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Effects of negative interest rates on floating rate loans and bonds

Analysis of legal and financial profiles

S. Alvaro, A. Gentili, C. Mottura

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Consob
00198 Roma – Via G.B. Martini, 3
t 06.8477.1
f 06.8477612
e studi_analisi@consob.it

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S. Alvaro, A. Gentili**, C. Mottura****

Abstract and main conclusions

The work analyses the legal and financial effects of negative money market interest rates on floating rate loans and bonds. The analysis is developed around finance, private law and regulation.

The study is divided into four subject blocks.

The first block considers the motives and objectives of the study, including the contextual elements surrounding the effects of sign of the interest rate within the logic of financial trade and specific elements surrounding the contracts under analysis. There are a further three parts.

The first part analyses the legal foundations of the monetary policy choices of the European Central Bank (ECB) that led to the negative values of short-term interest rates, including with reference to the effects that these choices could have on the principle, protected in Italy by Art. 47 of the Constitution, of promoting citizens' capacity to save for investment purposes. The conclusion reached is that, at least in the short term, the monetary policy of the ECB (implemented under the powers awarded to it by European Treaties) indeed has the effect (albeit indirect) of protecting investors, inasmuch as, by preserving the value of the monetary meter, it protects the economic system as a whole. This approach to the problem, alert to the profiles of constitutional protection of the founding principles of the different Member States and to the limits of accountability met by the ECB, is also found in recent case law of the Constitutional Court of certain Eurozone countries and of the European Court of Justice, as well as in widespread European doctrine.

JEL Classifications: G10, G18, K12, K20, K22.

Keywords: floating rate loans, floating rate bonds, negative interest rates, financial markets.

* Head of Legal Studies Office, Consob Research Department. ** Full Professor of Private Law Institutions, Roma Tre University. *** Full Professor of Financial Mathematics, Roma Tre University.

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The second part of the study analyses the capacity of the national legal system to adapt to a context of negative rates. The study rests on the consideration that the Italian legal system (in which there is an abundance of provisions of the theme of interest) is lacking both an express unitary legal principle and a consistent concept on which to base the function of interest and in the light of which to set out the solution in new and unforeseen situations, such as negative rates. This shortcoming prevents legal experts from connecting new case law to a principle established by existing law, forcing them instead to expand the logic of the law, looking beyond the code, which for some time has failed to express the logic of the system. Thus, the different views on the effects of negative interest rates are analysed in the loan contract analysis, understood to be a paradigm of the credit contract category, to which even corporate bond regulations refer in some way.

The third part questions more explicitly the existence in our legal system of impassable legal and/or conceptual limits that prevent the use of negative interest rates. The study concludes that there are no conceptual and legal limits that prevent the use of negative interest rates in loan agreements. In terms of contract classification, we can discuss whether it is a legally or socially typical contract with the addition of a reason-based (indexing) clause (reasons that do not, in any case, alter the consideration), or whether instead it is an irregular contract, established in practice. But there shall be no doubt that the first case involves the inclusion of a legitimate clause and the second case involves the drafting of an irregular contract worthy of protection, in which the indexing introduces an element of lawful uncertainty to the relationship.

Given that there are no legal constraints to the use of negative interest rates, the study then discusses the validity of the clauses deriving from private trading autonomy that limit the expenses borne by the creditors in the case of negative rates, such as, in particular, the so-called floor clauses, widely used in floating rate loans and bonds; a question raised in abstract by doctrine. Having argued that the recourse to floor clauses is not, in itself, in question, the study then tackles the question most often raised in the loan agreements that have been most heavily focused on in doctrine, i.e. the question of the need to comply with obligations of transparency and of balance between benefits (so-called bilateral balance), for the purposes of the validity of the floor clauses. The conclusion is reached that floor clauses are legitimate if formulated in a clear and comprehensive manner and if adequately highlighted and that they do not in any way damage any alleged bilateral "balance" between benefits. This is because the fact that there is negative interest rate does not alter the nature of the loan, which is and remains primarily a contract for the 'loan' of a sum of money in which the payment of interest is not a part of the case law and in which the consideration is "variable".

The study highlights the fact that, whereas in the banking field, the theme of negative interest rates is of central importance both to guarantee transparency of contract terms to customers (and therefore for the purpose of acquiring informed consent) and to ensure competition between brokers, in the financial field, the theme of negative interest rates also takes on particular significance for the purpose of guaranteeing the comparability of contract interest offered by the floating rate products, as well as compliance by brokers with adequate organisational and conduct regulations in the product distribution stage.

In conclusion, the economic public order of direction here has nothing to say about the possibility of interest rates becoming negative. Indeed, it may see it as a possible additional (reflected and desired) effect of the economic policy reasons that persuaded central banks to trigger the phenomenon. The question remains entirely down to the choices of private autonomy, even if the economic public order of protection requires, here as elsewhere in contract negotiation by non-professional operators, limits of transparency and information sufficient to guarantee informed and rational contractual decisions.

Contents

Reasons, objective, contextual and specific elements

1 Study motivations and objective

This study is motivated in general terms by the innovations in the negative interest rate "phenomenon" that have been observed - in the euro interbank market - since August 2014; a phenomenon that is tied, as will be shown (§ 3), to careful monetary policy choices by the central banks and, in the euro area, by the European Central Bank (ECB).

Indeed, the financial markets have historically known nominal interest rates, that is to say without considering the effects of inflation, of positive value. The financial sciences - financial mathematics, finance theory - were founded, as a consequence, on the assumption of the return on money: These require (in the original formulation by Bruno de Finetti) that "the cost of the transaction deferring the expiry of a debt [be] positive". On the other hand, prophesied de Finetti more than eighty years ago, "this restriction constitutes more a historical given fact than a more or less evident logical necessity: in theory, we could easily imagine an economic situation in which, with no one or very few people needing to loan money, there would be no advantage to accepting an amount on the undertaking that it would be repaid later with interest, nor even repaid in full, but only by deducting a certain amount for holding it"[1].

The current structure of financial markets - with (even) negative market interest rates - requires going beyond the "restriction" of positive nominal interest rates and to re-set the basic logic of financial reasoning in a "complete" market with interest rates either positive or negative.

Under trade logic, a creditor can thus be obliged to pay interest on invested capital, and a debtor can receive interest on capital borrowed[2]. In other words, the interest rate position taken by the creditor or debtor is no longer unequivocally determined by the type of agreement, either investment or loan: an operator may receive interest from an investment or loan if the market rates are positive or negative respectively. If loaning capital does not necessarily imply a "return" in favour of the creditor, nor does getting into debt imply a "cost" for the debtor in the form of interest, credit and debt are no longer distinguishable by positive or negative interest, either received or paid. Think also about the possible consequences of this financial

1 de Finetti B., *Sulle operazioni finanziarie*, Giornale dell'Istituto Italiano degli Attuari (Journal of the Italian Institute of Actuaries), 6(1935), 4, p. 292. Hirshleifer also points out that there are no logical reasons for excluding the possibility of a price of trade of monetary "goods" of more than 1 and thus a negative interest rate (see Hirshleifer J., *Investment, Interest and Capital*, Englewood Cliffs, Prentice Hall, 1970, p. 35, note 3).

2 A lot of interest was aroused, reported on numerous websites, by the case of the Spanish bank, Bankinter, and certain Danish banks that paid certain customers an interest rate on money loaned to the same customers as a mortgage.

choice on the classic paradigms: in a "complete" market, the debtor may find himself negotiating an increase in rate of return on his loan; the creditor a decrease in the cost rate of his investment.

Indeed, among the possible effects of the existence of (even) negative market interest rates, it has been reported that the "contractual language surrounding the operation of money and capital markets may not envision the possibility of negative rates; thus, the latter may create both legal and operational challenges"[3].

