

The Expansion of Big Data Companies in the Financial Services Industry, and EU Regulation

by Martina Scopsi

ABSTRACT

New firms are entering the EU financial services industry and exploiting the technological gap left by incumbent institutions. Big data companies are playing an important role in shaping the current financial services landscape, especially in the area of digital payments, where they have developed a range of innovative services (e.g., Apple pay, Google pay). Given this context, regulation plays a key role in assuring a level playing field between new and existing players on the market, prompting competition, stimulating firms' interoperability and protecting consumers' confidence in the overall stability of the system. At the same time, compliance costs might hinder the ability of newcomers to develop new services and products on a broader scale. Assessing the impact of the current EU financial services legal framework on the expansion strategies of tech firms has, therefore, become an urgent undertaking.

European Union | Digital governance | Financial services

keywords

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Introduction

The application of emerging technologies and the entrance of new players in the financial services sector are significantly changing the way consumers and firms access financial services, as well as their expectations. Consumers are now seeking easy access, wider choice, better speed and an enhanced experience. As a general trend, new and existing financial service providers seem to be shifting from a product/channel-centred approach towards a customer-centred approach.

Even though the majority of customers continue to trust incumbent banks to maintain their funds and data, customers' mobility is gradually increasing. The biggest current advantage for incumbents is, in fact, the special relationship that they have built over time with their clients. Banking and finance are still businesses of trust and incumbents have long relied on clients' loyalty. However, the number of customers using daily payment or investment services provided by new entrants – and in particular by tech firms – is growing.

This trend is occurring especially in the payment services industry. A number of new players are entering the market and offering better user experience and new complimentary services. This, in turn, is impacting on the relationship between customers and incumbents. Many traditional credit institutions are facing challenges in terms of reduced profitability and lack of digitalisation/innovation programmes. In light of this development, some incumbents are invoking more rules for the use of data and technology in the financial sector. In particular, they raise concerns about a lack of level playing field between new players and traditional credit institutions.

Given this context, assessing the impact of the current EU regulatory landscape on the expansion of tech companies into the financial services sector has become an urgent undertaking. Regulation plays a key role in enabling new players to enter the

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market, as it assures equivalent operational conditions to new and existing players while safeguarding consumers and the stability of the overall system. In this regard, the EU's technologically neutral regulatory and supervisory systems intend to capture not only traditional financial services but also innovative business models. This should guarantee that consumers receive the same protection, regardless of the technology used to deliver the service, where the business is the same. At the same time, recent legal developments concerning payment services and open APIs¹ prompt competition in the retail sector by opening up banks' infrastructures and stimulating the interoperability of firms.

1. New players in the financial services industry: the case of big data companies

"FinTech", a contraction of financial technology, refers to the interlinkage of finance and technology.² The application of information technology (IT) to finance is not a new phenomenon per se. As a matter of fact, financial and technological development have long been intertwined. The financial services industry has been one of the largest purchasers of IT globally since the mid-1990s and its spending on IT is predicted to double in the next years. However, the current growth of FinTech appears to carry the potential to transform further the provision of financial services and products. On the one hand, technology is evolving at an unprecedented rate and its use has been dramatically increasing. On the other hand, a new trend has emerged as to *who* is using technology to deliver financial services.

Prior to the 2008 global financial crisis, technology was provided in order to respond to the demand from incumbent financial institutions and regulators to decrease the costs connected to regulatory compliance and increase the quality of monitoring activities. For this stage of the evolution, the word "RegTech" was coined.³ Since 2008, a new wave of FinTech has developed from the bottom up: new players have entered the financial services industry and exploited the technological gap of traditional firms, such as banks, in order to sell solution services directly to customers or to incumbents.

¹ API stands for application programming interface. These interfaces are sets of functions that can be developed by programmers to make diverse software components communicate. In the banking and financial sectors, APIs are playing a crucial role, as they allow financial institutions to increase data quality and availability.

² FinTech is defined by the Financial Stability Board (FSB) as "technologically enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services". See FSB website: *Monitoring of FinTech*, <http://www.fsb.org/?p=12571>.

