extensive private information about them. Even users who do not wish to agree to collection of the information might be forced to agree since they will have no realistic ability to transition to a competing app, due to the importance in the size of the network of such an app. Another potential harm is specific harm to the owners of very small businesses (and in particular, businesses that do not receive payment via credit card), inter alia by collecting high commissions. These businesses will not be able to refuse the demand or waive the use of Bit without risk of losing many customers who are on Bit's network.

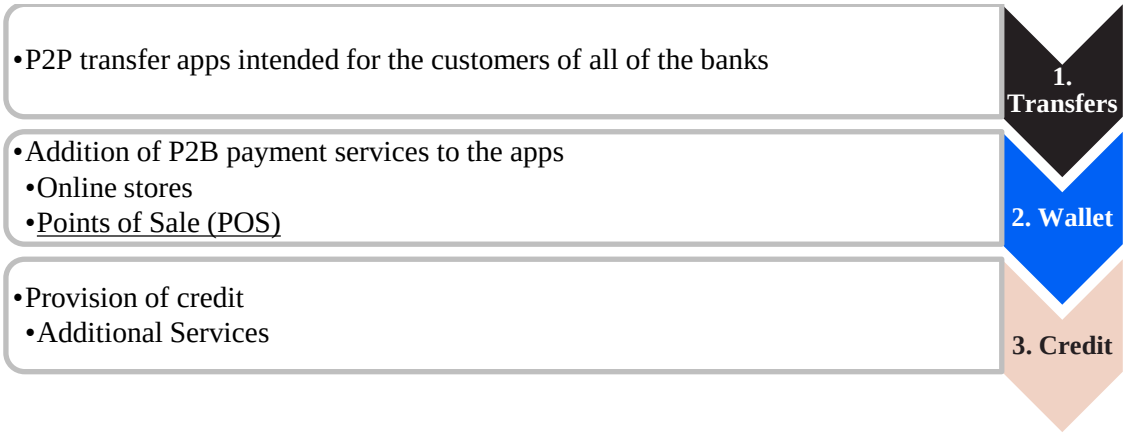
25. In order to mitigate this concern, it would appear that steps needed to be taken that might weaken the network effect, concern mandating interoperability between the apps. This may enable the development of a competitive market in which each consumer chooses to use his most suitable app, without his choice being dictated by the number of registered users on the apps network.

26. Two main disadvantages of such a solution should be noted. Firstly, there is a concern of potential harm to the incentive of innovation and development. On a market that is characterized by network advantages, each firm knows that if it "wins" the competition, it can expect to enjoy a dominant position which will enable it to make profits. The desire to attain that position is an incentive for firms to invest in innovation, in the generation of goodwill, in increased efficiency and in production. If, from the outset, companies knew that ex-post regulatory intervention would prevent them from "collecting the fruits" of the position that they attain, their incentive to invest in improving the product and penetrating the market will be reduced next time around. Secondly, a weakening of the network effect might harm the incentive of apps to diversify themselves. In a world without interoperability, the apps have an incentive to offer a unique experience, for instance, to beneficiaries – not merely to attract beneficiaries but also to attract the payers who will engage in transactions with them. This increases the chance that the payer will have a number of apps for the purpose of performing transactions with different beneficiaries. In a world with interoperability, the connection between recruitment of the beneficiary and recruitment of the payer (and vice versa) is severed. As a result of that, the app's incentive to invest in one of the parties to the transaction who might be considered to be less worthwhile in and of itself might weaken and that might also reduce the rate of multi-homing.

27. Despite these disadvantages, the ICA advocates that it is necessary to mitigate the network effect in this field. Both because even now the rate of multi-homing in usage is quite low, but mainly because of the understanding that a lack of intervention will fix a market structure that is not competitive.

