Valeria Falce *

Fintech e raccolte dati
Tech-fin databases in the open banking system. An out-of-the-box competition law perspective

1. Introduction

As the fourth industrial revolution overrides boundaries (between sectors, services and products) and traditional (legal and economic) categories [1], also the financial sector is shaken by the digital *disruption*. Deep changes are occurring in the Fintech era in terms of subjects (techfin), processes (modeled by IA), products/services (unbundled), markets (open, unstructured and disintermediated), models (coopetitive) and relationships (not anymore trustees) [2].

* Valeria Falce, PhD, LLM (Valeria.Falce@unier.it) is Jean Monnet Professor of EU Innovation Policy and Full Professor of Regulation, Competition and Intellectual Property at the European University of Rome.

[1] Specifically, on the fourth industrial revolution see now EUROPEAN COMMISSION, *Report 'Competition policy for the digital era'* (by J. CRÉMER, Y.-A. DE MONTJOYE, H. SCHWEITZER), 2019, at 35 identifying its features in terms of "a mixture of new features, new processes and new technologies arranged in a unique way", unfinished and unstructured changes, and first to market advantages.

[2] *"Fintech" is an umbrella term encompassing a wide variety of business models* in ECB, *Guide to Assessments of Fintech Credit Institution Licence Applications*, Sept. 2017; H.Y. CHIU, *The disruptive implications of FinTech – Policy themes for financial regulators*, 21, in *Journal of Technology Law & Policy* 55, 2017; ACCENTURE, *Fintech and the Evolving Landscape: Landing Points*

The driving forces orienting the financial revolution appear to be mainly twofold: the first ones is *external* and *conglomeral*, being characterized by a process of *fintegration* where actors [3] mastering extremely sophisticated digital techniques strategically enter the financial sector, coordinating their activities with those undertaken by banks and financial institutions; the second ones is *internal* and *intra-sectoral*, being characterized by a *data-centric* model endorsed by old and new actors in providing financial services at large, that is based on the collection, classification and use of massive personal [4], anonymous [5] and commercial data [6].

---

for the Industry, April 2016; R. ALT, R. BECK, M. SMITS, *FinTech and the Transformation of the Financial Industry*, 28 *Electronic Markets*, 2018; D.W. ARNER, J. BARBERIS, R.P. BUCKLEY, *The evolution of fintech: new post-crisis paradigm*, Georgetown Journal of International Law, vol. 47(4): 1271-1320, 2016; M. BOFONDI, G. GOBBI, *The big promise of Fintech*, European Economy, vol. 2: 107-119, 2017. On Techfin, see D.A. ZETZSCHE, R.P. BUCKLEY, D.W. ARNER, J.N. BARBERIS, *From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance*, EBI Working Paper Series, n. 6, 2017; EBA, *Discussion Paper on the EBA's approach to financial technology (FinTech)*, EBA/DP/2017/02, 4 August 2017; C. SCHENA, A. TANDA, C. ARLOTTA, G. POTENZA, *Lo Sviluppo del Fintech – Opportunità e Rischi per l'Industria Finanziaria nell'Era Digitale*, Consob, Milano, 2018; BANCA D'ITALIA, *Fintech in Italia – Indagine Conoscitiva sull'Adozione delle Innovazioni Tecnologiche Applicate ai Servizi Finanziari*, Banca d'Italia, Roma, 2017; R. LENER, *Fintech: Diritto, Tecnologia e Finanza*, Minerva Bancaria, Roma, 2018; A. JANCZUK-GORYWODA, *Evolution of EU Retail Payments Law*, 40 *European Law Review*, 858, 2015; R. FERRARI, *L'era del Fintech. La Rivoluzione Digitale nei Servizi Finanziari*, Franco Angeli Edizioni, Milano, 2016; M. ZACHARIADIS, P. OZCAN, *The API economy and digital transformation in financial services: the case of open banking*, SWIFT *Institute Working Paper* n. 2016-001, 2016; D. ZAOTTINI, L. LO PRATO, *La Centralità dell'Unione Europea nei Settori Bancario, Finanziario ed Assicurativo, Servizio Studi del Senato*, 2018; D. MILANESI, *A new banking paradigm: the state of open banking in Europe, the United Kingdom and the United States*, TTLF *Working Papers* n. 29, 2017; ISO/TC 307 – *Blockchain and Distributed Ledger Technologies*. More generally, on disitermediation, P. DE FILIPPI, S. MCCARTHY, *Cloud Computing: Centralization and Data Sovereignty*, 3(2) *European Journal for Law and Technology,* 2012; V. BUTERIN, *The Meaning of Decentralisation*, in medium.com, 6 February 2017, available at https://medium.com/@VitalikButerin/the-meaning-of-decentralization-a0c92b7.

[3] On the categories of non-banking institutions that currently operate in the financial market (Front-end providers, for example: providers of interface services between the end users of payment services and the traditional clearing and settlement process; Back-end Providers: non-bank entities that provide services, outsourced by banks, connected to certain phases of the payment chain, such as for instance, data security services, data center services, audits, ecc.; Retail payment infrastructure operators: operators that offer, often collaborating with banks, specific clearing and processing services for card transactions; End-to-end providers, which category consists of a combination of the above), see CPMI, *Non-banks in retail payments*, CPMI Papers N. 118, Sep 2014; A. MCQUINN, W. GUO, D. CASTRO, *Policy Principles for FinTech*, in *ITIF – Information Technology & Innovation Foundation*, vol. 1-52, 2016.

[4] Pursuant to art. 4, n. 1 of the (EU) Reg. 2016/679, personal data is defined as "*any information regarding an identified or identifiable natural person ("interested party")*". See European Data Protection Board, *Linee guida sul diritto alla portabilità dei dati*, 5.04.2017; V. CUFFARO, *Il*

The ongoing process may be synthesized as follows. O*nline* service platforms first ensure ease of communication and access to the markets for the exchange of goods and services by consumers/users and businesses[7].

diritto europeo sul trattamento dei dati personali, in *Contr. e impr.*, 3, 1098, 2018; Mondini Rusconi Studio legale, *Big data: privacy, gestione, tutele: Acquisizione e protezione dati, Linee guida GDPR, Concorrenza e mercato, Proprietà intellettuale, Valorizzazione*, Wolters Kluwer, Milano, 2018.

[5] The definition of anonymous information is contained within recital 26 of the EU Regulation n. 679/2016: "*The principles of data protection should therefore not apply to anonymous information, namely information which does not relate to an identified or identifiable natural person or to personal data rendered anonymous in such a manner that the data subject is not or no longer identifiable*". See among the others, G. BUTTARELLI, *The EU GDPR as a clarion call for a new global digital gold standard*, in *International Data Privacy Law*, 2/2016.

[6] In particular, the Financial Stability Board (FSB) has contributed to the analysis of the issue through a series of research and in-depth analyzes merged into the following documents: *Artificial intelligence and machine learning in financial services. Market developments and financial stability implications*, (November 2017); *Financial Stability Implications from FinTech*, (June 2017). Also FSB and BIS-CGFS have published works on such matter: *FinTech credit. Market structure, business models and financial stability implications*, (May 2017). The International Monetary Fund has investigated the issues in question in *IMF Staff Discussion Note, FinTech and Financial Services: Initial Considerations*, (June 2017). IOSCO published *Research Report on Financial Technologies (FinTech)*, (February 2017); *Final Report Update to the Report on the IOSCO Automated Advice Tools Survey*, (December 2016); *IOSCO Report on the IOSCO Social Media and Automation of Advice Tools Surveys*, (July 2014), *IOSCOPD445.* Bank of International Settlements (BIS) has released the following documents: *Sound Practices: Implications of FinTech Developments for Banks and Bank Supervisors,* (February 2018); *BIS (Committee on Payments and Market Infrastructures): Report on Distributed ledger technology in payment, clearing and settlement – An analytical framework,* (February 2017), d157. WFE-IOSCO (AMCC) have contributed to the discussion with *Financial Market Infrastructures and Distributed Ledger Technology (Survey)*, (August 2016). The European Union, active in this field, has contributed through the work of its institutions; in particular the European Parliament has published: *ECON Draft Report on FinTech: the influence of technology on the future of the financial sector – 2016/2243(INI)* (January 2017), the EU Commission, *FinTech: a more competitive and innovative European financial sector, Documento di consultazione* (February 2017); the ECB, *Consultation Draft on Guide to assessments of FinTech credit institution licence applications,* (September 2017); *Occasional paper on Distributed ledger technologies in securities post-trading Revolution or evolution?* (April 22nd, 2016); l'ESMA *Discussion Paper on The Distributed Ledger Technology Applied to Securities Markets* (January 2017), l'EBA *Discussion paper on the EBA's approach to financial technology (FinTech)*, (August 2017).

[7] See on those matters the newest Digital Services Act and Digital Markets Act, i.e. *Proposal for a regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector*, Brussels, 15 dicembre 2020 COM(2020) 842 final; the *Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services*; and all the recent European Commission's initiatives on fostering foster an environment in which online platforms thrive such as the *Communication from the commission to the european parliament, the council, the european economic and social committee and the committee of the regions Online Platforms and the Digital Single Market Opportunities and Challenges for Europe*, and the *Commission Recommen-*

Then, they leverage from the original function of decentralized and widespread interconnection, so as to actively enter new markets and provide new services as financial intermediaries. Last, they merge or strategically cooperate with financial institutions, through start-ups, partnerships, joint ventures [8], offering modular services and thus fully contributing the sharing economy [9].