The study objective was set within this context: to analyse the legal and financial effects of negative money market rates on variable rate loans and bonds. The central aspect of the study is, therefore, the variable rate bank (loan) and financial (bond) "agreement", which envisages short-term rate indexing (typically the Euribor rate, in the euro market). The analysis was developed around finance, private law and regulation.

Analysis of the history of interest rates, from their first appearance in ancient civilisation to the present day, shows some interesting features and justifies the importance of the current "phenomenon" of negative market rates[4].

Firstly, historically, interest rates (market, contract and legal), except for on exceptional and sporadic occasions, have never been negative in the history of man.

Secondly, interest rates have shown a progressi ve decrease in correspondence with the development of the different civilisations and cultures (Bablylon, Greece, Rome, Western countries in modern and contemporary history), whereas they show a clear increase in the periods of decline and fall of each of these civilisations.

In the historical period extending from the Middle Ages to the mid-twentieth century, interest rates have essentially always decreased across Western Europe and in North America. However, over the course of the last century, this trend has been interrupted, making way for a period in which rates have shown the greatest fluctuations in the history of mankind: from the hyperinflation of the Weimar Republic in 1921-1923 to the negative rates observed on financial markets from September 2014.

It is even more interesting, however, to analyse the regulation of interest rates

3 World Bank Group, Global Economic Prospectus – Box 1.1, Negative Interest Rates in Europe. A Glance at Their Causes and Implications, 2015, p. 8.

4 Traces of the earliest creditors date back to 3000 BC, one thousand years before the minting of the first coins. See V. P. Einzig, *Primitive Money*, Eyre & Spottiswoode, London, 1948, p. 372. For broad discussion on the subject, S. Homer e R. Sylla, *A History of Interest Rates*, 1991, It. transl. *Storia dei tassi di interesse*, Bari, 1995, p. 9 et seq., as well as P. Ciocca e G. Nardozzi, *L'alto prezzo del danaro. Un'interpretazione dei tassi di interesse internazionali*, Rome-Bari, 1993; L.G. Epstein and T. Wang, *Intertemporal Asset Pricing under Knightian Uncertainty*, in *Econometrica*, vol. 62, no. 3, 1994; I. Fisher, *The Theory of Interest as Determined by Impatience to Spend Income and Opportunity to Invest It* (1930), Kelley & Mcmil- lan, New York, 1954; J.M. Keynes, *The General Theory of Employment Interest and Money*, Macmillian, Londra, 1967; R. Masera, The Term Structure of Interest Rates. An Expectation Model Tested on Post-War Data, Oxford University Press, Oxford, 1972.

throughout history; regulation characterised by the alternation between periods in which the law left the market free to determine interest rates and (longer) periods in which the law, concerned with preventing abuse by those who lent money to financially weaker individuals, set maximum limits on interest rates or prohibited them tout court.

The first law that regulated interest rates (moreover formalising a usage already in existence among the Sumerians since 3000 BC) was the Code of Hammurabi of ancient Mesopotamia of around 1800 BC, which set the annual interest rate practicable for loans of wheat payable in kind at 33.33% and at an annual rate of 20% for loans of silver by weight[5].

Two thousand years later, towards 600 BC, having required all creditors to remit existing debts and prohibited many new forms of credit, abolished all interest rate regulation.

The Romans too, with the Twelve Tables of 450 BC, with the aim of mitigating the effects of a serious financial crisis due to excessive borrowing, set a maximum practicable annual interest rate of 8.33%[6].

From the Roman period up to the late Middle Ages, the regulation of interest rates was heavily influenced the world over by the fact that the profession of lending money was essentially forbidden under all monotheistic religions (Christian[7], Jewish[8] and Muslim[9]) as a sign of God's attention towards the poor. This influence accentuated

5 L. Delaporte, Mesopotamia (transl. V.G. Childe), New York, 1925, pp. 126. As referred to by S. Homer and R. Sylla, A History of Interest Rates, cit. p. 42, at the time many agreements required that, in the case of failure to pay interest, the creditor had the right of repayment via the work of a slave or child of the debtor. The same debtor who failed to honour his debt could be reduced to slavery for up to three years.

6 S. Homer, R. Sylla, *A History of Interest Rates*, cit. p. 65

7 A.K. Sen, in *Denaro e valore: etica ed economia della finanza*, First Lesson Paolo Baffi, 26 April 1991, Banca d'Italia, available at https://www.bancaditalia.it/pubblicazioni/lezioni-baffi/pblecture-01/index.html, that Jesus drove the money lenders from the temple and ecclesiastical doctrine always places severe restrictions on usury. The same Saint Thomas Aquinas, to quote Aristotle, declared that currency should be sterile and, consequently, believed that producing money from other money was unnatural. According to Ezekiel (18:8) "He does not lend to them at interest or take a profit from them. He withholds his hand from doing wrong and judges fairly between two parties"

8 The warning of the prophets and the Jewish rules of conduct prohibited interest on loans. Deuteronomy, the fifth and final book of the Torah of the Old Testament, reads, "You may charge a foreigner interest, but you may not charge your brother interest" (23:20). Given that under common Jewish interpretation, all forms of interest bearing loans are usury, there is a strict and severe prohibition on usury between Jews (see M. Maimonides, *Il Codice di Maimonide*, Vol. XIII, Libro delle Leggi Civili, Mishpatim, *Regole del Debitore e del Creditore*, ch. VI: I, transl. from Hebrew by J.J. Rabinowitz, New Haven, Yale University Press, 1949, p. 88).

9 Even today, Islamic religion forbids the practice of not only usury but also of interest or *ribà* (*Arab term that literally means "increase", "excess", "growth"*). Ribà is forbidden in order to achieve conditions of economic and social equality and justice, preventing all forms of exploitation. This is founded in the principle according to which nothing can be earned without the assumptions of risk, i.e. no enrichment that cannot be justified by the active industriousness of man. Therefore, according to Islamic scholars, any form of positive, fixed and pre-established return that is guaranteed regardless of the performance of the investment is forbidden. More particularly, according to scholars, ribà exists for interest rates that are: a) agreed *ex ante*; b) tied to a factor of time and to the sum of the loan; c) owed regardless of the economic results obtained by investing the loan (see S. Alvaro, *La finanza Islamica nel contesto giuridico ed economico italiano*, Quaderno Giuridico CONSOB no. 6, July 2014, p. 10). The following works involve the economic and legal analysis of the prohibition of Ribà: M.N. Siddiqi, *Riba, Bank Interest and the Rationale of Its Prohibition*, Islamic Development Bank, Jeddah, 2004; M. El-Gramal, *Interest and the Paradox of Contemporary Islamic Law and Finance*, Forham International Law Journal, 2003; M. El-Gramal, *An Economic Explication of the Prohibition*

by important figures in the secular world taking the same stance in different periods in history, such as Aristotle[10], Cicerone, Cato, Charlemagne[11] - seriously compromised the social acceptability of those who got rich by lending money for a very long time and up to very recently, that is to say up to the stances taken by Adam Smith and Jeremy Bentham in the second half of the 1700s[12], a period in which, moreover, in Great Britain those who belonged to the upper social classes generally avoided practising banking activities, delegating such activity to foreigners and Jews[13], whilst in the Unites States a maximum interest rate of 6%[14] was set right from the start.

From this point of view, it is interesting to trace the steps that led the Christian western world to legitimise the practice of interest rates and lending in general, reinterpreting the sacred scriptures in a less restrictive manner.

Over the course of the Middle Ages, scholasticism took the first step in this direction, highlighting what was supposed to be the clear distinction between usury (illegal) and interest (legal)[15].

It was said that canon law forbade only usury, that is to say the use of the capi-

of Riba in Classical Islamic Jurispru- dence, in *Proceeding of the Third Harvard University Forum on Islamic Finance* Centre for Middle Eastern Studies, Harvard University, Cambridge, MA, 2000; A. Mawdudi, *The Prohibition of Interest in Islam*, Al-Islam, June 1986.

