

— The Never-Ending European Credit Data Mess —

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Executive Summary

This report explores the role of consumer credit data and their sharing in the retail financial markets of the EU Member States, and it analyses their functions within the EU policy and legal framework. The main aim is to provide some clarity and disentangle the many difficulties that characterise an area of the single market that can pose more than one concern for the detriment of European consumers. It purports to show the ongoing state of disorder within the EU single market and the reasons why the urgent and careful attention of the EU legislator is required. Besides, policy and regulatory questions for the EU financial services market become increasingly important in view of the new challenges presented by emerging technologies that avail themselves of new generations of personal data processing, as well as new business models that are capable of transforming the retail financial sector ('FinTech'). This report includes some recommendations to policy-makers.

It is now a common feature in retail finance that lending firms exchange information about their customers and process a growing amount of personal data. For some time, the sharing of customers' credit data has become the most extensively used instrument or practice of the lending industry to underwrite decisions on credit or the supply of goods and/or services to consumers that will be repaid in full at a later stage, or that tie them in a contractual relationship over time. Lenders access databases and other data managed by third-party providers in order to evaluate a consumer's credit application, the risks involved in the financing, and the prospective borrower's creditworthiness.

The third-party organisations managing the credit data databases are traditionally known as Credit Reference Agencies or Credit Bureaus (when incorporated in private or commercial form) or National Credit Registries (when they are organisations of public nature), although new technologies are transforming their business or they are creating new business models and ventures acting as data brokers for the industry.

The complexity of credit data usage in consumer financial markets arises from the fact that their functions in the economy and the activities of the organisations centralising the data differ significantly within the EU Member States, depending largely on national cultures and traditions, institutional arrangements, and the local economic and regulatory environment. Broadly, for example, the traditional data brokers can be third-party private, commercial, or public organisations that collect a variety of diverse financial data of consumers about transactions with lenders and - depending on the practices in the Member States - other credit providers that are not financial institutions *stricto sensu* but that advance goods or services to consumers that will be paid at a later stage (e.g. utility companies, telecoms, mail order companies, etc.). Such data are pooled to compile databases whose data are shared among those lenders which are part of the same information network, either via commercial contracting (e.g. in the case of commercial credit bureaus) or by regulation (e.g. in the case of public credit registries).

It is undeniable that today consumer data processing and their sharing have become the instrument most extensively used by the lending industry to assess consumers' ability to repay their debts and underwrite decisions. As such, they are used for credit-risk management in the private interest of lenders or as a practice of creditworthiness assessment. In financial circles, their virtues are usually portrayed in terms of more efficient processes and decision-making, or better management of financial risks or fraud situations. In many ways, data processing for risk analysis is also transforming the way products and services are provided. Most

of the times, the benefits for consumers are highlighted in terms of products/services better tailored to their needs, better quality or cost-effective services/products.¹

Moreover, the extensive use of credit data has been promoted by a number of stakeholders or international agencies with the claim that it will help achieve a number of policy objectives. These include the facilitation of the access to a more affordable and better quality credit for consumers,² the prevention of consumer over-indebtedness by limiting irresponsible/predatory lending,³ and the contribution to financial stability by limiting banks' credit loss risks.⁴

Indeed, under certain national systems, consumer data can be part of a broader information centralisation system managed by national central banks for the purpose of oversight of the financial system as a whole, i.e. they are an instrument for the prudential supervision of the banking system.

The diverse use, role and functions attributed to the data in financial services in the various Member States not only expose a jeopardised EU single market. Also, whatever the arrangements and the function of a data sharing system in the national jurisdictions, the volume of the processing of a variety of different datasets from different sources are the basis of any operation. As such, difficult questions arise over the privacy and data protection of consumers vis-à-vis the purposes, necessity, and proportionality of their uses. After all, privacy and data protection are fundamental rights of the EU legal system under Article 16 of the Treaty on the Functioning of the European Union ('TFEU') and Articles 7 and 8 of the Charter of the Fundamental Rights of the EU.⁵

Moreover, an extensive processing of personal data in the financial services sector may raise issues over consumer protection beyond privacy and data protection rights. The use of personal data in financial matters - combined with the limitations or errors in the data and in the analytic tools - could potentially have an impact on consumers' access not only to financial services, but also to products or services in other economic segments. It could also raise questions around the relationship between the data and pricing practices - for example making use of analytical data showing a consumer's degree of willingness to pay more, liaising higher prices to higher perceived risks of a consumer becoming unable to repay on time, or demonstrating his or her inertia to switch products or services.

Despite the questions that credit data pose for the integration of the EU single market in retail finance and the safeguard of its citizens, so far the policy and regulatory responses have been uncoordinated and equivocal, exposing the absence of common, harmonized and/or appropriately resourced strategies at EU level. However, with the renovated thrust towards further integration of financial markets,⁶ time is ripe to

¹ E.g. see Bank of England (2014); HM Treasury (2014); Turner and Varghese (2010); Jentzsch (2007).

² OECD, Facilitating access to finance - Discussion Paper on Credit Information Sharing, at <https://www1.oecd.org/globalrelations/45370071.pdf>

³ ACCIS (2013).

⁴ World Bank (2011).

⁵ Under Article 16 TFEU "1. Everyone has the right to the protection of personal data concerning them. 2. The European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall lay down the rules relating to the protection of individuals with regard to the processing of personal data by Union institutions, bodies, offices and agencies, and by the Member States when carrying out activities which fall within the scope of Union law, and the rules relating to the free movement of such data. Compliance with these rules shall be subject to the control of independent authorities". In turn, Article 7 of the Charter provides that "everyone has the right to respect for his or her private and family life, home and communications" and Article 8 of the Charter affirms that "1. Everyone has the right to the protection of personal data concerning him or her. 2. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified. 3. Compliance with these rules shall be subject to control by an independent authority".

⁶ See European Commission, Green Paper on Building a Capital Markets Union, COM(2015) 63 final (Brussels, 18.2.2015); European Commission, Green Paper on Retail Financial Services, COM(2015) 630 final (Brussels, 10.12.2015); 6 European Commission, Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions – Consumer Financial Services Action Plan: Better Products, More Choice (Brussels, 23.3.2017), COM(2017) 139 final. Recently, see the European Parliament resolution of 22 November 2016 on the Green Paper on Retail Financial Services (2016/2056(INI)) where the European Parliament calls on the European Commission to: analyse what data are necessary for the creditworthiness assessment and introduce proposals for regulating this assessment process; investigate further the current practices of credit bureaus in relation to the collection, processing and marketing of consumer data with a view to ensuring that they are adequate and not detrimental to consumers' rights; consider taking action in this area if necessary.

probe the extent to which the current policies and law should do more, and whether more tailored rules are needed.

Chapter 1 analyses the economic theories, purposes and traditional uses of credit data. These include the reduction of information asymmetries between lenders and borrowers, the use of information in credit-risk management and decision-making in the interest of creditors, the prevention of moral hazard of consumers and information sharing as reputation collateral, the implementation by creditors of cost-efficient mechanisms for screening applications and managing accounts of consumers, and data pooling and sharing to enhance competition by lenders in consumer credit markets.

The expanding uses of credit data are explored in Chapter 2 to show how the industry has moved forward with the use of consumer data to develop new services in their economic interests. Such uses include scoring, rating and tools for credit products' securitisation, information matching for identity verification, marketing services and consulting, technological tools for fraud prevention, and emerging uses beyond the creditor-debtor traditional relationship.

Chapter 3 examines the broad policy and resultant legal context within which credit data are processed and the data brokers operate. At first, it analyses the use of data vis-à-vis responsible lending policies and the legal transposition of the creditworthiness assessment to tackle the over-indebtedness of European consumers, digging into the relevant provisions of the relevant credit laws. Next, the use of financial information for the prudential supervision of the banking system is accounted to underline a separate but intersecting role of credit data in credit markets, and the ensuing legal and institutional legal arrangements. All the above differences are reflected in the diverse legal forms and functions of national data brokers across the EU.

The institutional arrangements and legal forms of the organisations managing the databases, as well as their diverse functions, are considered in Chapter 4, where comparative Tables aim at illustrating the fragmented picture across the EU.

The variety of datasets and sources used by the different actors involved in the centralisation and sharing of data in the Member States is conveyed in Chapter 5, which shows the diversity in usage of traditional and non-traditional data, and how the EU market for data is jeopardised into un-interoperable national markets.

The following Chapters aim at identifying shortcomings in the current structure and arrangements in consumer data sharing within the context of the EU and its policies.

Chapter 6 looks at the limitations of the cross-border exchange of data in view of the EU integration of retail financial markets and the law in place to achieve the single market, advancing questions on the extent to which the fragmentation of the information market affects the financial market that it serves.

The latter issue touches into the unexplored territory of competition among the Credit Bureaus where their nature of natural monopolies is confronted with the limitations of the cross-border exchange of data. This is the issue briefly addressed by Chapter 7.

Chapter 8 analyses EU data protection legislation and the mechanisms behind credit data processing. It attempts to uncover the limits of the law against its values, ultimately questioning the safeguards that it offers to consumers vis-à-vis potential dangers.

In this context, Chapter 9 attempts to analyse and query the use of consumer data against problems of reliability and proportionality of the data used vis-à-vis the policy goals that the sharing intends to achieve.

In turn, Chapter 10 takes the angle of consumer protection beyond the problems usually addressed by personal data protection law. The major concern that it explores is the problem of the use of credit data as a gateway of the economic and social life of consumers, as well as the lack of proper safeguards in place to prevent this to happen or to address issues of consumer access to products and services.

Finally, Chapter 11 observes the latest developments and initiatives taken at EU level to standardise credit data for statistical purposes and measure consumer over-indebtedness. In particular, it examines the projects of the European Central Bank and the implementing legal measures to centralise and standardise credit data for statistical purposes under the umbrella of its new remit over the prudential supervision of the banking system. It closes with a speculation over the likely interference with the current use of credit data, the setting of standards, and the blurring functions of credit-risk management, creditworthiness assessment, and prudential supervision of credit institutions. Likewise, an alternative solution based on consumer data collected from a single source of information such as the borrower's bank account(s) is presented to show how all the information (i.e. income and expenses) necessary for creditworthiness assessment can be found on the consumer's bank/payment account statement. This information is objective and should allow the lender to conclude whether the borrower has sufficient and stable income, whether the level of the loan-to-income ratio is appropriate, whether the consumer already has other pending mortgage credit or personal loans, including payment arrears, what are other financial and non-financial commitments (rent, utility bills, insurances, etc.).

The Report concludes **that the** current practices of credit data use in the Member States hardly contribute to achieve univocal, common, or defined policy objectives under the rule of law. Across the EU there is still a great variety in the datasets and data sources used for different purposes - both as regards traditional and non-traditional data. Consumer data are at the basis of each system and their processing needs to be balanced with the fundamental rights of data protection of individuals. Moreover, personal data may become the gateway of the economic and social life of people determining, inter alia, access conditions to services and consequently they may play a role in inclusion or exclusion in society in a broad sense. Therefore, the data need to be reliable and proportionate to achieve well identified policy objectives in the general interest. The fragmentation in the Member States questions such reliability and proportionality as they all seem to have in place a diverse system but with no uniquely accepted criteria or standards. As the techniques for data collection, distribution, and use are still very different across the EU, this signifies that there is no universal or common acceptance of what data are relevant for risk-management, creditworthiness assessments, or prudential regulation (when used). In addition, to serve the interest of consumers, it is important that any data are processed and used proportionally and transparently to achieve well-defined goals. The analysis of the many functions and usages of credit data suggests that the policy goals to be achieved should inform the institutional or legal form of the organisations managing the data, as well as the design and use of databases under the rule of law. If personal data are not used within a proper framework, they can result in dysfunctional markets, market abuse, and major consumer detriment including social and financial exclusion, discrimination and, in some cases, abuse of fundamental rights. Moreover, it is difficult to conceive a single market in retail financial services where the underlying information infrastructure is not standardised. A jeopardised data infrastructure may serve as an obstacle to cross-border credit as well as the exercise of all other free movement rights which are at the basis of the EU. The picture is exacerbated by the rapid developments in information science, technological innovation and the sheer volume of non-traditional data in financial markets. Once properly defined policy goals of personal data usage in financial services are defined, it should be for the law to determine which datasets and data sources should be necessary, reliable, and proportionate. This would be extremely important for both the creation of the single market and for consumer protection. The current framework set by data protection law looks inapt to stem overuses, abuses or misuses if the type of data to be used is left to the sole determination of the financial services industry.

Recommendations to Policy Makers

1. Clarify the several policy goals requiring the use and processing of personal data: creditworthiness assessment, prevention of over indebtedness, credit risk analysis, prudential supervision

The current practice of credit data use across the EU does not contribute to achieving defined policy objectives under the rule of law (over-indebtedness, creditworthiness assessment, market integration, prudential supervision). This is especially the case for the current practices of private credit bureaus, as well as the use of non-traditional data.

Only public institutions operating under the rule of law and the democratic process should be allowed to pursue the policy goals of sound creditworthiness analysis in the interest of consumers, monitoring of consumer over-indebtedness and prudential supervision, or at least supervise their implementation under a properly designed legal framework. Such data should be processed exclusively in the public interest.

2. Identify the data needed to achieve each policy objective

Policy makers should take appropriate measures to achieve well defined policy goals that need to be balanced with consumer protection and the respect for fundamental rights.

The future European Data Protection Board, in co-operation with the European Banking Authority and the European Commission should issue an opinion/guidance on the application of the GDPR in the credit sector, to clarify issues like to what extent can lenders rely on the 'legitimate interest' ground, what data, for which purposes is allowed to be used, information and transparency duties, etc.

Policymakers should determine whether the way financial institutions use credit data is compliant with data protection and anti-discrimination legislation: past credit history and the plethora of information used by the industry is not always related to creditworthiness, over-indebtedness, or prudential supervision.

By no means should credit data be used across other economic segments and, vice-versa, data from other economic relationships should not be used in credit relationships.

3. Identify the data processing appropriate to achieve each policy goal

It should be based on the analysis of existing practices, but should also include alternative procedures.

For instance, there are alternatives that could reconcile data analysis and data protection making the assessment of the creditworthiness of borrowers from a single source of information, and allowing the borrowers to transfer their own data to the potential lenders (application of the right of data portability). These solutions should be explored by policy-makers.

4. Standardize the data needed to measure over-indebtedness at EU level

The EU should develop a common scheme for measuring household over-indebtedness made of legal rules rather than technical rules. In the longer term, data from public sources should have a role in the monitoring of over-indebtedness. As the system of collecting credit data across the EU countries is currently being developed (AnaCredit), this could be extended to individuals with all types of loans (however, the current reporting threshold should be eliminated for consumers or at least lowered to below the planned Euros 25,000).

5. Regulate credit registers

- *Governance*: credit registers should be subject to a mixed governance body supervising their activities composed of public authorities, data protection authorities, consumer/user organisations, civil society, financial industry representatives and credit register representatives. This governance body would have the mandate to ensure due process and the respect of principles based on agreed policy objectives, consumer protection, and fairness.
- *Use of data*: the data contained inside credit registers should be limited by the governance body above upon consensual decision and be proportionate to the aim of assessing creditworthiness, preventing over-indebtedness and ensuring responsible lending/borrowing.
- *Access to data*: the data in credit registers should be free and easy to access for consumers. Its access by private entities should be subject to strong privacy protection standards and can only be shared with the explicit consent of the consumer (for instance, upon a visit to a local branch of a bank). Consumers should have the right to know which entity consulted their data, when, and for what purpose.
- *Right to correct their credit history*: The consumer should be easily able to report any incorrect data to the credit register, which should rectify the data immediately and without any undue delay.
- *Right of redress*: consumers should have the right to an easy redress procedure in case of a mistake inside the credit register. Liability for incorrect data and its possible adverse effects on the consumer (e.g. credit refusal, financial and social exclusion) should always lie with the credit register.

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1. Credit Data in the Economy

1.1. Classic economic theory

a. The Reduction of Information Asymmetry and Risk-Management

The sharing of consumers' credit data finds its roots in conventional economic theory and the study of risk in finance. This economic literature focuses on credit risk analysis.

Classical economic theory views the sharing of consumer credit data in the financial system as a tool to meet the problem of asymmetrical information between borrowers and lenders, as well as problems of bad selection of customers, and the risk which arises from the characteristics of prospective borrowers that may increase the possibility of an economic loss.

Economists have identified the problem of asymmetrical information as the one that a party has when it does not have the same information of the other party in relation to the risks relating to the performance of the contract by such other party. In a nutshell, one party knows less than the other, a situation which is different from the one where a party has less information than the ideal, known as 'imperfect information'. In finance, this may be seen as the different knowledge or level of information that the demand side, i.e. customers, has either on financial products or the market behaviour of providers. By the same token, from the perspective of the supply side of the relationship - i.e. the credit industry - this difference of knowledge or information relates to the payment behaviour of customers. In a credit relationship, lenders want to avoid lending money that will not be repaid. If they do not have the same information as borrowers have on their ability or willingness to repay a debt, they will incur in a higher risk of making bad business. This risk, in turn, poses problems of bad debts and adverse selection, i.e. the selection of the wrong customers. This explains why economic theory has traditionally emphasised the importance of information in credit markets.⁷

From the supply side, the reduction of asymmetric information and adverse selection of customers encompass several elements relating to market structure and marketing activities of the participants in the retail finance marketplace.

The theory suggests that the lack of information on borrowers can prevent the efficient allocation of credit in a market, and that one way that lenders can improve their knowledge of borrowers is through their observation of clients over time.⁸

In turn, the reduction of asymmetric information affects many aspects of the lending business: risk management and pricing through the assessment of uncertainties about the ability and/or willingness of a debtor to repay, market entry and competition, customers' creditworthiness, application processing and screening, customers' segmentation and product specialisation, and improvement of the credit portfolio.⁹

b. Moral hazard and reputation collateral

All financial transactions in general - and credit transactions in particular - involve risks or uncertainties. Among these, an important one concerns the ability and/or the willingness of the debtor to repay the debt. At the time of contracting, lenders want to assess whether borrowers are creditworthy, i.e. if they have the ability to pay when the repayment is due back, and/or that they have the willingness and incentive to pay back their debt. These are two different types of risk because some people may be able to pay but unwilling

⁷ Stiglitz and Weiss (1981), pp. 393-410; Berger and Udell (1995), pp. 351-381; Akerlof (1970), pp. 523-547; Diamond (1991), pp. 689-721; Admati and Pfleiderer (2000), pp. 479-519.

⁸ Ibid.

⁹ Ibid.

to do it or, vice versa, they do want to pay but due to unexpected changes in their circumstances they may be unable to pay back when the money is due.

The unwillingness to repay is known as 'moral hazard'. It refers to the risk which arises from personal, as distinguished from physical, characteristics of a borrower that increases the possibility of an economic loss. It is a phenomenon normally associated with business credit: it occurs when entrepreneurs have incentives to invest in riskier projects and a larger proportion of the cost is financed by a lender. If the project is successful, they have much to gain from any excess return, but if the project fails their losses would be limited by bankruptcy. Hence, in this circumstance, as lenders will suffer much of the actual economic losses, borrowers do not have incentives to act prudently and exceed in risk-taking in the attempt to maximise returns. Investments, by contrast, are deemed to become capable of being safer if entrepreneurs have more to lose, in particular if they are forced to bear a portion of the risk.¹⁰

But moral hazard is now considered directly relevant also for the behaviour of consumers in the use of mortgage or consumptive credit every time that a repayment reflects the willingness, not the ability, to honour one's debts. In credit to consumers, individuals do not make risky investments but they use credit to consume or buy a property.¹¹ As the theory explains, when deciding to repay, a rational agent weighs the gain of failing to repay vis-à-vis the punishment for default. Since small-size debts could not be cost-effective to recover by lenders, and debtors may receive no or little punishment by the law, a number of consumers may become prone to moral-hazard, i.e. they willingly may decide not to repay their debts.¹²

Similarly, economic theory also explains that information exchanges among lenders play a pivotal role as a borrowers' discipline device as the latter would know that a delay or a default in re-payment compromise their reputation with all the other potential lenders on the market, resulting in credit with more costly terms or by cutting them off from credit entirely.¹³ Therefore, information exchanges among lenders would strengthen borrower discipline and reduce moral hazard, since late payment or failure to repay a debt with one institution would result in sanctions by all or many others. According to Miller, a borrower's 'good name', i.e. his or her reputation collateral, should provide "an incentive to meet commitments much the same way as does a pledge of physical collateral, thus reducing moral hazard".¹⁴

From this perspective, some have gone as far as suggesting that information exchanges maintain accountability and honesty in society.¹⁵

c. Cost efficiency

Typically, the process of granting credit begins when a prospective customer approaches a credit provider and applies for credit or services/goods to be paid at a later stage. In the event the latter agrees to enter the financing or credit agreement, then, such a relationship ends when the last statement of the credit line is paid back in accordance with the same agreement or, in the worst case scenario, when the credit is unrecoverable and/or disregarded following a debt recovery proceeding and a judicial procedure, or in some jurisdictions the judicial declaration of insolvency of the borrower. The recourse to debt collection procedures and legal actions, however, does not guarantee to lenders the recovery of the debt and, in any

¹⁰ Bertola, Disney, and Grant (2006 a), pp. 1-26.

¹¹ Of course, high levels of indebtedness are risky for consumers who may be exposed to economic shocks and over-indebtedness. For example, this is why Sweden has proposed new legislation forcing amortisation requirements which demands mortgage holders to repay more than they currently do, especially if they have borrowed high percentages of the purchase price of their home. See the official website of the Swedish central administrative body in charge of monitoring and analysing the trends in the financial market (Finansinspektionen) at http://www.fi.se/upload/90_English/80_Press_office/2014/measures-household-indebtedness-eng.pdf.

¹² Bertola, Disney, and Grant (2006 a), pp. 1-26.

¹³ Jappelli and Pagano (2002), pp. 2017-2045; Diamond (1991), pp. 689-721; Admati and Pfleiderer (2000), pp. 479-519. See also Jappelli and Pagano (2006), pp. 347-371.

¹⁴ Miller (2003 a), pp. 1-23, sp. 2. See also Miller (2003 b), pp. 25-79.