³ On RegTech see generally Lawrence G. Baxter, "Adaptive Financial Regulation and RegTech: A Concept Article on Realistic Protection for Victims of Bank Failures", in *Duke Law Journal*, Vol. 66, No. 3 (2016), p. 572, <https://scholarship.law.duke.edu/dlj/vol66/iss3/5>.

It is worth noting that these players have common features that distinguish them from incumbent financial institutions. FinTech firms capitalise on the economies of scale offered by technology and data. Among these, some are start-ups that deliver financial services by merely applying new or better technology than that provided by incumbents. Some others are big tech firms and, in particular, big data companies (BDCs) that acquire and collect data in a non-financial setting, where they develop relationships with customers, and then move into the financial world aiming at directly providing services or acting as intermediaries through which customers can access financial services.

At the present stage, there is no official legal definition of BDCs. However, it is reasonable to qualify as BDCs all firms that, while offering their products or services, collect enormous volumes of data related to their consumers.⁴ The ability to process data, together with an advanced degree of technological development and huge financial resources, allows BDCs to continuously refine and diversify their commercial offer, as well as to enter into markets for which they initially have no consolidated know-how. Along these lines, Google, Amazon, Facebook and Apple can all be classified as BDCs.⁵ These firms obtain a great amount of data from various sources and combine it in order to assess their customers' preferences, activities and choices. Data can be either sold to financial services providers or used by the firm itself to expand its offering services.

Even though financial institutions have always made use of data to make business decisions, the amount and quality of data available to BDCs is much greater and more complex. Data stem from multiple and different contexts. In addition, the application of big data analytics makes it possible to link data in order – for instance, to better assess the risk of granting credit to a consumer or to better define credit conditions. Traditional financial institutions, by contrast, have only at a later time considered supplementing their offer by using technology more broadly. Furthermore, they have been gathering data only from their banking relationship with clients. The amount of data is, therefore, less extensive and covers only information related to the customer's financial history within that specific context.

2. The new financial services landscape

FinTech is a global trend and it is estimated to become an increasingly significant part of the financial services sector. An important role in shaping the new financial services landscape is played by BDCs. Alibaba, China's biggest online commerce company, led the way by creating Ant Financial, a controlled corporation that runs Alipay, the largest payments network worldwide, and WeBank, which offers loan

⁴ For a definition of big data see Joint Committee of the European Supervisory Authorities (ESAs), *Joint Committee Final Report on Big Data* (JC/2018/04), 15 March 2018, p. 8-9, <https://www.esma.europa.eu/node/84854>.

⁵ See Mariateresa Maggiolino, *I big data e il diritto antitrust*, Milano, Egea, 2018, p. 28-31.

services. Amazon offers lending services to its online sellers in the USA, Japan and the UK.⁶ Similarly, BDCs have entered the financial services industry in numerous European countries. Since 2018, Android Pay and Google Wallet has merged into a single pay system called Google Pay, a digital wallet platform and online payment system developed by Google to enable users to make payments with Android phones, tablets or watches.⁷ Apple Inc. launched its Apple Pay mobile payment and digital wallet service;⁸ Facebook provides e-money services to its users.⁹ Microsoft, Samsung and Vodafone all offer forms of payments and other financial services.

As the financial landscape is rapidly changing and new players are being involved in the entire financial value chain, it comes as little surprise that mapping the activities carried out by FinTech firms is quite a complicated task. The European Banking Authority in spring 2017 undertook a mapping exercise to gain better insight into the innovations applied by FinTech firms and the financial services offered.¹⁰ The exercise was crucial to define the regulatory treatment applying to these firms and assess the extent to which the provision of these financial services is subject to an authorisation and/or registration scheme (under European Union or national law) and supervisory approaches to FinTech (such as innovation hubs).

As to the technology applied, FinTech firms appear to apply a wide range of financial innovations. Most frequently, FinTech firms apply an online-only distribution channel (e.g., peer-to-peer transfers or crowdfunding), a mobile-only distribution channel, a value transfer network, big data analytics, data aggregation services and robo-advice. These technologies are often combined, as usually firms apply more than one financial innovation at a time.