10 According to which interest constitutes an unnatural and unjustified reproduction of money from money (Aristotle, Politics, Vol. 9 of Complete Works, edited by R. Laurenti, Bari, 1986, Book I, ch. 9-11; id., Etica Nicomachea, Vol. 7 of Complete Works,edited by A. Plebe, Bari, 1985; E. Barker, The Political Thought of Plato and Aristotle, New York, Dover, 1959).

11 The Capitulary of Charlemagne of 800 AD strictly prohibited making any type of profit from loans.

12 The doctrine states that, up until the 7th century, lending was performed in England only by Jews. See D.C. Munro, The Middle Ages, The Century Co., New York, 1921, p. 309; N.B. Nelson, The Idea of Usury, Princeton University Press, Princeton 1949, p. 74 (It. transl. Usura e cristianesimo. Per una storia dell'etica moderna, Firenze, 1967). Adam Smith was the first to oppose the legal prohibition of interest (An Inquiry into the Nature and Causes of the Wealth of Nations, Glasgow Edition, Vol. I, Oxford, 1776, It. transl. Indagine sulla natura e le cause della ricchezza delle nazioni, Milan,1973, Book I, Ch. II, Conclusion, p. 253). J. Bentham expressed the same opinion, though using different arguments, in An Introduction to the Principles of Morals and Legislation, Londra, 1789, reprint Oxford, 1948

13 C.P. Kindleberger, in A Financial History of Western Europe, Londra, 1984 trad. it. Storia della finanza dell'Europa occidentale, Roma-Bari, 1987, p. 60, observed that, in many societies, money lenders belonged to a different religion and were thus not tied to the ethical norms of the community.

14 S. Homer. R. Sylla, A History ..., cit. p. 383. This upper limit remained in force over the course of the nineteenth century and for a good part of the twentieth century. In the 1950s, the legal rate in the United States was 4% in one state, 5% in five other states, 6% in forty states and 7% i the remaining four states (again Homer-Sylla, A History..., cit. p. 591).

15 On this point, for all, see: J. T. Noonan Jr., The Scholastic Analysis of Usury, Cambridge (Mass.) 1957; J. W. Baldwin, The Medieval Theories of the Just Price: Romanists, Canonists, and Theologians in the Twelfth and Thirteenth Centuries, "Transactions of the American Philosophical Society", N.S. 49/4, Philadelphia 1959; J. Gilchrist, The Church and Economic Activity in the Middle Ages, London 1969; O. Langholm, Economics in the Medieval Schools. Wealth, Exchange, Value, Money and Usury According to the Paris Theological Tradition. 1200-1350, Leiden, New York-Köln 1992 (Studien und Texte zur Geistesgeschichte des Mittelalters, 29); O. Langholm, The Merchant in the Confessional. Trade and Price in the Pre-Reformation Penitential Handbooks, Leiden-Boston 2003 (Studies in Medie- val and Reformation Thought, 93). In more recent Italian history, see: Paolo Evangelisti, Il pensiero economico nel Medioevo. Ricchezza, povertà, mercato e moneta, Roma 2016.

tal borrowed and the price paid for the use of this money. Vice versa, receiving payment for a loan was considered legal if it did not constitute net earnings, but rather reimbursement for privation or expenses incurred or a penalty for late payment of a debt[16].

According to certain scholars, the modern term 'interest' is in fact the noun form (developed from 1220 AD onwards) of the Latin verb intereo, which means "to be lost"[17]. Thus, interest was not profit, but instead payment for a loss[18]. This interpretation led not long afterwards to the creation of the first banks in Italian and Spanish history that paid interest on deposits by lending the money receive[19].

The Church formally accepted the distinction between interest and usury (and, therefore, payment of interest on certain types of credit) during the eighteenth century, whilst it was only in 1822 that the Sant'Uffizio decreed definitively that Il types of Interest permitted by law could be applied by anyone[20].

However, it was only in the 1900s that the idea was established in the western capitalist economy of considering capital a primary factor of production that leaves the choice between capital accumulation and availability up to private initiative. From this point of view, interest is nothing more than payment for foregoing cash hoarding, that is to say a reward offered to investors for overcoming their natural preference for cash, understood to mean, in economic terms, abstaining from investment[21]. Interest becomes the price to pay for the availability of a loan. The price per unit of time of this availability is the interest rate[22].

In this view, interest rate (real interest rate) is set by calculating the individuals who make the sacrifice of refraining from consuming today (savings) with the expected benefit of consuming more and better tomorrow (investment).

Finally, it is observed that the classic western notion of interest as "reward for deferring consumption" is rejected by Islam, in which only the physical and intellectual effort of people may be rewarded, and not the mere the act of waiting. For this reason, in the Islamic economic system, interest rate is replaced by profit rate, which is the real measurement of the actual growth of capital through its use and investment. However, if the earnings can be made only through the assumption of liability by whoever holds

16 J.T. Noonan, *The Scholastic Analysis of Usury*, Harvard University Press, Cambridge 1957, p. 100.

17 S. Homer. R. Sylla, *A History* ..., cit. p. 103.

18 S. Homer. R. Sylla, *A History* ..., cit., p. 102 and 103.

19 It is not by chance that, again in the late Middle Ages, the term and concept of finance came about. DFrom an etymological point of view, the term *finance* derives from *finare*, i.e. a modified form of the verb *finire* (to finish). In the practice of medieval common law, the term *finare* was used to refer to the closing stage of negotiations and accounts for a given service. The act of negotiating or concluding a deal was said to be *finatio*, finance. As has been noted, "*all this involves the concept of balancing a relationship, determining its value by means of counting liquidation, to close the deal in terms of money*". On this point, see A. Bernardino, *Finanza*, voce, in *Noviss. Dig. It.*, VII, Milano, 1975, p. 348, according to whom, finance consists essentially "*of wealth that, in modern economy, is represented by currency and bonds that represent it*".

20 J.T. Noonan, *The Scholastic Analysis of Usury*, Harvard University Press, Cambridge 1957, p. 392.

21 J.M. Keynes, *The Treatise on Money*, 1930, trad. it. di Radaeli e Treves, 1923-34

22 Homer-Sylla, *A History* ..., cit., p. V

the capital, this always requires that the risk be shared between the holder of the capital and the user of the capital for production purposes. This is the framework for profit and loss sharing: Whoever provides the capital shall have a return (or a loss) that shall be proportionate to the actual return on investment and not to a pre-set amount[23]. Therefore, under Islam, profit rate can legitimately be negative, to the extent that the investment made results in a loss[24].

2 Specific elements relating to the contracts under analysis

We have said that the objective of this study is to analyse, on a legal and financial level, the effects of negative money market interest rates on floating rate loans and bonds that require short-term rate indexing (typically the Euribor, in the euro market).

In particular, we will analyse loans and bonds traded and underwritten using brokers by retail customers of bank and finance services[25]. Focusing specifically on bonds, we refer to those issued by private companies (corporate bonds).

In these financial agreements, contract interest is random[26]: the interest rate (coupon, for bonds) is calculated using the indexing rule, which uses as its primary variable market interest rates that are known at pre-established times, after the date of signing the agreement (before the date of maturity)[27].