¹⁵ Klein (1992), pp. 117-136; Klein (1997), pp. 267-288.

event, they are considered an instrument of last resort as they are perceived to be both costly and time-consuming.¹⁶

Thus, risk assessment and applicants screening have become particularly important for the consumer credit industry which has to deal with a large number of small-sum (often unsecured) credit lines. It is widely agreed, in fact, that in this sector profitability is only achieved by minimising the risk while ensuring that a sizeable volume of credit lines is granted. Hence, credit grantors consider information about borrowers vital for their risk-assessment purposes. Along these lines, one of the best predictors of future behaviour is considered to be past behaviour. Therefore, information on how a potential borrower has met obligations in the past enables lenders to more accurately evaluate credit risk, easing adverse selection problems.¹⁷

Moreover, the small or medium size of loans to consumers means that it is not cost-efficient to assess consumers on a case by case basis. Traditionally, when lenders evaluate borrowers to determine their creditworthiness for credit-risk assessment and management, they interview the applicants and ask them directly for personal information together with the relevant supporting documents. At the same time, they seek and gather information from their own databases developed through years of experience and business practice in the credit market. Such a source of information, however, is incomplete as it covers a lender's own past and present customers, but it does not contain data about the same customers' past and/or present relationship with other financial institutions nor, from a competition perspective, information about new or prospective customers and their past and/or present relationship with other providers. Thus, it is with the view to supplement comprehensive information about these customers that information exchanges among lenders and sophisticated centralised databases emerged and developed in the past few decades.¹⁸

1.2. Competition

As far as competition is concerned, the exchange of information on customer relationships or applicants reduces the information monopoly of individual lenders and the competitive advantage of large financial institutions. Although lenders lose the exclusivity of data in terms of competition one versus the other, they would ultimately gain by sharing information as this additional accumulation of data enables them to distinguish the good borrowers from the bad ones. Information sharing would serve as a tool to predict the future payment behaviour of applicants allowing lenders to attract creditworthy borrowers and offering them better terms and conditions, thus promoting market competition that could ultimately result in benefits to those 'good consumers'.¹⁹ Hence, the adverse selection problem identified by the economic literature indicates that should lenders fail to distinguish the good borrowers from the bad ones, all accepted borrowers would be charged at a higher rate an average interest rate that mirrors their pooled experience.²⁰ Therefore, the distinction between good borrowers from the bad ones allows lenders on the one hand to offer more advantageous prices to lower-risk borrowers while, on the other hand, higher risk borrowers are offered higher interest rates or can be rationed out of the market because of the lenders' unwillingness to offer these borrowers accommodating rates or any credit at all.²¹

The problem of asymmetric information and adverse selection becomes greater for new market entrants, particularly foreign lenders. This is particularly the case in the context of the creation of the EU single market and cross-border entry or cross-border provision of financial services. In addition to competitive disadvantages in relation to incurring greater risks of incorrectly estimating a borrower's credit risk, without

¹⁶ Riestra (2002), p 4; Bertola, Disney, and Grant (2006), pp. 1-26.

¹⁷ Miller (2003 a), pp. 1-23, sp. 2. See also Miller (2003 b), 25-79.

¹⁸ Bertola, Disney, and Grant (2006), pp. 1-26; Riestra (2002). However, note that in some countries (e.g. Germany) credit bureaus have existed for a longer time (see below).

¹⁹ European Commission (2009).

²⁰ Alary and Gollier (2001).

²¹ Barron and Staten (2000); Barron and Staten (2003), pp. 273-310.

relevant information on borrowers new market entrants would be likely to attract precisely those who were rejected by existing lenders in the market.²² This circumstance has induced recent literature to conclude that information sharing, market structure, and competitive conduct are intrinsically intertwined in the financial services market and, from the standpoint of industrial organisation, the availability of information shared by the sector can affect foreign lenders' choice not only of whether to entry another jurisdiction but also the mode of doing it, i.e. whether through the cross-border provision of services, the setting-up of branches or subsidiaries, or through mergers and acquisitions.²³

Therefore, on the one hand such strategies may well have the potential to influence the intensity of competition in national markets and among national providers. On the other hand, however, this is an indication that the behaviour of one or few market players – particularly existing lenders – influences and drives the behaviour of others, especially new entrants, which will decide their strategies on the experience, or market intelligence, of existing ones.

Prima facie, considerations of the like may have the effect of casting doubts as to whether or to what extent in actual facts this may constitute a concerted practice or simply a reduction of market uncertainty.²⁴

Also, to the extent that information monopoly of individual lenders is reduced, this is transferred to those third-party subjects who become the providers of information and manage the corresponding databases, i.e. the Credit Bureaus. This, in turn, may raise new concerns over market competition and power which are beyond the scope of this work.²⁵

1.3. The Limits of Classic Economic Theory

It is not within the scope of this contribution to challenge or discredit the economic theories and rationale for the use of credit data and their sharing.

Nonetheless, it cannot be underestimated how the traditional economic theories suffer from not being universally accepted. One of the most apparent limitations lies in the neo-classical understanding or bias of the consumer borrower as purely a *homo economicus*. These theories, in fact, seem to envision a commercial relationship where consumers are perfectly rational, informed, vigilant and alert. For example, they know and understand how the data sharing works, as well as the value and meaning given to the data; they appreciate the association of the data with other information; they are capable of regularly identifying and disputing errors, etc. In short, the economic behaviour of consumers is explained as if they were fully rational, narrowly self-interested actors who have the ability to make judgments towards their subjectively defined ends; consumers who maximise their own utility and make intelligent and conscious choices, free of external events biasing or forcing their behaviour.²⁶

Such an economic interpretation appears inconsistent with the findings and increasing acceptance of the behavioural literature which attempts to explain relevant features of human behaviour and the consumers' cognitive limitations that cannot be explained under standard economic assumptions. It challenges economic assumptions by using a number of alternative social sciences or disciplines such as psychology, sociology, neurosciences to explore the real behaviour of human beings and how economic decisions are taken or dictated in the economic, cultural, and social context where they live.²⁷

²² Giannetti, Jentzsch, and Spagnolo (2010).

²³ Ibid.

²⁴ Ferretti (2014).

²⁵ These issues have been addressed in Ferretti (2014).

²⁶ Staten and Cate (2004); Becker (1976); Osovsky (2013), pp. 881-933.

²⁷ The literature on behavioural economics is copious. Examples are Jolls, Sustain and Thaler (1998), pp. 1471-1550; Diamond and Vartiainen (2007); Camerer, Issacharoff, Loewenstein, O'Donoghue, and Rabin (2003), pp. 1211-1254; Hansen and Kysar (1999), pp. 630-749. For literature specifically relevant on borrowers' behavior see e.g. Agarwal and Zhang (2015); Lea (no date); Tooth (2012); Xiao (2015); Wright (2007).

Moreover, credit data may only give a partial or fragmented picture of the borrower story or situation. They may present a distorted impression of individuals, not because the data are incorrect but for presenting a piecemeal picture making it seem incomplete and incorrect. In simple language, it is like taking a few silvers of a person and presenting that as the whole her/him.

Also, the economics of giving a second chance to consumers has been under-explored.

Many other questions may arise on the viability and assessment of those who are not in the databases. Arguably, those who are not in the databases for not having incurred into any financing operation are not negligible in numbers. The problem seems to be that there are no fixed rules in the industry and the literature alike as to what constitutes a good credit risk. Assuming that a good credit risk is someone with immaculate repayment behaviour, the system seems to penalise those with a weaker credit history notwithstanding their personal circumstances, or ignoring behavioural biases or unstandardized conducts. From this point of view, the resulting theories appear to some extent artificial. The ability of these systems to detect atypical behaviours raises new questions and problems because they also make assumptions about what is normal behaviour, where deviation from the established pattern is seen as undesirable or questionable, with all the following implications. In this respect, the biases behind the classic economic theories go against the foundations of human behaviours as heterogeneous and unpredictable.

The above concerns are exacerbated by the consideration that the reviewed economic literature provides no conclusive or at least empirical evidence - nor a certain relation of cause and effect - as to the connection between the data exchanges and the predictability of human behaviour. In addition, the theory that justifies the rationale for Credit Bureaus has been criticised for being far from complete. According to Jentzsch, for instance, "this literature is primarily incoherent because there are different approaches to information (...). The economic implications of information are multi-dimensional and no model can integrate them all at once".²⁸ Others have begun to question the economic efficiency of giving a memory to the market, advancing the proposition that giving second chances to defaulting debtors may be justified not only on equity grounds but also on economic grounds.²⁹ This exploration has remained at its infancy but it tells that other routes could be explored.

What seems to be mostly important, when considering all such issues, nevertheless, is that one should not forget that the use of private or commercial Credit Bureaus is not mandatory by law.

2. Expanding uses of credit data sharing

2.1. Credit Scoring

Credit scoring is a related, yet distinct, use of credit data that avails itself of *ad hoc* technologies which add additional features and integrate the data with other data sources. Scoring models are mathematical algorithms or statistical programmes that determine the probable repayments of debts by consumers, assigning a score to an individual based on the information processed from a number of data sources and categorising credit applicants according to risk classes. Thus, the resulting credit score is the numerical expression based on a statistical formula to evaluate an individual's financial health and creditworthiness at

²⁸ Jentzsch (2007), 7.

²⁹ Jappelli and Pagano (2000), 15.

a given point in time.³⁰ They involve data mining techniques which include statistics, artificial intelligence, machine learning, and other fields aiming at getting knowledge from large databases.³¹

Scoring has been subject to several criticisms for its numerous fallacies, particularly for introducing new biases, or for making assumptions that lack universal acceptance or that may work on large numbers but not for individual cases.³²

In the end, scoring is essentially a classification and profiling technique, a way of recognising different groups in a population according to certain features expressed by a combination of personal financial and other non-personal data, differentiating consumers on grounds of parameters and classifications set *a priori* from statistics for a predictive purpose. It is an analysis of customer behaviour having the objective of classifying them in two or more groups based on a predictive outcome associated with each customer. The probability of given events, such as for example a default in the repayment of a loan, is assumed to depend on a number of characteristics of the individuals³³ The factors relevant for such a classification purpose are usually determined through an analysis of consumers' past payment history together with other descriptive information provided in the credit application form and other data from a number of different sources.

In short, a goal of credit scoring systems in the lending process is that of predicting the risk or assessing through automated means the creditworthiness of consumers, as well as the profitability of lenders over each one of them. It is now used for all consumer credit operations, in issuing credit cards and managing accounts, as well as in mortgage origination and securitisation operations of consumer loans. Although credit scoring was originally employed to seek to minimise the percentage of consumers who default, lenders are now using it to identify the customers who are most profitable and to maximise profits through risk-based pricing according to their profile thus obtained, blurring all this with direct marketing activities.³⁴

For example, the existence of scores reduces the incentive of lenders to assess the data in the credit register where his main motive is the automatisisation of decision making. This is usually the case for most of small/middle sized credit.

A problematic aspect is the lack of transparency in the scoring process. The methodology is usually not disclosed, while it is not clear who has access to the scoring data. Scoring makes the credit data more tradable. It could thus be seen as tipping the conflict of interest between the prevention of over-indebtedness vis-à-vis sales acceleration towards the latter. Proprietary algorithms are considered trade secrets and therefore the exact scoring methods are protected. Secrecy over the methods and opacity over their uses are justified as a means to keep competitors from learning how lenders select and price their customers. Therefore, it is not due to know how the systems are built and operated. Moreover, opacity is justified as a mean to prevent scored individuals from deceiving the lender by falsifying their applications to reach a desired score.

For the problems that it raises, previous scholarship has pointed out the need of addressing consumer rights and transparency in the credit scoring of consumers. For example, the opacity surrounding the scoring methods can be criticised for preventing consumers from knowing why their applications have been turned down, challenging existing scoring models, and avoiding new adverse data from being added for future applications.³⁵ From this perspective, to some extent Germany has been a precursor in enacting specific legal measures. For the first time in Germany and largely in the EU, the law altering the German Data Protection

³⁰ Abdou and Pointon J (2011), esp. 62

³¹ See, for example, Bigus (1996); Desai, Conway, Crook, and Overstreet (1997), pp. 323-346; Handzic, Tjandrawibawa, and Jeo (2003), pp. 97-109; Jensen (1992), pp. 15-26; Yobas and Crook (2000), pp. 111-125.

³² For all see, for example, Poulton (1994).

³³ Fractal Analytics (2003).

³⁴ Thomas (2000), pp. 149-172.

³⁵ Ferretti (2009).

Act of 29 May 2009 deals specifically with consumer-related scoring.³⁶ In turn, the German Supreme Court (*Bundesgerichtshof*) has confirmed that credit scoring qualifies for meeting legal requirements under data protection legislation, but it has affirmed that the underlying mathematical and statistical calculation method can be protected as a trade secret. Thus, it remains open to question to what extent transparency can be guaranteed to consumers, which is a matter now under the consideration of the German Constitutional Court.³⁷

2.2. Securitisation

Information pooling and sharing can be used for the securitisation on lenders' portfolios of consumer loans, including mortgages.

In its simplest form, securitisation is a financial operation used by a financial institution on the receiving end of credit repayments from customers who have taken out financing. It bundles its loans repackaging the monthly loan payments into securities rated by rating agencies, and it backs them using the underlying loans as collaterals. It then transfers or sells such securities on to investors in order to receive funding which can be used to issue more loans.

According to financial theory, investors in asset backed securities need information on the quality of the underlying assets. Without such information, investors would not risk investing or they would require a risk premium which would signify higher refinancing costs for lenders, ultimately being passed on consumers with higher borrowing costs. Therefore, financial institutions involved in the process of securitisation avail themselves of the services of credit rating agencies such as Standard & Poor's, Moody's and Fitch (only to mention the three big rating agencies that dominate the market and take the titles in the media) which grade or score the repackaged loans on the credit risk associated with those securities. In such rating of securities for the calculation of the risk of default, the agencies need to rely on data on the underlying loans from the information providers organising the exchange of information among the competing lenders. However, they do not have access to the data and they need to rely on the credit score assigned by the same information providers.³⁸ Thus, the whole process mostly relies on a double scoring or rating from different intermediaries.

Securitisation has the effect of transferring credit risks to investors, releasing lenders from concerns over defaults, and ultimately resulting in more reckless credit for consumers as well as dangers for the health and stability of the financial system. Securitisation was pointed as one of the biggest factors contributing to the subprime lending boom and bust which generated what is known as 'the great financial crisis' that erupted in 2008. This discussion, however, is beyond the scope of this contribution and it has been analysed elsewhere in great detail.³⁹

2.3. Identity verification

Traditionally, undertaking the identity check of an applicant has involved lenders requiring individuals to produce documentary evidence, such as a passport, an identity card, a driving licence, or in countries like

³⁶ Metz (2012).

³⁷ See *Bundesgerichtshof*, press release at <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&sid=2ef8cefa03b7d0493f54c1bc71ee0a53&anz=1&pos=0&nr=66583&linked=pm&Blank=1>. Schufa, Germany's leading credit bureau was sued by a German individual over the lack of transparency of its credit scoring methods. The plaintiff had been denied credit and Schufa had already provided him with information as required by law. However, the company did not provide the underlying method, which it regarded as a trade secret. The court held that while credit bureaus must disclose all personal data as prescribed in the Federal German Data Protection Act, they do not have to disclose how the underlying scoring algorithm weighed the various factors and how the reference groups used to arrive at a credit score were comprised. Following to this decision of the Supreme Court, the matter has been brought before the German Constitutional Court and a decision is awaited as to the balancing of the fundamental rights of privacy and data protection vis-à-vis the safeguard of trade secrets (German Constitutional Court, Case n. 1 BvR 756/2014)

³⁸ European Commission (2009); Keys, Mukherjee, Seru, and Vig (2008); Engel and McCoy (2011).

³⁹ E.g., for a detailed account of the securitisation of consumer loans see Engel and McCoy (2011).

the United Kingdom even utility bills. Such documents, then, were examined by a lender's officer in order to establish that documents were genuine and they truly related to the individual making the application. Officers, finally, needed to take the evidence of the identity check by photocopying and filing the documents.

The use of databases is said by the industry to enable lenders to check on several sources, thus forming the so-called 'electronic footprint' of every individual, which is used to match against the personal data supplied by the applicant.

In a way, identity verification challenges the role of the State, which is the only one which can determine the identity documents and true identity of individuals. Once more, cost saving is the main drive for such an additional use. But in those countries where such tools are used, the cost of credit does not appear to be lower for consumers (e.g. France and Belgium).⁴⁰

2.4. Marketing

Credit data are increasingly used to segment and classify customers, and to price loans accordingly. Yet, those consumers who are a higher risk in the terms of the credit industry are those who pay more for credit. This is certainly not a use for the pursuit of responsible lending policies and over-indebtedness prevention. A trend, for example, is that of setting-up businesses whose core activity is that of lending at higher rates to borrowers with poor credit records, also known as 'subprime lending'.⁴¹

Credit data are also used for marketing other banking products. Many private Credit Bureaus do not have pre-defined and strict conditions under which the data may be checked (e.g. request of the consumer for a credit offer, payment difficulties, etc.). And, even more important, one of the main uses of scores is that they can be sold to other goods/services providers.

Other marketing activities resulting from the use of data are product development for the profitability of the industry and geo-marketing.⁴²

2.5. Fraud prevention

Consumer credit data can be used alongside the application processing systems to compare a current credit application with previous ones over a number of years by matching the application details. Thus, it would be possible to look for discrepancies and detect omissions, the data an applicant would like not to disclose, or inaccurate or untrue details within the applicant's history. Similarly, these databases would be used to detect multiple applications in the applicant's name within the same timeframe, misleadingly including consumers shopping around for quotes, or the use by the applicant of different names for the same banking details or other patterns of (alleged) fraudulent behaviour.

Databases, in this way, become substitutes of lengthier and more complete documentation in the interest of the credit industry. However, empirical evidence of the incidence of fraud vis-à-vis all loan applications is largely missing, as it is evidence that credit databases are the appropriate tool to prevent it. Arguably, further research in this area is necessary. If anything, reliance on databases erodes the principle of 'know your customers', where it means acquiring a proper and more individualized knowledge of customers.

⁴⁰ See, for e.g., Eurobarometers available from http://ec.europa.eu/public_opinion/archives/ebs/ebs_321_en.pdf; http://ec.europa.eu/public_opinion/archives/ebs/ebs_355_en.pdf.

⁴¹ E.g. see in the UK CallCredit at <http://www.callcredit.co.uk/products-and-services/consumer-marketing-data/segmentation-analysis>. For some literature, see e.g. Engel and McCoy (2011).

⁴² E.g. see the websites of the major Credit Bureaus such as Experian at <http://www.experian.co.uk/marketing-services/index.html>, Equifax at <http://www.equifax.com/consumer/marketing>, CRIF at <http://www.crif.com/site/en/Pages/default.aspx>, Schufa at https://www.schufa.de/en/en/produkteundservices_en/produktedservices_1.jsp

2.6. Fight against identity theft

There are two most commonly known types of identity theft: (i) 'account takeover' occurs when the fraudster acquires someone else's credit account information and purchases products and/or services using that person's existing accounts. Victims normally learn of the account takeover when checking their account statements; (ii) 'application fraud' occurs when the impostor uses someone else's identifying information to open new accounts in that person's name. In this case, victims usually do not learn of the fraud for some time as the account statements are normally mailed to addresses used by the identity thief and there is no record on the accounts effectively in use.

Thus, databases can be used as real-time identity fraud detection and prevention automated tools, by matching key personal data provided on credit applications by real-time access into a range of powerful market leading data sets, including directories and other independent data sources.⁴³

The credit industry believes that the practice described above may prevent the 'account takeover' type of identity theft.

In the fight against 'application fraud', by contrast, the use of credit reports requires the active involvement of customers. Thus, a number of Credit Bureaus have seized the opportunity to develop a new business to the consumer market by offering credit reports for a fee, thus allowing and encouraging individuals, who are motivated by their anxiety, to check their own report regularly and catch possible frauds committed at their name.⁴⁴

By contrast, it can be argued that increasing reliance on databases increments identity theft and makes it possible. Moreover, because of the reliance on databases, consumers who fall victim of identity theft have to go through hurdles to have their files cleaned and suffer the consequences of the theft for long time.

2.7. Emerging uses: job applications, tenancies, and uses in other economic sectors

Credit data all the time more become the gateway for other economic sectors such as telecoms or utilities. According to the ACCIS Survey (2015), in some countries, utility companies, telecoms, TV and Internet providers have actively started to use data provided by Credit Bureaus. In ACCIS' view, there is potential for greater supply of data from utility providers and telecommunication companies and for these companies to use the services provided by the Credit Bureaus.

Governments tapping databases: the example of the United Kingdom.

In the last few years, Governments have started to make use of Credit Bureaus' databases to overcome contingent situations, such as measures directed to tackle terrorism or other forms of organised crime (notwithstanding how controversial these remedies may seem to many), as well as to maximise the enforcement of, or give execution to, orders issued under the rule of law.

For example, in the United Kingdom at least, it has been reported that in the attempt to thwart bogus applications for UK passports in an effort to fight terrorism, "the data sharing provisions of the draft identity cards bill are to allow the UK Passport Service to tap into the databases of Credit Bureaus and other commercial organisations".⁴⁵ The use of credit reference data in the United Kingdom has been a part of the proposed national ID cards and an integral element of 'biographical footprint checking' of applications. To this purpose, the UK Passport Service has engaged in a data sharing project with a Credit Bureau, the Home

⁴³ Experian, from <http://www.experian.co.uk/>; Equifax, from <http://www.equifax.co.uk/>

⁴⁴ Ibid. See also Callcredit, from <http://www.callcredit.co.uk/>

⁴⁵ "Topic: Confidence and Data Protection - News and Views", *Privacy and Data Protection*, (11 March 2004).

Office immigration and nationality department, the Department of Work and Pension and the Driver and Vehicle Licensing Agency.⁴⁶

Even the Department for Constitutional Affairs in the UK, which also has access to the UK Police National Computer to locate defaulters, has signed a contract to use the database of a Credit Bureau to track fine-dodgers. According to a recent report, magistrates will use the 500 million records kept by such Credit Bureau to pursue a total of 276 million British Pounds in unpaid court fines in England and Wales.⁴⁷

48% of governments or central banks have access to the data held by CRAs for monitoring and economic policy purposes. For instance, some government departments (i.e. Tax Authorities) and Law Enforcement agencies (i.e. Police) are allowed access as an exception to the reciprocity rule.⁴⁸

In some jurisdictions, such as in the UK, credit data are used by estate agencies and landlords for granting tenancy agreements. Similarly, such data may now be used to screen job applicants. Consumer credit data, therefore, risk becoming increasingly more a tool of economic and social inclusion or exclusion.