---

dation of 1.3.2018 on measures to effectively tackle illegal content online (C(2018) 1177 final); see also *EU eGovernment Action Plan 2016-2020 – Accelerating the digital transformation of government,* COM(2016) 179 *final; European Cloud Initiative – Building a competitive data and knowledge economy in Europe*, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions*. COM(2016) 178 *final*; UE Commission, *Le piattaforme online e il mercato unico digitale Opportunità e sfide per l'Europa*, SWD, 172 final, 2016; MONOPOLKOMMISSION, *Competition policy: The challenge of digital market*, Special Report No 68 July, 1st, 2015; CPMI, *Non-banks in retail payments, BIS,* 2014; L. FILISTRUCCHI, D. GERADIN, E. VAN DAMME, P. AFFELDT, *Market Definition in two-sided markets: theory and practice*, in *Journal of Competition Law & Economics* Vol. 10, 2014; J. JOOYONG, *Entry of Non-financial Firms and Competition in the Retail Payments Market*, Bank of Korea Working Paper No 2015-19, July 6, 2015; Autoriteit Consument & Markt, *Report*: *Fintechs in the payment system The risk of foreclosure*, December 19th, 2017; B. SCHÖNFELD (interview to), *The PSD2 from a European perspective*, in *Clear.it*, June 2018; EBA, *Final Report – Draft Regulatory Technical Standards on Strong Customer Authentication and common and secure communication under Article 98 of Directive 2015/2366 (PSD2)*, 23.02.2017.

[8] See G. GOBBI, *The troubled life of the banking industry*, Wolpertinger Conference, Verona, 2016.; *Lo sviluppo del Fintech. Opportunità e rischi per l'industria finanziaria nell'era digitale*, Quaderni Fintech Consob, n. 1 marzo 2018, p. 90 ss.; D.A. ZETZSCHE, R.P. BUCKLEY, D.W. ARNER, J.N. BARBERIS, *From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance*, EBI Working Paper Series No. 6, 2017; European Banking Authority, *Discussion Paper on the EBA's approach to financial technology (FinTech)*, 2017; European Supervisory Authorities, *Joint Committee Discussion Paper on The Use of Big Data by Financial Institutions*, 2016; European Central Bank, *The payment system*, 2010; A. JANCZUK-GORYWODA, *Evolution of EU Retail Payments Law*, 40 European Law Review, 858, 2015; M. ZACHARIADIS, P. OZCAN, *The API Economy and Digital Transformation in Financial Services: the Case of Open Banking*, SWIFT Institute Working Paper No. 2016-001; C. MARIOTTO, M. VERDIER, *Innovation and Competition in Internet and Mobile Banking: an Industrial Organization Perspective*, Bank of Finland Research Discussion Papers No. 23, 2015; M. CARNEY, *Enabling the Fintech transformation: Revolution, Restoration, or Reformation*, speech given at Mansion House 16 June 2016.

[9] Institute of International Finance, *RegTech in Financial Services: Technology solutions for compliance and reporting*, 2016; Financial Stability Board, *Financial stability implications from Fintech: supervisory and regulatory issues that merit authorities'attentions,* 2017; European Banking Authority, *Discussion Paper on the EBA's approach to financial technology*, 2017; C. SCHENA, A. TANDA, C. ARLOTTA, G. POTENZA, *Lo sviluppo del FinTech. Opportunità e rischi per l'industria finanziaria nell'era digitale*, in G. D'AGOSTINO, P. MUNAFÒ, Quaderni FinTech, Consob, 2018; D.A. ZETZSCHE, R.P. BUCKLEY, D.W. ARNER, J.N. BARBERIS, *From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance*, EBI Working Paper Series, n. 6, 2017; European Banking Authority, *The EBA's fintech roadmap. Conclusions from the consultation on the EBA's approach to financial technology* (*fintech*), 2018; European Banking Authority,

In the new open ecosystem, ICT (Information and Communication Technology) and IOT (Internet of Things) technologies, Big Data analytics [10], user profiling techniques and artificial intelligence systems revolutionize the markets [11-12], redesigning their boundaries [13], dynamics and products [14].

EBA Report on the impact of fintech on incumbent credit institutions' business models, 2018; ESMA, EBA, EIOPA, *Joint Committee Final Report on Big Data*, march 2018, JC/2018/04; G. COLANGELO, O. BORGOGNO, *Data, Innovation and Transatlantic Competition in Finance:* The *Case of the Access to Account Rule*, 2018.

[10] On this topic see the *Proposal for a regulation of the european parliament and of the council on european data governance (data governance act)* com/2020/767 final, which is the first of a set of measures announced in the 2020 European strategy for data. This instrument aims to foster the availability of data for use by increasing trust in data intermediaries and by strengthening data-sharing mechanisms across the EU, support business-to-business data sharing, and evaluate the IPR framework with a view to further enhance data access and use. See also *European Commission, Communication on a European strategy for data* COM(2020) 66; European Supervisory Authorities, *Joint Committee Final Report on Big Data*, 2018; J. CANNATACI, V. FALCE, O. POLLICINO, *New legal challenges of Big Data*, EE Int., (Forthcoming 2019); V. FALCE, G. GHIDINI, G. OLIVIERI, *Informazione e Big Data tra Innovazione e Concorrenza*, Giuffrè, Milano, 2018; J. MCQUIVEY, *Digital Disruption: Unleashing the Next Wave of Innovation*, 2013; S. DAVIDSON, P. DE FILIPPI, J. POTTS, *Blockchains and The Economic Institutions of Capitalism*, 14(4) *Journal of Institutional Economics*, 2018; P. DE FILIPPI, S. MCCARTHY, *Cloud Computing: Centralization and Data Sovereignty*, 3(2) *European Journal for Law and Technology*, 2012; V. Buterin, *The Meaning of Decentralisation*, in medium.com, 6 February 2017, available at https://medium.com/@VitalikButerin/the-meaning-of-decentralization-a0c92b7.

[11] The Fintech Revolution set out in the markets has, indeed, lead to an updating of market definition itself, in order to ensure that it is accurate and up to date and that it sets out a clear and consistent approach to market definition in both antitrust and merger cases across different industries, in a way that is easily accessible. For this, the Commission has started an *Evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law;* the Period of consultation went from 26.06.2020 to 9.10.2020, for further information on stakeholder and NCAs responses see https://ec.europa.eu/competition/consultations/2020_market_definition_notice/summary_of_contributions_stakeholders.pdf, https://ec.europa.eu/competition/consultations/2020_market_definition_notice/summary_of_contributions_NCA.pdf. See, e.g. the report by the Dutch competition authority: ACM, 'Fintechs in the payment system. The risk of foreclosure', 19 dicembre 2017, at 3 (available at: https://www.acm.nl/sites/default/files/documents/2018-02/acm-study-fintechs-in-the-payment-market-the-risk-of-foreclosure.pdf).

[12] It is, in fact, precisely identified by digitization, disintermediation and decentralization, as well as by the expansion of the active subjects in the system. See M. JACOBIDES, T. KNUDSEN, M. AUGIER, *Benefiting from Innovation: Value Creation, Value Appropriation and the Role of Industry Architectures*, 35 Research Policy, 2006; S. SANTANDER INNOVENTURES, O. WYMAN, ANTHEMIS GROUP, *The Fintech 2.0 Paper: rebooting financial services*, 2015; E. KANE, *Is Blockchain a General Purpose Technology?*, 2017, available at https://ssrn.com/abstract=2932585.

[13] The Fintech lexeme describes, in particular, the phenomenon on the basis of which there is an offer of financing services, payment, investment and high technological intensity consulting. This financial innovation reverberates its effects both in the field of financial and banking

As Techfin [15] fully belongs to the data and intelligent economy [16], data is collected [17], filtered and stored in a non-stop process of disaggregation, analysis and re-assemblage aimed at defining (direct or indirect) connections and homogenous categories of information [18].

---

services by modifying its structure. The term *Fintech* is born, in fact, from the combination of the words "finance" and "technology" and can be translated into the generic formulation "technology applied to finance", in *Lo sviluppo del Fintech. Opportunità e rischi per l'industria finanziaria nell'era digitale*, Quaderni Fintech Consob, n. 1, March 2018, p. VIII; see also ECB, *Guide to Assessments of Fintech Credit Institution Licence Applications*, Sept. 2017, that describe Fintech as «*[…] an umbrella term encompassing a wide variety of business models*». On this topic see also the *Proposal for a regulation on Single Market – new complementary tool to strengthen competition enforcement*, 06.2020, as one of the measures aimed at making sure that competition policy and rules are fit for the modern economy, addressing gaps in the current EU rules identified on the basis of the Commission's experience with enforcing the EU competition rules in digital and other markets as well as the worldwide reflection process about the need for changes to the current competition rules to allow for enforcement action preserving the competitiveness of markets.

[14] As a result, online payment services are "*rather inherently auxiliary to the transaction for the supply of goods and services*" (Recital 11), thus leaving them outside the scope of Regulation 2019/1150 of the European Parliament and of the Council, 20 June 2019 on promoting fairness and transparency for business users of online intermediation services, PE/56/2019/REV/1, in OJEU L 186/57, 11 July 2019. See, *inter alia*, European Banking Authority, E*BA Report on the impact of fintech on incumbent credit institutions' business models*, 2018; ESMA, EBA, EIOPA, *Joint Committee Final Report on Big Data,* March 15th, 2018, JC/2018/04.

[15] *"An indistinct set of societies united by the development of activities based on new information and digital technologies, which are applied in the financial sphere*", in *Lo sviluppo del Fintech. Opportunità e rischi per l'industria finanziaria nell'era digitale*, Quaderni Fintech Consob, n. 1 March 2018, p. 9; L. SWARTZ, *Blockchain Dreams: Imagining Techno-Economic Alternatives After Bitcoin*, *Another Economy is Possible: Culture and Economy in a Time of Crisis*, edited by Manel Castells, Polity Press, 2017.

[16] A definition is provided by ARNER, *op. cit.* which highlights how *"Fintech refers to the application of technology to finance"*, emphasizing that non-supervised entities use technology to prepare financial solutions which in the past were offered only by regulated financial intermediaries. In a similar sense, ZETZSCHE, *op. cit.*, notes that "*Fintech in its broadest sense refers to the use of technology to deliver financial solutions*". A more precise meaning is instead provided by the FSB: "*Fintech is defined as technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services*". In this perspective, the Fintech constitutes a "horizontal" phenomenon within the financial services sector, which is developing in the broader framework of the digital economy. D.W. ARNER, J. BARBERIS, R.P. BUCKLEY, *The evolution of fintech: new post-crisis paradigm*, in *Georgetown Journal of International Law*, 47(4), 1271-1320, 2016.