23 S. Alvaro, La finanza islamica nel contesto giuridico ed economico italiano, Quaderno Giuridico CONSOB no. 6, July 2014, p. 10 and 11. On the same theme, see also T.A. Russo, Contributo allo studio dei contratti Shari'a compliant. Valori religiosi e meritevolezza degli interessi, Naples, 2014; C. Porzio, Le peculiarità dell'attività bancaria islamica, in AA.VV., Scritti in onore di Tancredi Bianchi, Bancaria Editrice, Rome, 2009 e T. Al-Deehani, R.A. Abdelkarim e V. Murinde, The Capital Structure of Islamic Banks under the Contractual Obligation of Profit Sharing, in International Journal of Theoretical and Applied Finance, 2, 1999; AA.VV. (coordinated by G. Gomel), Finanza islamica e sistemi finanziari convenzionali. Tendenze di mercato, profili di supervisione e implicazioni per le attività di banca centrale, Banca d'Italia, Questioni di Economia e Finanza, Occasional Paper no. 73, 2010, p. 25.

24 On this subject, see: G. Ceccarelli, Denaro e profitto a confronto: le tradizioni cristiana e islamica nel medioevo, in: Associazione per lo sviluppo degli studi di banca e borsa. Quaderno no 30 (http://www.assbb.it/ contenuti/news/files/quaderno_etica_30.pdf); S. Alvaro, La finanza islamica nel contesto giuridico ed economico italiano, CONSOB, Quaderno Giuridico n. 6, July 2014.

25 The definitions of "customer" and "broker" are those provided by Art. 1 of Decree 3 of August 2016 on interest in bank transactions. In particular: "customer" is "anybody who has an existing contractual relationship with a broker. Customers cannot be banks, financial companies, electronic money institutions, insurance firms, investment firms, collective savings investment bodies, alternative investment funds, investment management companies, financial instrument depositary companies, pension funds, Poste Italiane s.p.a., Cassa Depositi e Prestiti and any other body that performs financial intermediation. Nor shall parent companies, subsidiaries or companies subject to the shared control of the bodies described above be considered customers"; "brokers are banks, financial intermediaries, under Art. 106 of the Testo Unico Bancario (TUB; Consolidated Law on Banking), and any other bodies authorised for the professional issue of loans, to which are applied Part VI of the TUB".

26 This is how variable rate agreements are distinguished from fixed rate agreements. It is to be noted that even interest defined in the contract may become uncertain due to "other causes"; for example, following insolvency of the payer.

27 Floating rate financial agreements are bonds indexed at interest rates with capital refunded in a single payment with a maturity deadline (for example, Treasury Certificates indexed to the performance of six-month Treasury Bonds and

Typically, loans and bonds have different types of depreciation of capital. In general, loans are characterised by progressive depreciation (e.g. at a constant rate or by constant capital share) and bonds by a "bullet" type depreciation (with capital repaid in a single payment upon maturity).

The main difference between a loan and a bond is the method of collecting funds. A loan is an agreement made between individual parties, thus the full loan amount is paid by one or more (few, in any case) lenders to the (single or multi-member) borrowing party. The issue of a bond, however, consists of a single financial transaction of collection, but divided into many debt securities, generally made towards the bearer (the debtor borrows a total amount from a wide range of investors, issuing a very large number of bonds to the bearer, each for a return value corresponding to a fraction of the whole loan).

As concerns the financial market of reference, bonds are typically traded as much on trading venues (regulated markets, multilateral trading systems and systematic internalisers) as off (over-the-counter, "OTC"); loans are "off-market" agreements.

There can be any indexing rule: in linear with the market rate (on which the rule is based); or it can set limits, over the course of the life of the agreement, on the effect of the performance of (rule) reference market rates on contract interest.

The most widely used limits in variable rate loan and bond indexing rules are: limit up, limit down and limit up/limit down[28]. Limits can be defined based on the market rate with or without taking into consideration the contract spread, by setting one or two "threshold" rates. Given a variable rate financial flow, if there is a lower limit, there will be a minimum rate threshold; if there is an upper limit, there will be a maximum threshold; and if limit up/limit down, there will be a minimum and maximum threshold.

The "phenomenon" of (even) negative market interest rates focuses - in contract analysis and, in particular, in determining contract interest (of the interest share of the loan, of the bond coupon) - on the significance and value of a possible "zero" limit down (so-called "zero-floor"), which must be discussed from both a finance point of view - explained below - and a legal point of view (see § 12).

We must consider, first of all, that a zero-limit down can be defined in the agreement in (at least) two alternative forms: in relation to the reference market (usually Euribor) with or without the spread agreed in the contract. These definitions determine different financial effects. In fact, from a creditor/debtor point of view, if the market interest rate takes on a negative value over the course of the life of the contract: if without spread, the creditor/debtor will receive/pay the spread; if with-

Treasury Certificates indexed to the 6-month Euribor) and bonds with capital depreciation and loans indexed to interest rates (for which the interest rate typically depends on the performance of the Euribor, of 3, 6 or 12 months).

28 See: A CarleoC. Mottura, Considerazioni tecniche su alcuni precedenti recenti in casi finanziari, working paper predisposto per il convegno su "I Precedenti", Rome, Accademia dei Lincei, July 2017 (in particular, see paragraphs 5 and 6).

out, in which the limit is defined with spread, the creditor/debtor may not receive/pay contract interest.

To emphasise the effect in terms of the transaction, for the purposes of calculating the interest rate, of the two different contractual definitions of a zero-limit down indexing rule, let's consider, for example, a variable rate loan agreement that envisages: the payment of semi-annual interests; interest rate at the end of each semi-annual period determined by observing the Euribor at 6 months from the start of each period - so-called "in advance" indexing rule - with an annual contractual spread of 1.5%; zero limit down for interest rate. It will be as follows:

a) if the zero-limit down is defined in relation to the market interest rate *without* spread (Euribor 6 months), then:
   - if the market rate is negative, the contractual rate is 1.5%;
   - if not, the contractual rate is equal to the Euribor plus the spread;
b) If, however, the zero-limit down is defined in relation to the market interest rate *with* spread (Euribor 6 months plus 1.5%), then:
   - if the market rate is less than -1.5%, the contract rate is 0%;
   - if not, the contract rate is equal to the Euribor rate plus the spread.

Formally, these are: $\tilde{I}$ the generic interest rate, referring to unitary capital, generated by the floating rate contract with limits; $\tilde{\imath}$ the market interest rate on which the contractual indexing rule is based; σ contract spread; *f minimum* interest rate threshold; *c maximum* interest rate threshold.

Without limits: $\tilde{I} = \tilde{\imath}+\sigma$.

With limits:

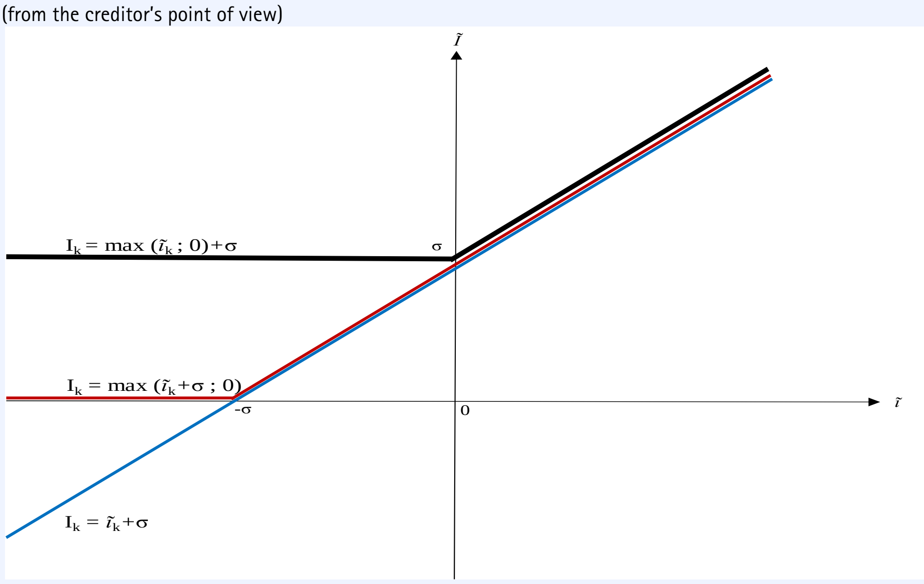
- if the limit is defined in relation to the market rate *with* spread: $\tilde{I} = \max\{\tilde{\imath}+\sigma; f\}$ if there is a limit down; $\tilde{I} = \min\{\tilde{\imath}+\sigma; c\}$ if there is a limit up; and it is $\tilde{I} = \max\{\min\{\tilde{\imath}+\sigma; c\}, f\}$ if a limit up/limit down is envisaged;
- if, however, the limit is defined in relation to the market rate *without* spread: $\tilde{I} = \max\{\tilde{\imath}; f\}+\sigma$; $\tilde{I} = \min\{\tilde{\imath}; c\}+\sigma$; $\tilde{I} = \max\{\min\{\tilde{\imath}; c\}, f\}+\sigma$, respectively.