2.8. New consumer services

A number of commercial credit bureaus have developed services for consumers, selling them the credit report to verify if they can qualify for credit and the amount that they may be able to obtain.⁴⁹

However, concerns have been expressed that the credit reports sold to consumers are not the same as those sold to financial institutions, where they have at their disposal much more data, detail, and in depth. In the end, consumers do not buy what the credit industry really uses.⁵⁰

In this way, the credit data system has created new needs for consumers to know if and how they qualify for credit, and how financial institutions value them. This may have the potential to nudge consumers towards the financial behavior envisaged by the credit industry.

However, it is questionable to what extent it is legitimate or appropriate to sell information to consumers about themselves. Under Data Protection Law, as implemented in the national laws of the Member States, data subjects (i.e. consumers) have the legal right to access data regarding themselves. With the emerging provision of this kind of services the credit data industry may be selling what in fact is a right of access, which by law is usually free of charge or, in the UK, it costs a minimal fee of 2 GBP.

3. The Policy and Legal Context

3.1. Responsible lending, creditworthiness assessment and over-indebtedness

The market for loans available to consumers has grown rapidly in the last decade across the EU and it is increasingly sophisticated. However, with the development of the retail and mortgage credit markets European consumers are becoming increasingly indebted. The growth of over-indebtedness is becoming a

⁴⁶ Ibid. See also Secretary of State for the Home Department by Command of Her Majesty, "Legislation on Identity Cards, a Consultation", (April 2004), at <http://www.privacyinternational.org/issues/idcard/uk/id-card-draft-404.pdf>, 21; Home Office, "Identity Cards Bill Regulatory Impact Assessment", available at <http://www.homeofficeqsi.gov.uk>; Molloy (2004).

⁴⁷ "News", *New Law Journal* (8 Oct. 2004), 154.

⁴⁸ ACCIS Survey (2015).

⁴⁹ See, for example, the website of Experian at <http://www.experian.co.uk/consumer/>

⁵⁰ E.g. see Consumer Financial Protection Bureau (2012).

concern for national and EU policy-makers alike. Besides, the financial crisis has raised important issues regarding the protection of consumers in financial markets and the need for additional safeguards to stem the social problems that it has exacerbated.⁵¹

Therefore, alongside the advancement of measures for the cross-border provision of credit and the abolition of obstacles for further integration, the promotion of responsible lending and borrowing policies to limit the over-indebtedness of European consumers is high on the EU agenda, at least on paper. Likewise, the importance of the relationship between borrowers and financial institutions is under the close scrutiny of European policy makers.

Responsible lending and borrowing is a recent policy introducing a novel concept to tackle consumers' over-indebtedness. It makes reference to the delivery of responsible and reliable markets, as well as the restoration of consumer confidence, where credit products are appropriate for consumers' needs and are tailored to their ability to repay their debts. They envisage a framework that could ensure that all lenders and intermediaries act in a fair, honest and professional manner before, during, and after the lending transaction. Similarly, it is expected that in order to obtain credit consumers provide relevant, complete and accurate information on their finances. They are also encouraged to make informed and sustainable borrowing decisions.⁵²

The resulting EU law regarding loans to consumers comprises the Consumer Credit Directive (CCD)⁵³ and the Mortgage Credit Directive (MCD).⁵⁴

a. The Consumer Credit Directive

The CCD is a full harmonising measure attempting to extend the internal market for financial services to the specific field of consumer credit. As already extensively recognised by many commentators, it does not mention over-indebtedness⁵⁵ nor does it include any specific provision on responsible lending.⁵⁶ This is not only remarkable because of the frustration of the previous recognition of over-indebtedness as a European problem and of the ensuing policy impetus on responsible lending, but also for the emphasis given to such a policy in the earlier drafts of the CCD that was not retained in the final version. Rott offers a detailed account of the legislative history of the CCD showing how the European Commission originally aimed at avoiding the consumer's over-indebtedness by evading unreasonable credit contracts, introducing duties of lenders to assess and advise consumers on the risks of default and holding them responsible during all phases of the contractual relationship.⁵⁷ Instead, the final version of the CCD remains anchored on the usual paradigm of transparency and information requirements by both lenders and borrowers, adding a focus on an undetermined requirement of creditworthiness assessment.⁵⁸

⁵¹ See European Commission, *Staff Working Paper on National Measures and Practices aimed at Avoiding Foreclosure Procedures for Residential Mortgage Loans* SEC(2011) 357 final, which pointed to the severe consequences for individual homeowners losing their homes in a foreclosure procedure, but also for society as a whole, considering their impact on financial and social stability.

⁵² See Communication of the European Commission to the European Council of 4 March 2009 *Driving European Recovery*, COM (2009) 114. See also the *Public Consultation on Responsible Lending and Borrowing*, available at atec.europa.eu/internal.../responsible_lending/consultation_en.pdf. The EU Commission has conducted a consultation with all stakeholders on responsible lending and borrowing in the EU to find measures to adequately assess, by all appropriate means, borrowers' creditworthiness before granting them a loan and tackle over-indebtedness. The consultation covered, among other things, the advertising and marketing of credit products, the information to be provided to borrowers prior to granting any loans, ways to assess product suitability and borrower creditworthiness, advice standards, responsible borrowing and issues relating to the framework for credit intermediaries (for example, disclosures, registration, licensing and supervision).

⁵³ Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC, OJ 2008 L 133/66.

⁵⁴ Directive 2014/17/EU of the European Parliament and of the Council of 4 February 2014 on credit agreements for consumers relating to residential immovable property and amending Directives 2008/48/EC and 2013/36/EU and Regulation (EU) No 1093/2010, OJ 2014 L 60/34.

⁵⁵ The only sketchy mention to over-indebtedness is in Recital 26 about "warnings [to be given to consumers] about the risks attaching to default on payment and to over-indebtedness".

⁵⁶ Rott (2014); Atamer (2011); Fairweather (2012); Ramsay (2010).

⁵⁷ Rott (2014).

⁵⁸ See Articles 4-6 CCD.

Thus, in the view of the EU legislator of the CCD, the significance of responsible lending is limited to duties to explain and disclose, and an obligation to assess the creditworthiness of consumers.

The CJEU has clarified in *LCL Le Crédit Lyonnais*⁵⁹ that the aim of the obligation to assess the creditworthiness of the borrower is that of protecting consumers against the risk of over-indebtedness and insolvency. In *Consumer Finance*⁶⁰ it was corroborated that all the above obligations deriving from responsible lending are pre-contractual in nature.

These judgements are significant in making clear in whose interest the creditworthiness assessment is undertaken and the private law nature of the duty, but they leave unanswered questions as to the remedies available to consumers if the creditor does not comply with such a duty and the extent of the remaining enforcement duties under public law.

If to a large extent the limited understanding of responsible lending focuses on the obligations of the creditor, which carries the main responsibility to assess the creditworthiness, Directive 2008/48/EC does not establish any obligation for the borrower except to provide sufficient information to the lenders for the creditworthiness assessment. At theoretical level the concept of responsible lending includes the responsible borrower.⁶¹ However, the only mention to the responsible borrower is in Recital 26 of the CCD, according to which “consumers should also act with prudence and respect their contractual obligations”. No obligation is established but there is a guideless suggestion that the borrower should also be prudent on his/her part. At the same time, it can be maintained that if lenders lend truly ‘responsibly’, there should be no need for strong provisions on the responsible borrower.

In general, the CCD has been criticized not only for not imbuing responsible lending in its provisions but especially for insisting on relying on the ability of informed, confident and rational consumers as drivers of economic efficiency⁶² but not caring about the socially and financially vulnerable consumers⁶³ such as those who become over-indebted.

As far as credit data are concerned, the relevant provisions are contained in Articles 8 and 9 of the CCD. The CCD is not explicit and it is to some extent unclear on the exchange of consumer information, at least as far as the obligation to share information is concerned. Article 8 of the CCD states that creditors have to assess the consumer's creditworthiness on the basis of sufficient information obtained from the consumer, not through information exchanges. Only where it is *necessary*, financial institutions have to make such assessment on the basis of a consultation of the relevant database, such circumstance occurring in those Member States whose legislation requires them to consult databases, usually a requirement that may be imposed by central banks for purposes of financial stability (see the relevant sub-heading below in this Section).

At the same time, in the following Article 9 the CCD is concerned that for competition purposes access is ensured on a non-discriminatory basis for creditors from other Member States to databases used in another Member State, if any.

b. The Mortgage Credit Directive

The adoption of the Mortgage Credit Directive (MCD),⁶⁴ which has been designed against the backdrop of the financial crisis and as another effort to create a transparent, efficient and competitive internal market

⁵⁹ Case C-565/12.

⁶⁰ Case C-449/13.

⁶¹ See Ryder, Griffiths and Singh (2012), esp. p. 509; FinCoNet (2014).

⁶² Micklitz (2013); Nield (2010).

⁶³ Micklitz (2013).

⁶⁴ Directive 2014/17/EU of the European Parliament and of the Council of 4 February 2014 on credit agreements for consumers relating to residential immovable property and amending Directives 2008/48/EC and 2013/36/EU and Regulation (EU) No 1093/2010, L 60/34.

for mortgage credit⁶⁵, may be considered a step in the direction of a closer legal transposition of responsible lending.

To some degree, the MCD insists and reproduces the information and transparency model of the CCD in the advertising, marketing, product specifications, pre-contractual and contractual information (including intermediaries and representatives), etc.⁶⁶

The novelty is the introduction of a number of norms that in principle may better correspond to the concept of responsible credit explicated in the policies. These include the following provisions:

- the financial education of consumers in relation to responsible borrowing and debt management, including guidance to consumers in the credit granting process;⁶⁷
- conduct of business obligations and product suitability more tailored on individual circumstances, including methods of incentives or remuneration for staff or intermediaries;⁶⁸
- methods for calculating interest rates transparently.⁶⁹

The creditworthiness assessment of consumers features strongly in the MCD as the most reliable tool capable of fostering responsible lending. The EU legislator believes that imposing such a duty will enable lenders to determine the ability of consumers to meet their obligations under the credit agreement, and thus a tool to detect or prevent over-indebted consumers. After the lesson learned from the financial crisis, such an assessment “shall not rely predominantly on the value of the residential immovable property exceeding the amount of the credit or the assumption that the residential immovable property will increase in value”.⁷⁰ On the contrary, it should be based on information contained in databases alongside income, expenditures, savings, assets, and other circumstances about the consumer.⁷¹ In the creditworthiness assessment, therefore, the MCD requires that creditors take appropriate account of a number of relevant factors, requiring financial institutions to obtain information directly from the consumer, with the addition of relevant internal or external sources but without mandating or explicating information exchanges among lenders as the necessary ‘external source’ to be used. Relevant factors include income, savings, assets, expenses, features of the loan of offer, etc. Credit data are one of many possible sources of information for the assessment of creditworthiness.⁷²

What may appear unclear about this provision is that mainstream lenders already availed themselves of credit databases well before the financial crisis and the passing of the MCD, and they have always demanded relevant information to the applicants. But, arguably, the creation of the internal market and competition suggested that access to such information should be mandated on a non-discriminatory basis.

Indeed, like the CCD, the MCD looks at the competition side of the market and it provides for the non-discriminatory access of creditors to the databases used in another Member States via the exchange of information among the competing creditors, specifying that such databases comprise databases operated by private information providers as well as public registers.⁷³

The focus on competition of the MCD is clear from the Recitals:

⁶⁵ See Recital 6 and Article 1 MCD.

⁶⁶ See Articles 8, 10, 11, 13, 14, 15, 16 MCD.

⁶⁷ Article 6 MCD.

⁶⁸ Article 7 MCD.

⁶⁹ Article 17 MCD.

⁷⁰ Article 18(3) MCD.

⁷¹ Articles 18 and 20 MCD. On the belief of the usefulness of credit databases see Recital 59 MCD. On the suggested good practices for the creditworthiness assessment see also European Banking Authority (13 June 2013).

⁷² See Article 18 and 20 of the MCD.

⁷³ See Article 21 of the MCD. See, also, European Banking Authority (13 June 2013).

“to prevent any distortion of competition among creditors, it should be ensured that all creditors, including credit institutions or non-credit institutions providing credit agreements relating to residential immovable property, have access to all public and private credit databases concerning consumers under non-discriminatory conditions (...)”.⁷⁴

Article 18(5) of the MCD introduces a nominal ‘duty to deny credit’ but the nature of this provision appears unclear or open to different readings. According to the norm, the creditor makes the credit available to the consumer only where the result of the creditworthiness assessment indicates that the obligations resulting from the credit agreement are likely to be met in the manner required under that agreement.⁷⁵ Therefore, if the outcome of the assessment is negative, indicating that the consumer is not likely to be able to repay his loan, the creditor should not grant the credit.⁷⁶ Moreover, should the case arise, the creditor must also be able to invoke the specific indications he took into account for the assessment of the consumer’s ability to repay the loan.⁷⁷

Under this interpretation, the intention of the European legislator is to impose to the Member States the introduction of a duty to deny and intervene in the freedom of the contractual parties, which could have opted to proceed to the conclusion of the credit agreement despite the negative assessment.⁷⁸

On a reverse reading of such a duty, the establishment of such an obligation should not mean that a positive creditworthiness assessment obliges lenders to provide the credit. This is expressly provided for in the relevant recital of the MCD.⁷⁹ This seems to be explained by the legislator’s intervention in the general principle of the freedom of contracts which requires an express legislative provision justified by reasons of superior public interest.

Nonetheless, questions arise as to the public or a private nature of the obligation, as well as of the resulting sanctions and issues of enforcement. All what the MCD does is a reference to sanctions to be set-up by the Member States individually. There is an argument among scholars about the legal nature of the lender’s obligation to carry out a creditworthiness assessment. At least until recently it was the majority’s opinion that this obligation is a public law duty only.⁸⁰ As a result, a breach of such a duty could only trigger remedies laid down in the underlying sanctioning system of the national law providing for it. By contrast, the view of what at least until recently was seen as a minority is that the duty to carry out the creditworthiness assessment is a duty owed to the debtor, so it is by nature either a private law duty or a duty with both public and private law character.⁸¹ According to this view, breach of this duty entitles the debtor to damages. As a result, the creditor would have to put the debtor in the situation he would have been in had the duty not been breached. According to this view, the debtor could claim that, had the creditor carried out the creditworthiness assessment (properly), either the creditor or the debtor would not have entered into the loan agreement. Hence the creditor would have to pay for every loss suffered by the debtor as a result of having entered into the contract. This does not only include costs and interest but can also extend to the loan itself. Also, if the debtor became insolvent as a consequence of taking out the loan the creditor would have to pay for any loss resulting from the insolvency.⁸² What in any event appears doubtful is the extent to

⁷⁴ Recital 60 of the MCD.

⁷⁵ See also Directive 2014/17/EU, recital 57.

⁷⁶ An obligation to deny credit already exists under the Swiss law for consumer credit since 2003 (*Loi sur le crédit à la consommation*), even if not directly, but by combining the relevant provisions (Arts. 28-32). Moreover, heavy sanctions are imposed in case of substantive infringement of the said obligation. See Stauder and Favre-Bule (2004), esp. p. 188.

⁷⁷ Ferretti and Livada (2016).

⁷⁸ Ibid.

⁷⁹ Directive 2014/17/EU, recital 57.

⁸⁰ Ferretti, Salomone, Sutschet and Tsiafoutis (2016) and the literature there cited.

⁸¹ Ibid.

⁸² Ibid.

which the provision is capable of tackling the problem of over-indebtedness since its violation cannot lead to a debt cancellation without immediate repayment of the lent capital.

In short, the provision may raise a number of problematic legal issues that leave doubts over the extent to which such a measure could have any effect on the real financial difficulties of consumers.

c. Credit laws and credit data

When it comes to credit data, however, it appears clear that whilst they are considered as a possible tool to assess consumer creditworthiness, their use is not a mandatory requirement by law. If used, however, non-discriminatory access to all lenders should be guaranteed in order to avoid distortions of competition – this, however, is not a measure of consumer protection.

In addition, the guidelines of the European Banking Authority ('EBA') on creditworthiness assessment do not make reference on the use of credit data.⁸³ By contrast, EBA has only started recently to investigate the possible advantages and/or disadvantages of the use of consumer data by financial institutions.⁸⁴

At any rate, it is important to stress that both the CCD and the MCD state that the provisions mentioning the use of credit data are without prejudice to the application of the EU data protection law on the protection of individuals with regard to the processing of personal data and on the free movement of such data, whose provisions must be respected, particularly as far as the requirements of 'necessity' and 'proportionality' of the processing are concerned.⁸⁵

Only recently, in its thrust towards the creation of a true European market for retail financial services, the European Commission have identified the issue of what credit data should be necessary for the creditworthiness assessment and whether the increased use of personal financial and non-financial data by firms (including traditionally non-financial firms) require further action to facilitate provision of services or ensure consumer protection.⁸⁶ The concern arises from the above analysed provisions of the CCD and MCD where creditors have the right to consult credit databases in other Member States on a non-discriminatory basis to assess the creditworthiness of potential customers. Accordingly, however, lenders still face problems when attempting to use data as the techniques for their collection, distribution and use are still very diverse across the EU, and opinions vary on what data is relevant for creditworthiness assessments. This means that accessing and using these data by creditors in other Member States is problematic and they are unable to provide their services cross-border competitively. At the same time, there is the recognition that private credit bureaus often collect more data than necessary for the purposes of a creditworthiness assessment, or data which might be of questionable relevance to a creditworthiness assessment.⁸⁷

Against such policy and legal context, on the one hand the exchange of credit data may be regarded as a tool that in the end should be in the benefit of consumers. On the other hand, however, it remains open to debate whether the type of data used and the design of databases is proportionate to the policy goals to be achieved, and whether the level of aggregation or detail of information exceeds the purpose for its sharing. In turn, the first issue raises debates over duties and social responsibilities and the institutions which should be entrusted with the exercise of the social function of controlling over-indebtedness in the interest of consumers, as well as the oversight of these systems.⁸⁸

⁸³ European Banking Authority (19 August 2015).

⁸⁴ European Banking Authority (4 May 2016); see also the Joint Committee of the European Supervisory Authorities (19 December 2016).

⁸⁵ See Article 9(4) of the CCD, and Recitals 59, 61, and 62 of the MCD.

⁸⁶ European Commission, Green Paper on Retail Financial Services, COM(2015) 630 final (Brussels, 10.12.2015).

⁸⁷ Ibid.

⁸⁸ Ferretti (2010), pp. 1-27.

3.2. Prudential supervision

Information exchanges among competing lenders may be justified and used for the supervision of the financial system as a whole and assist in preserving financial stability. Under certain national systems, credit data are part of a broader information centralisation system managed by national central banks for the purpose of oversight of the financial system as a whole, i.e. they are an instrument for the macro-prudential supervision of the banking system. But credit risk data may also become a tool for the micro-prudential supervision if used to oversight and safeguard individual financial institutions from excessive risk-taking.⁸⁹

Financial prudential supervision encompasses a number of complex issues and elements that are beyond the scope of this work. But, among the tools to achieve it, there is the need for the authorities in charge of this public function to have adequate and timely information about the behaviour, leverage, and condition of banks vis-à-vis the whole system. Among the many types of information needed by the authorities – such as asset quality, capital adequacy, liquidity, internal systems of control and security, income and dividends, foreign operations, and so on – it is included the regular reporting on past due loans and non-performing loans. This not only allows supervisors to be in control and have the information on the condition and performance of the supervisees to intervene in time in case of problems, but it also constitutes an instrument to promote transparency to favour greater reliance on market discipline. The information available to financial supervisors also allows them to produce macro statistics and perform a number of analyses. For e.g., in Spain credit risk data are used for the stress testing of banks.⁹⁰

In addition, access to credit data by public authorities may provide them with the tools to study credit conditions and so support the decisions of monetary and other macroeconomic policymakers. According to the Bank of England, a key use of such data would be to improve the understanding of the transmission mechanism for monetary policy and to assess its impact upon both the availability of credit and bank risk-taking.⁹¹

In turn, under a limited number of mechanisms supervisors provide feedback loops to the banks that provide the data.

According to this prudential model, banks benefit from supervision in that they are provided with the instruments to control the quality of their loans in their daily operations. To favour this, in a number of Member States centralised databases managed by public authorities provide banks and supervisors with aggregate or granular information (depending on national regulation) about the level of indebtedness of borrowers vis-à-vis the whole system, including natural persons. In these jurisdictions, information sharing by supervised banks is mandated by law, usually in the national banking act.⁹²

This mechanism relies on information exchanges among financial institutions where the public authority acts as the third-party pooling, aggregating, and elaborating the information exchanged, as well as the organisation setting the rules of the information exchanges.

The exchange of private financial information in this context may become clearer below in the discussion of the information providers and their role which, in turn, will later result helpful for matters of competition law and policy.

⁸⁹ For the institutional arrangements in the various EU Member States see Chapter 4 below and the Tables provided.

⁹⁰ See e.g. European Banking Authority (26 October 2014).

⁹¹ Bank of England (May 2014).

⁹² Jappelli and Pagano (2000); Jappelli and Pagano (2003), pp. 81-114; Jappelli and Pagano (2006), pp. 347-371; Ferretti (2008); Brealey, Clark, Goodhart, Healy, Hoggarth, Llewellyn, et al. (2001), sp. Ch. 2; Cartwright (2004), sp. 31-34; Lastra (1996); Lastra and Shams (2001), pp. 165-188.