[17] X. VIVES, *The Impact of Fintech on Banking, European Economy*, vol. 2: 97-105, 2017; B. ZHANG, R. WARDORP, T. ZIEGLER, A. LUI, J. BURTON, A. JAMES, K. GARVEY, *Sustaining Momentum, the 2nd European Alternative Finance Industry Report*, University of Cambridge, KPMG and CME Group Foundation, 2016.

[18] A.P. GRUNES, M.E. STUCKE, *No Mistake About It: The Important Role of Antitrust in the Era of Big Data*, 14 *Antitrust Source*, 12, 2015, meaning "*linking data of diverse types from dis-*

Each set represents a dynamic and interactive cluster, which is continuously nurtured to become a powerful instrument of experiment, proliferation and cross-usage, better classifying a client in terms of service preferences and risk aversion, tailoring services and conditions over time and orienting preference and choices also in other sectors [19].

Whereas datasets become essential to enter new markets and operating therein, they may be caught (despite which two rounds of Consultations [20-21] and a Resolution from the European Parliament [22-23]) by Directive 96/9/CE [24] even when verified and presented by means of machines, sensors and other new technologies [25].

Under the European regulation, in fact, database owners can rely on database rights that have been conceived in 1996 for strengthening the contractual and economic position [26] of Infotech investors at the time

---

parate sources in support of unified search, query, and analysis", that "*may yield potential uses that the consumer never envisioned*"; N.M. RICHARDS, J.H. KING, *Three paradoxes of big data*, 66 *Stanford Law Review* 41-46, 2013. See also N. NEWMAN, *Search, antitrust and the economics of the control of user data*, in *Yale Journal of Regulation* 401, 2016; C. CATALINI, C. TUCKER, *Antitrust and Costless Verification: An Optimistic and a Pessimistic View of the Implications of Blockchain Technology*, MIT Sloan Research Paper, 2018.

[19] Some databases are incentivized by law, considering that under the PSD2 payment institutions have the right to access credit institutions' payment accounts services on an objective, non-discriminatory and proportionate basis, so as to provide payment services in an unhindered and efficient manner: Art. 36§1, Dir. EU No. 2015/2366, applicable in the EU since 13/1/2018; S. VEZZOSO, *Fintech, access to data, and the role of competition policy*, 2018, at 35 (available at: https://ssrn.com/abstract=3106594).

[20] On the first round of Consultation, V. FALCE, *The (over) protection of information in the Knowledge economy. Is the Directive 96/9/EC a faux pas?*, Diritto Autore, 2009 602.

[21] Commission Staff Working Document, *Evaluation of Directive 96/9/EC on the legal protection of databases* {SWD(2018) 147 final}.

[22] European Parliament Resolution of 19 January 2016 on Towards a Digital Single Market Act (2015/2147(INI)), (2018/C 011/06).

[23] JIIP, Technopolis Group, *Study in support of the evaluation of Directive 96/9/EC on the legal protection of databases – Annex 2: Economic analysis*, European Commission, Brussels, 2018.

[24] Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases [1996] OJ L 77/20.

[25] Whereas databases generated with the means of machines, sensors and other new technologies are closely interlinked with the creation of their content (i.e. data), their verification, organization and presentation requires enormous investments, thus making the Directive rights applicable. For a cautious approach, M. LEISTNER, *Big Data and the EU Database Directive 96/9/EC: Current Law and Potential for Reform*, in LOHSSE, SCHULZE, STAUDENMAYER (eds.), *Trading Data in the Digital Economy: Legal Concepts and Tools*, Nomos, Baden-Baden, 2017, 27.

[26] "The ability to generate and process large datasets can nevertheless be associated to mar-

when the infant European industry needed to be supported.

Moving from here[27] in the following it will be queried that in the new open data ecosystem mixed databases owned by Techfin operators[28] may consolidate their (conglomerate) market position[29] vis-à-vis banks and fi-

ket power, as a result of economies of scale, economies of scope and network effects, as well as real-time data feedback loops. Even if these effects do not necessarily lead to dominance or market tipping, they should be considered as part of the competitive analysis". "Firstly, competition authorities may consider new theories of harm involving the use of covert tracking and data collection to exclude competitors. Secondly, they may incorporate into their analysis the impact of data on alternative dimensions of competition, such as quality and innovation": OECD, *Big Data: Bringing Competition Policy to the Digital Era*, 26 April 2017, DAF/COMP/M(2016)2/ANN4/FINAL, available at: https://one.oecd.org/document/DAF/COMP/M(2016)2/ANN4/FINAL/en/pdf.

[27] OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being* (2015), at http://dx.doi.org/10.1787/9789264229358-en. On the competition law challenges triggered by the big data era, M. PATTERSON, *Antitrust Law in the New Economy: Google, Yelp, LIBOR, and the Control of Information*, 2017; A. DE MAURO, M. GRECO, M. GRIMALDI, *A Formal Definition of Big Data Based on its Essential Features*, *Library Review*, 2016; and M.E. STUCKE, A.P. GRUNES, *Big Data and Competition Policy*, Oxford University Press, Oxford, 2016; W. KERBER, *Digital Markets, Data, and Privacy: Competition Law, Consumer Law and Data Protection*, in FALCE, GHIDINI, OLIVIERI, *Informazione e Big data tra innovazione e Concorrenza*, Giuffrè, Milano, 2018, Ch. 1.; on the competition and privacy implications, see I. GRAEF, *EU Competition Law, Data protection and Online Platform. Data as Essential Facility*, Wolters Kluwer, ???, 2016; G. PITRUZZELLA, *Big data, Competition and Privacy: a Look from the Antitrust Perspective*, *Concorrenza e Mercato* 15, 2016; A. EZRACHI, M.E. STUCKE, *Is Your Digital Assistant Devious?*, in A. EZRACHI, M.E STUCKE (eds.), *Virtual Competition – The Promise and Perils of The Algorithm-Driven Economy* (2016) available at http://ssrn.com/abstract=2828117; Autorité de la Concurrence and Bundeskartellamt, *Competition Law and Data*, Report (2016); European Data Protection Supervisor, *Privacy and Competitiveness in the Age of Big Data: the Interplay between Data Protection, Competition Law and Consumer Protection in the Digital Economy*, Preliminary Opinion (2014).

[28] Autorité de la Concurrence and Bundeskartellamt, *Competition Law and Data*, Report (2016); European Data Protection Supervisor, *Privacy and Competitiveness in the Age of Big Data: the Interplay between Data Protection, Competition Law and Consumer Protection in the Digital Economy*, Preliminary Opinion (2014).

[29] On the need for an integrated approach, see W. KERBER, *Digital Markets, Data, and Privacy: Competition Law, Consumer Law and Data Protection*, in FALCE, GHIDINI, OLIVIERI, *Informazione e Big data tra innovazione e Concorrenza*, Giuffrè, Milano, 2018, Ch. 1.; on the competition implictions, see I. GRAEF, *EU Competition Law, Data protection and Online Platform. Data as Essential Facility*, Wolters Kluwer, ???, 2016; G. PITRUZZELLA, *Big data, Competition and Privacy: a Look from the Antitrust Perspective*, *Concorrenza e Mercato* 15, 2016; A. EZRACHI, M.E. STUCKE, *Is Your Digital Assistant Devious?* in A. EZRACHI, M.E STUCKE (eds.), *Virtual Competition – The Promise and Perils of The Algorithm-Driven Economy* available at http://ssrn.com/abstract=2828117, 2016; J. CRÉMER, Y. DE MONTJOYE, H. SCHWEITZER, Competition Policy for the digital era (Final Report), EU, 2019, available at http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf. Specifically on conglomerate power, See M. BOURREAU, A. DE STREEL, *Digital Conglomerates and EU Competition Policy*, March 2019; I.

nancial institutions and that, while awaiting for a specific EU response, the *acquis communitaire* may be invoked so as to neutralize the restrictive effects connected to the exploitation of the database rights vested therein, coming to the conclusion that in the open finance economy, the misuse doctrine may play a renewed role in balancing the interests of the Tech right owners together with those of the financial institutions and the market as a whole [30].

2. EU (Tech-Fin) databases regulation

In the open banking system, tech operators are incentivize to enter the financial markets, with the view to enlarge the markets and increase competition [31]. However, despite these good intensions, the process of collecting and elaborating big data is reserved to few players, which rely on sufficient financial and technological resources needed to process in real time unlimited volumes of data and extract the highest economic value.

The capacity to collect and analyze this unlimited volume of digital data

---

GRAEF, R. GELLERT, M. HUSOVEC, *Towards a Holistic Regulatory Approach for the European DataEconomy: Why the Illusive Notion of Non-Personal Data is Counterproductive to Data Innovation*, DP 2018-028 TILEC Discussion Paper(2018) (available at: ssrn.com/abstract=3256189).

[30] In particular, the European Commission published a document in May 2015 entitled "Strategy for the digital single market in Europe", where 3 macro-objectives were set: 1) improve access to digital goods and services for consumers and businesses; 2) create a favourable environment and a level playing field so that digital networks and innovative services could develop; 3) maximize the growth potential of the digital economy. The "*Action Plan for the creation of the Capital Markets Union*" published in September 2015, which was later supported by an Action Plan on Fintech. See the Communication of the European Commission COM (2018) 109/2 on March 8th 2018, *"Fintech Action plan: for a more competitive and innovative European financial sector"*. See also the newest proposal "*Proposal for a regulation of the European Parliament and of the Council on European data governance (Data Governance Act)*" COM/2020/767 final".