With zero-floor limit: $f = 0\%$.

To be noted that the "formula" for calculating the interest rate - the only one - uses simple rules, in all cases (addition, multiplication, choice between a minimum and maximum number).

Figure 1 illustrates, from the point of view of the creditor (lender or underwriter of the bond), the performance of the maturity value (so-called "pay- off") of the generic contractual interest rate ($\tilde{I}$) indexed to the market interest rate at maturity reference ($\tilde{\imath}$). There are three cases: absence of any limit (straight blue line), zero-floor contractually defined in relation to the market rate without spread (dotted black line) and zero-floor defined in relation to the market rate with spread (dotted red line).

Figure 1 – Contractual interest rate pay-off with and without "zero-limit down"
(from the creditor's point of view)



To be noted in Figure 1 that, if the market interest rate ($\tilde{\imath}$) is positive, the contractual interest rate ($\tilde{I}$) pay-off is the same in all three cases; if, however, the market interest rate is negative: if there is no floor, the interest is negative if the market rate drops below the contractual spread; if the floor is below zero, the contractual interest is always non-negative, and its value is increased if the limit is contractually defined in relation to the market interest rate without spread[29].

From a finance point of view, a floating rate loan or bond with a zero- limit down can technically be interpreted as if it were a "structured" contract, i.e. like a "portfolio" made up of multiple basic contractual components identifiable via "breakdown" (so-called "unbundling"); and the limit in indexing rule can be interpreted in relation to a clause "incorporated" into the contract, like a sort of embedded option. This is followed by interpreting the indexing rule using the language of the theory of financial options, in particular interest rate options. This way, a limit down may be interpreted as a floor clause[30]. It is important to note that, in general, it will be possible to choose among different types of unbundling and each type will have its own basic components; this will allow different technical interpretations of the same agreement.

29 For analysis of pay-offs of financial agreements with even negative market rates, see C. Mottura, Effetti dei tassi di interesse negativi nel linguaggio finanziario: alcune avvertenze tecniche, Collana del Dipartimento di Studi Aziendali, Working Paper, Number 1, 2016

30 For detailed technical analysis on cap, floor and collar: J. C. Hull, Opzioni, futures e altri derivati, Pearson, 2012; p. 726-730.

The typical types of unbundling are "puts" and "calls". For example, a variable rate loan agreement drafted between a customer and a bank that has a limit down:

– if you choose to unbundle using "puts", it can be interpreted as a portfolio made up of a variable rate agreement without limit and a floor contract;

– if, instead, you unbundle using "calls", the same agreement can be interpreted as a portfolio made up of a fixed rate contract (with contract rate equal to the floor rate) and a cap contract (with end of financial year rate equal to the floor rate).

In particular, from the debtor's point of view, borrowing at a variable rate with limit down may correspond technically to: borrowing at a fixed rate without limit and selling the floor to the creditor ("put" unbundling); or borrowing and a fixed rate and selling the cap to the creditor ("call" unbundling). The opposite goes for the creditor. When you use floor clause language to interpret a limit down, it refers, implicitly, to the use of "put" unbundling.

The fact that the agreement - which is unique and (obviously) remains as such - may be interpreted in different ways according to the chosen type of unbundling supports the technical nature of unbundling.

From the point of view of assessment, financial mathematics makes it possible to develop detailed analysis of the value and risk of the agreement, using stochastic valuation models. Once the evaluation date has been set and the model and the (model) calibration techniques have been chosen, calculation can be made of the "value components": of the principal cash flow, the interest flow, spread flow and embedded options. These evaluations depend on the chosen model, subject to the evaluation agreement used[31]. Given that the indexing rule and all its components determine - jointly - the economic reason for the agreement, the "component" analysis adds nothing to the logic of the contract: it can serve to reinforce elements supporting the choice to draft the agreement or to fulfil accounting purposes (such as those established by the IAS-IFRS)[32].

31 It is reported, from a technical point of view, that the phenomenon of market interest rates being either positive or negative has caused a "breakage" (even) in financial models that can be adopted to evaluate interest rate options previously considered best practice. Referring to the so-called "Black model", previously considered the model of reference, that can no longer be used in a situation with possibly negative market rates because it is defined under the presumption that interest rates are positive (J. C. Hull, Opzioni, futures e altri derivati, cit. pp. 726-733). Questions on evaluation agreements in the current stage of financial markets are discussed in: A. Carleo, C. Mottura, Calcolo giuridico e mercati finanziari, in Calcolabilità giuridica (edited by A. Carleo), Bologna, il Mulino, 2017.

32 Component analysis was taken into consideration, for example, in the European debate on the transparency that must be provided to investors who purchase structured financial products in the Key Information Document. But as far as interests us here, this debate led to nothing in terms of floating rate and callable bonds.

Furthermore, these limits to the rate indexing rule incur prospects and problems that must be considered separately from a finance point of view and from a legal point of view. Whereas, from a finance point of view, the aforementioned limits of the rate variation rule can be interpreted as structured contracts, and as such as loan agreements with an embedded derivative, from a formal legal point of view, the question is different and shall be examined below (see § 12).

3 Negative rates and the monetary policy of the ECB

Since the start of the financial crisis in 2007-2008, the central banks of many countries around the world have gradually lowered "guide" interest rates, even to below zero, to stimulate the economy and in response to the severe global economic recession[33]. The interest rates of central banks, in fact, "guide" the evolution of interest rates in the interbank market and in financial markets in general.

The current context of negative money market interest rates in the euro area is tied to the effects of specific monetary policy decisions of the ECB.

In the Eurosystem, as is well-known, the "guide" rates of the ECB with overnight maturity are the deposit rate - which is the return rate on excess cash deposited by commercial banks in the central bank (deposit facility) - and the rate on marginal lending facilities - which are the transactions used by banks to borrow cash from the central bank against suitable guarantees. At present, the levels of deposit rate and marginal lending facility rate, which define the so-called "interest rate corridor"[34], are -0.4% and +0.25% respectively[35].

The ECB "guide" rates have a direct effect on the EONIA interbank rate (European OverNight Index Average[36] - which varies within the "interest rate corridor"); therefore, they extend to the Euribor (Euro Interbank Offered Rate, for the different

33 For considerations on the financial markets shaken by the crisis: C. Mottura., Il ruolo del rischio nella recente crisi dei mercati finanziari, Gnosis, Rivista Italiana di Intelligence, no 4, 2010; on the public intervention tools in support of the financial crisis: C. Mottura, F. Bassan, From Savior to Guarantor: The EU Member States' Economic Inter- vention during the Financial Crisis, Palgrave Macmillan, 2015; for considerations on rules and risks, see: C. Mottura, A. Carleo, Finanza derivata, Regolazione e Rischi, in Le negoziazioni del rischio finanziario: patologie dei rapporti e profili di sistema (edited by R. Di Raimo and A. Gentili), Diritto Privato – Nuovi Orizzonti, 2016, vol. 7.