4. The legal form and functions of credit bureaus in the EU

Credit Bureaus are the major data channels for a number of different purposes in the Member States. Credit bureaus now exist in all EU Member States with the exception of Luxembourg, but their legal form or institutional structure varies depending on different policy or other objectives, and the function that they perform in the economy and society. Databases are organised and the types of information are provided depending on the pursuit of defined policy objectives or other private interests that they are meant to address. The different role of credit information providers reveals a key distinction between public and private or commercial organisations. While the former is normally a part of a national central bank or supervisory authority, and institutionally and legally designed to address the stability of the financial system and the monitoring of the indebtedness of consumer households, the latter offers to the market risk-management and market intelligence tools to enhance economic efficiency and the profitability of financial institutions irrespective of whether these are banks that lending the money of depositors or any other entity doing business through the provision of credit in return for profit.⁹³

4.1. Private or commercial credit bureaus

These are fully-fledged privately owned companies working for profit (see e.g. commercial companies in the UK, Germany, Italy) or for the benefit of banks (see e.g. not for profit entities designed to make the interest of commercial ventures such as banks in Slovenia or Poland) that are no more controlled, monitored, or influenced by State-controlled organisations or other public bodies than any other privately owned organisation or business. Nor are they accountable to public bodies, central banks, or other financial service regulators. They are subject to the same rules and regulations as every business in the marketplace. Their job is to provide services to the financial services industry compiling databases. Even looking at the websites of these companies, they clearly state that they provide decision-making tools or marketing intelligence to the credit industry. They do not claim social tasks to prevent consumer over-indebtedness and they do not hold accountable for the decisions taken by the credit industry.

They can have a broad range of client members depending on the jurisdiction, from banks to non-bank lenders. In addition to traditional financing firms that are not banks, other less obvious examples may include telecommunication companies, utility companies, mail order companies, and/or any other business advancing goods or services to consumers paying for them at a later stage. Consultation of their databases is not mandatory by law prior to the underwriting of credit and is carried out on a voluntary basis (the exception is Slovenia where banks have to use such bank-owned database, but other non-bank lenders are not obliged to subscribe to it). As participation by lenders in a privately owned consumer credit information system is not compulsory, the rules relating to the functioning of the system are not imposed by law or regulation but are governed by contract law.⁹⁴

In some jurisdictions, these databases are supplemented with non-credit data collected from other sources. Thus, financial and non-financial entities may have access to consumer information across different economic segments. In this way, accessibility to full credit and other non-credit data may affect the inclusion, exclusion, or sorting in different economic spheres of the consumers. Moreover, this leads to the problem of incomplete or missing data in one's credit profile, possibly resulting in an inaccurate picture on the consumer's finances and wrong scoring assumptions. This is a problem unique to private credit registers. As commercial ventures, they integrate their services with consumer risk scoring (which includes

⁹³ Jappelli and Pagano (2000); Jappelli and Pagano (2003), pp. 81-114, Jappelli and Pagano (2006), pp. 347-371; Ferretti (2008).

⁹⁴ Ferretti (2008).

both behavioural and sociological customer scoring), loan or mortgage rating, risk screening, monitoring, propensity modelling, debtor tracking, and support to debt collection.

4.2. Public credit bureaus

These are institutions typical of continental Europe, where they first originated and developed with the objective of providing an information system for supervisors to analyse banks' portfolios and monitor the health and soundness of the overall financial system of a country, as well as the level of indebtedness of borrowers, both legal and natural persons.

Generally, they exercise a public function by furthering the general stability of the banking and payment system.

This requires the monitoring of the safety and soundness of banks, which includes the monitoring of the amount of exposure of each bank towards legal persons and individuals who, consequently, undergo checks over their levels of indebtedness.

Only banks participate in the system and are subject to the underlying rules, unlike private registries that are conceived as open systems with the incentive of bringing an increasing number of subscribers and information into play.⁹⁵

Another key difference is that financial institutions that are under the supervision of a country's central bank or supervisory authority are required to report certain credit data on a regular basis by law or other regulation. As participation in the system is compulsory, its rules are imposed by law or regulation and not under contract. This compulsory nature also means that public bureaus have complete coverage of the financial institutions of a country, and no bank lenders are left out as may happen when parties are free to negotiate whether to take part in a system or not, or which system to be part of if more than one exists.⁹⁶

Equally, public authorities have a legal basis for demanding that reporting lenders remedy possible inaccuracies or make available missing data. Failure to comply can result in sanctions that may be imposed by law, such as penalty fees followed by supervisory actions.⁹⁷

It is undisputable from all the features discussed above that private or commercial Credit Bureaus on the one side, and public Credit Bureaus on the other side cannot be reciprocally substitutes to the extent that the latter exercise functions in the public interest that the former are not entitled and do not perform. Public providers, however, can substitute for private/commercial ventures to the extent that the lenders' debt provisioning remains tightly controlled and the amount of overdue or defaulted debt is controlled. Lenders are entitled and do use these databases for risk-management purposes.

In the end, as Tables 2 and 3 show, the picture in the EU is fragmented. There are profound differences in the legal form and structure in the various Member States, the different roles of credit bureaus, and the various types of data exchanged. The Tables summarise the above discussion of the legal form of credit bureaus in terms of private versus public ownership and function. In the case of private or commercial credit bureaus, it emerges clearly the self-interest pursued by the credit industry and the bureaus. On the contrary, the goals, role and function of databases controlled by public authorities show the pursuit of the general interest.

⁹⁵ Jappelli and Pagano (2003); Ferretti (2008).

⁹⁶ *Ibid.*

⁹⁷ Miller (2003 b), pp. 25-79.

Table 2 – Legal form and structure of credit bureaus in the Member States of the EU (Source: Source: European Parliament 2011; European Commission 2009).⁹⁸

NB: The Table below should be corrected as regards Romania. The number of private Credit Bureaus is 1 (instead of 2), and the ownership structure is >50% ownership by creditors - in fact it is 100% (instead of <50% ownership by creditors).

Ireland is underway in establishing a Public Credit Bureau leaving an open question as regards the future to private sector credit bureaus.

Country	Public credit register	no. of private Credit Bureaus			Ownership structure		
		For profit	Not for profit	Not ownership by creditors	≤ 50% Ownership by creditors	> 50% Ownership by creditors	Other
Austria	Yes		1				1
Belgium	Yes						
Bulgaria	Yes	1		1			
Cyprus	No	1				1	
Czech Rep.	Yes	1			1		
Denmark	No	2		2			
Estonia	No	1		1			
Finland	No	1		1			
France	Yes						
Germany	Yes	1			1		
Greece	No	1			1		
Hungary	No	1			1		
Ireland	No	1			1		
Italy	Yes	2	1	1		1	1

⁹⁸ European Commission (2009); European Parliament (2011).

Country	Public credit register	n. of private Credit Bureaus			Ownership structure		
		For profit	Not for profit	Not ownership by creditors	≤ 50% Ownership by creditors	> 50% Ownership by creditors	Other
Latvia	Yes						
Lithuania	Yes	1				1	
Luxembourg	No						
Malta	No	1				1	
Netherlands	No	1	1	1			1
Poland	No	1		-	1	-	
Portugal	Yes	2				1	
Romania	Yes	2		1	1		
Slovakia	Yes	2		1	1		
Slovenia	Yes		1				1
Spain	Yes	2		1		1	
Sweden	No	6		5	1		
United Kingdom	No	3		3			

Table 3 – Role and structure of private/commercial and public credit bureaus (Source: European Commission 2009).⁹⁹

⁹⁹ European Commission (2009).

	Credit Bureau	Public Credit Register
Ownership structure	Private/commercial entity	Central Bank or Supervisory Authority
Clients structure	Mainly creditors but sometimes also other services providers	Financial institutions authorised to grant credit
Scope	Credit assessment and monitoring	<ul style="list-style-type: none"> ▪ Banking supervision, building statistics, financial stability studies ▪ Monitoring and preventing over-indebtedness ▪ Credit assessment ▪ Fostering credit institutions prudent management
Creditors' participation	Generally voluntary	Mandatory by law
Principle of reciprocity/Non discriminatory access	Yes	Yes
Type of data stored	<ul style="list-style-type: none"> ▪ Full credit data (positive and negative data) ▪ Often also non-credit data 	<ul style="list-style-type: none"> ▪ Credit data from financial institutions authorised to grant credit (including both positive and negative data in a majority of cases) ▪ Data on bankruptcy of natural and legal persons
Additional services provided to creditors	Mainly: <ul style="list-style-type: none"> ▪ Credit scoring based on the whole CB dataset ▪ Software applications ▪ Portfolio management services ▪ Fraud prevention systems ▪ Authentication products... 	None
Use of thresholds	Yes, but generally low	Yes
Degree of detail of the information provided ¹⁷	Detailed information on each individual loan. In some countries, credit information merged with other data (e.g. from public sources).	Information sometimes in a consolidated form (giving the total loan exposure of each borrower). In some PCRs, (Belgium, Italy, Portugal or Spain), the information is also given in a detailed form.
Coverage	Depends on the legislation, length of service provided, financial culture, etc.	Universal coverage

5. Data sources

5.1. Traditional Data Sources

All Credit Bureaus process data on individual consumers. However, the large majority of them also processes data on sole traders and SMEs.¹⁰⁰

The data sources vary depending on the type of data typically processed by the Credit Bureaus and then used by the credit industry for the purposes outlined above. Most Credit Bureaus collect and then collate data from more than one source. The most common ones are the lenders themselves and the consumers (via the lenders). Public sources are also used for certain type of publicly available data to be then integrated

¹⁰⁰ ACCIS Survey (2015).

with the other data furnished by the lenders. Examples are the electoral registers for identity data verification and the Courts for insolvencies and other court data.

The most relevant data providers are the lenders themselves. However, in the context of credit to consumers the term 'lender' has a very broad significance. Depending on the jurisdictions, it may comprise of any organisations that have the potential to provide credit facilities to consumers in the form of loans, mortgages, hire purchase, supply of goods and/or services billed upon use, etc. They include, for example, banks, building societies, finance houses, leasing and other retail credit companies, telecom and internet service providers, high street retailers, credit card issuers, the home shopping sector, utility companies, estate agents, etc. In short, any legal persons that advances resources to natural persons which will be (re)paid at a later stage.

The Table below provides a synoptic view of the types of 'data provider lenders' by country (source: ACCIS Survey 2015)¹⁰¹.

Country codes for the EU Member States:

AT: Austria; BE: Belgium; HR: Croatia; CY: Cyprus; CZ: Czech Republic; DK: Denmark; FI: Finland; DE: Germany; EL: Greece; HU: Hungary; IT: Italy; PL: Poland; RO: Romania; SK: Slovakia; SI: Slovenia; SE: Sweden; NL: The Netherlands; GB: United Kingdom.

Table 4. What type of organization supplies data to the credit reporting agencies, by country?

	AT	BE	HR	CY	CZ	DK	FI	DE	EL	HU	IT	NL	PL	XK	RO	RU	RS	SK	SI	SE	CH	GB
Banks																						
Credit unions																						
Debt collectors/debt purchasers																						
Leasing																						
Credit card suppliers																						
Retail credit suppliers																						
Health insurance																						
Other insurers																						
Energy (electricity, gas, other fuel)																						
Water																						
Telecommunication companies																						
Television suppliers (cable/satellite TV)																						
Internet providers (broadband)																						
Mortgage providers																						
Home rental companies																						
Brokers/Intermediaries																						
Courts																						
Government departments																						
Crowd-funding platforms																						
Payment services providers																						
Tax authorities																						
Police																						
Central banks																						
Acquirers of credit portfolios																						
Investors																						
Others																						

- Yes, organisation supply data to the CRA

- No, organisation doesn't supply data to the CRA

- In discussions

- Not answered

¹⁰¹ Ibid.

Note (ACCIS Survey 2015): in Greece debt collectors do not supply data but debt purchasers do; in Finland data is not provided directly to the Credit Bureaus. The number of organizations providing data to Credit Bureaus is normally a function of the level of development of credit reporting in the particular country.

Credit Bureaus often claim that the information is supplied by the lenders on a reciprocal basis, i.e. the lenders are able to access the databases only if they contribute to it for the benefit of all the other contributing member lenders.¹⁰² This mechanism - based on what has been called the 'reciprocity principle' – in most cases relies on private law agreements between the Credit Bureaus and the lenders save for those jurisdictions where the data sharing is mandated by law (see further below).

Other commonly used characterisations for the data used are those making reference to the breadth and the depth of the data. The breadth of data refers to the level of credit product coverage in the databases of the Credit Bureaus. Of course, this is also determined by the type of lenders taking part in the system.

Once again, the detail of the type of information collected and disseminated by Credit Bureaus varies from country to country. In general terms, it may be synthesised that Credit Bureaus store, process, and disseminate consumers' files containing data on their previous and existing accounts, which normally include detailed information about mortgages, bank accounts, store cards, charge cards, credit cards, loan accounts, and in many jurisdictions even mail order accounts as well as telecom and other utilities accounts.

The Table below provides a synthesis of the type of data processed by country (source: ACCIS Survey 2015).¹⁰³ A major problem at EU level is that there is no uniformity or common understanding regarding the terminologies used and there is no accepted use of the breadth of information.

Table 6. Do you hold data for these products, by country?

	AT	BE	HR	CY	CZ	FI	DE	EL	HU	IT	NL	PL	XK	RO	RU	RS	SK	SI	SE	CH	GB
Mortgage																					
Consumer Loans																					
Credit and store card																					
Mail order																					
Point of sale credit																					
Energy (gas, electricity, oil)																					
Water																					
Education loans																					
Credit line on current account																					
Internet service provider																					
Satellite/cable TV																					
Fixed line Telecoms*																					
Telecoms - mobile																					
Payday loans/SMS loans																					
Home rent																					
Leasing																					
Health insurance																					
Other insurances																					
Others																					

■ - Yes

■ - No

□ - Not answered

*includes satellite and cable TV, broadband

¹⁰² Experian, Official Website, available at <http://www.experian.co.uk>; Equifax, cit. at 4; CallCredit, Official Website, available at <http://www.callcredit.co.uk>.

¹⁰³ ACCIS Survey (2015).

The depth of the data refers to the amount of information held about a specific credit agreement.

An important distinction to be drawn is the one between the so-called ‘negative’ information and ‘positive’ information.

‘Negative’ information usually refers to negative consumer data, (information about defaults on payments, delays, delinquencies, bankruptcies etc.). That is, information with a negative connotation on the payment history and the financial behaviour of the data subject.

‘Positive’ information, by contrast, refers to positive consumer data, i.e. information about the financial standing, payments and other details which do not indicate a default or a late payment.

Attempts have also been made to classify semi-negative or semi-positive information, which would refer to data on accounts which demonstrate some signs of problems but have not yet proceeded to the state of being ‘negative’, i.e. accounts which are in acceptable time arrears with no warning to the customer being yet issued by the lender.¹⁰⁴

At EU level, there is no commonly accepted use of the depth of information. As the Table below shows (Source: European Parliament 2011; European Commission 2009)¹⁰⁵, some countries make use of both positive and negative information while others prescribe that only negative information can be used. In France, a proposed law allowing the use of positive data was held unconstitutional.¹⁰⁶ Once more, it exposes a great difference in the type and usage across the EU and a jeopardised infrastructure at EU level.

Country	Data structure				Threshold (€)		CBs operations			
	PCR		CB		PCR	CB	For creditors only	For creditors+ other service providers	For credit assessment only	For other purposes
	positive & negative	negative only	positive & negative	negative only						
Austria	•		•		35000		•		•	•
Belgium	•				200					
Bulgaria	•		•				•		•	•
Cyprus			•							
Czech Rep.	•		•				•		•	
Denmark				•					•	
Estonia			•							
Finland				•			•	•	•	•
France		•			500					
Germany	•*		•		1,5 ML	100	•	•	•	•
Greece			•				•		•	
Hungary			•				•		•	
Ireland			•				•		•	
Italy	•		•	•	30000 **		•		•	

¹⁰⁴ Howells (1995), pp. 343-359, sp. 344.

¹⁰⁵ European Commission (2009); European Parliament (2011).

¹⁰⁶ See Conseil Constitutionnel, Décision n. 2014-690 DC du 13 mars 2014. In 2010 France proposed legislation implementing the EU Consumer Credit Directive 2008 recommending a positive credit reporting system operated by the Bank of France. It was included within the *loi Hamon* which introduced a number of consumer protections. However, the relevant provisions on the establishment of a positive credit database were referred to the Constitutional Court (*Conseil Constitutionnel*) which declared them unconstitutional as a disproportionate intrusion on the constitutional right of privacy which was not outweighed by possible benefits related to credit decision-making.

Country	Data structure				Threshold (C)		CBs operations			
	PCR		CB		PCR	CB	For creditors only	For creditors+ other service providers	For credit assessment only	For other purposes
	positive & negative	negative only	positive & negative	negative only						
Latvia	•				150					
Lithuania	•			•						
Luxembourg										
Malta				•						
Netherlands			•				•		•	
Poland			•			125	•		•	
Portugal	•		•		50		•		•	
Romania	•		•				•	•	•	
Slovakia	•		•				•		•	
Slovenia			•				•			
Spain	•		•		6000		•	•	•	
Sweden			•				•	•	•	•
United Kingdom			•				•	•	•	•

Note: *Does not cover consumers, **No threshold applies to bad debts

NB: The Table above should be corrected as regards Romania. CBs operations: there are operations for creditors only (not for other service providers - telecom, gas, water companies, etc.). But in the category of creditors there are not only banks, but also non-banking lenders.

Also note that Ireland is underway in establishing a Public Credit Bureau leaving an open question as regards the future to private sector credit bureaus.

Each Credit Bureau file may contain the name of the borrower, his/her date of birth, current address, previous addresses if any, linked addresses, marital and employment status, number of accounts, amounts, types, stage (loan under approval, withdrawn, denied) and terms of the accounts, amount of monthly instalments, amount of residual instalments, historical data, number of defaults, amount of arrears, name of granting institutions, payment history (both regulars and in default), dates. In addition, most of the time, information relating to people that have a financial relationship with him/her are included (including, but not limited to, credit warrantors).¹⁰⁷

Each personal file, then, usually has status codes assigned to it by the lender, showing whether it is up to date, in arrears, by how much in arrears, if the account is in default and how many times the repayment has been late. Closed accounts show the status codes for a variable amount of time prior to closure.¹⁰⁸

A survey carried out by the World Bank indicates that a large majority of Credit Bureaus worldwide also collect information on taxpayer IDs (75%), loan rating data (70%), and type and value of collateral used to secure loans (around 50%).¹⁰⁹

According to the latest ACCIS survey of its Members, most Credit Bureaus hold information on mortgages, consumer loans, and credit and store cards. Eleven out of thirty one respondent members hold data on mobile telecommunications and low value loans, where mainly negative data is covered.¹¹⁰

¹⁰⁷ See for example Credit Report, Equifax, from <https://www.econsumer.equifax.co.uk>. See also credit reports from Experian from <http://www.experian.co.uk>; CallCredit, from <http://www.callcredit.co.uk>; CRIF, from <http://www.crif.com>

¹⁰⁸ *Ibid.* In the UK, for example, such amount of time extends up to three years.

¹⁰⁹ Miller (2003 b), sp. 43.

¹¹⁰ ACCIS Survey (2015).

The depth of the data on 'mainstream' lending products such as consumer loans, credit and store cards, mortgages and overdrafts, is the highest in terms of both negative and positive data. Credit application, portfolio monitoring, and identity checking are the most frequently used services by clients of Credit Bureaus. Banks, leasing companies, credit card and retail credit suppliers as well as mortgage providers and credit unions are the most advanced users of Credit Bureaus' services. In some countries, however, utility companies, TV and Internet providers are starting actively to use data provided by Credit Bureaus.¹¹¹

In many cases, on the consumer's credit files there is also a record of the searches, including the dates and the reason for the search.

In addition, Credit Bureaus normally collect and make use of 'public record information' obtainable by law from public sources to integrate each consumer's file.

Such information usually includes data from the following sources (which most of the times are not visible or are known to consumers):

- 1) the electoral or voters' roll, as well as other national directories (which are used to match the address on it with the address provided in the current and previous applications, thus verifying in addition how long the applicant has lived at a given address for);
- 2) National or county court judgements or decrees (as the case may be) entered for sums of money in the courts or other competent authorities in the relevant country - in most cases Credit Bureaus are informed about judgements as soon as they are entered by the courts;
- 3) bankruptcies;
- 4) court administration orders.¹¹²

The Table below summarises the types of data collected by selected Credit Bureaus in a surveyed number of Member States (Source: ACCIS Survey 2015). It shows the divergences in the type of data shared.

Consumer identity, income & asset, bankruptcy & court data (Source: ACCIS Survey 2015)

	AT	BE	HR	CY	CZ	DK	FI	DE	EL	H U	IT	NL	PL	RO	SK	SI	SE	GB
Consumer/borrower identity data																		
Name	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Other or previous name	X		X		X		X	X		X	X		X	X	X	X	X	X
Taxpayer or other unique	X	X	X	X	X		X		X		X		X	X	X	X	X	X
Date of birth	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
Place of birth			X	X	X			X		X	X		X	X	X	X	X	X
Gender	X	X	X	X	X			X			X	X	X	X	X		X	X
Addresses	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Family group data	X			X									X					X
Others	X		X					X	X	X		X	X					
Consumer/borrower income/asset data																		
Income							X				X		X				X	X
Assets e.g. shares, property,	X																	X

¹¹¹ ACCIS Survey (2015).

¹¹² Credit Report, Equifax. See also UK Information Commissioner's Office, "Credit explained", at https://ico.org.uk/Global/~/media/documents/library/Data_Protection/Practical_application/credit-explained-dp-guidance.pdf

Employer identity			X		X					X		X	X			
Consumer/borrower bankruptcy/insolvency and court data																
Bankruptcy/insolvency data	X	X		X		X	X	X	X		X		X		X	X
Court judgements	X	X		X		X	X	X	X		X		X		X	X

x- Data is held in or accessed by credit reference agency database

In some European jurisdictions Credit Bureaus also make financial connections between separate individuals. The databases may contain in the file of a given consumer additional information about one or more persons other than the relevant individual. The circumstances in which information about another person(s) may appear on someone's credit reference file relate to situations where:

- 1) the name(s) is(are) the same or similar and the address is the same;
- 2) the Credit Bureau knows beforehand that such other person(s)' information applies to such individual;
- 3) those other person(s) has(have) the same surname as such individual and they have been living at the same time either at the current or at any other previous address contained in such individual's file (this aggregate information enables Credit Bureaus to include information on the applicant about family members and their payment history).¹¹³

It is worthy of note that it is the duty of the individual to request the Credit Bureaus to eventually create a dissociation if a financial connection does not in fact exist.