[31] See, the report by the Dutch competition authority: ACM,*'Fintechs in the payment system. The risk of foreclosure*, 19.12.2017, at 3 (available at: https://www.acm.nl/sites/default/files/documents/2018-02/acm-study-fintechs-in-the-payment-market-the-risk-of-foreclosure.pdf); S. VEZZOSO, *Fintech, accessto data, and the role of competition policy*, 2018, at 35 (available at: https://ssrn.com/abstract=3106594); see also F. DI PORTO, G. GHIDINI, *'I Access Your Data You Access Mine'. Setting a Reciprocity Clause for the 'Access to Account Rule' in the Payment Services Market*, Jun 2019; A. CAFFARONE, *The Non-Data Sharing Data-Sharing Network: One Anti-Money Laundering Innovation Requires a Closer Look*, May 2019. On the inherent characteristics of Fintech operators, relevant for the purpose of conglomerate power, EUROPEAN COMMISSION, Communication *FinTech Action plan: For a more competitive and innovative European financial sector*, COM(2018) 109 fin., 8.3.2018, at 12.

belongs to techfirms only which make use of intelligent algorithms [32]. Such algorithms are able to identify connections, similarities, identities and differences, and ultimately offer to the market clusters of homogenous data which are constantly updated to provide the latest information [33]. At connected levels, instead, we find a multitude of new players and businesses making use of derivative data sets made available [34], in a dynamic and interactive way, in order to provide goods and services which may meet the needs of the society and may even create new ones.

The gap between the different levels of the industrial sectors has grown: the economies of scale, characterizing the processes of collection and analysis of data, have experienced an acceleration as a consequence of the current concentrative processes [35]. These processes also lead to an accumulation and contamination of data, which could further justify action from a regulatory perspective.

On the one hand, the recognition of certain phenomena or trends should not be confused with their evaluation. With this regard, it is important to refrain from applying to the digital ecosystem the equation according to which the specific capacity to process data automatically reflects the possession of market power. On the other hand, however, in the presence of certain market dynamics facilitated by the very structure of the market [36], the existence of exclusive and exclusionary rights benefiting those parties processing the data does not promote the competitive process but slows it down in an excessive and unjustified manner.

---

[32] OCSE, *Algorithms and Collusion: Competition Policy in the Digital Age* (2017), available at www.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm.

[33] This is the paradox of power highlighted by N.M. RICHARDS, J.H. KING, *Three paradoxes of big data*, 66 *Stanford Law Review* 41-46, 2013. See also N. NEWMAN, '*Search, antitrust and the economics of the control of user data*', (2016) *Yale Journal of Regulation* 401. Overall, as clearly evidenced by the literature, the figure concerning market shares can be misleading: see G. COLANGELO, *Big data, piattaforme digitali e antitrust*, in *Mercato, Concorrenza e Regole*, 425, 2016.

[34] OCSE (2016) on the matter explains that "*The control over a large volume of data is a not-sufficient factor to establish market power, as nowadays a variety of data can be easily and cheaply collected by small companies – for instance, through point of sale terminals, web logs and sensors – or acquired from the broker industry. In addition, data faces decreasing returns to the number of observations and is most valuable when combined with data analytics and good predictive algorithms, which may require high investments in complementary assets, including hardware, software and expertise*".

[35] OCSE, *Data-Driven Innovation: Big Data for Growth and Well-Being* (2015), at http://dx.doi.org/10.1787/9789264229358-en.

[36] G. MUSCOLO, *Big Data e concorrenza. Quale rapporto?*, and M. GAMBARO, '*Big data, mercato e mercati rilevanti*', in V. FALCE, G. GHIDINI, G. OLIVIERI, *Informazione e Big data tra innovazione e concorrenza*, Giuffrè, Milano, 2018, Ch. 9 and Ch. 10 respectively.

The above consideration is far from being hypothetical. Fintech Digital and automated data collections resulting from such datification process [37], in fact, are likely to meet the EU definition of database under the Directive 96/9/CE, which is a "collection of independent works, data or other materials", that, irrelevant of the medium and format [38], are arranged in a systematic or methodical way and individually accessible by electronic or other means" [39]. Techfin Datasets, in fact, easily comprise materials that are separable from one another [40], that are organized according to methodical criteria [41] and are individually retrieved, under the terms fixed by the Directive. This is even easier considering that, as interpreted by the case-law, the concept of "material", as the content of the collection, in fact, tends to be almost indefinite, and also the requirement of "independent" material, as holding autonomous value, is not difficult to satisfy [42].

---

[37] S. NEWELL, M. MARABELLI, *Datification in Action: Diffusion and Consequences of Algorithmic Decision-Making*, in R.D. GALLIERS, M.K. STEIN, (Eds.), *The Routledge Companion to Management Information Systems*, Routledge, London and New York, 2017.

[38] E. DERCLAYE, *The Legal Protection of Databases. A Comparative Analysis*, Edward Elgar, Cheltenham, UK and Northampton, MA, USA, 2008, 54; Case C-444/02 Fixtures Marketing Ltd v Organismos Prognostikon Agonon Podosfairou (OPAP) [2004] ECR I-10365, paras 20ff. For an analysis of the National implementation and risks, V. FALCE, *Italy*, in LIONEL BENTLY (ed), *International Copyright Law and Practice*, Lexis Nexis, 2017 and 2018).

[39] Directive 96/9/CE of the European Parliament and of the Council of 11 March 1996, on the Legal Protection of Databases, [1996] O.J. L 77/20; Commission Staff Working Document, *Evaluation of Directive 96/9/EC on the legal protection of databases*, SWD, 147 final, 2018. For an analysis of the Database Directive and its history, see Davison, *The legal protection of databases*, Cambridge University Press, Cambridge, 2003, 51.

[40] Court of Justice 9 November 2004, Fixtures Marketing v OPAP, case C-444/02, paras. 29 and 33, in this Journal, 2005, 407. See also Aplin, *The ECJ elucidates the Database Right*, *IPQ* 2005, 204. For this reason, a recording or an audiovisual, cinematographic, literary or musical work as such does not fall within the scope" of the Database Directive (recital 17). This is because of the "semantic continuity" of such works, as noted by Ottolia, *Big data e innovazione computazionale*, in I quaderni di AIDA, n. 28, Giappichelli, Torino, 73. See also Court of Justice 26 October 2011, Dufour, case T-436/09, in ECR, 2011, II, 7727, paras. 87, 102. On this case see Larché, *Accès aux documents*, in Europe 2011, XII, 14 ff. In the most recent EU case about databases, the Court stated that "geographical information extracted from a topographic map by a third party so that that information may be used to produce and market another map retains, following its extraction, sufficient informative value to be classified as 'independent materials'of a 'database' within the meaning of that provision" (Court of Justice 29 October 2015, Verlag Esterbauer, case C-490/14, in *Dir. inf.*, 2016, 191, para. 30, with a comment by G. RESTA, *Sulla tutelabilità delle carte geografiche ai sensi della direttiva sulle banche di dati*).

[41] See Court of Justice 19 December 2013, *Innoweb*, case C-202/12, in JIPLP 2014, 458, with comment of Bonadio, ROVATI, *Use of dedicated meta-search engine infringes database right: the CJEU's stance in Innoweb v Wegener.*

[42] The ECJ, in fact, stated in this respect that «the autonomous informative value of material

3. Property rights on Techfin databases

What is doubtful on the other hand is to which extent Techfin datasets are worth of copyright protection. Under the Directive, the originality requirement is dependent on the activity of selection, organization and coordination of the collected materials [43], including raw information, news or even simple non aggregated data. Besides, such activities shall be conducted through the systemic and organic arrangement of the different elements – also collected via electronic processes – which must be made available [44]. In other words, the Directive recognizes diversity and originality in the structure [45] of the work considered as a whole, regardless of the single elements it consists of. This is enough to regard it as an intellectual creation.

What is, then, the meaning of originality and creativity if it is accepted that a database is a product conceived for the market which responds to a specific demand and satisfies a precise need? Is it sufficient that the data be merely identified according to a personal, rectius individual, choice of the author, as a natural o legal person, regardless of the quality or aesthetic

---

which has been extracted from a collection must be assessed in the light of the value of the information not for a typical user of the collection concerned, but for each third party interested by the extracted material»: Judgment of the Court (Second Chamber) of 29 October 2015, Freistaat Bayern v Verlag Esterbauer GmbH, Request for a preliminary ruling from the Bundesgerichtshof, Case C-490/14.

[43] See Court of Justice 1 March 2012, *Football Dataco v Yahoo! UK*, case C-604/10, in Diritto comunitario e degli scambi internazionali 2012, 269, with comment by Adobati, *La Corte di giustizia interpreta la direttiva n. 96/9/CE sulla tutela giuridica delle banche dati*.

[44] The Directive states that, in order to benefit from copyright protection, any assessment of the quality or aesthetic value of the database is not needed (Recital 16). For an in-depth analysis of the choice of the EU legislator and the related consequences, see P. SPADA, *Banche dati e diritto d'autore*, *AIDA* 9, 1997; G. SCHRICKER, *Farewell to the "Level of Creativity" in German Copyright Law?*, *International Review of Intellectual Property and Competition Law* 41, 1995.

[45] It must be added that, under art. 3 par. 2 and Recital 15 of Directive 96/9, only the 'structure' of the database, and not its content or the elements it consists of, can benefit from the copyright protection granted by the Directive; similarly, under art. 10 par. 2 of the TRIP Agreement and art. 5 of the WIPO Treaty on copyright, the compiling of data, as a result of the selection or arrangement of their content, amounts to an intellectual work protected as such by copyright; such protection does not instead extend to the single data, without prejudice to any copyright subsisting in such data; in this context, the terms 'selection' and 'arrangement', under art. 3 par. 1 of Directive 96/9, concern respectively the selection and systematization of the data used by the author to provide the database with its structure; such concepts do not instead refer to the creation of the data included in the database; consequently, the considerations concerning the intellectual effort and the know-how used to create the data can not be taken into account to assess whether the database, including those data, can benefit from the copyright protection granted by Directive 96/9.

value obtained (Recital 15 and 16), or is it rather necessary something more (a *quid pluris*) than that?