34 Analysis by institutional sources of negative rates can be found in: A. Joergensen, L. Risbjerg, Negative Interest Rates, in Monetary Review, no. 3, Part I, 2012; Bindseil, C. Domnick, J. Zeuner, Critique of accommodating central bank policies and the 'expropriation of the saver', European Central Bank, Occasional Paper no. 161, May 2015.

35 Deposit facility and marginal lending facility transactions are monetary policy operations that "can be implemented on the initiative of the counterparties". Other conventional monetary policy tools are "open market" transactions and variation in Reserve Requirement Ratio. In terms of marginal lending facility transactions, the ECB points out that "there is little incentive for banks to use standing facilities, as the interest rates applied to them are normally unfavourable when compared with market rates." (European Central Bank, The Monetary Policy of the ECB, 2014; p. 109)

36 The EONIA is reported to the European Banking Federation (EBF) and is the result of the weighted average of rates on unsecured overnight loans granted by selected banks that are more active on the money market.

maturities up to a year) and to the other financial market rates (in euro)[37]. The trends in ECB rates, from 2 January 1999 to end of April 2017, as compared to the EONIA and Euribor (for maturities of 3, 6 and 12 months) are illustrated in Graphs 1 and 2 respectively.

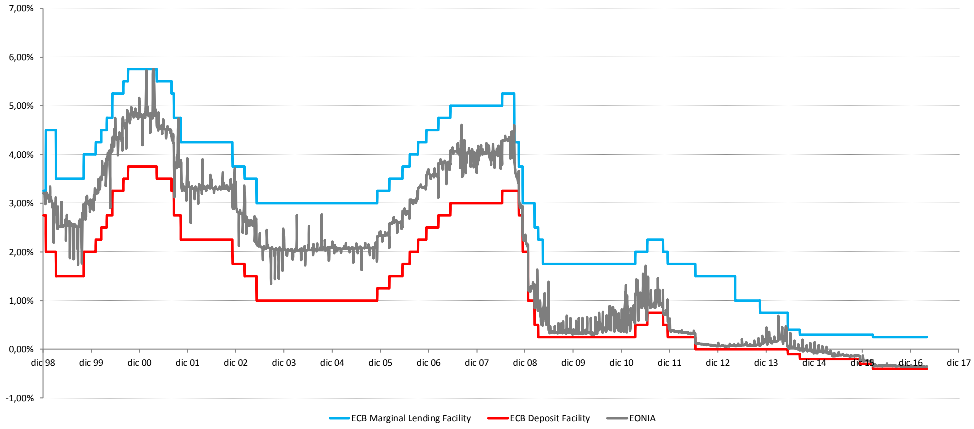
The graphs illustrate the effect of the "propagation" of ECB rates in the interbank market. It can be observed that the ECB first fixed a negative deposit rate in June 2014 (at -0.1%) and subsequently: in September of the same year, it decreased it to -0.2%; in December 2015, it reduced it to -0.3%; and, from March 2016, it was fixed at -0.4%. Overall, it was observed that "[...] today, 18% of the world economy, in trade-weighted terms, operates within a context in which central bank reference rates are negative [...]."[38]

In terms of the Euribor - which, as is well-known, represents the cost of money on the "wholesale" market of funding operations between banks, at the end of April 2017, it had a negative level for all significant maturities (-0.33%, -0.25% and -0.12% respectively for maturities of 3, 6 and 12 months).

37 The "propagation" methods can be described using the words of the ECB: The (long) chain of cause and effect linking monetary policy decisions with the price level starts with a change in the official interest rates set by the central bank on its own operations. In these operations, the central bank typically provides funds to banks. The banking system demands money issued by the central bank (known as "base money") to meet the public demand for currency, to clear interbank balances and to meet the requirements for minimum reserves that must be deposited with the central bank. Given its monopoly over the creation of base money, the central bank can control the interest rates on its operations. Since the central bank thereby affects the funding cost of liquidity for banks, banks need to pass on these costs when lending to their customers. Through this process, the central bank can exert a dominant influence on money market conditions and thereby steer money market interest rates. Changes in money market rates in turn affect other interest rates, albeit to varying degrees. For example, changes in money market rates have an impact on the interest rates set by banks on short-term loans and deposits. In addition, expectations of future official interest rate changes affect longer-term market interest rates, since these reflect expectations of the future evolution of short-term interest rates However, the impact of money market rate changes on interest rates at very long maturities (e.g. ten-year government bond yields, long-term bank lending rates) is less direct. Those rates depend to a large extent on market expectations for long-term growth and inflation trends in the economy. In other words, changes in the central bank's official rates do not normally affect these longer-term rates unless they were to lead to a change in market expectations concerning long-term economic trends." In terms of the quantification of the effects of guide rates on market rates, "[t]he interest rate on the marginal lending facility is normally substantially higher than the corresponding money market rate, and the interest rate on the deposit facility is normally substantially lower than the money market rate. As a result, credit institutions normally only use the standing facilities in the absence of other alternatives. As there are no limits on access to these facilities (except for the collateral requirements of the marginal lending facility), the rate on the marginal lending facility and the rate on the deposit facility normally provide a ceiling and a floor, respectively, for the overnight rate in the money market." (European Central Bank, The Monetary Policy of the ECB, 2014; p. 59-60 / p. 99).

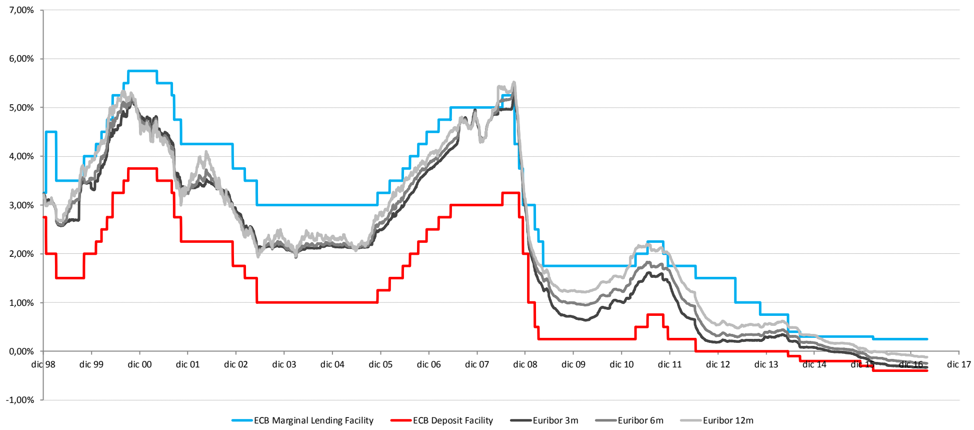
38 Introductory speech by Mario Draghi, Addressing the causes of low interest rates, introductory speech held at a panel in Frankfurt on 2 May 2016 entitled *The future of financial markets. A changing view of Asia* (https://www.ecb.europa.eu/press/key/date/2016/html/sp160502.en.html). More generally, if we consider the (negative) return rates characteristic of government securities and corporate bonds currently traded on financial markets, it has also been observed that, at the end of July 2016, "the total global volume of sovereign and corporate bonds with negative nominal yields [...] arose above $12.6 tn [...]. That represents almost half of all western debt. By historical standards this is extraordinary – not least because investors continue to gobble up those notes, even though they will lose money on redemption" (Financial Times, The bizarre world of negative interest rates, August 12, 2016.). With specific focus on the yields offered by government bonds in the euro area, it was highlighted that "a key reason for negative sovereign yields in core European countries appears to be technical – a result of demand pressures stemming from the ECB's Extended Asset Purchase Program, which is in turn a consequence of the design of the program" (World Bank Group, Global Economic Prospectus – Box 1.1, Negative Interest Rates in Europe. A Glance at Their Causes and Implications, 2015, p. 15).