5.2. Non-traditional data sources

As the financial services industry embraces digitalisation, traditional lenders and other financial services firms or new platforms are using modern IT and increasing data analysis to offer customised products with personalised risk pricing. The rise of large data collection and processing, also known as 'Big Data', has created vast digital catalogues of personal information that can be continually analysed and categorized using machine-learning algorithms.¹¹⁴ On the one hand, the amplified use of data may offer opportunities to reduce prices for many consumers; on the other hand, however, these practices also raise concerns which need to be taken into account – a circumstance at last now acknowledged at the highest levels of European policy-making.¹¹⁵

As noted earlier, in developed markets the common approach has been that past behaviour is predictive of future behaviour. As a result, Credit Bureaus have developed creditworthiness assessment tools that make use of the above traditional data on a large scale and in an increasingly automated way.

However, as credit underwriting and technologies evolve, and standards and appetite for credit adapt to changing economic cycles and shifting demographics, a wider array of new data are now emerging in the credit risk analysis of lenders in addition or as an alternative to the traditional data. These so-called 'non-traditional' or 'alternative' data are those data gathered from diverse sources outside the standard credit reports that lenders use to evaluate consumer borrowers. Their volume is greater than that of the traditional sources as they are usually taken from social media, digital data brokers and other online trails to mathematically determine the creditworthiness of consumers.

¹¹³ See for example in the UK CallCredit www.callcredit.co.uk; Experian www.experian.co.uk; Equifax www.equifax.co.uk.

¹¹⁴ De Mooy (2017)

¹¹⁵ European Commission, Green Paper on Retail Financial Services, COM(2015) 630 final (Brussels, 10.12.2015).

The non-traditional data are driven largely by new platforms of lending, usually non-mainstream lenders, crowdfunding and peer-to-peer lenders,¹¹⁶ or start-up companies (the so-called 'FinTech') that make an alternative finance industry that records a substantive expansion and is increasingly gaining a significant market share.¹¹⁷ The degree to which such data are utilised by mainstream banks and credit card companies is unclear. For instance, it is reported that some mainstream banks have started building new risk models and technological algorithms that make use of these alternative data sources. This provides them an opportunity to explore new market segments at low-costs.¹¹⁸

In many ways, these innovative lenders are reshaping business models, underwriting criteria, and customer experiences. Their innovations reflect an understanding of demographic changes, borrower needs, and how to connect to borrowers through new technological channels.¹¹⁹

Traditional data are largely of historical nature. Therefore, lenders source alternative data to target mainly customers that may habitually have no credit or a short credit history. Moreover, traditional credit risk analysis and assessment methods are less effective in emerging economies where past data are not available, and especially where there are large segments of low-income or unbanked consumers.

A case in point is that of young generations who may pose unique challenges for the lending industry. They are users of new technologies and connected in social media. Although they haven't yet amassed wealth and have no or little credit history, they represent an important market segment. Moreover the generational effects of the economic downturn that erupted in the last decade combined with high levels of youth unemployment may have delayed major purchases and prolonged the time it takes to young generations to establish a credit history.

Other significant market segments exist which traditional data are unable to serve. These are not only the unbanked or under banked consumers. Many households have temporarily impaired financial capabilities. For example, consumers with otherwise immaculate or sufficient credit histories may experience hardship associated with the economic downturn.

All these examples show how traditional data sources are an imperfect indicator of credit risk analysis. As it will be shown in greater detail later, this report maintains that therefore principles of data minimisation should apply. By contrast, the FinTech industry considers that traditional data may easily fail in identifying large segments of consumers, in detecting isolated versus recurring credit issues, or in providing more insight into consumer behaviour.

Examples of non-traditional data are emerging day after day. The explosion of social media and professional networks provide unprecedented amounts of information that is used by some lenders to support decisions about an applicant's credit risk. People post large amounts of personal information that can be captured by technologies. For example, to establish an estimated earning potential for borrowers with short job histories, lenders may consider information such as the education history, student loans, and the majors studied. A reported example is that of a law graduate with a limited credit history, where the assessment of social media may indicate whether s/he has connections with prestigious law firms as well as professors from the law school or other successful lawyers. In addition, if those 'socially' or 'professionally' connected with an applicant are responsible borrowers with stable employment and good credit histories, this may support the probability that the applicant him/herself is also a responsible borrower. Moreover, it is reported that

¹¹⁶ Financial Times, "P2P consumer loans given landmark rating" (28 January 2015), available at <https://www.ft.com/content/a22edbe0-a749-11e4-b6bd-00144feab7de>.

¹¹⁷ E.g. see Zhang et al (2016 a); Zhang et al (2016 b)

¹¹⁸ E.g. see Financial Times, "Psychometric testing on the rise in emerging markets" (1 February 2015) available at <http://next.ft.com/content/bf27f8c2-a586-11e4-8636-00144feab7de>. According to Twardy L, "Alternative data usage by FinTech lenders", *Lending Times* (20 June 2016), available at <http://lending-times.com/2016/06/20/over-12000-variables-of-alternative-data-for-36-billion-in-alternative-loans/> Santander and Scotiabank are among mainstream banks availing themselves of non-traditional data.

¹¹⁹ PricewaterhouseCoopers (2015)

the age of their social media accounts and the volume of activity within them can indicate an applicant's interconnectedness and stability with their network. Some lenders apply similar concepts to an applicant's professional networks. The individual's job and the jobs their connections hold may provide insights into the strength of the applicant's job stability.¹²⁰ Accordingly, analysing social networks may allow lenders to understand other information such as race, socioeconomic status and their comparative customer loyalty.¹²¹ For the avoidance of doubts, it is important to stress that all these correlations and causality links are claims made by the industry but they are not necessarily true. No evidence exists, either theoretical or empirical, regarding the ability of such data to predict the risk of failure to repay debts based on the biases and assumptions upon which they are grounded.

Other new data sources that can be included in the assessment of a borrower may range from phone and utilities bills. Customers can be asked to sign over permission to access personal emails, bank accounts, social media accounts, shipping data, and aggregated financial information. They may have to disclose their monthly cash flow over bank accounts and online financial accounts such as Paypal, Amazon, Ebay or else (heavy activity on these sites may suggest a healthy cash flow). Also, spending patterns may give indications of how often someone loses control of his/her finances. Similarly, probing the way applicants click through web pages can give suggestions about some of their character traits such as impulsiveness or attitude towards risk-taking.¹²² In fact, any data that may align with default rates can quickly be incorporated into the assessment. Stories are starting to surface. For example, one well-known UK online lender uses up to 8000 data points to automatically assess a consumer's creditworthiness;¹²³ Some lenders are starting to look at customers with gym memberships as they were found to be more reliable than those without;¹²⁴ a notorious credit card company has decided to cut someone's credit limit for shopping at stores frequented by people deemed by the company to have a poor repayment history;¹²⁵ credit card companies have set up systems to detect unsettling patterns that are indicative of higher risk such as expenses for marriage therapy because of possible problems leading to separation or divorce, thus lowering credit lines or setting higher interest rates;¹²⁶ even web searches for the applicant's name combined with keywords chosen by the lender may provide information;¹²⁷ etc. All these examples not only expose an increasing intrusion in people's private lives but they also raise debates and concerns over the financialisation of the same private lives of consumers and the shaping and conforming of their behaviour beyond that of repayment.

Again, smart phones have become ubiquitous and their accounts provide many detailed data, e.g. they generate calls and text messages over given periods of time, each carrying a rich data set including the time the call was made (this may indicate having a more or less fixed job), the location of the caller at the time of the call, the receiver of the call, the type of information accessed via text messaging, and the types and number of payment transactions made through new smart devices. For those customers who consent to the sharing of their data in order to access credit, prepaid-minute or internet traffic purchase patterns can indicate a steady or uneven cash flow. Even retailer loyalty cards can provide important insights into consumers' income, spending habits and family structure.¹²⁸

Big data may even dig up protected information. Data taken from diverse unrelated sources may reveal information that could not be otherwise obtained in any credit application (at least currently in the EU), e.g.

¹²⁰ PricewaterhouseCoopers (2015).

¹²¹ Financial Times, "Big data: Credit where credit's due" (4 February 2015), at <https://www.ft.com/content/7933792e-a2e6-11e4-9c06-00144feab7de>.

¹²² Ibid.

¹²³ The Guardian, "With Wonga, your prosperity could count on an algorithm" (16 October 2011), at <https://www.theguardian.com/money/2011/oct/16/wonga-algorithm-lending-debt-data>.

¹²⁴ Ibid.

¹²⁵ Financial Times, "Big data: Credit where credit's due" (4 February 2015), at <https://www.ft.com/content/7933792e-a2e6-11e4-9c06-00144feab7de>.

¹²⁶ New York Times, "What Does Your Credit-Card Company Know About You?" (12 May 2009), at <http://www.nytimes.com/2009/05/17/magazine/17credit-t.html?pagewanted=all>.

¹²⁷ The Guardian, "With Wonga, your prosperity could count on an algorithm" (16 October 2011), at <https://www.theguardian.com/money/2011/oct/16/wonga-algorithm-lending-debt-data>.

¹²⁸ Baer et al. (2013).

medical data. Shopping lists may for instance reveal the health status of a person. Furthermore, artificial intelligence may come up with schemes that conclude that certain groups of the population pose greater credit risks than others and lenders decide to refrain from allowing access to financial services to those groups of consumers (e.g. young families with children).

It can be disputed to what extent the use of non-traditional data has pros and cons. While their estimators maintain that they provide a more detailed picture of the potential borrower and they can be more inclusive, serving under-banked segments of society, they can also place consumers in a very vulnerable position. In fact, not only they are likely to share the same problems that will be analysed later below in this report but they may exasperate them. Interpretation of the data is critical and non-traditional data are more subjective in nature.

The key point is that correlation is not equal to proper screening or creditworthiness assessment. Correlation is not a relationship between cause and effect.

6. Cross-border exchange of data and the integration of credit markets

As seen earlier, the CCD and the MCD provide that foreign lenders shall not be discriminated in the participation in such a system.

However, unfair or discriminatory access conditions for foreign lenders may take place in more circumstances. Foreign lenders may be newly set-up institutions establishing a physical presence or institutions that establish a branch in another Member State. But, at EU level there are other emerging modes of providing credit which are necessary for market integration. Other possible forms of market integration in the sector are the cross-border provision of services, including internet banking or e-commerce, where lenders are based in one Member State and do business with consumers in another Member State. The latest policy initiatives of the Capital Market Union¹²⁹ and the creation of a true European market for financial services¹³⁰ go in this direction.

Europeans are becoming increasingly mobile under the free movement of persons rights.

In principle, however, under the current system non-established financial institutions do not have access to all existing credit bureaus in the EU and they would not be able to provide information to all of them any time they establish a financial relationship with a consumer.

This is because lenders from a Member State are unlikely to have or establish an ongoing contractual relationship with a private or commercial credit bureau in another Member State.

Moreover, the business model of reciprocity would prove hard to satisfy, where foreign lenders would be in the impractical situation to provide their data portfolio to the credit bureau of another country, in addition in the type and breadth of data required by such a different system. At the same time, in a commercial environment, the existing national participants may be averse to share their data portfolios with foreign players and allow competition on their market from abroad on a basis that is not reciprocal.

¹²⁹ European Commission, Green Paper on Building a Capital Markets Union, COM(2015) 63 final (Brussels, 18.2.2015).

¹³⁰ European Commission, Green Paper on Retail Financial Services, COM(2015) 630 final (Brussels, 10.12.2015).

The MCD is of little help in this respect, as it recognises that “access conditions, such as the costs of accessing the database or requirements to provide information to the database on the basis of reciprocity should continue to apply. Member States should be free to determine whether, within their jurisdictions, credit intermediaries may have access to such databases”.¹³¹

Likewise, in the case of public credit bureaus, foreign lenders do not have to abide by the national rules of another Member State if not physically established there (provided they qualify as ‘banks’).

Finally, credit bureaus across the EU make use of different type of information, which makes the exchange within the EU not possible.

If EU law provides for the integration of credit markets via the CCD and the MCD, on the other hand the underlying information markets have remained national, which risk rendering the provisions of EU law ineffective in practice. The CCD and the MCD are likely to be prevented from enhancing cross-border credit, either as cross-border provision of services, consumer consumption abroad, or EU migration and access to host member state services. If foreign lenders are allowed to consult databases on a non-discriminatory basis but there remain barriers for a European exchange of information, information markets will remain jeopardised into national markets and the underlying credit markets will be prevented to integrate.

Indeed, the new thrust of the European Commission in this area is the facilitation of cross-border credit. Under this view, the creditworthiness assessment embedded in EU law under the CCD and the MCD is a key requirement that demands common assessment standards and principles for consumer lending. As seen above, however, credit providers face difficulties in the creditworthiness assessment of borrowers from other Member States as they rely on credit data that are not comparable or equally available from jurisdiction to jurisdiction. Thus, the new European Action Plan sets out the further steps that the European Commission considers necessary to achieve a Single Market for retail financial services. Under Action 9 the European Commission undertakes to develop a minimum set of data to be exchanged between credit registries in cross-border creditworthiness assessments.¹³²

However, a question that should be answered unequivocally is whether the EU is ready for cross-border data exchange without a proper mapping and understanding of the typologies of consumer groups that are more likely to default in the Member States. Little research has been undertaken and the one available indicates that consumer groups that are most likely to default differ considerably from jurisdiction to jurisdiction.¹³³

7. Competition in the credit information industry

As noted earlier, traditionally consumer credit information exchanges are looked vis-à-vis the competitive or anti-competitive object or effect on those making use of the information in the market for consumer loans, not on those providing information.

Clearly, there is the element of the competition among lenders; yet, this involves not only the covered horizontal relations between the lenders themselves, but also the vertical relation between the lenders and the credit bureaus. Moreover, when commercial entities are involved, horizontal competition between information providers may become relevant.

¹³¹ Recital 60 of the MCD.

¹³² European Commission, Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions – Consumer Financial Services Action Plan: Better Products, More Choice (Brussels, 23.3.2017), COM(2017) 139 final.

¹³³ Reisch and Gwozdz (2010)

However, to the extent that information is turned into a tradable commodity of commercial value, competition issues have not yet been addressed.¹³⁴

Traditionally, information exchanges among competitors have been treated as ‘hub and spoke’ agreements. These are ordinary vertical agreements but with potential horizontal anti-competitive effects. Precisely as in the case at study, they involve an exchange of information between two or more undertakings operating at the same level of the production or distribution chain (i.e. the lenders) via a common contractual partner operating at a different level of the chain (i.e. the credit bureau).¹³⁵

But, as outlined earlier in this work, information providers become active market players, especially when private commercial actors are the suppliers, influencing and impacting on the underlying consumer markets in terms of lenders’ entry and behaviour, transparency, pricing of loans, and consumers access to financial services.

Some economic literature has already shown awareness of anti-competitive problems relating to such a vertical or hub-and-spoke relationship in consumer financial markets beyond the traditional analysis: it has been demonstrated how credit bureaus may well be used by dominant lenders as concerted practices to raise rivals’ costs either downstream for new market players, or upstream for possible rival credit bureaus that cannot obtain data from lenders.¹³⁶

This is what happens in several EU Member States where only one credit bureau at national level pools consumer financial data,¹³⁷ which risks having the undesirable effect of financial institutions becoming vertically integrated with one credit bureau, often of commercial nature. This is so because participation, coverage and accuracy are intertwined in the same essence of an information system, which would not make any sense if incomplete, i.e. when participation and coverage are not universal, in turn translating into inaccuracy.

From this point of view, competition in the information industry within the EU is almost absent.

Whilst public authorities are exempted from this, it is an anomaly that commercial credit bureaus do not face competition in the relevant market of credit data, which remains at national level. Yet, the relevant market for credit for consumers is, or should be, the EU market.

Credit bureaus operate through a network structure. They are natural monopolies in that the extension of a system’s coverage itself enhances its effectiveness. In fact, they are dependent on that network structures within which information is traded, where the participants that share the information constitute such a network.¹³⁸

The achievement of economies of scale is essential for coverage, where scale and scope effects affect coverage which has the propensity to universality, thus concentration. Historically, for example, the need to achieve economies of scale with nationwide market coverage was the main reason behind the concentration process that occurred in the US after an initial period of numerous credit bureaus spread over the nation’s territory to serve local business communities.¹³⁹

¹³⁴ Ferretti (2014).

¹³⁵ Odudu (2011).

¹³⁶ Giannetti, Jentzsch, and Spagnolo (2010).

¹³⁷ European Commission, “Report on the retail banking sector inquiry”, *Commission Staff Working Document accompanying the Communication from the Commission - Sector Inquiry under Art 17 of Regulation 1/2003 on retail banking (Final Report)* [COM(2007) 33 final] SEC(2007) 106; European Commission (2009).

¹³⁸ Pagano and Jappelli (1993).

¹³⁹ Olegario (2003), pp. 115-159.

Economic research describes such networks as a form of industrial organisation and market governance, where they can influence market structure, and the behaviour of firms and their performance, hence competition. Accordingly, in credit reporting markets, the information flows among agencies, information suppliers and consumers constitute a network of information whose value increases as more lenders are connected to it. Consequently, the more the network of one credit bureau increases, the more attractive it becomes for potential participants or participants to other networks. Therefore, to the extent that scale and scope effects also affect coverage, the more sources are connected to the network, the more detailed becomes the credit report and knowledge, and the more precise may become for risk-management purposes.¹⁴⁰

In short, the very nature of the consumer financial information business demands that the success of the system depends on its universal extension; otherwise it would be of little or no use.

Arguably, a new stream of research is necessary in this area. Competition law is usually investigated in the reference credit market but the market for consumer data (i.e. the market of information suppliers) is understudied. Also, in the area of information pertaining to consumers, many areas of law intersect one with the other. The relationship between competition law and its goals and the interest of consumers under consumer protection law need to be looked closer, especially in an area which is dominated by fundamental rights such as data protection law.¹⁴¹

8. Data Protection

8.1. Data Protection and its values

Credit Bureaus are subjected to the general provisions of data protection legislation in the absence of specific sectorial or derogating legislation that may exist in national banking laws (especially for Public Credit Registries or in the national banking acts). In some Member States, specific provisions complementing or altering data protection acts exist.¹⁴²

Before assessing the extent of the legitimacy of Credit Bureaus operations or the adequacy of data protection law to stem possible consumer concerns, it is worth summarising the values behind protecting personal data and the rationales for regulation.

The literature on data protection law is extensive, albeit scholarship specific on the General Data Protection Regulation ('GDPR')¹⁴³ is starting to emerge only now for its very recent enactment.¹⁴⁴ However, the GDPR represents more an evolution than a revolution of the existing law. Most of its underlying rules and principles have stayed the same as Directive 95/46/EC and they have been studied for years.

Data protection is a complex and multifaceted concept both from a societal and a legal point of view. Traditionally, its primary objective has been identified with the protection of personal privacy within the

¹⁴⁰ Jentzsch (2003); Jentzsch (2006).

¹⁴¹ See Ferretti (2014).

¹⁴² E.g. in Germany see § 28b and 34 Bundesdatenschutzgesetz (BDSG); in Italy see Garante per la Protezione dei Dati Personali (Italian Data Protection Authority), "Balancing of interests: data collection by CRAs without consent" (Rome, 16 Nov. 2004), available at www.garanteprivacy.it/web/guest/home/docweb/-/docweb-display/docweb/1671380; in the UK see Information Commissioner Office, Credit agreements – Data sharing (6 Nov. 2006), at [www.ico.org.uk/for_organisations/sector_guides/~media/documents/library/Data_Protection/Practical_application/CREDIT_%20AGREEMENTS%20-%20DATA_%20SHARING.ashx](http://www.ico.org.uk/for_organisations/sector_guides/~/media/documents/library/Data_Protection/Practical_application/CREDIT_%20AGREEMENTS%20-%20DATA_%20SHARING.ashx)

¹⁴³ Regulation (EU) 2016/679, OJ 2016 L 119, p. 1–88.

¹⁴⁴ E.g. Gutwirth, Leenes and De Hert (2016); De Hert and Papakonstantinou (2016); Gellert (2015); Lynskey (2015); Putrova (2014); Voss (2014).

context of processing operations involving personal data. The considerable body of literature and many debates on privacy exemplify the difficulty in delineating what remains a broad and at times ambiguous concept,¹⁴⁵ Scholarly debates have helped to largely accepted that, in its most general accession, privacy protection is a legal way of drawing a line at how far society or other individual subjects may intrude into a person's own affairs. It entails that such a person should be left able to conduct their personal legitimate affairs relatively free from unwanted intrusions. Nonetheless, the considerable body of literature on the concept of privacy exemplifies the difficulty in defining with precision what remains a broad and at times ambiguous term, but it also helps to set the basis for distinguishing 'data protection' from 'privacy'.

Personal data protection is a distinctive European innovation in law that over the years has been gaining a mixed fortune outside the EU. The horrors of last-century European history and the subsequent international conventions played an important role in the development of data protection laws across Europe and, ultimately, in the adoption of the Data Protection Directive 95/46/EC. Two other factors, however, proved decisive for its enactment under the remit of the EU: (i) the progressive development in information technologies transcending national borders; and (ii) the need for the free movement of personal data within the EU to enable trade and prevent conflicts arising from separate national regimes (Recitals 1-11 of Directive 95/46/EC). Indeed, the real aims and scope of the Directive 95/46/EC were both the protection of fundamental rights and freedoms of European citizens, and the achievement of the internal market. Both objectives were equally important, even though the jurisdiction of the EU on this subject rested on internal market grounds, having its legal basis in Article 100a of the EC Treaty (now Article 114 TFEU).

All the same, as documented in the literature, the EU legislator consistently took a rigorous 'fundamental human rights' approach.¹⁴⁶

This position has been made explicit lately by Article 16 TFEU which elevates the provision on data protection to a 'provision of general application' under Title II alongside other fundamental principles of the EU. Equally, with the Treaty of Lisbon, the Charter of Fundamental Rights of the EU has become binding, and in its Article 8 it recognises the protection of personal data as an autonomous right distinguished from that of 'privacy' recognised in Article 7.