The answer is only partially given by the case-law. The legal concept of creativity does not correspond to those of creation, originality and absolute novelty, but it refers to the personal and individual expression of an objectivity belonging to the protected categories, so that, for an intellectual work to receive protection, it suffices that a creative act exists, even if minimal, susceptible of being externalized in the outside world. It thus follows that creativity cannot be excluded only because the work consists of simple ideas and notions, capable of being understood by people with expertise in the subject [46]. In brief, in relation to compilatory works, it suffices that the data be processed and organized by the author in a personal and autonomous way, for the choice or the arrangement of the materials. Conversely, the intellectual effort, the use of significant know-how for the creation of such a database, as well as the conferment of a certain degree of relevance to the content, become irrelevant factors. Such factors indeed are unable to justify copyright protection in the absence of an originality requirement in the choice and arrangement of the included data.

The data extrapolated from the internet forest are then selected, processed and organized according to a certain structure which does not reflect the author's personality [47] but rather the autonomous choice, disentangled from rules or limits. The database, in other words, is not characterized by a 'personal touch or sign' [48] of the author, but it is rather the expression of a certain degree of autonomy in the choice, processing and management of the collected information. Overall, there are no rules or technical limits, because through the process of dematerialization products and services are converted into homogenous goods, the bits, which are overabundant rather than limited [49].

This would in theory suffice to satisfy the parameter of creativity. However, the ratio itself behind the protection of original databases suggests a

---

[46] *Ex multis*, Italian Supreme Court n. 12314/2015; Italian Supreme Court n. 17795/15; Italian Supreme Court n. 9854/12.

[47] Case C-604/10 *Football Dataco Ltd. v. Yahoo! UK Ltd* [2012] O.J. C 118/5. See also Case C-5/08 *Infopaq International AS v Danske Dagblades Forening* [2009] E.C.R. I-6569, at 45; Case C-393/09 *Bezpecnostní softwarova asociace* [2010] E.C.R. I-13971, at 50; and Case C-145/10 *Painer v Standard Verlags GmbH* [2011] ECR I-12533, at 89.

[48] Case C-145/10 *Painer v Standard Verlags GmbH* [2011] ECR I-12533, at 92.

[49] See the judgments in Case C-393/09 *Bezpecnostní softwarova asociace* [2010] E.C.R. I-13971, at 48-49; and Case C-604/10 *Football Dataco Ltd. v. Yahoo! UK Ltd* [2012] O.J. C 118/5, at 98.

different conclusion, that is requiring a *quid pluris* which may distinguish the dataset from a mere compilation, consisting in an original selection or arrangement, without it being necessary to achieve the threshold of the artistic or aesthetic value.

Within such limits, also Techfin datasets are encompassed within the category of autonomously protectable works[50], subspecies of original databases deserving homogeneous protection – all conditions being equal – in Europe[51]. The dataset's author, as a natural or legal person, is the only entitled to reproduce, record, disseminate or translate the whole work, as well as to act in response of the unlawful use of it. The same author has the right to perform or authorize the reproduction, distribution and communication to the public of the original collection.

4. Techfin databases and software protection

However, Techfin datasets are not intended to be used for a merely aesthetic or intellectual function; rather, they are perceived as having material utility, in light of the nature of the selected materials and the aim (typically informative) pursued. It seems reasonable to argue that the process of 'functionalizing' databases is in line with the process of extending to databases specific features of the protection of computer programs, under the Software Directive. The effect is to scale down certain aspects or problems, not yet clarified by the case law, which may arise when a database is implemented as a program[52].

---

[50] In this way, databases acquire their own identity and autonomy, without being ascribed to the category of collective or compilatory works. See M. FABIANI, *Banche dati e multimedialità*, (1999) 1 *Rivista Diritto Autore* 3.

[51] P.B. HUGENHOLTZ, *Something Completely Different: Europe's Sui Generis Database Right*, in S. FRANKEL, D. GERVAIS (eds.), *The Internet and the Emerging Importance of New Forms of Intellectual Property*, (Information Law Series, Vol. 37, Kluwer Law International 2016) Chapter 9, 205-222.

[52] As nicely put in the Study whereas Art. 1(3) of the Directive excludes from the definition of databases computer programs used in the making or operation of databases, computer programs and parts of computer programs which are not used in the making or operation of electronic databases can benefit from the sui generis right if they can be classified as databases (contra S. BEUTLER, *The protection of multimedia products through the European Community's Directive on the legal protection of databases* (1996), *Ent. LR*, 317, 324-5 (on the basis of Recital 23 only those computer programs protected by copyright are excluded; computer programs used in the making or operation of a database which do not obtain copyright could be protected by the sui generis right)). G. GIANNONE CODIGLIONE, *La violazione del diritto d'autore sulle*

In particular, the rights of economic exploitation of the creative collection are reserved to the employer (legal entities included) of the author every time the activity of creation falls within the tasks assigned to the employee and in all those cases where the work is carried out by following the employer's instructions, unless different provisions agreed by the parties apply.

Secondly, the owner of the database is entitled to exercise certain rights, such as the translation, adaptation, rearrangement and any other change of it, on the ground that only the database maker has the right to reproduce, present or demonstrate in public the results of the change. All these rights are not affected by the originality of the result, the prerogatives recognized to the author of the derived work, or the extent of the protection.

Further, along the same lines of the *Software* Directive, the lawful user is entitled to implement certain actions, necessary to operate and access to the contents of the database, as well as to make a technical or normal use of it.

5. Techfin databases and *sui generis* protection

In any case, the strength and relevance of Directive 96/9/CE, in the Data era, arises with and through the sui *generis* right. The new right[53], it is

---

c.d. App da parte del gestore di un social network, (2017) 1 *Diritto dell'informazione e dell'informatica*, 138, according to whom the Milan Tribunal's decision (1 August 2016, Sez. spec. Impresa) can be considered in this grey zone, in line with the EU Court of Justice in *Ryanair v. PR Aviation* (CJEU, case C-30/14 *Ryanair Ltd c. PR Aviation BV*, [2015] 2 CMLR 36), where it was held that a database concerning flight information managed and implemented by Ryanair is not protected neither by copyright nor by the *sui generis* right (art. 3-6 and 7-11 of the Directive 96/9/CE), and for this reason access to such database by third parties can be subject to specific contractual limitations. Moreover, in *Innoweb v. Wegener*, the Court held that the activity of making available to the public a dedicated meta search engine on the Internet, which simultaneously accesses several databases managed by a third party, comes close to the manufacture of a parasitical competing product, considered by Recital 42 of the Directive 96/9/CE, albeit without copying the information stored in the database concerned, since such dedicated meta search engine, taking into account its search options, resembles a database but without having any data itself (CJEU, Case C-202/12 *Innoweb BV v. Wegener ICT Media BV, Wegener Mediaventions BV* [2013]). See also Tribunal of Milan (Sez. spec. Impresa, *Soc. Business Competence C. Soc. Facebook e altro*, in *Foro italiano* (2016), 12, I, 3989).

[53] On the topic, see A. ZOPPINI, *Nota alla direttiva 96/9/CE*, *Diritto dell'Informazione e dell'Informatica* 491, 1996, according to whom the *sui generis* protection does not have an ancillary function with respect to the exclusive right granted by intellectual property. Both types of protection have equal dignity and, above all, are based on diverging profiles of protection: cop-

well known, aims at protecting the industrial interest – or, put differently, the economic investment and work done to assemble the relevant content, regardless of any consideration about merit, end use, quality or aesthetic value achieved.

While systematic considerations suggest limiting access to copyright protection, the owner of an interactive and dynamic machine-generated dataset [54], which is the result of qualified investments [55], is surely entitled to invoke the *sui generis* right [56].

In connection to the substantial investment criterion, investments in fact can be material, financial or human (recital 40, para. 44 OPAP), and have to be measured on obtaining, verifying or presenting the contents [57] (a

yright looks at the structure of the database; the *sui generis* right instead looks at the content and aims at preventing the unauthorised extraction or reuse of the whole or substantial part of the database.

[54] European Commission, *Evaluation of Directive 96/9/EC on the legal protection of databases*, Brussels, 25.4.2018 SWD(2018) 146 final, {SWD(2018) 147 final}: «The trigger has been the revival of the 2010 German Federal Court of Justice (BGH) decision (Autobahnmaut) where machine-generated data, namely data about motorway use, was deemed to be protected as a sui generis database. In the case, the German Federal High Court of Justice accepted a highway company's sui generis right in a database of machine-generated toll data. The court found that the company invested money in the recording of pre-existing data ('obtaining') on cars using the highway and in the processing of such data through software ('verifying' and 'presenting'). The case is revealing, as the highway company resembles a spin-off database producer, yet the company successfully claimed a sui generis right in these, in essence, traffic data. Stakeholders from the automotive industry provided similar examples resonating with this case: for instance the car industry's incorporation of sensors in cars».

[55] As nicely put by the Study in support of the evaluation of Directive 96/9/EC on the legal protection of databases, 2018, available at https://ec.europa.eu/digital-single-market/en/news/study-support-evaluation-database-directive. 112: «Because of the special nature of sensor/machine-generated data, M. Leistner argues that the sui generis right should be amended for them. This is because of the rather low threshold of substantial investment, the uncertainty behind spin-off situations and the fact that another database maker will need another complete set of data to create a new data set, so will automatically infringe the sui generis right. Because of this, the sui generis right has the potential to influence the European data economy enormously and its infrastructure».