Graph 1 - Trend in ECB rates and EONIA rate



Source: Bloomberg

Graph 2 - Trend in ECB rates and Euribor (3, 6, 12 months)



.Source: Bloomberg

The interbank market interest rates influence, in turn, the characteristic interest rates of financial products and of products offered by banks in the "retail" market - that is to say, transactions made between banks and end customers (families, enterprises) - in different forms and with the addition of contract spread.

In the current debate, including in the national and international press[39], the question is asked (among other things) as to how far market interest rates can drop. Comparisons with the "cost" of holding cash have been proposed. Certain studies have, for example, discussed possible levels of "social cost" of cash, stating that possible retail rates should not go below these levels (because otherwise we could experience the displacement of transparent forms of investment and "fleeing" from deposits, with negative effects on the banks' internal assets and on the economy). Other studies have analysed the possibility of prohibiting of the use of cash or of imposing a "tax" on bank note possession[40].

39 The Economist, Negative interest rates. Bankers v mattresses, 28 Nov 2015; Il Sole 24Ore, Le politiche monetarie e il club dei Paesi 'sottozero', 30 January 2016.

40 See K.S. Rogoff, La fine dei soldi, il Saggiatore, 2017.

4 On the legal significance of monetary policy on interest rates in the EU

In order to understand the legal significance of the monetary policy established within the European Union (EU) by the ECB in recent years, referring specifically to interest rates[41], a few brief considerations must be made.

The European Economic and Monetary Union is founded on the European System of Central Banks (ESCB). It is an organism without legal status, governed by the decision-making bodies of the ECB. The Maastricht Treaty, on the other hand, attributed legal status to the Central Bank, as well as the exclusive and independent right (Art. 130 TFEU) to define and implement EU monetary policy, within the scope of the primary objective to "maintain price stability" (Art. 105, TEC)[42].

On this subject, the ECB has regulatory power that, even considering the limits that will be discussed below, "is unrivalled among all relative sectors of the European Union and that overrides the legislative power of the Member States", insofar as, on the one hand, it can introduce regulations that derogate from the provisions of national legislation and, on the other hand, national governments cannot lay down laws that contrast with the rules dictated by the ECB[43]. As is well-known, the tools that the ECB can use to perform its monetary functions, pursuant to Art. 18 of the Statute of the ESCB and of the Central European Bank include (as well as open market transactions) credit operations with banks and other market operators[44]. It is precisely through this type of operation that, as noted earlier, the ECB can determine (as indeed it has) the "short-term" interest rate to guide the "price at which liquidity is traded on the money market", which, in turn, affects the rates at which banks loan to customers. In reality, the ECB uses these monetary policy operations with a "corridor" approach, fixing one official rate that sets the "floor" and

41 The decision of the ECB to make interest rates negative was, as has been mentioned, justified by the need to encourage banks to issue credit to the economy, provide incentives towards consumer spending, entrepreneurial investment and, finally, the economic growth of the European Union. This is an intermediate objective in relation to the ultimate monetary policy objective of maintaining price stability with an inflation rate of close to 2%. The operation of the ECB has been displayed, as mentioned earlier, both in the determination of guide rates, i.e deposit rates for excess reserves deposited by the Eurosystem banks, which have conditioned the market rates (Euribor and EONIA), and in the Expanded Asset Purchase Program (APP; plan to purchase asset backed securities, government bonds, covered bonds and corporate shares), which has affected the rates of return on government bonds.
(on this point, see https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html).

42 For all, see M. Perassi, Banca centrale Europea, in Enc. Dir., Annali, IV, Milan, 2011, p. 154 et seq.

43 On this subject, see R. Costi, L'ordinamento bancario, V ed., Bologna, 2012, p. 156. On the regulatory power of the ECB, see A. Malatesta, La Banca centrale europea, Milan, 2003, p. 109 et seq. and C. Zilioli and N. Selmayr, The European Central Bank, its system and its law, in Euredia, 1999, p. 201 et seq.

44 M. Pifferi e A. Porta, La banca centrale europea, Milan, 2011, p. 61 et seq.; S. De Donno, La politica monetaria della BCE, in La banca centrale europea, a cura di F. Belli e V. Santoro, Milano, 2003, p. 417 et seq.

another that sets the "ceiling" for the short-term rate, guiding the interest rate within this corridor with market transactions[45].

5 Investor protection profiles

The (legitimate) monetary policy adopted in recent years by the ECB[46] could, however, at least in the short term, have negative effects; indeed, at first glance, it appears to penalise investors in favour of borrowers.

Negative rates possibly applied to bank accounts, corporate bonds and government bonds downstream from the monetary policy pursued by the ECB could discourage, somehow, both the inclination to save and the transfer of these savings to investors (investment firms and the government). It would appear, therefore, that we are lacking precisely that which, according to leading economic theory, is, and must be, the function of interest rates on markets, i.e. payment for foregoing cash hoarding, which is nothing more than reward offered to investors for overcoming their natural preference for cash, understood to mean abstaining from investment.

From this point of view, we could legitimately ask whether this monetary policy is not, in some way, damaging to the principle of developing the capacity for saving for investment purposes, which in Italy is protected under Art. 47, Par. 1 of the Constitution, according to which "the Republic encourages and safeguards all forms of saving; it regulates, coordinates and controls the practice of lending money."

Although this is not the place to be tackling such a general problem, we do note that, as with the provisions of all standards, Art. 47 is also a standard without case law, whose actual applicative content is remitted "to the Republic", that is to say - in the vocabulary of the Constitution - to ordinary legislation. And, in fact, this has fulfilled the task, regulating universally the structure and activity of the credit system. All the existing regulation on finance and banking, in Italy and in other legal systems, essentially has the purpose of providing particular public law protection and of offering an ad hoc institutional framework when the individual uses his own savings in financial investments (bank, social security, insurance or securities), or when he invests current resources to create future resources, thus stimulating the growth of the system. And this happens precisely when savings are made available to economic development by their entry into the credit system. Therefore, in current interpretation, the protection of savings required by Art. 47 of the Constitution is

45 Thus F. Papadia e C. Santini, La banca centrale europea, Bologna, 2011, p. 111 et seq. Art. 18 of the Statute states: "In order to achieve the objectives of the ESCB and to carry out its tasks, the ECB and the national central banks may:

- operate in the financial markets by buying and selling outright (spot and forward) or under repurchase agreement and by lending or borrowing claims and marketable instruments, whether in euro or other currencies, as well as precious metals;
- conduct credit operations with credit institutions and other market participants, with lending being based on adequate collateral."

46 In implementation of the provisions of Art. 127, Par. 1 of the TFEU, according to which "The primary objective of the European System of Central Banks (hereinafter referred to as "the ESCB") shall be to maintain price stability. (...)".

performed by means of controlling the practice of money lending[47]; and case law has sometimes explicitly stated that the organisation, solvency and stability of the credit system is the primary interest pursued by the constitutional standard[48].

It is precisely the moment of connection between savings and investment aimed at developing the economic system that determines the arousal of interest in public law towards investor protection via the creation of an ad hoc institutional framework[49]. In other words, investor protection is the social objective that presupposes and justifies the regulation and control of financial markets and banks. So much so that, according to a significant part of the doctrine, the only form of saving that enjoys constitutional protection is precisely and only that which enters into the economic cycle or into the public sector, as regulation of the method of investment guarantee, given that, as already mentioned, saving is not defended as a value in itself but for its function instrumental to the distribution of property and wealth[50].

It is not considered here that the monetary policy established by the ECB - via "guide" rates - in itself, especially when considered from a short-term perspective, breaches the constitutional principle of investor protection; and this is for two reasons:

Firstly, insofar as savers, with the existence of (even) negative market rates offered by securities and government bonds, can always obtain satisfactory interest rates by diversifying their activity.