Furthermore, FinTech firms provide a wide range of financial services. However, they are particularly active in the context of payments, clearing and settlement services together with credit, deposit and capital-raising services. Other financial-related activities are also provided, such as lending, consumer credit, factoring or portfolio management. It is worth pointing out that these new players heavily rely on interoperability with other firms. They might, in fact, operate as independent providers, such as e-money institutions, or as firms whose business depends on other service providers to function (e.g., payment initiation service providers or

⁶ Amazon Lending is an option for small business owners who sell on the Amazon marketplace. It is not possible to simply apply to Amazon lending, since it is first necessary to register as an Amazon seller and start selling items on Amazon. Then it is up to Amazon to choose which sellers might be a good fit for their financing services and to invite them to participate in the Amazon loans programme. See Biagio Simonetta, "Ecco le app digitali che hanno rivoluzionato i pagamenti e ora puntano al credito", in *Il Sole 24 Ore*, 13 January 2018, <https://www.ilsole24ore.com/art/tecnologie/2018-01-13/i-prestiti-amazon-lending-100521.shtml>.

⁷ See Google website: *Google Pay: Pay for Whatever, Whenever*, <https://pay.google.com/about>.

⁸ See Apple website: *Apple Pay*, <https://www.apple.com/apple-pay>.

⁹ See Facebook website: *Community Payments Terms*, https://www.facebook.com/payments_terms.

¹⁰ European Banking Authority (EBA), *Discussion Paper on the EBA's Approach to Financial Technology (FinTech)* (EBA/DP/2017/02), 4 August 2017, p. 16-33, <https://eba.europa.eu/-/eba-publishes-a-discussion-paper-on-its-approach-to-fintech>.

account information service providers).¹¹

As to BDCs, the expansion strategy of these firms so far has mainly been related to the payment services industry. In particular, BDCs have developed innovative technologies to enable users to make online, in-store and mobile digital payments by simply creating an account associated to a credit or debit card issued by a bank or other payment institution. By offering these services, BDCs continue gathering and elaborating data, while consumers benefit from fast and cheap payment solutions. It is, therefore, reasonable to argue that BDCs might soon decide to further expand their financial services offer and enter into new markets.

The innovative use of big data and technology in the financial services sector has been perceived by incumbent institutions as possible regulatory arbitrage and an unlevel playing field between regulated credit institutions and FinTech start-ups and other tech firms. For instance, it has been argued that some FinTech firms might act outside the scope of current financial regulation and, therefore, do not have to comply with restrictions concerning prudential or capital requirements.¹² Consequently, concerns have been raised about whether the existing pieces of financial regulation are fit to address the potential disruptive effects brought by newcomers. In this regard, it is questioned if the entrance of FinTech firms into the financial services sector undermines consumer protection and the stability of the EU financial system as a whole by affecting investors' confidence and generating substantial risks.

3. The impact of current EU financial services regulation on the expansion of BDCs

The entrance of such new players in the financial services sector has both favourable as well as unfavourable potential consequences.

On the one hand, FinTech generates substantial advantages for consumers and the overall business. It is all about innovation, transformation and disruption. It fosters competition by providing new opportunities to consumers and stimulating their ability to switch among different firms. In addition, it facilitates the reduction of transactions costs for financial contracts, as investments in technology allow for an automation of procedures. The big data approach also plays a key role: the quality and dimension of data sets owned by Tech firms enable them to form a true picture of customers' product preferences and risk profile which, in return, serves as an appropriate basis for prudent business decisions.¹³ It is, therefore, a

¹¹ Tom Kokkola (ed.), *The Payment System. Payments, Securities and Derivatives, and the Role of the Eurosystem*, Frankfurt am Main, European Central Bank, 2010, p. 33, <https://www.ecb.europa.eu/pub/pdf/other/paymentsystem201009en.pdf>.

¹² Joint Committee of ESAs, *Joint Committee Final Report on Big Data*, cit., p. 9-10.

¹³ EBA, *Report on the Prudential Risks and Opportunities Arising for Institutions from FinTech*, 3

common assumption that this innovation development should be fostered rather than hindered. In this regard, the regulatory dimension is crucial for the possible expansion of newcomers in the financial services industry.

On the other hand, it is still unclear if and to what extent these developments will impact on individuals and the stability of the financial system as a whole. FinTech may change the risk profile of credit institutions as previously immaterial risks, such as the risk of mismanagement of personal data or lack of data protection, may be amplified. Financial inclusion, product comparability and pricing practices are other possible issues related to the use of big data in the financial services sector. At the same time, incumbent firms, such as banks and other financial firms, bear numerous other risks in terms of disintermediation of customer relationships and eroded market power.