Indeed, data protection refers to the protection through regulation of personal information pertaining to an identified or identifiable individual (data subject). Individuals do not own information about themselves. Information does not pre-exist to its expression or disclosure but it is always to some extent constructed or created by more than one agent.¹⁴⁷ Normatively, no proprietary rights exist on personal information. It pertains to an individual but it does not belong to him or her in a proprietary sense. Those who process personal data (data controllers) have the right to process those data as long as such processing is in compliance with procedural rules set by law. The objective of data protection law is to protect individuals

¹⁴⁵ See e.g. Warren and Brandeis (1890); Bloustein (1964); Stromholm (1967); Pennock and Chapman (1971); Paul et al (2000); Rachels (1975). Other narrower views of privacy see it as self-determination, intimacy, or a meaningful aspect of interpersonal relationships, personal expression, and choice. See, e.g. Parent (1983); Gerstein (1978); Westin (1967); Inness (1992); Fried (1970); Gavison (1980); Moore (1998); Schoeman (1984); DeCew (1997). Such an individualistic approach to privacy has been criticized by scholarship arguing that greater recognition should be given to the broader social importance of privacy: other than a common value in which individuals enjoy some degree of it, privacy is seen as a public and collective value vis-à-vis technological developments and market forces, requiring minimal levels of privacy for all. Regan (1995). There exists a number of works critical of privacy, too. The so-called 'reductionist approach', e.g. takes the view that the right to privacy is derivative, meaning that it can be explained in the context of other rights without deserving any separate attention. As such, it can be protected through other rights without any explicit protection on its own. Any privacy violation would be better understood as the violation of other more basic rights: ultimately, the right to privacy would merely be a cluster of rights, where these rights are always overlapped by property rights or rights over the person such as bodily security. See Thomson (1975). For another strong critique of privacy see also Bork (1990). These 'reductionist approaches' have been criticized by a number of commentators: see Scanlon (1975); Johnson (1994). Another well-known contribution to the 'reductionist approach' is that of Posner (1981) who took an economic, cost-benefit analysis of privacy. He argues that the types of interests protected under privacy are not distinctive. Most of all, nevertheless, the central proposition is that privacy protection is economically inefficient. Protection of individual privacy would be difficult to defend because it does not maximise wealth. On this line of argument, Posner defends organizational or corporate privacy as more valuable than personal privacy, the reason being that the former is likely to improve economic efficiency.

¹⁴⁶ Heisenberg (2005); Mayer-Schönberger (1997); Simitis (1995); contra, on the utilitarian approach of the UK, see Kenyon and Richardson (2006), 1-10.

¹⁴⁷ Rouvroy and Poullet (2009), 45-76.

not against data processing *per se*, but against unjustified collection, storage, use, and dissemination of the data pertaining to them.¹⁴⁸ As persuasively shown by De Hert and Gutwirth, data protection cannot be reduced to a late privacy spin-off echoing a privacy right with regard to personal data, but it formulates the conditions under which information processing is legitimate.¹⁴⁹

At least under EU law, the two have become distinct, yet complementary, fundamental legal rights which derive their normative force from values that - although at times coincidental and interacting in many ways - may be conceptualised independently. While privacy laws derive their normative force from the need to protect the legitimate opacity of the individual through prohibitive measures, data protection law formulates the conditions under which information processing is legitimate by forcing the transparency of the processing of the data, thus enabling its full control by the data subjects where the processing is not authorised by the law itself as necessary for societal reasons. In short, data protection law focuses on the activities of the processors and their accountability, thus regulating an accepted exercise of power.¹⁵⁰ Both privacy and data protection regimes (i.e. seclusion and legitimate opacity on the one side, and inclusion and participation on the other side) represent a bundle of legal protections to pursue the common goal of a free and democratic society where citizens develop their personality freely and autonomously through individual reflexive self-determination.¹⁵¹ Granting to individuals control over their personal data is not only a tool to allow them control over the *persona* they project in society free from unreasonable or unjustified associations, manipulations, distortions, misrepresentations, alterations or constraints. It is also a fundamental value pertaining to humans to keep and develop their personality in a manner that allows them to fully participate in society without having to conform thoughts, beliefs, behaviours or preferences to those of the majority or those set from above by the industry for commercial interests.¹⁵² The rights conferred by data protection law become participatory rights of self-determination.

8.2. Notice and Legitimate Grounds for Data Processing

It is in light of the significance of data protection legislation that one should read the processing of credit data. Establishing whether private credit bureaus truly abide by the law may be problematic. There can be concerns about the necessity, adequacy, and relevance of the type and amount of data involved regarding the assumptions upon which consumer-credit reporting and scoring are based. Of interest are determinations on the predictability of individual human behaviour, and the real financial capability of borrowers. In particular, doubts may currently arise as to the legal compliance of the notice to be given to data subjects required by Directive 95/46 Articles 10 and 11. Even more, in perspective, this will be the case under the new provisions of Articles 13 and 14 GDPR which reinforce the provision of the notices to data subjects demanding that they must be provided “in a concise, transparent, intelligible and easily accessible form, using clear and plain language” (Article 12 GDPR). Under the GDPR, the notice to data subject will include the legitimate interests pursued by the controller or by a third party when this is a ground for processing.¹⁵³

The general objectives of transparency and informational self-determination set by Directive 95/46/EC and the GDPR seem compromised by the amount and vagueness of information that should be provided to individuals (including the right to withdraw consent), the type and amount of personal data processed by credit bureaus, the indefinite number of actors involved in a spill-over data dissemination, and the secondary uses of the same data. Indeed, a critical element of both credit reporting and scoring often raised by European consumer organizations is a lack of transparency because—for competition concerns—

¹⁴⁸ On discussions about individuals not owning information about themselves see Kang and Bunter (2004); Rouvroy and Pouillet (2009).

¹⁴⁹ De Hert and Gutwirth (2009).

¹⁵⁰ Davis (1997); De Hert and Gutwirth (2009); Rouvroy and Pouillet (2009).

¹⁵¹ Rouvroy and Pouillet (2009).

¹⁵² Ibid.

¹⁵³ See Articles 13(1)(d) and 14(2)(b) GDPR.

lenders do not disclose the type and amount of data used, the impact of information on personal data, the criteria and data-mining techniques employed in data processing, or the criteria used in decision-making.

Both Directive 95/46/EC and the GDPR set in a likely manner the legal requirements for a valid basis for legitimate data processing. A data controller must be able to provide a valid base for the processing activity only if it can claim that the processing relies on one of the criteria established by the law. The set of criteria is exhaustive, so that if a data controller is unable to rely on one of them the processing is unlawful. These are expressed in Article 7 of Directive 95/46/EC and reproduced in a very similar- though not identical - manner in Article 6 GDPR:

- (a) The data subject has (unambiguously) given his/her consent.
- (b) The data processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract.
- (c) The data processing is necessary for compliance with a legal obligation to which the data controller is subject.
- (d) The data processing is necessary in order to protect the vital interests of the data subject.
- (e) The data processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller or in a third party to whom the data are disclosed.
- (f) The data processing is necessary for the purposes of the legitimate interests pursued by the controller or by the third party or parties to whom the data are disclosed, except where such interests are overridden by the interests for fundamental rights and freedoms of the data subject, in particular their right to privacy (wording of Directive 95/46/EC with slight changes in the GDPR that do not alter its substance).

As far as these requirements are concerned — alongside the processing purposes, adequacy and relevance of data, accuracy, or data- retention periods—ultimately, the whole credit data system seems to rely predominantly on two grounds of legitimacy, i.e. a) consent and f) the legitimate interest of data controllers.

The lawful base set by 'b) performance of a contract' is not applicable because a financing agreement can well be underwritten without processing credit data of other unrelated credit lines or data from other sources. Moreover, any processing made by Credit Bureaus can be deemed as an 'incompatible further processing' under the terms of Article 6 of Directive 95/46/EC and Article 5 GDPR¹⁵⁴, because it falls out of the scope for which data was originally collected, that is for the conclusion of a pre-existing contract.

8.3. The Legitimate Interest of Data Controllers

In order to be able to process credit data, Credit Bureaus mostly rely on f) the legitimate interest clause as the most favoured base. According to ACCIS Survey (2015), in fact, 55% their members stated that all or part of their data was shared on the basis of legitimate interests of the data controllers and that the data subject is notified that data will be shared if they proceed with the conclusion of a contract.¹⁵⁵

The legitimate interest of data controllers or that of third parties is known as the 'balance of interest' clause. Data controllers can process personal data lawfully without meeting the tight conditions provided by the other bases. Moreover, as seen above with the non-traditional data sources, new technologies such as data

¹⁵⁴ According to these provisions, personal data shall be collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes.

¹⁵⁵ ACCIS (2015)

analytics increasingly use large data sets obtained from diverse unrelated sources (the 'Big Data') which make the fulfilment of the other legal bases impracticable, including the obtaining of consent.

Under this condition, the processing must be necessary for the purpose, which must be a legitimate interest of the controller or a third party to whom the data is disclosed, provided that such legitimate interests do not impinge upon the fundamental rights and freedoms of individuals.

Under the regime of Directive 95/46/EC, the room for manoeuvre intentionally left by the balance of interest test to national implementation has complicated the interpretation and application of the norm, leading to considerable divergences in the Member States. These inconsistencies go in different directions. For example, the choice of the subject in charge of making the assessment of the test has been left in some countries to the determination of the data controllers, while in others this is for previous specification by the national supervisory authority. Similarly, some countries have provided indications while others have provided none.¹⁵⁶ If anything, Recital 30 of Directive 95/46/EC complicates the picture, as it states that "in order to maintain a balance between the interests involved while guaranteeing effective competition, Member States may determine the circumstances in which personal data may be used or disclosed to a third party in the context of the legitimate ordinary business activities of companies and other bodies".

In one case involving credit data, the ECJ has intervened to declare as contrary to EU law the national law restricting the application of the balance of interest criterion only to data in public sources, affirming *inter alia* the direct effect of Article 7(f) of Directive 95/46/EC in case of non-compliance by national law.¹⁵⁷

However, despite the affirmation of the direct applicability of the legitimate interest test of Directive 95/46/EC, the provision has failed in its goal to create a harmonized legal framework for data processing in the EU. The GDPR, precisely as it is a regulation and does not require national implementation, is meant to correct the anomaly and create a level playing field within the EU.

The GDPR presents once again the test, providing for few changes in the wording but maintaining the substance of the current norm. However, in its Recital 47 it clarifies that the legitimate interests of a controller, including those of a controller to which the personal data may be disclosed or of a third party, may provide a legitimate basis for processing when it meets the reasonable expectations of data subjects based on their relationship with the controller. The provision explicitly exemplifies that such legitimate interest could exist where there is a relevant and appropriate relationship between the data subject and the controller in situations such as where the data subject is a client or in the service of the controller, such as in a credit relationship with a lender. At any rate, the existence of the legitimate interest would need careful assessment including whether a data subject can reasonably expect at the time and in the context of the collection of the personal data that processing for that purpose may take place. Under any lending process, lenders may easily claim that this is the case. The interests and fundamental rights of the data subject could override the interest of the lenders only where personal data are processed in circumstances where data subjects do not reasonably expect further processing, but this will hardly be a demonstrable circumstance in view of the existing traditional lending practices.

If anything, however, the legitimate interest clause will be hardly justifiable in the case of non-traditional data sources.

Moreover, even within the range of traditional data sources, distinctions should be made. As seen above, in fact, the depth and breadth of credit data is inconsistent and differs greatly among the Member States. This

¹⁵⁶ See Balboni et al (2013).

¹⁵⁷ Joined cases C-468 & 469/10, ASNEF and FECEMD v. Administración del Estado, [2011] ECR I-12181.

poses problems of interpretation as to which data would fall within the scope of the legitimate interest clause and which ones do not. This is especially the case since the GDPR is meant to apply uniformly within the EU.

Crucially, the last limb of Recital 47 of the GDPR affirms that the processing of personal data strictly necessary for the purposes of preventing fraud also constitutes a legitimate interest of the data controller concerned. Likewise – to give an idea of how loose the legitimate interest base may be – even the processing of personal data for direct marketing purposes may be regarded as carried out for a legitimate interest.

The doubt that remains, however, is what accounts ‘strictly necessary’ and who makes such a determination. For example, in the case of credit data, lenders and Credit Bureaus have unilaterally decided that one of the purposes for their processing is that to prevent fraud in credit applications.

Moreover, following the introduction in the GDPR of an accountability principle,¹⁵⁸ it appears that the data controller will be left with the determination of whether it has a legitimate interest to justify the processing, and whether its interest overrides the fundamental rights and freedoms of the data subject. Nonetheless, in providing further input on the data protection reform discussions, the Article 29 Working Party argued that additional guidance is essential in order to have a common understanding of the provision, especially as regards the very concept of legitimate interest and where such interest may override the fundamental rights and freedoms of data subjects. Such guidance should occur at EU level, because leaving further regulation to national law through the use of delegated acts would create discrepancies across the Union where data controllers would not be able to process data under the same ground or following the same rules.¹⁵⁹

Looking back at the case-law of the CJEU under Directive 95/46/EC, the decision in *Asnef and Fecemd v. Administración del Estado*¹⁶⁰ supports a liberal notion of processing of data, having the effect of giving way to the credit industry in the processing of negative financial data of consumers on grounds of their legitimate interest. However, it is important to stress that it is only the negative data, and not the positive ones, that have fallen within the scope of the decision. The case was about national law which qualified the legitimate interest requirement by adding extra conditions, such as that the data should appear in public sources, and thereby excluding, in a categorical and generalized way, any processing of data not appearing in such sources; the CJEU ruled that such national law was precluded.¹⁶¹ However, the CJEU had the opportunity to touch upon the significance of the legitimate interest where it recognized that the processing of data appearing in non-public sources necessarily implies that personal data is known by the controller, acknowledging that this more serious infringement of the data subject’s rights enshrined in the Charter of Fundamental Rights of the EU must be taken into account when balanced against the legitimate interest of the controller.¹⁶² However, it missed the opportunity to make such a balance in the specific case, limiting its analysis to the illegitimacy of the more restrictive criteria imposed by national law. As a result, since the national law in question prevented commercial Credit Bureaus from using the legitimate interest clause to process and disseminate negative consumer financial data within the industry in Spain, the judgment had the factual effect of legitimizing such a practice.

Finally, it is worth of note that Article 40 GDPR provides for the establishment of ‘Codes of Conduct’ whereby data controllers are encouraged to draw up codes of conduct intended to contribute to the proper application of the GDPR, taking account of the specific features of the various processing sectors. Under this norm, associations and other bodies representing categories of controllers or processors (in the case at study, for example, ACCIS) may prepare codes of conduct, or amend or extend such codes, for the purpose

¹⁵⁸ Article 5(2) GDPR.

¹⁵⁹ Article 29 Working Party, “Opinion 08/2012 providing further input on the data protection reform discussions” (WP 199, 5 Oct. 2012).

¹⁶⁰ Joined cases C-468 & 469/10, *ASNEF and FECEMD v. Administración del Estado*, [2011] ECR I-12181

¹⁶¹ *Ibid.*

¹⁶² *Ibid.* paras. 45–46.

of specifying the application of the GDPR, in particular including fair and transparent processing and the legitimate interests pursued by controllers in specific contexts.

The question whether and to what extent data controllers should be entrusted with the determination of which of their own interest should prevail, albeit forcing them to provide a justification, remains controversial. Likewise, the effort of levelling the imbalance of powers between data controllers and data subjects pursued by the GDPR would remain frustrated. Arguably, until now one of the most questionable aspects has been the lack of involvement or co-participation of Civil Society or Consumer Organisation in the co-determination of such Codes of Conduct.

In sum, the use of the 'legitimate interest' legal basis for the processing of credit data is not without controversy. In any rate, its use should remain limited to only a few types of data whose use is universally accepted within the EU.

8.4. Data Subject's Consent

For the inclusion of broader data sources in their processing operations and less obvious controversy, the a) consent of the data subjects is the most reliable legal basis in use. Credit bureaus and lenders need to rely on the informed consent of data subjects who unequivocally agree to all the game rules set by the credit industry, notwithstanding whether these are set unilaterally and the degree of transparency.

Consent, as conceived by the law, is a key element that permits the processing of personal data by data controllers that would otherwise be forbidden. When a data subject gives valid consent, data controllers are released from the restrictions provided by law in a fashion that can be described as an opt-in system. In other words, the processing becomes lawful from the moment consent is unambiguously expressed. However, despite the apparently robust legal protection afforded to data subjects, consent may be obtained by a number of methods and has proved problematic as a basis for personal-data processing because it can be easily abused, confused, or conflated.¹⁶³

The complexities of the credit data sharing business models, data-collection practices, vendor-customer relationships, or technological applications may make them impossible for consumers to understand. Alternatively, these complexities may in practice render consumers unable to freely and actively decide to accept the consequences of consenting to data processing, particularly when faced with a perceived immediate economic benefit. For example, under the regime of Directive 95/46/EC it is not infrequent to notice these occurrences in the inclusion of a notice to consent to data processing within the standard contractual terms for credit. However, treating consent as a transactional moment using standard form agreements may constitute a mechanical or perfunctory means of obtaining overarching consent for data processing.¹⁶⁴

The inclusion of data-processing consent in the general terms and conditions of a credit application can be a common yet elusive method of obtaining consumer consent. A central tenet of an agreement is that one agrees voluntarily; consent is therefore associated with the legal paradigm of contract. Moreover, the lending contractual relationship is a situation with a clear imbalance between the consumer and the business counterpart. Consumers do not have much choice but to abide by the credit bureaus' and lenders' rules if they wish to receive credit. A consumer's consent regarding the credit bureaus' use of databases is either mandatory or assumed. Lenders claim that lack of consent would impede them from taking the credit application any further. The same occurs for the use of credit scoring. In the end, concerns regarding the suitability of the law to address consumer credit reporting and scoring result in a number of phenomena to

¹⁶³ In theory, consent that does not meet the requirements of the law or is vitiated should be regarded as void, and should invalidate all data processing *ex tunc*—from the outset. See Article 29 Working Party, Opinion 15/2011 on the Definition of Consent, 01197/11/ENWP187 (July 13, 2011), available at http://ec.europa.eu/justice/policies/privacy/docs/wpdocs/2011/wp187_en.pdf.

¹⁶⁴ See Brownsword (2009).

avoid: economic and social classification; profiling; generalization; segmentation; and consumer sorting. These actualities may lead to various types of economic discrimination—from pricing to access and inclusion—with possible repercussions in the social sphere.

Consent is again a core tenet of the GDPR, which reinforces its concept providing for new stricter conditions. As before, it must be “freely given, specific, informed and unambiguous” [Article 4(11) GDPR]. However, the law now mandates affirmative consent requiring the data subject to signal agreement by “a statement or a clear affirmative action” (Art. 4(11) GDPR).

At the same time, it continues to distinguish between “explicit” consent if the data in question is sensitive personal data (i.e. relates to any of the categories of sensitive data listed in Art 9(1) GDPR, such as physical or mental health data, racial or ethnic origin, and so on) and “unambiguous” consent for data considered of non-sensitive nature, i.e. all the other personal data (Art 6 GDPR combined with Art 4 GDPR).

The issue of what standard of consent should apply under the GDPR was the subject-matter of intense debates and negotiations at the lengthy proposal stage of the GDPR. The legislative history of the GDPR demonstrates that the final drafting was intentional in maintaining different qualifiers of consent and making the explicit distinction between unambiguous and explicit consent depending on the ordinary or sensitive nature of the data to be processed.

To the extent that the GDPR makes clear that ‘explicit’ and ‘unambiguous’ consent are not the same, the boundaries of what is ‘unambiguous’ remain unclear, with the additional complication that the law now states that it must be given by an affirmative action. For example, it is unclear to what extent implied consent remains possible.

While the GDPR provides that “silence, pre-ticked boxes or inactivity should not (...) constitute consent” (Recital 32 GDPR), it also states that consent can be given through “another statement or conduct which clearly indicates in this context the data subject’s acceptance of the proposed processing of his or her personal data” (Recital 32 GDPR). The distinction between ‘explicit’ and ‘unambiguous’ consent matters in practice as long as different models of consent translate into very different engineered solutions within products and services, especially online. In the ‘explicit’ consent model an ‘opt-in tick box’ or declaratory consent statement will be clearly necessary. However, in the ‘unambiguous’ consent model that dominates commercial services a prominent notice together with an ‘affirmative action’ may suffice to obtain an implied consent without the need for an opt-in box or declaratory consent.

This can make a substantial difference in terms of the way consent is collected from consumers or the interface presented to them, and the way in which they interact with the product or service provider in question. Ultimately, this also makes a difference as to the real knowledge and control that consumers may have on the processing of their personal data, and the uses that can be made with the data.

In the end, consent must rely on transparency and an “affirmative action” (whether explicitly given or inferred through conduct) but how this will be translated in practice remains to be seen, especially within the complexities of financial transactions.

The GDPR also establishes explicitly that data subjects have a subsequent right of withdrawal of consent (or an opt-out). The data subject may withdraw consent at any time and this must be as practical as granting consent. Clearly, the withdrawal of consent shall not affect the lawfulness of processing based on consent before its withdrawal (Art. 7(3) GDPR).

However, it remains unclear how these aspirations are to be effectively reconciled with the reality of credit data sharing systems. First, there seem to be tensions in the legislation: on the one hand, consent must be informed; on the other, consent “should cover all processing activities carried out for the same purpose or

purposes” and when “the processing has multiple purposes, consent should be given for all of them” (Recital 32 GDPR).

Thus, if consent is the legal basis to rely upon, theoretically it would have to be given and renewed at a number of different stages, not only at the time of making a credit application but also to the processing of each piece of data generated through a search on databases, including information relating to having secured a credit line, having been refused credit, etc. However, “consent is presumed not to be freely given if it does not allow separate consent to be given to different personal data processing operations despite it being appropriate in the individual case” (Recital 43 GDPR). Likewise, consent is presumed not to be freely given “if the performance of a contract, including the provision of a service, is dependent on the consent despite such consent not being necessary for such performance” (Ibid.).

The picture regarding credit data becomes more confused where the GDPR further intends to protect the data subject stating that consent should not be regarded as freely given if the data subject “is unable to refuse or withdraw consent without detriment” (Recital 42 GDPR) or “where there is a clear imbalance between the data subject and the controller” (Recital 43 GDPR).