[56] For some authors, the right is systematically related to a perspective of unfair competition (similar to that of Art. 100 of the Italian Copyright Law, concerning the reproduction of news and information performed through means contrary to fair uses in the area of journalism). However, in case of data created thanks to sensor: M. LEISTNER, MATTHIAS, *Big Data and the EU Database Directive 96/9/EC: Current Law and Potential for Reform*, in LOHSSE, SCHULZE, Staudenmayer (eds), *Trading Data in the Digital Economy: Legal Concepts and Tools*, Nomos, Baden-Baden, 2017, according to whom «many authors have derived that in typical big data scenarios, the investments of 'producers' of sensor or machine-generated data of all kinds will be excluded from the sui generis right because in most practical cases, such investments would have to be regarded as investments in the 'creation' of data.».

[57] Court of Justice 9 November 2004, *British Horseracing Board v William Hill Organization*,

de minimis thresholds apply[58] both under a qualitative and a quantitative test[59]).

Now, if one can doubt that obtaining data, that is collecting data[60], is conditioned to substantial resources, it is sure that substantial investments are required to verify the data, ensuring the reliability of the information contained, monitoring the accuracy of the materials collected when the database was created and during its operation[61]. This will include checking, correcting and updating the contents since these are ways of ensuring the contents' reliability. Even if the database remains the same (the elements are not changed) as a result of the verification, it is still possible to prove a substantial investment.

Once agreed that in terms of positive law the database rights apply in the new ecospace, the maker is awarded with a great exclusive power, considering that also repeated and systematic extraction of insubstantial arts (including Web Scraping) fall within the scope of the sui generis right. In other words, it is in the maker right the activity of so-called dedicated meta-search engines, which scrape specific web sites (often databases) according to users' queries and present all the hits in one place so that users no longer need to consult the database as its contents are available in real time through the meta search engine[62].

---

case C-203/02, in ECR, 2004, I, 10415; Court of Justice 9 November 2004, *Fixtures Marketing v Svenska Spel*, case C-338/02, in ECR, 2004, I, 10497; *Fixtures Marketing v OPAP*, *cit.*; Court of Justice 9 November 2004, *Fixtures Marketing v Oy Veikkaus Ab*, case C-46/02, in ECR, 2004, I, 10365.

[58] Under Recital 19: «Whereas, as a rule, the compilation of several recordings of musical performances on a CD does not come within the scope of this Directive, both because, as a compilation, it does not meet the conditions for copyright protection and because it does not represent a substantial enough investment to be eligible under the sui generis right».

[59] Case C-338/02 Fixtures Marketing Ltd v AB Svenska Spel [2004] ECR I-10549 (Svenska Spel), para. 28; (C-444/02) OPAP, para. 43; Case C-46/02, Fixtures Marketing Ltd v Oy Veikkaus AB [2004] ECR I-10497 (Veikkaus), para. 38.

[60] Case C-338/02 Svenska Spel, para. 24; Case C-203/02 BHB, para. 31; Veikkaus, para. 34; OPAP, para. 40.

[61] Case C-338/02 Svenska Spel, para. 27. British Horseracing Board v William Hill [2001] RPC 612, para. 35; Recital 55 also provides that if substantial investment is put into ensuring the database is accurate, even if the contents do not change, it is protected by the sui generis right.

[62] See the Study, Annex 2; The CJEU held in Innoweb v Wegener (Case C-202/12) that such activity is a reutilization because it «is not limited to indicating to the user databases providing information on a particular subject» but it «provides any end user with a means of searching all the data in a protected database and, accordingly, […] provide[s] access to the entire contents of that database by a means other than that intended by the maker of that data-

So, also dedicated meta search engines, re-utilising the whole or a substantial part of the contents of a database, infringe the sui generis right where it: «provides the end user with a search form which essentially offers the same range of functionality as the search form on the database site; translates' queries from end users into the search engine for the database site 'in real time', so that all the information on that database is searched through; and presents the results to the end user using the format of its website, grouping duplications together into a single block item but in an order that reflects criteria comparable to those used by the search engine of the database site concerned for presenting results».

Of course, in order to benefit from the legal protection, limited and renewable, there must be a natural or legal person [63], residing or with a registered office or principal place of business within the Union, which takes the initiative and runs the risks related to the obtaining, verification or presentation of the contents of a database, and employs financial means and/or time, work and energy.

On the whole, once the investment has been turned into an asset worthy of legal protection, the maker is given the right to prohibit – with effect *erga omnes* – any act of extraction or reutilization of the whole content of the collection or of a substantial part of it (and, under certain conditions, of an insubstantial part), regardless of the use or of the fact that the act is carried out by the lawful user. What is more, the database owner can prohibit any kind of use amounting to an unlawful economic exploitation of its content (in other words, all forms and modes of enjoyment of the product which are able "to prejudice – in terms of commercial impact – the market share of the first maker, depending on the replaceability of the new product unlawfully obtained", or more simply to prejudice the economic interest of the maker of the database) [64].

base, whilst using the database's search engine and offering the same advantages as the database itself in terms of searches».

[63] The *sui generis* right is reserved to natural persons citizens of the EU or regularly residing in the EU, as well as undertakings set up according to the law of a Member State of the EU and having the registered or administrative office within the EU (in this case, an effective and continuos link between the activity of the undertaking and the economy of a Member State is required).

[64] On the "evolving" qualification of the sui generis right, from the draft to the adopted Directive: KUR, *What to Protect, and How? Unfair Competition, Intellectual Property, or Protection Sui Generis*, in LEE, WESTKAMP, KUR, OHLY (eds.), *Intellectual property, unfair competition and publicity: convergences and development*, Elgar, Cheltenham, 2014, 11.

6. Abuses of Tech-Fin database rights

The implications and possible repercussions of the *sui generis* right exercise [65-66] in the financial environment are huge [67].

Whereas the open banking system supports the enlargement of the financial ecosystem, data rights may become a powerful instrument for tech operators to orient and direct bank activity, allowing intermediaries to extract and use only specific categories of data but not others.

At present, one could suggest that competition toolbox [68] avoids any significant anticompetitive market effect, imposing special responsibilities on database owners who are granted a position of dominance and may be able to damage effective competition by preventing access to information markets or driving out existing competition.

The Court of Justice has already clarified that the practice of refusal to license or deal (hence, the EU case law on the "exceptional circumstances" could be plausibly invoked, from *Magill* to *Tierce Ladbroke*, from *IMS* to *Microsoft* [69]) single sources databases may qualify for an anticompetitive

---

[65] This position had been supported by authoritative literature, which – since the adoption of the Directive – had challenged the proprietary structure of the *sui generis* right. See J.H. REICHMAN, P. SAMUELSON, *Intellectual Property Rights in Data?*, (1997) *Vanderbilt Law Review* 51; G. GHIDINI, *Profili evolutivi del diritto industriale*, Giuffrè, Milano, 2001, 108.

[66] HUGENHOLTZ, *Abuse of Database Right Sole-source information banks under the EU Database Directive*, in LÉVÊQUE, SHELANSKI (eds.), *Antitrust, patents and copyright: EU and US perspectives*, Edward Elgar, Cheltenham, 2005, 203. See now also HUGENHOLTZ, *Something Completely Different: Europe's Sui Generis Database Right*, in FRANKEL, GERVAIS (eds.), *The Internet and the Emerging Importance of New Forms of Intellectual Property*, Wolters Kluwer, Alphen aan den Rijn, 2016, 205.

[67] Database Directive, recitals 11 and 11. For the analysis of the economic justification of the sui generis right, Judgment of the Court of Justice 15 January 2015, *Ryanair*, case C-30/14, in *Computer Law Review International* 2015, 83 with a comment by ELTESTE, *EU: Contractual Limitations for Database Use – Screen Scraping.* See also Vousden, *Autonomy, comparison websites, and Ryanair*, in *IPQ* 2015, 386; Castets-Renard, *La liberté contractuelle et la réservation de l'information des bases de données non protégées devant la CJUE*, in *Droit de l'immatériel* 2015, 8; Gupta and Devaiah, *Databases: The Database Directive "contracting out" bar: does it apply to unprotected databases?*, in *JIPLP* 2015, 669; ROSS, *"Not Getting into a Scrape": Dispute over "Screen Scrape" Data*, in *Computer and Telecommunications Law Review* 2015, 103; Synodinou, *Databases and screen scraping: lawful user's rights and contractual restrictions do not fly together*, in *EIPR* 2016, V, 312.

[68] Indeed, some commentators have acknowledged that competition law plays a complementary role, beside endogenous regulatory mechanisms provided for by IP rules, in ensuring the 'access-incentive' balance in the exploitation of databases. See D. LYM, *Regulating access to databases through antitrust law: the missing perspective in the database debate*, *Stanford Technology Law Review 7*, 2006.

[69] EU Court of Justice, Joined Cases C-241-242/91, *RTE & ITP v. European Commission*

behavior and that the *sui generis* right must not be afforded in such a way as to facilitate abuses of a dominant position [70]. However, despite the virtues of competition law and policy, its toolbox scheme has proven not to be a bonne-a-tout-faire model: the definition of the relevant market can be elusive, the notion of economic power is questioned together with the features of the theory of harm [71].

If and when the dominant position conditions are lacking in one or more markets, it is the same sui generis right along with the prerogative that further compromise the functioning of the markets in which the access to Big Data in terms of volume, speed, variety, and value, are crucial.

Should therefore the antitrust boundaries appear uncertain and almost blurred, then the misuse doctrine surely provides a safe harbor, having gained the status of a principle applicable to all areas of EU law [72], regardless dominance. Under such doctrine, in fact, a right cannot be enforced, if its exercise, even if formally respectful to the EU framework, occurs beyond its rational and in a manner determining an unjustified disproportion between the benefit of the right holder and the sacrifice to which the counterpart is subject.

(*Magill*) [1995] 4 CMLR 718; Court of First Instance, Case T-504/93 *Tiercé Ladbroke v. European Commission* [1997] ECR II-923; EU Court of Justice, Case C-418/01 *IMS Health c. NDC Health* [2004] 4 CMLR 28; Court of First Instance, Case T-201/04 *Microsoft c. European Commission* [2007] ECR II-03601.