The evolution of FinTech calls for a re-think by credit institutions of the approach on customer interaction, as financial innovation is currently changing the way consumers and firms access financial services. To this end, some credit institutions are entering into direct competition with FinTech firms by setting up innovation hubs and providing new FinTech-enabled products, such as mobile payments. Other credit institutions enter into partnerships with start-ups and FinTech firms to offer new products to their customers.

From a regulator's perspective, it is fundamental to understand what rules apply when a tech firm decides to move from not being involved in the financial context to creating financial products or providing financial services. To this end, the aforementioned mapping activity is crucial, as it allows for better insight into the financial services offered by FinTech firms, and identification of their regulatory status.

The EU financial services sector is heavily regulated. Notably, the EU legislative framework represents a quite solid tool to address the concerns raised regarding the stability of the financial system and the lack of a level playing field among competitors. It is worth pointing out that the largest part of the EU's regulatory and supervisory system in the financial services sector aims to be technologically neutral, as it is based on the application of the "same business, same rules" principle. Thus, firms are required to meet the standards set by EU law in cases where the services or products offered resemble formal banking or financial services characteristics, regardless of the technology used to deliver them. This is a crucial step to avoid the risks of regulatory arbitrage and unfair competition. For instance, the definition of payment services given by the Payment Services Directive (PSD, Directive 2007/64/EC, replaced by PSD 2, Directive (EU) 2015/2366)¹⁴ comprises a

July 2018, p. 4-9, <https://eba.europa.eu/-/eba-assesses-risks-and-opportunities-from-fintech-and-its-impact-on-incumbents-business-models>.

¹⁴ Directive 2007/64/EC of 13 November 2007 (PSD), <http://data.europa.eu/eli/dir/2007/64/oj>; and Directive (EU) 2015/2366 of 25 November 2015 (PSD2), <http://data.europa.eu/eli/dir/2015/2366/oj>.

vast array of payment instruments and allows for the development of new types of payment services, while ensuring equivalent operating conditions for both existing and new payment service providers.

As a matter of fact, a large proportion of the financial activities currently carried out by FinTech firms attract regulation. FinTech firms can be subject to mandatory rules either on the basis of an authorisation requirement or upon solicitation of clients or arrangement of financial services.¹⁵ However, as technology is continuously evolving, it is, in fact, true that in some cases financial regulation may fail to subject FinTech firms to prudential rules. For this reason, further work is being conducted by EU supervisory and legislative authorities on the prudential risks and opportunities stemming from the use of new technologies.

As already stressed above, currently BDCs are mainly active in the payment services industry. This industry has experienced substantial changes in the last years, due to technological innovation, and EU payment services law represents a relevant example of how EU regulation is dealing with this phenomenon. Particularly, PSD is an EU directive to regulate payment services and payment service providers throughout the EU and the European Economic Area. When enacted, PSD aimed at increasing competition in the payments market and providing a level playing field by harmonising consumer protection and the rights and obligations for payment providers and users. PSD regulated the information requirements, the rights and obligations of payment services users, as well as the prudential requirements for entering the market of entities qualified to provide these services (payment service providers). In order to remove legal barriers to market entry, PSD established "a single licence for all providers of payment services". By doing so, it introduced a "category of payment service providers, 'payment institutions', by providing for the authorisation, subject to a set of strict and comprehensive conditions".¹⁶ These principles were strengthened with the provisions of PSD2.

A number of BDCs active in the payment service industry have already been authorised to operate by competent authorities. For instance, in October 2016, the Central Bank of Ireland added Facebook Payments International Limited to its roster of digital payment providers. The license granted authorised Facebook to provide basic financial services, such as electronic money transfer, to all EU citizens.¹⁷ At the same time, being subject to an authorisation regime, Facebook

¹⁵ EBA, *Discussion Paper on the EBA's Approach to Financial Technology (FinTech)*, cit., p. 20-21. EBA in its discussion paper on FinTech showed that many firms belonging to the sample appeared to be regulated pursuant to EU law or national law. Some were payment institutions, whereas others were investment firms, credit institutions or Electronic Money Institutions. National registration regimes and national authorisation regimes applied to another proportion of firms while only a small proportion of them were not subject to a regulatory regime under EU or national law.