The problem is that an effective right to withhold consent to the processing of personal data for the purposes of calculating credit risk would undermine the entire *raison d’être* of the industry by removing debtors or bits of information from the overall data pool of the databases, thus causing incomplete market coverage which in turn would diminish the accuracy of the databases themselves.¹⁶⁵ By pre-empting consumers of the possible negative effects of the withdrawal of consent under the GDPR, the credit data industry not only confirms this analysis but it also provides a more imbalanced and worrying scenario. If a consumer is able to exercise his or her right to withdrawal or erasure of personal data, ACCIS warns that such an action will lead to an incomplete credit file and the data subject would “join a potential group of financially excluded consumers who would have amended files. (...) [This] may make attaining credit extremely difficult in the future for [the consumer], and lenders would lack certainty on what has or hasn’t been deleted.”¹⁶⁶

Therefore, what remains doubtful and of concern for consumers is the effect that the right of withdrawal of consent may have on their future financial relationships, given that the latter are increasingly dependent on the completeness of credit data coverage. Almost certainly, the right of withdrawal of consent for the processing of credit data will not mean that those who exercise it are exempted from all credit risk analysis across the board. The suspicion, by contrast, is that they will be excluded altogether for not being in the databases and not having a credit history.

Last but not least, recent studies show that in order to gain specific transactional and personal advantages most consumers willingly disclose information about themselves and their social activities without thinking about the effects of their disclosures, thus making consent *de facto* ineffective. Yet very few consumers understand the significant consequences of this trade-off, including how data controllers will use their personal data. Not only data processing can be very complex and non-transparent, but most consumers lack both the information and the skills to properly evaluate their own decision to consent.¹⁶⁷

8.5. Automated Decision-Making and Profiling

Both Directive and the GDPR provide for the automated decision-making and profiling through the processing of personal data. As seen above, these methods are largely used in the financial services industry with the use of credit scoring alongside the credit reports.

¹⁶⁵ Ferretti (2008).

¹⁶⁶ ACCIS (no date) also retrieved in ACCIS (2016)

¹⁶⁷ Peppet (2011); Frank (1988); Pasquale (2015)

Directive 95/46 contains a specific provision designed for credit scoring. Article 15 on automated individual decisions provides that in certain cases, including the evaluation of a person's creditworthiness, data subjects have the right not to be subject to a decision based solely on the automatic processing of data. Nevertheless, Member States are given the ability to provide that a person may be subjected to an automated decision as long as the decision "is taken in the course of the entering into or performance of a contract, provided the request for the entering into or the performance of the contract has been satisfied or that there are suitable measures to safeguard his legitimate interests, such as arrangements allowing him to put his point of view (...)".¹⁶⁸ Member states may allow automated decision-making if authorized by a law that also lays out measures to safeguard a data subject's legitimate interests.¹⁶⁹

For example, for the first time in Germany, the law altering the German Data Protection Act of 29 May 2009 deals specifically with consumer-related scoring.¹⁷⁰ In turn, the German Supreme Court (*Bundesgerichtshof*) has confirmed that credit scoring qualifies for meeting legal requirements under data protection legislation, but it has affirmed that the underlying mathematical and statistical calculation method can be protected as a trade secret. Thus, it remains open to question to what extent transparency can be guaranteed to consumers, which is a matter now under the consideration of the German Constitutional Court.¹⁷¹ At least, the GDPR attempts to provide more transparency to data subjects as regards the existence of automated decision-making, including profiling. In these cases, under Art. 13(f), Art 14(g) and Art 15(h) GDPR data controllers should provide "meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject". Nonetheless, it remains unclear the extent to which data controllers will have to disclose full details of scoring logics and see their interests or rights for trade secrecy and competition compromised. Likewise, it remains to be seen the extent to which consumers will be able to understand the complex techniques behind the making of profiling and the logics of algorithms. The suspicion is that information about the logics employed will remain at a general level not allowing a full understanding of how algorithms work and how the new generations of intelligent machines learn and generate evolving results.

In the absence of this type of law, Article 15(2)(a) of Directive 95/46 applies. Interestingly, the key terms *satisfied* and *legitimate interests* have not been specifically defined, leaving uncertainty, especially if one considers that the right to data protection should be satisfied in the first place. One must consider, however, that credit scoring is built on credit data processing. Therefore, before the application of Article 15, the data that was used to generate a score would have been processed according to the other provisions of Directive 95/46.

Once again, the GDPR attempts to reinforce the protection of data subjects by stating that they shall have the right to object, on grounds relating to his or her particular situation, at any time to processing of personal data concerning him or her which is based on profiling. However, the data controller may still process such data if it demonstrates compelling legitimate grounds for the processing which override the interests, rights and freedoms of the data subject or for the establishment, exercise or defence of legal claims (Art. 21 GDPR). This means that once more data controllers are called upon a balancing exercise. In

¹⁶⁸ Article 15 of Directive 95/46/EC

¹⁶⁹ Ibid.

¹⁷⁰ Metz (2012).

¹⁷¹ See Supreme Court ruling on information access to scoring practices by consumer: <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=pm&Datum=2014&Sort=3&nr=66583&pos=1&anz=17>. See the press release of the judgement at <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&sid=2ef8cefa03b7d0493f54c1bc71ee0a53&anz=1&pos=0&nr=66583&linked=pm&blank=1>. Schufa, Germany's leading credit bureau was sued by a German individual over the lack of transparency of its credit scoring methods. The plaintiff had been denied credit and Schufa had already provided him with information as required by law. However, the company did not provide the underlying method, which it regarded as a trade secret. The Court held that while credit bureaus must disclose all personal data as prescribed in the Federal German Data Protection Act, they do not have to disclose how the underlying scoring algorithm weighed the various factors and how the reference groups used to arrive at a credit score were comprised. Following to this decision of the Supreme Court, the matter has been brought before the German Constitutional Court and a decision is awaited as to the balancing of the fundamental rights of privacy and data protection vis-à-vis the safeguard of trade secrets (German Constitutional Court, Case n. 1 BvR 756/2014)

the case at study, the usual justifications regarding the protection of credit or the over-indebtedness of consumers are likely to be used or, depending on the point of view, abused.

At first sight, according to Article 22 GDPR, consumers shall have the right not to be subject to a decision based solely on scoring (the GDPR refers to ‘automated processing, including profiling’). However, the provision does not apply if the decision is necessary for entering into or performing an agreement (e.g. the credit contract). Again, this may give a leeway to the credit industry which claims that the use of credit scoring is necessary to make a decision on the opening of a credit line to consumers, despite the fact that such decisions may well be taken without scoring consumers. Likewise, the right not to be subjected by automated decision processing does not apply if it is authorised by other EU or national law (e.g. specific provisions altering data protection act such as in the case of German Law or Italian Law, or the banking act of a Member State), making the fundamental right of data protection of consumers succumb to financial services legislation.

Finally, automated decision-making and profiling can take place if it is based on the data subject’s explicit consent – therefore all the above considerations on ‘consent’ and its weaknesses to protect consumers apply *mutatis mutandis*.

The only safeguard that the law offers to consumers is that they will have the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision. However, it remains an open question how and to what extent in practice lenders (and their employees in particular) will be ready to overturn the results of a credit score. Under the tenets of the GDPR, this will happen with the correction of inaccuracies, and provided that explicit discriminatory effects are prevented on the basis of racial or ethnic origin, political opinion, religion or beliefs, trade union membership, genetic or health status or sexual orientation, or that result in measures having such an effect.

Nonetheless, the problem may be that it may prove impossible to demonstrate the extent to which scoring may conceal forms of discrimination that it may generate, especially indirectly by not using such sensitive data. Arguably, it is impossible for a consumer to demonstrate a cause-and-effect relationship on an individual basis, between the data used, the data-mining technique employed, and the discriminatory decision affecting an entire group.

9. Reliability and proportionality of data to achieve policy objectives

Overall, an effective protection of consumers’ personal data is particularly important in the financial services sector. If the values upheld by data protection law are considered, it becomes apparent how credit data may raise issues of consumer classification, standardization, simplification, sorting, economic discrimination, and financial inclusion of some and exclusion of others. Generally, consumer credit data are capable of driving the conforming of consumer behaviours to the economic needs of the credit industry under market tenets of the neo-liberal ideology.¹⁷² All these undesirable outcomes can be direct consequences of credit data processing, which comprise any form of automated processing of personal data intended to analyse or predict economic situations or behaviours.¹⁷³

¹⁷² In particular those advanced by the Chicago School: see BORK (1993). See also HARVEY (2005). On a late account on the persistence of the neoliberal ideology in financial markets, see Williams (2013)

¹⁷³ Article 29 Data Protection Working Party, Advice Paper on Essential Elements of a Definition and a Provision on Profiling within the EU General Data Protection Regulation (Brussels, 13 May

The issue of selecting qualitative in addition to quantitative data can also pose the problem of unintentional or even intentional discrimination (e.g. by cherry-picking certain borrowers and manage default rates that increase profitability), especially since their choice reflect biased human decisions. Obviously, such a decision-making does not overtly discriminate on the basis of factors such as race, gender or age that are caught by anti-discrimination laws.¹⁷⁴ Nevertheless, it may instead use correlated information to build an in-depth profile of a particular customer and make other types of discriminations not explicitly covered by the law, e.g. discriminations based on behaviours, culture or wealth. Some instances of these discriminations can be re-conducted to traits of race, gender, or age but they will be very hard - if not impossible - to prove.

An indiscriminate use of data may also easily lead to increased stereotypical decisions. If data protection can be problematic for traditional data, this is exacerbated by the use of non-traditional data and by allowing lenders too much access into their customer's personal life.

These situations have to be contextualised with the complications and opaqueness of algorithms that transform numerous bits of apparently neutral or unrelated information about a consumer into a straight numerical score that determines the outcome and/or price of applications with all the following implications. Most of the time not only the logics of the algorithms remain secret, but also the data sources used by the individual lenders are undisclosed.

In the end, when balancing the fundamental right of data protection, one of the main issues remains the determination of what data and data sources are necessary to achieve policy goals for the creditworthiness assessment and the prudential supervision of the financial system. Likewise, in the absence of legislative or other regulatory indications, it is also critical to determine who makes such a decision as to the necessity of the types of data to be processed.

It is important that the data used are only those necessary to achieve policy or other important goals, ensuring that they are reliable and proportionate.

As shown above, the exchange of consumers' financial information and the use of centralised databases are now regarded not only as a risk management tool in the interest of the credit industry, but also as a form of creditworthiness assessment and a tool to identify the over-indebtedness of individuals.

However, the case *LCL Le Crédit Lyonnais* has made clear that the creditworthiness assessment should be done in the interest of consumers to prevent irresponsible lending and over-indebtedness,¹⁷⁵ and the use of credit data is regarded as one possible - though non-exclusive - tool to make such an assessment.

If on the one hand this point of view may support an argument for the exchange of information in the general interest of consumers, on the other hand it remains open to debate whether the design of databases is proportionate to the policy goals to be achieved, and whether the type and the level of aggregation or detail of information exceeds the purpose for its sharing.

Credit data – with the uncertainty of which data sources would be necessary - may capture existing or likely debt problems if further credit is taken, but they cannot address the most frequent causes of consumer over-indebtedness, such as life-time events or poor market conditions, when repayment difficulties emerge at a later stage. Certainly, behavioural factors may have a role in consumers becoming over-indebted. However, credit data can sanction or penalize failures to repay or repay late. But the large majority of

2013).

¹⁷⁴ E.g. see Council Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin, OJ L 180/22; Council Directive 2004/113/EC of 13 December 2004 implementing the principle of equal treatment between men and women in the access to and supply of goods and services, OJ L 373/37. See also *Association Belge des Consommateurs Test-Achats ASBL and Others v Conseil des ministres* (Case C-236/09), ECLI:EU:C:2011:100, where the CJEU ruled that insurers can no longer take gender into account when calculating insurance premiums.

¹⁷⁵ *LCL Le Crédit Lyonnais SA v Fesih Kalhan* (Case C-565/12), ECLI:EU:C:2014:190

consumers fail to repay their debts or pay them back late (with profitable interests for the industry) for the occurrence of events that are not predictable at the time of contracting a loan and that credit data cannot foresee. Poor macro-economic conditions, job losses, divorces, illnesses, family deaths cannot be anticipated but credit data give a memory to the system, potentially and possibly penalizing the affected consumers even further.¹⁷⁶ On the contrary, market deregulation - coupled with incomplete social safety nets - is often recognised as the structural condition that leads to an environment hospitable to financial difficulty.¹⁷⁷ This consideration should be contextualised with the findings of recent studies confirming the nature and causes of over-indebtedness, which reveal empirically how this is not limited to the issue of debts stemming from financial credits but includes all consumer essential outgoings, and is tied to income and other expenditures relating to taxation and cuts in social welfare. Consumers are considered over-indebted if they are having – on an ongoing basis – difficulties meeting (or falling behind with) their commitments, whether these relate to servicing secured or unsecured borrowing or to payment of rent, utility or other household bills.¹⁷⁸ The major causes of consumer over-indebtedness have been confirmed to be external lifetime events or accidents of life exacerbated by poor macroeconomic factors, the increasing costs of living, and the over-reliance on consumptive credit as an economic model for growth.¹⁷⁹ The findings reveal that people who lose their jobs and incomes have a higher probability to default and become entrapped in unsustainable debt, as do people confronted with accidents of life no one can anticipate. Behavioural factors, such as poor financial choices, mismanagement of resources or irresponsible lending practices, seem to have a limited bearing. Yet a reading of the major causes behind problem debt could be a conjuncture of external events with behavioural factors, where consumers do not effectively adjust their budgets to the external changes.¹⁸⁰

These situations cannot be caught or resolved by credit data and their exchange. All what data may do is the abstract representation of unique or circumstantiated situations without distinguishing the causes, and they retrieve and give a memory to such representations that become accessible to all other market players, thus *inter alia* raising doubts as to their ability to predict whether the same consumer will repay loaned money in the absence of those life-time events that once originated the data themselves.

All considered, it becomes apparent that the nature of the problem is rooted in a number of economic soils that are beyond the remit or control of what credit data can do. This ultimately questions the reliability and proportionality of credit data to reach such policy goals, as also confirmed by a study of experts advising the European Commission in the field of financial services from the perspective of users which found no evidence that their increased availability has helped prevent over-indebtedness, support prudential regulation, or facilitate access to affordable credit.¹⁸¹

Arguably, moreover, giving a second chance to consumers may well be in the consumer interest and it may even be economically efficient. In this context, a second chance is intended as not retrieving information which could have negative consequences on consumers, especially under those circumstances that are not tied or linked with the original negative information. The same may be put forward for the case of personal insolvencies under the law of the Member States in order to avoid the perpetration of the stigma attached to such procedures.¹⁸² The examples of countries where only public credit bureaus exist such as Belgium and France (where *inter alia* only negative data are allowed) corroborate this stance and further question the role and effectiveness of private credit bureaus. In these countries, for example, the levels of consumer over-

¹⁷⁶ On the causes of defaulting see e.g. Ramsay (2007), sp. 578-580; Caplovitz (1963); Berthoud and Kempson, (1992); Hoermann (1986); Balmer et al (2006); Dominy and Kempson (2003); Vandone (2009); Niemi (1999).

¹⁷⁷ Braucher (2006).

¹⁷⁸ Civic Consulting (2014).

¹⁷⁹ Id.

¹⁸⁰ For example, see Banque de France (2014).

¹⁸¹ Financial Services User Group (2015).

¹⁸² Personal Insolvency Laws in the EU raise difficult issues and questions that are beyond the scope of this work. For a thorough discussion, see e.g. Micklitz (2012), Ramsay (2012 a), Niemi (2012).

indebtedness are not higher than in the other Member States where there is an extensive sharing of consumer data.¹⁸³ Likewise, in these two Member States the cost of credit for consumers does not appear to be higher than in other Member States.¹⁸⁴

Therefore, in the end it is argued that extensive, expansive or indiscriminate use of credit data is disproportionate to the policy goals to be achieved. Only negative data in aggregate form can provide a partial static picture of the consumer financial exposure and their state of financial difficulty. Moreover, the types of data used must be reliable - a circumstance that cannot be left to the sole determination of the credit industry.

10. Consumer protection concerns beyond data protection: credit data as the gateway of the economic life of consumers

Credit data sharing by commercial credit bureaus and the uses made by lenders raise questions of possible economic discrimination, classifications, sorting, standardization of behaviours and the need to build a financial CV as dictated by the industry. These issues may easily translate into inclusion or exclusion from mainstream financial services, and they have the potential of ultimately affecting the social sphere of consumers in addition to their dignity and liberty as human beings.

In addition, the idea that the conforming of behaviours may be dictated by the financial industry can be a problematic scenario for society that many are not ready to accept. Consumers adapt their behaviours to what the industry demands, becoming aware that failure to play by their rules may translate in exclusion from mainstream services. An expanded use of personal data can easily turn them into the gateway for other economic and social aspects of the lives of people, which makes personal financial data a potentially harming tool for consumers and a threat for societies resting on values of social inclusion and welfare. For example, recently it has been reported that in the Netherlands consumers were asked to pay for large deposits of hundreds of Euros for their utilities on the basis of credit data processing.¹⁸⁵ Consumers may be turned down from telecom contracts and be forced to buy more costly pay-as-you-go packages – or vice versa they may pay more for their mortgages for mispayments of telecom bills of little value.¹⁸⁶

Moreover, it is disputed that also those who are not in the databases for not having a credit history may face negative consequences in the access of mainstream services, so that everyone becomes induced to build his/her financial CV for not becoming penalized at a later stage. This is what already happens in the US where the market is more mature than in the EU.¹⁸⁷ Moreover, the raise in usage of non-traditional data opens further questions as regards other behaviours of individuals in a free society, e.g. whether there is or there should be an explicit right to be un-networked¹⁸⁸ thus safeguarding people of attracting negative consequences in case personal data are not available on social media or else.

¹⁸³ See Civic Consulting (2014).

¹⁸⁴ See, for e.g., Eurobarometers available from http://ec.europa.eu/public_opinion/archives/ebs/ebs_321_en.pdf; http://ec.europa.eu/public_opinion/archives/ebs/ebs_355_en.pdf.

For literature comparing the use of consumer credit in France and in the UK see Ramsay (2012 b). Trumbull (2014) puts forward that America's credit culture emerged from an evolving coalition of lenders seeking to make their business socially acceptable and NGOs that pushed the idea of credit as welfare-enhancing and promote labour and minority rights. By contrast, the author argues that in France, where a similar coalition did not emerge, consumer credit continued to be perceived as economically regressive and socially risky.

¹⁸⁵ See <https://www.consumentenbond.nl/nieuws/2016/tientallen-klachten-op-meldpunt-dupe-van-je-data>

¹⁸⁶ See <http://plug-n-score.com/blog/credit-scoring-methods-for-telecom-financiers.htm> and

<https://www.theguardian.com/money/2011/feb/19/credit-score-mobile-phone-mortgage>. See also Turner and Walker (2015).

¹⁸⁷ Mierzewski and Chester (2013); Hendricks (2004)

¹⁸⁸ See Packin and Aretz (2016).

It is suggested that empirical research is needed to assess whether or to what extent credit data and the scoring of consumers act to exclude low-income, vulnerable, or non-conforming consumers from markets. As the use of credit data and scoring can turn into classification, categorising and sorting mechanisms, financially vulnerable consumers may be easily recognized, classified and excluded. Until now, very little is known about the relationship between the use of consumers' data as a method of selection or credit pricing, as well as exclusion of those members of society who do not qualify under the standards set by the lenders. For example, more knowledge is needed to understand the credit behaviour of those who are not eligible to take credit by mainstream lenders and have a poor credit rating retrieved by the data. Likewise, more knowledge is important regarding the needs and conditions of those who are not in the databases or the young generations who are unlikely to have a substantial credit history. Open questions are the extent to which they are likely to recourse to subprime lenders, as well as whether and how other economic segments could be affected (e.g. tenancies, telephone and utility contracts, etc.).

It is warned that the increased processing of credit data and the scoring of individuals across different economic segments may lead to situations where credit risk can be used as a proxy for other types of risks—insurance claims, workplace trustworthiness, rent payment, telecommunications, or utilities pricing. This use of credit data may create the additional concern – so far unresolved by the law – regarding the extent to which data sharing across industries may lead to exclusion from non-financial services or wider economic and social discrimination or marginalisation.

These issues are even more important in a voluntary system because there is no requirement, either legal or natural, to justify the unilateral sharing of data for the performance of a contract that is the core of the lending business.

Lending money in exchange for profit is perfectly possible and probably lucrative even without the intervention of Credit Bureaus. At most, data sharing is useful and more profitable in the same manner as using personal data for marketing purposes is useful and profitable. Certainly, one may reasonably think that credit data induce an increased volume of lending, thus indirectly providing important benefits to those with 'good' or 'conforming' credit. Accordingly, it would be reasonable to expect that increased lender profits unequivocally result in more favorable credit conditions for those who fall within the classification of 'good' or 'conforming' consumers. This presumption reflects the view that there is relative equivalence between pursuing lenders' self-interest in maximising profits and promoting the general interest resulting in lower prices for consumers. This is an idea dating back to Adam Smith and his notion of the 'invisible hand'. The economic assumption implied is that in perfectly competitive markets, marginal private benefits equal marginal social benefits, and marginal private costs equal marginal social costs. Accordingly, self-interest always promotes the interest of the community even though it is not part of the original intention.¹⁸⁹ The traditional assumptions of Smith's perfect-competition theory, however, are that all market actors act rationally in their own self-interest with good and full information, that all goods and resources are freely transferable, that all markets permit free and easy entry and exit, and that prior distributions of wealth and resources do not unfairly impact competition.¹⁹⁰ It is well-accepted today that such assumptions practically never hold true in the real world, a circumstance of which Adam Smith was aware.¹⁹¹

Economic arguments on this subject are numerous and they touch upon contentious areas. The economic advantages appear to be for some consumers only—the 'conforming' ones—while others would be excluded or penalized by paying more. These 'other' consumers do not qualify as 'good' or 'conforming' consumers because they do not fit into predefined criteria, and they would ultimately have more difficulty repaying their debts and avoiding default. At any rate, whether credit bureaus really serve the interest of

¹⁸⁹ See generally Smith (1776).

¹⁹⁰ See generally Malloy (2004).