[70] V. FALCE, *The (over) protection of information in the know-ledge economy. Is the Directive 96/9/EC a faux pas?*, *Diritto Autore* 602, 2009. Therefore, national judges are warned not to interpret it in a way that may affect competition, providing the maker of a database with a right that will be abusively exercised.

[71] "Firstly, competition authorities may consider new theories of harm involving the use of covert tracking and data collection to exclude competitors. Secondly, they may incorporate into their analysis the impact of data on alternative dimensions of competition, such as quality and innovation": OECD, *Big Data: Bringing Competition Policy to the Digital Era*, 26 April 2017, DAF/COMP/M(2016)2/ANN4/FINAL. On the effects of the digital revolution on the competition law and policy, EZRACHI, STUCKE, *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy*, Harvard University Press, Cambridge (Ma), 2016, 218. Along the same lines, see MEHRA, *Antitrust and the Robo-Seller: Competition in the Time of Algorithms*, in *Minn. L. Rev.* 2016, 1323 ff.; SURBLYTE, *Data-Driven Economy and Artificial Intelligence: Emerging Competition Law Issues*, in *WuW* 2017, 120 ff.; CALO, *Digital Market Manipulation*, in *George Washington Law Review* 2014, 995 ff. *Contra*, PETIT, *Antitrust and Artificial Intelligence: A research Agenda*, in *Journal of European Competition Law & Practice* 2017, VI, 361.

[72] Halifax e a., C-255/02, EU:C:2006:121, 68; Sices e a., C-155/13, EU:C:2014:145, 29. For an analysis, K. SØRENSEN, *Abuse of Rights in Community Law: A Principle of Substance or Merely Rethoric?*, in *Common Market Law Review*, 2006, 423. G. ALPA, *Appunti sul divieto dell'abuso del diritto in ambito comunitario e sui suoi riflessi negli ordinamenti degli Stati membri*, in *Contr. e impr.*, 2015, p. 247.

But when would the exercise of a database right fall in conflict with the abuse of right principle? In other words, provided that the doctrine prevents any right holder from manipulating his own right, which test should be applied to assess whether a formally legitimate conduct amounts to a misuse?

The answer is clear-cut. The European case-law first recognized that individuals cannot use fraudulently or abusively the rules of the Union. It has, therefore, subordinated the integration of a practice to the appeal to a double assessment: an objective (consisting in the failure to achieve the purpose pursued, even in the face of formal compliance with the conditions laid down by the EU Directive) and subjective criterion (related to the desire of obtaining an undue advantage of the law through the artificial creation of the conditions necessary to obtain it).

In addition, the EU jurisprudence raised the ban on the abuse of the external limit of the right to exercise Union rights to the extent of gradually widening the application spectrum, thus qualifying it as a general principle[73].

[73] Just to make some examples, in regards to the battle against the abuse of freedom of establishment, a Member State has the right to take measures to prevent, thanks to the possibilities offered by the TFEU, the attempt of some of its citizens to elude abusively the rules of their national law (see Inspire Art. C-167/01, EU: C: 2003: 512, paragraph 136). However, if a European citizen has chosen to acquire a professional title in another Member State (other than that in which he resides) in order to benefit from more favorable legislation, does not constitute an abusive conduct. The reason lies within the objective of Directive 98/5, which is achieved when citizen of a Member State that has earned a degree in that State later acquires the professional qualification of a lawyer in another Member State, then returns to the Member State of which he/she is a citizen of to practice the profession of lawyer, with the professional title obtained in the Member State in which that qualification was acquired. Therefore, the objective condition to which the occurrence of the abuse is subject to is lacking. In relation to medical transport, «taking account of the general principle of EU law of the prohibition of abuse of rights», for example, «the application of legislation which, as a matter of priority, reserves medical transport activities for public health services to voluntary associations, cannot be extended to include abusive practices of the associations themselves or their members. Therefore, the activity of voluntary organizations can be carried out by workers only within the limits necessary for their regular functioning. With regard to the reimbursement of costs it must be ensured that no profit, even indirect, can be pursued within the voluntary activity, and also that the volunteer can be reimbursed only for the actual expenses incurred for the activity provided, within the limits previously established by the organizations themselves». In the field of labor law, «if it objectively appears, on the one hand, that despite the formal compliance with the conditions laid down by Directives 2000/78 and 2006/54, the objective pursued by these have not been achieved and, on the other hand, that a subject has applied elusively for a job with the essential purpose of not practicing that job but for the purpose of using the protection offered by the Directives in order to obtain an undue advantage» … «it should be considered that that person abuses of the aforementioned protection»: issue that the referring court or tribunal should veri-

In this regard, the EU case law has elaborated an increasingly articulated test, which has alternatively looked at whether: i) the right is only exercised to circumvent a national law (*TVIO*); ii) the right is exercised to gain an undue benefit from another Member State's national law (*Liar v Universitat Hannover*); iii) the right is exercised to obtain improper advantages contrary to the goals pursued by the right (*Centros* and *Diamantis*); iv) the right is exercised to achieve objectives other than those which are legitimate under the law at stake (*Donaldson*); v) the aim of the right is not achieved, and the abuser intended to get an advantage by artificially creating the conditions for the application of the right (*Emsland Starke*); and vi) the aims of the allegedly abused right would be frustrated if the right claims were actually conferred, and the right invoked derives from activities for which there is no other explanation than the creation of the right claimed (*Halifax*) [74].

The *Halifax* case, in particular, represented the maximum expression of this complex articulation [75], very recently echoed by the Court of Justice in the February 6, 2018 judgment, when it made it clear that: the abuse of right one is a general principle of the Union" [76].

Further, in the antitrust scenario, an abuse of right has been invoked for firms taking advantage of legitimate governmental procedures to harm competition and produce anticompetitive outcomes. In *AstraZeneca*, for instance, the EU Commission had argued that the existence of a piece of

---

fy. Even in the civil-procedural stage, and under the rules governing the execution of trials in Court, parties enjoy protection against inappropriate use of the documents throughout the trial. Therefore, the consultation to the case file is subject to a written request along with elements that prove its legitimacy. This is the reflection of a fair administration general principle of justice, under which the parties have the right to defend their interests without any external interference, especially from the public. It results that a party to which the access is granted to the case file of the other parties may use such right only to defend its position, with the exclusion of any other purpose – such as raising public criticism of the arguments put forth by the counterparty(s). A contrary action to this principle constitutes an abuse of rights which must be taken into account when the expenditure is allocated for exceptional reasons, in accordance with Article 87 (3) of the Rules of Procedure. The European law has in fact clarified that the theory of abuse of law applies regardless of the connection with the law and the principles of competition and therefore independently of the existence of the relative conditions of applicability.

[74] Court of Justice, 2 May 1996, Paletta, C-206/94, EU:C:1996:182, 24; 21 February 2006, Halifax e a., C-255/02, EU:C:2006:121, 68; 12 September 2006, Cadbury Schweppes and Cadbury Schweppes Overseas, C-196/04, EU:C:2006:544, 35, 28 July 2016, Kratzer, C-423/15, EU:C:2016:604, 37; 7 August 2018, n. 472.

[75] Court of Justice, Halifax.

[76] Court of Justice, 6 February 2018, n. 359, 49; 5 July 2007, Kofoed, C-321/05, EU:C:2007:408, 38; 22 November 2017, Cussens e a., C-251/16, EU:C:2017:881, 27.

EU law allowing a specific behaviour could not exempt that conduct from the application of EU competition law if and when the same conduct was misused and if and when it produced anticompetitive effects [77].

7. A national endorsement

These EU line of reasoning is matched at National level.

In Italy, the theory of the abuse of law has in fact been investigated for a long time. Firstly by the doctrine that in view of the functionalization of the right to property (to claim its internal limitation nature or to recognize its exceptional character); then successively as a general category, while conforming to the relative law – in substance according to the "true law" – with the objective of verifying whether and under what conditions the exercise of a right constitute a deviation contrary, in the its ultimate purpose, to the principles of the legal system. The jurisprudence has over time demonstrated to decline such conditions considering them to have instead the following constituent elements: 1) the ownership of a subjective right by a subject; 2) the possibility that the concrete exercise of that right can be carried out according to a plurality of methods that are not rigidly predetermined; 3) the concrete action, even if formally respectful of the frame attributable to that right, is carried out according to censurable methods with respect to an evaluation criterion (legal or extrajudicial); 4) such modus operandi results in an unjustified disproportion between the benefit of the right holder and the sacrifice to which the counterpart is subject.

The Achilles' heel is clearly represented by the third condition which risks, in the absence of certain margins of interpretation, to lead to an arbitrary expansion of the scope of application of the theory. The Supreme Court has once again intervened, reassuring the interpreter.

The constitutional value of the "private economic initiative" must be connected to the competitor "duty of solidarity" in the intersubjective relations pursuant to art. 2 of the Constitution, which is enriched and complete with the general canon of objective good faith and fairness. Hence the Constitutional Court deduced «the existence of a principle of bad-debt as a limitation to creditor claims». The Supreme Court, noting its synergistic effectiveness with the general canon of objective good faith and fair-

[77] General Court, Case T-321/05 *Astrazeneca v European Commission* [2010] ECR II-0280; confirmed by ECJ, Judgment, C-457/10 AstraZeneca, of 6.12.2012, ECLI:EU:C:2012:770, para. 149 ff.; see also: GC, Judgment T-286/09 Intel, No. 219 of 12.6.2014.

ness, attributes to the principle of bad-debt «a vis legislation and enriches it with positive content, including obligations (also instrumental), of protection of the person and things of the counterparty, thus functionalizing the mandatory relationship to the protection of the interests of the negotiating partner, to the extent that this does not collide with the protection of the interest of the obligated» (Italian Supreme Court September 24, 1999, No. 10511).