¹⁶ Tenth recital in the preamble to PSD.

¹⁷ Madhumita Murgia and Martin Arnold, "Bank of Tech Poses Growing Threat to Traditional Institutions", in *Financial Times*, 14 February 2017, <https://www.ft.com/content/1a862cd2-efd3-11e6-ba01-119a44939bb6>.

Payments must comply with rules regarding conduct of business, systems requirements and operational oversight. Similarly, Amazon, Google and Apple all applied for authorisation in Europe.

The fact that BDCs providing financial services are most likely subject to mandatory rules implies that this regulatory framework may represent a barrier to market entry and expansions. Firms are, in fact, compelled by legislators to assure that their compliance systems and controls are robust, that they meet minimum capital requirements and that they can react to both individual errors and systems failures.

However, as these firms expand and move beyond their core markets, developing appropriate risk management strategies should be part of their business development strategy and overall corporate governance. In addition, regulation is essential for any financial service provider to be able to access the services of technical infrastructures while assuring integrity and stability of systems. Provisions are made for the non-discriminatory treatment of any providers competing in the same market and assure the ability to use the services of the technical infrastructures under the same conditions. Moreover, while compliance costs might impact on the expansion ability of small start-ups, they are certainly not an entry barrier for BDCs. On the one hand, these firms rely on huge financial capacities; on the other hand, the reputational costs associated with a violation of prudential requirements would be higher than that of being compliant, as it would compromise the trust relationship established by BDCs with their customers and hinder their ability to continue in the data collection and processing activity.

4. PSD2 “access to account” rule and right to data portability: fostering competition through regulation

BDCs derive their influence mainly from technology and data. Data represents a fundamental source of revenue and an essential tool to strengthen competition in the market. In this regard, the EU regulator has taken crucial steps in developing a framework that aims at maintaining fair competition among different players and removing entry barriers for newcomers. This is especially true for the payment services market.

PSD2 establishes new rules to close the regulatory gaps left by PSD while providing more legal clarity. Along these lines, equivalent operating conditions are guaranteed to existing and new players on the market, new means of payment are enabled to reach a broader market, and a high level of consumer protection is ensured in the use of those payment services across the Union as a whole. This, in turn, should generate efficiencies in the payment system, leading to more choice and more transparency of payment services while strengthening the trust of consumers in a harmonised payments market.

In this perspective, two main innovations are worth pointing out here.

On the one hand, PSD2 enhances rules on authorisation of payment institutions. To this end, the Directive introduces a neutral definition of acquiring in payment transactions, in order to capture not only the traditional acquiring models structured around the use of payment cards, but also different and innovative business models.

In addition, PSD2 removes barriers preventing third-party providers (TPPs) from entering the market of payments and offering solutions on a large scale. Particularly, two new payments services are introduced: the Payment Initiation Service (PISP) and the Account Information Service (AISP). The former is a service provided by those who stand between the payer and his online payment account, by starting the payment to a third-party beneficiary. The latter is a service made available to users of payment services with online access to accounts through which the payer can get, via an online platform, a consolidated view on all his payment accounts, even if those are held by multiple payment service providers. From this it follows that TPPs will have to comply with the same rules as the traditional payment service providers (registration, licensing and supervision by the competent authorities) in proportion to the dimension and scale of their activities.¹⁸ Furthermore, TPPs are required to assure full compliance with data protection law.

On the other hand, PSD2 opens up banking infrastructures to third regulated parties. According to the “access to account” rule, banks, upon request of the account holder, must release their data in a standardised form, in order to share them with authorised service providers only.¹⁹ The so called “open banking” is a big opportunity to create new business models and revenue streams, both for newcomers as well as for traditional financial institutions. By accessing bank account data, which have long been locked-in by banks, new TPPs can prompt competition in the retail sector. Similarly, incumbents have the opportunity to take full advantage of their position as intermediaries between account holders and tech firms. As a matter of fact, banks maintain an essential role in assuring interaction between consumers and newcomers and in enabling tech firms to deliver their services. Therefore, such a rule fosters incumbents’ ability to adopt new and better marketplace strategies and hinders their willingness to merely rely on customer inertia.