¹⁹¹ See generally SMITH A (1759); Stiglitz (2007).

debtors seems inconsequential if one embraces the idea that economic efficiency does not stand in isolation, but that there are greater social concerns relating to the position of individuals in society. Namely, where they are not merely equated to consumers but valued as citizens in a free and democratic society. As it stands, the law does not resolve the question of how far consumers should be forced to sacrifice their own rights in the interest of the credit industry, bearing in mind that the 'utilitarian' concerns of the credit industry cannot necessarily prevail over civil liberties and fundamental-rights concerns.

Therefore, it remains open to debate whether the institutional form of credit bureaus and the design of databases advance the desired policy goals, or whether the level of aggregation and the type of information exceeds the purpose for which it is shared, especially with respect to EU citizens' fundamental rights.

At the same time, the sharing of credit data raises debates over social duties and social responsibilities of the credit industry or private credit bureaus as social actors, prudential supervision, and the institutions which should be entrusted with the exercise of such a social function. The credit industries, as well as the private and commercial credit bureaus, are not social actors or institutions designed to work in the public interest. They are commercial or private entities whose mission is to make the interest of shareholders and generate profits or, when not-for-profit in the context of banking associations, they are designed to make the interest of the associated commercial ventures. In these cases there seems to be a conflict of interest which prevents possible arguments that they may work in the interest of consumers.¹⁹²

The picture may be different when public institutions are involved under the legitimacy of the rule of law. For example, unlike for the creditworthiness assessment and over-indebtedness, the use of credit data for the prudential supervision of the financial system has addressed the institutional nature and regulation of the organisations entrusted with such a public duty.

11. New extra Challenges and Possible Alternatives

11.1. A Euro-area Database

At the proposal stage of the MCD the European Commission had included provisions that would have allowed to harmonise at least some key terms used in credit databases (terms such as 'defaults', 'arrears') and to define uniform credit registration criteria, as well as data processing conditions to be applied to credit databases (e.g. the registration thresholds), in order to increase reliability of information contained in databases, facilitate creditworthiness assessments and in the long-run promote cross-border supply of credit. But these provisions were not kept during negotiations and in the final text of the directive.¹⁹³

Nevertheless, as outlined in Chapter 6 above, the EU internal market and the integration of credit markets for consumers raise questions of how to measure over-indebtedness and assess household creditworthiness. Likewise, the establishment of a level playing field for the competition of financial

¹⁹² There are considerable differences in size, turnover, volume of activities, and public engagement of credit bureaus across Europe. Some credit bureaus engage in social activities of financial education or other socially helpful activities. All the same, the duty of commercial credit bureaus is towards their shareholders and socially helpful activities remain within the sphere of publicity or enhancing their commercial reputation.

¹⁹³ Commission adoption of a proposal for a Directive on credit agreements relating to residential property, COM(2011)142. The following provisions were deleted during the negotiations between the Council and the European Parliament:
Article 14(5) - "Powers are delegated to the Commission (...) to specify and amend the criteria to be considered in the conduct of a creditworthiness assessment as laid down in paragraph 1 of this Article and in ensuring that credit products are not unsuitable for the consumer as laid down in paragraph 4 of this Article".
Article 16(2) - "Powers are delegated to the Commission (...) to define uniform credit registration criteria and data processing conditions to be applied to the databases referred to in paragraph 1 of this Article. In particular, such delegated acts shall define the registration thresholds to be applied to such databases and shall provide for agreed definitions for key terms used by such databases".

institutions may demand that they are equipped with similar tools and no restrictions or barriers exist in the Member States. In turn, this means that credit-risk data may require standardisation or a harmonised measurement system for the EU and its market players. As shown earlier, however, this is far from being the situation of a jeopardised system of national credit data sharing.

This study has outlined that other public policy goals are associated with the use of credit data, especially as regards the databases operated by national central banks containing loan-level or borrower-level information to supervise the national financial system (Chapters 3 and 4). Credit data also serve the purpose for statistical and economic analysis.

The free movement of capital and economic and monetary union within the EU demand for the adoption of an economic policy which is based on the close coordination of Member States' economic policies, on the internal market and on the definition of common objectives. Price stability, sound public finances and monetary conditions, and a sustainable balance of payments are goals of the EU to pursue its objectives set in Article 3 TEU.¹⁹⁴

A major Euro-area response to the 2008 financial and economic crisis has been the deeper integration - or ever closer union - of its banking system, which culminated in the making of the BU.¹⁹⁵ In the rhetoric of the EU, this is an important step towards a genuine Economic and Monetary Union which could allow for the consistent application of EU banking rules in the participating Member States, and which could be equipped to tackle those problems caused by the crises and the close relationship between public finances and the banking sector.¹⁹⁶

One important goal of the BU is the pursuit of a number of initiatives to create a safer and sounder financial sector for the single market. One of such initiatives includes a common stronger prudential framework for financial institutions through the establishment of a Single Supervisory Mechanism ('SSM') for banks.

The European Central Bank (ECB) is the European institution in charge of Europe's single currency, monetary policy, and price stability alongside the European System of Central Banks ('ESCB').¹⁹⁷ In addition to these tasks, the SSM places the ECB as the new central prudential supervisor. On the basis of Article 127(6) of the Treaty on the Functioning of the European Union (TFEU) and of the Council Regulation (EC) No 1023/2013 (the 'SSM Regulation')¹⁹⁸, the ECB is the institution responsible for specific tasks concerning the prudential supervision of credit institutions established in participating Member States. It carries out these tasks alongside the national competent authorities, where the ECB directly supervises the largest banks while national supervisors continue to oversight the remaining smaller financial institutions. As supervisors, the main task of the ECB and the national authorities is to work closely together within an integrated system to make sure that banks comply with the rules of the EU and to early intervene in case of detection of problems.¹⁹⁹

To achieve their goals in the framework of the SSM, supervisors need the tools to perform their newly assigned task. Among these tools, the ECB is promoting the setting-up of a centralised infrastructure for the collection and sharing of granular credit-risk data within the banking sector on an EU-wide scale, called Analytical Credit Dataset ('AnaCredit').

¹⁹⁴ See Articles 119 and 127 TFEU.

¹⁹⁵ Non-euro-area countries are entitled to join.

¹⁹⁶ See the official website of the ECB at <https://www.bankingsupervision.europa.eu/about/incontext/bankingunion/html/index.en.html>

¹⁹⁷ Articles 127 and 282 TFEU.

¹⁹⁸ Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions, OJ L287/63 29.10.2013, p. 63–89.

¹⁹⁹ See the official websites of the ECB at <https://www.ecb.europa.eu/ecb/tasks/html/index.en.html> and <https://www.bankingsupervision.europa.eu/home/html/index.en.html>

The idea of centralising credit-risk data for risk management and/or supervisory purposes is not new and it already existed in a number of Member States in the form of National Credit Registries, i.e. information systems providing central banks or other regulatory bodies and banks with data about the indebtedness of firms and individuals vis-à-vis the whole banking system.²⁰⁰ However, not all Member States share the same regulatory and institutional experience of having National Credit Registries and in some countries the latter do not exist, having data centralisation systems set up for different credit management purposes in the interest of the credit industry (i.e. credit bureaus or credit reference agencies).

Yet, for coordination at EU level, the ESCB has long been exploring the potential statistical use of the data contained in National Credit Registries for macroeconomic and financial stability purposes. Even before the outbreak of the crisis national authorities had finalised a plan for a pan-European data exchange among the registries of Belgium, Germany, France, Italy, Austria, Portugal, and Spain, as well as representatives of the ECB (later extended to Bulgaria, Czech Republic, Latvia, Lithuania, Romania, Slovenia, and Slovakia). The plan consisted in the creation of a reporting system allowing a data exchange on a regular basis on borrowers who also have debt in other European countries. The envisaged cross-border exchange was not intended for the consumer sector but to provide information to financial institutions across Europe about the indebtedness of their corporate customers. Also, the information exchange could provide useful additional information to supervisory authorities on credit concentration. For supervisory purposes, the growing internationalisation of lending to companies within the European Union, as well as the introduction of the single currency, required an exchange of information among national authorities in order to maintain the value of information contained in their databases.²⁰¹

The reporting to central National Credit Registries has proved its analytical usefulness but it has also outlined the absence of homogeneity and the differences at national level of the data in terms of coverage, attributes, and content. This lack of standardisation and comparable measurements has pointed to the need for harmonisation in concepts and definitions, as well as for convergence in time, coverage and content of the data.²⁰²

However, the recent financial crisis and the impact of defaults of both business and personal loans on the banking system have exacerbated the desirability for more credit-risk data to allow the ECB and the ESCB to perform their responsibilities of monetary policy, price stability, the development and production of analyses and statistics, and – last but not least – for micro-prudential supervisory purposes.

Hence, the ECB and ESCB have accelerated the exploration of the potentials of credit-risk data and they are working towards their collection and standardisation in order to be able to have common grounds to engage in EU-wide credit analysis, and measure levels of indebtedness and over-indebtedness in the financial system.

In a nutshell, with the ultimate goal of addressing both micro- and macro-prudential issues in the supervision of the EU banking system alongside monetary policy, the ECB and ESCB have launched the ‘AnaCredit’ project with the mandate of:

- 1) Identifying a core set of data to meet the main users’ needs and elaborate on their scope;

²⁰⁰ Reportedly, Germany established the first National Credit Registry in 1934, followed by France in 1946, Italy and Spain in 1962, and Belgium in 1967. See Miller (2003 b).

²⁰¹ As explicitly documented by the Deutsche Bundesbank (the Central Bank chairing the Working Group on Credit Registries), in fact, “data on the total amount of loans taken up will be available for each of the participating countries as well as on an aggregated basis. The data will also provide a breakdown into asset items and off balance-sheet transactions. *There will be no cross-border exchange of information on loans to individuals*” (emphasis added). See Deutsche Bundesbank, Press Release (7 June 2005), available at http://www.bundesbank.de/Redaktion/EN/Downloads/Press/Pressenotizen/2005/2005_06_07_credit_registers.pdf?__blob=publicationFile. See also European Central Bank (2010).

²⁰² De Almeida and Damia (2014).

- 2) Further analysing and considering harmonised concepts and definitions, and methodological enhancements of the data;
- 3) Estimating the costs to be incurred by the ESCB to set up a sharing system and that of the reporting agents; and
- 4) Considering the governance, as well as the legal and confidentiality issues for a centralised data sharing system, and preparing the appropriate legal instrument.²⁰³

It is with the view of setting up such a dataset containing detailed information on individual bank loans harmonised across the Member States that the ECB has issued a Regulation on the collection of granular credit and credit risk data (the ‘AnaCredit Regulation’)²⁰⁴ regarding the issue of technical rules, procedures, and reporting thresholds. EU-member states which are not part of the Eurosystem are also invited to participate. For example, Denmark and Sweden have initiated activities to create similar databases.

The expectation is of implementing a practical application of ‘AnaCredit’ by 2018 and have in place a ‘Eurosystem’ database of standardised deposit and loan-by-loan data on credit granted of or above Euro 25,000 to legal entities, including SMEs and sole traders/proprietors. According to Recital 12 of the AnaCredit Regulation, personal data will not be collected in the first stage of the reporting. The prospect is that of comprising also the data relating to the credits to consumers, in particular mortgage loans and the evolution of indebtedness and defaults rates at national level. The same Recital 12 of the AnaCredit Regulation, in fact, clearly provides for the possibility of extending it in subsequent stages, in which case it commits to ensure the protection of the rights of natural persons with regard to the collection and processing of their personal data. Even more, the broadening of the scope of AnaCredit to the data on consumer credits is a specific proposal of the European Commission, which aims to potentially involve all lenders and not only banks to enable it to monitor the performance of the consumer credit market and fulfil the obligations set by the Consumer Credit Directive 2008/48/EC covering overdrafts, credit cards, credit lines and other consumer credits.²⁰⁵ A further expansion of the credit data collection is subject to a decision by the governing council, which shall be taken two years prior to the implementation of additional stages (Recital 10 of the AnaCredit Regulation).

For the purpose of this study, ‘AnaCredit’ may have an important impact on the function and activities of Credit Brokers, especially the private or commercial ones. The standardisation of the measurement of over-indebtedness and the way to conduct creditworthiness assessment represent a back-door interference of the way lenders share credit data, Credit Bureaus conduct their business, and the type of data they supply. European lenders will need to accommodate future changes in market practices and regulations. The new set-up, in fact, reflects a paradigm shift in the statistical reporting from a template-based reporting of summary statistics to the reporting of entire harmonized and granular credit registers. AnaCredit underlines the ECB’s intention of a more quantitative supervisory approach that will allow increasing the link between monetary policy, financial stability and banking supervision and the usage of additional preventive measures in prudential regulation. However, for European lenders the granularity of the data required by the new system will result in changes in reporting systems, credit databases and processes, as well as the ensuing data collection to provide the requested data. A collection of data without a standardised and coherent planning is likely to lead to higher operational costs in achieving regulatory compliance and they can cause errors. From a data risk-management perspective, this means that comprehensive data structures should

²⁰³ Damia and Israel (2014).

²⁰⁴ Regulation (EU) 2016/867 of the European Central Bank of 18 May 2016 on the collection of granular credit and credit risk data (ECB/2016/13), OJ L 144/44.

²⁰⁵ See European Commission, Opinion of 7 August 2015 on the Draft Regulation of the ECB concerning the collection of granular credit and credit risk data (2015/C 261/01).

only be organised once and in a way that enables lenders to capture all relevant data across different business lines in a consistent and definite new database structure.

Arguably, therefore, AnaCredit will force lenders and Data Brokers to adapt or rebuild their databases in order to remain up-to-date with regulatory requirements and/or competitive in the market. The efforts to harmonize the type of credit data that credit brokers currently report may force them to use the same set of indicators and uniform definitions allowing for a European comparison of the levels of indebtedness. Even though the current coverage of AnaCredit does not allow for a complete analysis of the indebtedness of individuals because of the high reporting threshold of Euros 25,000, it nevertheless introduces the reporting standards that lenders and credit bureaus in the Euro area will be obliged to follow. An extreme argument may thus consider Data Brokers such as Credit Bureaus redundant to the extent that their role and functions may be substituted by the public authorities.

The bottom-line is that the ECB intervention, if and when implemented in step-by-step stages, has the potential to make a major impact on the credit data usage, to the point of forcing Credit Brokers to evolve or risk their own continued existence. The latter circumstance, for example, could materialise if the coverage of AnaCredit is extended to individuals with all types of loans and the reporting threshold is lowered to below the currently planned one of Euros 25,000 or eliminated altogether for individual loans.

11.2. Alternative data protection-friendly data analysis

Several studies have shown that, in most cases, loan defaults are due to an unexpected drop in income, not to a bad payer behavior that could be detected in advance as most of the credit registers pretend to do. In addition, the drop in income is often consecutive to a change credit register can anticipate regardless the level of sophistication of its tools: divorce, job loss or illness. It also been proved that the vast majority of borrowers facing income losses try to fulfil their repayment obligations by delaying the payment of other debts and / or trying to borrow again to repay previous loans. These ‘tactics’ are rarely covered successful and often lead to over-indebtedness. This means that for the vast majority of borrowers, there is a real willingness to meet their financial commitments at all costs.

The only worthwhile assessment is whether the borrower has sufficient resources to meet his repayments at the time of granting credit and over the term of the contract. The relevant data for performing such assessment are his income and expenses.

To assess the creditworthiness of any consumer, there is a single source of information that is reliable, and contains all that is needed to assess the financial situation of a consumer: his/her bank(s) account (s). All the information (income and expenses) necessary for creditworthiness assessment can be found on the consumer’s bank/payment account statement. This information is objective and should allow the lender to conclude whether the borrower has sufficient and stable income, whether the level of the loan-to-income ratio is appropriate, whether the consumer already has other pending mortgage credit or personal loans, including payment arrears, what are other financial and non-financial commitments (rent, utility bills, insurances, etc.).

To analyse the bank/payment account, two tools should be developed:

- An algorithm analyzing the income and expenditure of a consumer covering a sufficiently long period of time (to be defined), and some other key elements (see below).
- A report template/statement that would contain reliable information in an aggregated format that any borrower could provide, directly or indirectly, to his potential lenders.

A preliminary work of defining what data is necessary and sufficient to assess the borrower's ability to repay

a loan should be carried out. It should also be defined who should own the tool and be in charge of updating in order to ensure both reliability and relevance for borrowers and lenders and avoid any manipulation.

As regards the report/statement, the following information (to be defined) should be included in an aggregated format:

- the expenses to income ratio,
- outstanding loans if any, including use of authorised/non authorised overdraft facilities,
- account regularly or temporarily in the red, or account always with positive balance,
- penalties for arrears if any,
- saving capacity,
- etc.

It should also be defined who has the right to access the tool and generate the report: the consumer himself, for example by downloading his bank statement, or a trusted third party to which the consumer would give access to his/her bank accounts (most suitable solution for multiple bank accounts in different banks).

The main advantages are the following:

- No risk of incorrect data as it is too often the case with credit registers;
- Those who do not need credit are not subject to any centralized record of their personal data in a credit register;
- Data belongs to the consumer;
- It may hinder the development of private credit registers collecting data on everyone from the most varied sources;
- It complies with the objective of data minimisation and the proportionality principle;
- It fit for the data portability that is in the GDPR. By contrast, Credit Bureaus model will make it hard to allow such a right.
- It may increase financial inclusion: those who are excluded from the credit market because they do not fit into the right category of risks (e.g. low income people, some types of jobs, some stigmatized neighborhoods) could demonstrate that they are managing their budget well and they have even some savings capacity.
- It may increase budget management skills: those who are not good managing their budget could be encouraged to do better if they want to get a good report/statement to convince potential lenders.

Conclusions

This report has analysed the multiplicity of uses of personal data of consumers in credit relationships and the ongoing state of disorder within the EU single market. It stresses the reasons why the urgent and careful attention of the EU legislator is required. However, there is an important aspect that this report has not analysed for the many additional issues and concerns that it raises: data security. Nonetheless, it is important to mention here how critical this aspect is with the warning that it should be carefully studied in coming reports. The recent scandal caused by the commercial credit bureau Equifax concerning data breaches and the violation of the data of millions of consumers is just the last in a series.²⁰⁶ It is a loud alarm of the dangers of the indiscriminate data processing in this sector and how dangerous this could be for consumers. Urgent actions, including regulatory safeguards and sanctions, are needed from policy makers. These episodes are important wake up calls for the EU to reconsider the role and function of Data Brokers as outlined in this report.

Despite the attempts to harmonise the rules of credit to consumers for the creation of an EU internal market, the credit data infrastructure has been left unattended and it has remained jeopardised on national bases. Within such a fragmented at EU level, it appears that the current practice of credit data use in the Member States hardly contributes to achieve univocal, common, or defined policy objectives under the rule of law. Across the EU there is still a great variety in the datasets and data sources used for different purposes - both as regards traditional and non-traditional data. The three main identified functions of credit databases that this work has captured are the supply of consumer data for a broadly-conceived credit-risk management and pricing of lenders, the creditworthiness assessment of consumers, and the prudential supervision of financial institutions. These different functions usually result in different legal or institutional forms of the data brokers involved, and their fragmentation into public or private/commercial organisations.

Each function presents separate policy and legal issues which should be tackled separately.

Nevertheless, as far as consumer protection is concerned, key common features may be identified. Consumer data are at the basis of each system and their processing needs to be balanced with the fundamental rights of data protection of individuals. Moreover, personal data may become the gateway of the economic and social life of people determining, *inter alia*, access conditions to services and consequently they may play a role in inclusion or exclusion in society in a broad sense. Therefore, the data need to be reliable and proportionate to achieve well identified policy objectives in the general interest. The fragmentation in the Member States questions such reliability and proportionality as they all seem to have in place a diverse system but with no uniquely accepted criteria or standards. As the techniques for data collection, distribution, and use are still very different across the EU, this signifies no universal or common acceptance of what data are relevant for risk-management, creditworthiness assessments, or prudential regulation (when used). In addition, to serve the interest of consumers, it is important that any data are processed and used proportionally and transparently to achieve well-defined goals.

In the end, therefore, an analysis of the many functions and usages of credit data suggests that the policy goals to be achieved should inform the institutional or legal form of the Data Brokers and/or the design and use of databases under the rule of law.

²⁰⁶ On the Equifax 2017 data breach see e.g. <https://www.consumer.ftc.gov/blog/2017/09/equifax-data-breach-what-do> , <https://www.nytimes.com/2017/09/23/business/equifax-data-breach.html> , <http://www.telegraph.co.uk/technology/2017/09/08/equifax-hack-britons-data-watchdog-investigates-ukimpact-major/> . On precedents see e.g. <https://www.tripwire.com/state-of-security/security-data-protection/4-credit-bureau-data-breaches-predates-2017-equifax-hack/>

Firms need access to data on consumers to provide viable financial services in general - and to competitively assess the risks to which they would be exposed in other EU markets in particular. Likewise, they should be able to assess mobile consumers whose data was accrued in another Member State in the same way as the national ones. Moreover, with the growth of digitalisation and *FinTech*, firms' appetite for data is increasing as they use more sophisticated processes.

However, if personal data are not used within a proper framework, they can result in dysfunctional markets, market abuse, and major consumer detriment including social and financial exclusion, discrimination and, in some cases, abuse of fundamental rights. Last but not least, it is difficult to conceive a single market in retail financial services where the underlying information infrastructure is not standardised. A jeopardised data infrastructure may serve as an obstacle to cross-border credit as well as the exercise of all other free movement rights which are at the basis of the EU. If a simple analogy is allowed in the interest of oversimplification, it is akin to building a common train for the EU which then needs to run on tracks built with different measures and designs.

The picture is exacerbated by the rapid developments in information science, technological innovation and the sheer volume of data and information in financial markets.

Therefore, once properly defined policy goals of personal data usage in financial services are defined, it is argued that it is for the law to determine which datasets and data sources should be necessary, reliable, and proportionate. This would be extremely important for the creation of the single market and for consumer protection. The current framework set by data protection law looks inapt to stem overuses, abuses or misuses if the type of data to be used is left to the sole determination of the financial services industry. In this context, this study has started to investigate new initiatives taken by the ECB under its remit of collecting statistical data on the levels of indebtedness in the EU and the prudential supervision of the Euro area. The project of standardising data is still in its infancy but it stimulates speculations over a real need of having standardised data to achieve common policy objectives without stifling innovation.

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