7.2. Concerns Regarding Payments at Businesses and Use of Information Collected Incidentally to the Use of P2P Transfer Apps

28. As mentioned, the provision of payment services between individuals on the existing P2P transfer apps is not a profitable activity. It would appear that the main value the apps' operators driven from their operation, is as a method for recruiting customers. This is likely effective since having a frequent interface with such customers and obtaining information that is economically valuable, facilitates offering customers supplementary paid services. Particularly, the expected commercial development pathway of payment apps is set out in the following flowchart:



29. In the first stage, the banks set up an app designated for transfers between individuals (P2P), which is intended for the customers of all of the banks.[10] This activity is not profitable for the banks. A common method for deriving profit from a P2P transfer app is to add an option of paying at businesses via the app, first on online stores or at online payment interfaces at physical stores, and later at points of sale (POS) in stores. This kind of operation model in which the payment app enables payment to a wide variety of businesses shall hereinafter be referenced as a "**digital wallet**" or "**wallet**". In this context, a concern may arise that market power in the provision of P2P transfer app services will enable an entity to fortify a dominant position in the field of digital markets as well. However, it is not yet clear whether that is expected to be the only or even main "front door" entry into this field. The field of digital wallets is only just starting out in Israel and is still being designed and formulated, and at the present time, it would appear that there are relatively varied players (and potential players) in the field who come through different "front doors" (such as operations in the field of cellular telephones or retail operations).

30. Another method of deriving profits from the operation of an app is by using it to offer credit, optimized through use of the information collected regarding the customer incidentally to provision of the P2P transfer services. Some also raise the option of offering and providing users with other banking services. These services appear to constitute the core of the financial model for wallet operations, since they are expected to drive wallet profitability. This market feature is important from a competitive point of view, since the financial entities (and later on, possibly entities from other fields as well) compete for access to persons who are not part of their "regular" customer base. From the consumer's point of view, this may provide value by offering tailor maid products more suitable to the customer's requirements, using the consumer information collected during his use of the app for the purpose of P2P transfers.

31. On the other hand, it is not possible to overlook the fact that the leading app operator is the largest bank in the country, which only recently had the credit card company that it had owned separated from it, with the aim of enhancing competition in banking services. Against this backdrop, there are some who fear that the collection of this information might provide an advantage to the P2P transfer app operators (leading banks) in their access to continuous, high quality information about customers, in a way that might strengthen the largest bank and give rise to a gap that cannot be bridged, from a competitive point of view, between it and its competitors in the provision of credit, or at least, its small competitors in

[10] The universal appeal to customers irrespective of their affiliation with the bank that set up the app is an attribute that is of competitive importance on a market in which direct competition for the recruitment of existing customers of competing banks was weak for many years.

the provision of credit. Therefore, there are those who wish to impose restrictions on use of the information that is accrued on the P2P payment app for other purposes.

32. Even though the ICA acknowledges the concern regarding preserving the advantage that leading banks have in accessing information and customers, the ICA does not justify preventing use of the information that is collected incidentally to the use of P2P transfer services. Instead, steps must be taken in order to open the P2P field to a wider variety of competitors who will be able to collect the information and use it for the purpose of increasing competition in adjacent fields as well. And all of that alongside the creation of efficient mechanisms for sharing information, subject to the customer's consent.[11]

33. This was ICA's first empirical market study in the digital economy arena. Its results play a key role in promoting policy aimed at mitigating the significant network effect identified. A cross-government-agencies committee is currently designing a policy reform to mandate interoperability between the apps. The relatively fast delivery of this study's results is most likely a crucial component in its effectiveness in promoting policy. This will most likely be the case for future digital economy studies the ICA will conduct, as these rapidly changing markets require an equivocally rapid policy response to ensure its relevance.

[11] See the Memorandum of the Provision of Financial Information Services Law, 5780-2020; Joint Paper of the Competition Authority, the Protection of Privacy Authority and the Consumer Protection and Fair Trade Authority regarding the Right to Data Portability, which was published on January 3, 2021.