More generally, the latest developments in European data protection law suggest that it is the purpose of the regulator to enable consumers to switch at any time from one provider to another by taking their own data with them and solely on

¹⁸ EBA, *Draft Regulatory Technical Standards on Strong Customer Authentication and Common and Secure Communication under Article 98 of Directive 2015/2366 (PSD2)* (EBA/RTS/2017/02), 23 February 2017, p. 5-11, <https://eba.europa.eu/regulation-and-policy/payment-services-and-electronic-money/regulatory-technical-standards-on-strong-customer-authentication-and-secure-communication-under-psd2/-/regulatory-activity/discussion-paper>.

¹⁹ In particular, Articles 66 and 67 of PSD2 specify which data can be requested by the telecommunication service provider in relation to the service provided.

the basis of a cost benefit analysis. In this regard, Article 20(1) of the General Data Protection Regulation states that “the data subject shall have the right to receive the personal data concerning him or her, which he or she has provided to a controller, in a structured, commonly used and machine-readable format and have the right to transmit those data to another controller without hindrance from the controller to which the personal data have been provided”,²⁰ where the processing is based on consent and is carried out by automated means. Data portability has a potentially crucial impact on consumers’ habits as it removes lock-in effects related to the risk of losing valuable data when switching from one service provider to another.

In light of the above, companies interested in winning customers from another service provider, irrespective of whether it is a financial institution or a non-regulated entity, can offer to integrate their personal data if they decide to bring these along when switching to a new service. Similarly, upon request of customers, banks are required to give access to account data by opening their APIs to authorised TPPs. This process may lead to the development of a data marketplace that is based on consumer consent and that allows firms that provide new or better services to gain market power.

Concluding remarks

Regulation plays a key role in prompting competition in the context of the financial services industry. Given the potential great benefits that FinTech may entail for consumers and for business overall, it is a common assumption that this innovation development should be fostered rather than hindered. In order to enable new or better services to reach the market on a broader scale, it is crucial to guarantee equivalent operational conditions to existing and new players. At the same time, consumers’ confidence in the proper functioning of the market must be protected and, more generally, systemic risks must be avoided.

Along these lines, it is true that mandatory rules increase compliance costs for BDCs willing to expand into the financial services sector and may therefore constitute a barrier to market entry. However, regulation is a key tool to allow third parties to access the financial services market within a level playing field while providing consumers with adequate protection and certainty about the regulatory status of service providers.

The European regulator is taking important steps towards the achievement of these purposes. As already stressed, payment services are at the forefront of this process. Since the adoption of Directive 2007/64/EC, new types of payment services have emerged, especially in the area of Internet payments. Moreover,

²⁰ Regulation (EU) 2016/679 of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and repealing Directive 95/46/EC (General Data Protection Regulation), <http://data.europa.eu/eli/reg/2016/679/oj>.

technological developments have brought the emergence of new services, such as payment initiation and account information services. However, newcomers aiming at providing these services, being involved in pre-transaction, initiation and after-transaction, found significant entry barriers. Banks could, in fact, refuse access to customers' accounts and prevent them from delivering the service. According to the new PSD2 "access to account" rule, banks shall allow third parties to obtain customers' account data on the basis of customers' consent. Access must be granted on a non-discriminatory basis. At the same time, EU law on payment services assures that only third regulated parties can access data. From this it follows that TPPs must comply with prudential rules in proportion to the nature and scale of their activity.

Interestingly, as a result of this evolution, differences between traditional financial institutions and tech firms might likely disappear in the future.²¹ The importance of data and technology will be crucial for banks as well as tech firms. The former might invest more in data analytics and technological development. The latter might continue expanding in the financial sector and even apply for full banking license. In this perspective, financial regulation is crucial in preventing uneven competition.

Updated 25 March 2018

²¹ Dirk A. Zetsche et al., "From FinTech to TechFin: The Regulatory Challenges of Data-driven Finance", in *NYU Journal of Law & Business*, Vol. 14, No. 2 (Spring 2018), p. 415, https://docs.wixstatic.com/ugd/716e9c_2d238eae54ac4d35abb655dddb91f256.pdf.

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