In this perspective, the jurisprudential evolution has shown to attribute, even in the absence of a specific legal provision, a significant value to the obligations of good faith and fairness pursuant to art. 1175 and 1375 of the Italian Civil Code. Thus reaching to the elaboration of a general principle according to which it is not lawful to abuse one's own rights to achieve purposes, substantially damaging to wider interests or deriving from specific contractual agreements which transcend from those protected by the law. In such a manner, a general canon was established which codifies the principle of the abuse of rights, which «does not impose a predetermined behavior on subjects, but only detects as an external limit to the exercise of a claim, as it is aimed at reconciling opposing interests».

In essence, in our legal system «to take part in a legal relationship without respecting fairness / good faith may integrate a case of abuse of law, since the right of who performs in such manner does not take into account the solidarity due to the interests of the counterparty».

All in all, at the end such internal legal development, the jurisprudence timidly noted «the emergence of a trend principle, found in the EU law and from the concept of abuse of the law elaborated by the EU Court of Justice», now expressly acknowledged in which «the abuse would still be configurable on the basis of EU law in such matter, according to which individuals cannot avail fraudulently or abusively from the Union framework».

Having said so and by virtue of the link between the duty of good faith and the prohibition of abuse of rights, the latter figure has come into prominence in contractual matters, with multiple and significant applications in tax, labor, corporate relations, ecc.[78].

[78] For example, in the tax field, the prohibition of abuse of the law translates into a general anti-avoidance principle, which precludes the tax payer from obtaining tax advantages obtained through the distorted use, even if not contrary to any specific provision, of suitable legal instruments. to obtain a tax saving, in the absence of economically appreciable reasons that justify the operation, whose recurrence is part of the taxpayer's burden of proof (last, Cass. civ., sez. trib., 14 February 2018 n. 3533). In terms of labor law, the granting of permits entails an incovenience for the employer, justifiable only in the case of an effective assistance activity. Therefore, the improper use of the permit, even if only for a few hours, constitutes an abuse of

Also, in the *Pfizer* case, an Italian administrative authority held that the abuse of right offence takes place when the right holder makes an opportunistic use of his right, *i.e.* when he uses the right in a way which is not consistent with the purpose in the name of which the legislator chose in the first place to grant him the right [79].

8. Conclusions

Techfin is nurtured by "data fusion" [80], thus data, independently from

---

the right, due to the social impairment attributable to it, such as to determine in the employer the loss of trust towards the worker and legitimize the sanction of the dismissal for just cause. Whereas as in corporate matters, the position of the majority shareholders compared to the minority shareholders is emphasized when dealing with the exercise of the right to vote in terms of the abuse of power – always in application of the general principle of the prohibition to abuse of their rights, without taking advantage of a position of supremacy – affirming the recurrence, in the shareholders' resolutions, of a restriction derived from this obligation of fairness. If it is proven that the voting power has been exercised for the purpose of damaging the interests of the other shareholders, or is specifically aimed at unjustifiably benefiting the majority shareholders to the detriment of the minority, the consequence is the invalidity of the resolution because such practise violates the general principle of good faith in the execution of the contract (Cass., 17 February 2012, No. 2334, Cass., 20 January 2011, No. 1361, Cassation, July 17, 2007, No. 15950, Cass., December 19, 2008, n. 29776; Cass., 16 May 2007, n. 11258; Cass., June 11, 2003, n. 9353). Similarly, the request for deferment of the shareholders' meeting of a joint stock company, pursuant to art. 2374 Italian Civil Code, can be syndicated in terms of abuse of the law in the hypothesis in which the request was dictated by a concrete objective that is fully irrespective of the purpose of such right attributed by law. In relation to the exercise of the right to report, the use "gratuitous" expressions are unlawful, in the sense of not necessary to the exercise of such right because deemed as unnecessarily vulgar, humiliating or diligent. Altogether, what distinguishes and determines the abuse of the law is not the greater or lesser aggressiveness of the expression or the harshness of the approach, but the needless aggressions not pertinent to the issues that are in discussion. Such reasoning has also extended to competition law in its interference with industrial and intellectual property law.

[79] Consiglio di Stato, sentenza n. 693/2014 (12/2/2014). A different dispute, yet unrelated to the antitrust realm, also gave the same authority the opportunity to further explore the scope of the doctrine and clarify that a right is abused when it is exercised in a way that, although consistent with the law, violates another principle of law, and when the benefit gained by the holder by exercising the right is unduly higher than the sacrifice that it casts upon the others (Consiglio di Stato, sentenza n. 2857/2012 (17/5/2012)). Finally, at the intersection between competition and IP laws, a ruling by a Dutch court in the *ZTE v Vringo* case had invoked the abuse of right principle in relation to the misuse implemented by the holder of a standard essential patent, which had claimed for an injunction despite the existence of a FRAND licensing promise (The Hague District Court, Case n. 470109/KG ZA 14-870 *ZTE v Vringo* (2014).

[80] OECD, *Big data: bringing competition policy to the digital era* (Paris, 2016): «Big Data is commonly understood as the use of large scale computing power and technologically advanced software in order to collect, process and analyse data characterised by a large volume, velocity,

its nature (either personal and anonimized or non-personal) and destination (actual and potential), become part of disruptive digital databases, each one qualifying a dynamic and interactive cluster, with the view either to study, experiment and classify, or to present and foreseeable trade among sectors and across borders [81].

Since Techfin datasets may meet the requirements for database protection under the EU regulatory system [82], while awaiting the reform of the Directive 96/9/CE or specific sandboxes proposals [83], its features shall be

variety and value»; On the features of the Digital Era: OECD, *Hearing on disruptive innovation* (DAF/COMP, 2015) 3; OECD, *Report on data-driven innovation* (Paris, 2015), available at http://www.oecd.org/sti/data-driven-innovation-9789264229358-en.htm; A. DE STREEL, P. LAROUCHE, *Disruptive Innovation and Competition Policy Enforcement*, (2015) TILEC Discussion Paper; Amplius, V. FALCE, G. GHIDINI, G. OLIVIERI, *Informazione e Big data tra innovazione e concorrenza*, Giuffrè, Milano, 2018.

[81] Par. 55 of the Final Report on the E-commerce Sector Inquiry {SWD(2017) 154 final} of the EU Commission states that: "data can be a valuable asset and analysing large volumes of data can bring substantial benefits in the form of better products and services, and can allow companies to become more efficient". In this sense, data can sometimes qualify as output (commodity not dissimilar from any other product), other times as input (asset economically relevant for the relational value, declared or latent), or eventually as "coin" for the purchase of goods and services: OECD, *Big data: bringing competition policy to the digital era* (Paris, 2016); OECD, *Hearing on disruptive innovation* (DAF/COMP, 2015) 3; OECD, *Report on data-driven innovation* (Paris, 2015), available at http://www.oecd.org/sti/data-driven-innovation-9789264229358-en.htm.

[82] On the limits of the sui generis right, G. GHIDINI, *Rethinking Intellectual Property. Balancing Conflicts of Interest in the Constitutional Paradigm*, Edward Elgar, Cheltenham, 2018.

[83] In order to promote financial innovation at international level, three approaches have been outlined: *Innovation hub*: an institutional supervision and dialogue between the competent Authorities and Fintech companies in an information and guidance perspective; *Regulatory sandbox*: an expansive and derogatory approach that allows Fintech companies to test their products for short periods of time in the presence of regulatory derogations; finally, *Incubators*: a positive approach in which the competent Authority takes an active role in the development and testing of projects (partnerships and co-financing). In an international and European context, initiatives were then launched for the cognitive purpose of the breadth of the Fintech phenomenon: FSB (*Financial Stability Board*), a body that monitors the Fintech phenomenon under the main profile of promoting financial stability, analyzing the obstacles and operational risks; BCBS (*Basel Committee on Banking Supervision*), a body responsible for analyzing and assessing the risks and opportunities that technological innovation entails for the banking system; the European Commission, that deals with analyzing the phenomenon from the point of view of crowdfunding in an integrated perspective that involves banks, insurance companies and markets; the Commission also promotes, in a balancing perspective, the construction of a more innovative and competitive financial system in terms of accessibility, costs, competition and transparency; EBA, ESMA, EIOPA and the national Authorities, commit their forces in protecting the consumer and the financial companies in the face of the risks and benefits that Fintech entails; whereas the ECB, has the task of developing guidelines for the evaluation of applications for authorization to carry out banking activities by Fintech business entities. See

interpreted in order to avoid that the existence and exercise of database rights may erect excessive barriers to enter or fairly compete the Fintech arena [84].

To this end the abuse of right doctrine can be helpful to fill the huge gaps left in the European legal framework. If the relevant prerequisites occur, in fact, Techfin database makers operating on data markets would be continuing taking advantage of their contribution to the Fintech arena. However, they would be stopped from exploiting their rights anytime they are exercised beyond their ultimate goal, so as to distort competition, preemping financial institutions from competitively using Techfin data, even if art. 102 TFUE prerequisites lack.

FCA, *Regulatory Sandb*ox, 2015, available at https://fca.org.uk/publication/research/regulatory-sandbox.pdf; FCA, *Regulatory sandbox lessons learned report*, 2017, available at https://www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.Pdf; H. ALLEN, *A US Regulatory Sandbox?*, Working Paper, 24, 2018, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3056993.

[84] And this while awaiting the modernization of the competition law toolbox: «Firstly, competition authorities may consider new theories of harm involving the use of covert tracking and data collection to exclude competitors. Secondly, they may incorporate into their analysis the impact of data on alternative dimensions of competition, such as quality and innovation»: OECD, *Big Data: Bringing Competition Policy to the Digital Era*, 26 April 2017, DAF/COMP/M(2016)2/ANN4/FINAL. In any case, ESMA: «*Actions from the European Commission aiming at making the regulatory framework more proportionate to support innovation in financial markets should not be done at the detriment of investor protection and fair competition across various types of actors (...) such an approach would run the risk of being outpaced by future technological developments*», in *ESMA response to the Commission Consultation Paper on Fintech: A more competitive and innovative financial sector*, ESMA50-158-457, June 7th 2017.