Secondly, because, with its own monetary policy, the ECB, as well as protecting directly the stability of the monetary meter, also protects, indirectly, the same savings, proving thus in perfect harmony with the objectives pursued by Art. 47 of the Italian Constitution[51]. Indeed, as mentioned earlier, "regardless of the financial assets held, savers always have a right to the economic product. Thus, their interest ultimately coincides with that of the economy as a whole. If the central banks failed

47 F. Parrillo, La tutela del risparmio e il controllo dell'esercizio del credito nella Costituzione, in Studi sulla Costituzione, II, Milan, 1958; V. Spagnuolo Vigorita, Principi costituzionali sulla disciplina del credito, in Rass. dir. pubbl., 1962, p. 357 et seq.

48 T.a.r. Calabria, sez. Reggio Calabria, 7 October 1996, no. 241, in Banca, borsa ecc., 1999, II, 89: "The primary interest to be protected on a constitutional level is the solvency and stability of the credit system in relation to the delicate activity performed by credit companies."

49 Il The concept is even clearer if we look at this connection from the side of the bodies who re-invest wealth in productive terms: financial agreements (bank, insurance or securities) are the instrument with which economic operators can redistribute (transfer) the risks deriving from the production process, from both a short-term (bank contracts) and medium to long-term (financial agreements in the strictest sense) perspective, as well as for social security purposes (life insurance agreements). It is due precisely to the particular worthiness of the final interests pursued by the financial contacts, that is to say their economic function, that the legislator wanted to lay down for the financial sector - in addition to the private law regulations of these contracts - "public law" regulations and an institutional framework aimed at providing adequate protection (constitutionally guaranteed by Art. 47 of the Constitution) for savers who come into contact with such contracts. See S. Alvaro, Il quadro normativo italiano in tema di commercializzazione di pietre preziose presso lo sportello bancario, in Banca, Impresa e Società, 2017, no.1, p. 152 et seq.

50 F. Merusi, Art. 47 Commentario alla Costituzione - Rapporti economici, Tomo III, Bologna, 1980, p. 153 et seq.; S. Baroncelli, Art. 47 (voce), in Commentario alla Costituzione (edited by Bifulco, Celotto, Olivetti), Vol. I, Torino, 2006; N. Irti, L'ordine giuridico del mercato, Bologna. 1998; L. Mengoni, Autonomia privata e Costituzione, in Banca, borsa e tit. cred., 1999, p. 1 et seq.; F. Guizzi, La tutela del risparmio nella Costituzione, in Il Filangieri, 2-4, 2005.

51 R. Costi, L'ordinamento bancario, cit., p. 254 and 255.

to intervene to boost the economy in the event of stagnation, what would become of these rights? (...) In other words, whilst low interest rates may give the impression of creating conflict between creditor and debtor, this is not true in aggregate and is certainly not true in the medium-term"[52].

On the other hand, the idea that, with a view to implementing Art. 47 of the Constitution, the Republic should and must create a system of profitability guarantees for savings invested within the credit system appears immediately unrealistic. If anything, protection consists of guaranteeing the saver - without prejudice to his freedom of choice, with the connected opportunities but also the related risks - financial market conditions that enable an informed choice, assisted by the expertise and professionalism of financial brokers. We shall see later, in the sections dedicated to the in-depth discussion of transparency[53], the devices that legislation has repared in recent decades to make it possible to achieve this objective.

However, it appears that the real subject to consider is that relating to the limits that the ECB faces in determining its own monetary policy at its own discretion. The identification of these limits can only stem from consideration of the fact that, in all democratic countries, policy decisions (including those of economic policy) are adopted by bodies elected democratically or that in some way answer to society.

The concept of "accountability" is, in any case, a vast concept that can include both legal and administrative responsibility, as well as political responsibility[54]. Despite this, in order to justify the powers assigned to the ECB, the European Court of Justice has, on several occasions, limited itself to observing that the peculiar fact that the members of the Central Bank, although not elected democratically, can make economic decisions fundamental to the lives of the citizens of EU Member States stems from the consideration that, in this way, its decisions cannot be influenced by short-term (political) considerations that could interfere with the fulfilment of the tasks that the Treaty on the Functioning of the European Union (TFEU) and the Protocol on the European System of Central Banks (ESCB) and on the ECB entrust to the ESCB itself and to the ECB[55].

This issue has been tackled in general terms by the European Court of Justice in the famous Gauweiler case and it appears that the solution to the problem mentioned here may also be found in the principles expressed in the Court's decision[56], which we summarise briefly below.

52 See Introductory speech by Mario Draghi, Addressing the causes of low interest rates, introductory speech held at a panel in Frankfurt on 2 May 2016 entitled The future of financial markets: A changing view of Asia (https://www.ecb.europa.eu/press/key/date/2016/html/sp160502.en.html).

53 See §§ 12.1 and 13 below.

54 On this point, see M. Lamandini and D.R. Muñoz, EU Financial Law, Milano, 2016, p. 219; G. Ter Kuile, L. Wissink e W. Bovenschen, Tailor-Made Accountability within the Single Supervisory Mechanism, in Common Market Law Review, 2015, vol. 52, pp. 155-190 and D. Curtin, 'Accountable Independence' of the European Central Bank: Seeing the Logics of Transparency, in European Law Journal, 2017, vol. 23, Issue 1-2, p. 22-33.

55 See Court of Justice, judgement of 10 July 2003, European Commission v BCE C-11/00, point 134.

56 See the judgement of the Court of Justice (Grand Chamber) of 16 June 2015, no. C-62/14, Peter Gauwelier v Deutscher Bundestag. Ruling commented by T. Tridimas e N. Xanthoulis, A Legal Analysis of the Gauweiler Case –

According to the Court of Justice, the ECB (and the ESCB) must act within the limits of the powers granted by primary law and cannot, therefore, validly adopt and implement a programme that is outside the scope assigned to monetary policy by primary law.

Given, therefore, that the TFEU does not contain a definition of monetary policy, limiting itself instead simply to defining (and safeguarding) the objectives of said policy (in line with the maintenance of prices stability under Articles 127, Par. 1 and 282, Par. 2, TFEU) and the means used for its creation[57], for this reason all the acts of the ECB are subject to the judicial control of the Court of Justice.

Referring specifically and precisely to the acts of the ECB's monetary policy, the Court of Justice has stated that, given the complexity and technical nature of the subject matter, the ECB must necessarily be awarded broad discretionary powers[58]. Consequently, any review that the Court of Justice may perform in relation to such choices must have the main objective of checking compliance with existing procedural guarantees (such as the thorough and impartial examination of all elements pertinent to the de qua situation, as well as the existence of adequate justification for the choices made), in addition to the existence of proportionality among the measures adopted in relation to the objectives pursued by the reference regulations. An additional limit to the powers of the ECB and of European institutions more generally has been identified by the different Constitutional Courts of the Member States, which have on several occasions asserted the principle according to which the institutions of the European Union must always respect the constitutional identity of the individual Member States and the principal of allocation (i.e. they must act within the limits of the responsibilities attributed to them by the treaties)[59].

Between Monetary Policy and Constitutional Conflict, in the Maastrichet Journal of European and Comparative Law, Special Issue, 2016-1

57 See Court of Justice (Plenary Session), judgement of 27 November 2012, no. C-370/12, Thomas Pringle v Irish Government.

58 On the same theme, see the judgements of the Court of Justice of 8 July 2010, no. C-343/09, Afton Chemical (point 28) and Billerud Karlsborg and Billerud Skarblacka, C-203/2012 (point 35).

59 See, in Germany, for all, the judgement of the Bundesverfassungsgericht,Second Senate, of 30 June , on the Lisbon Treaty and , in Italy, the judgement of the Constitutional Court:

a) 13 July 2007, no. 284 (in Corriere Giur., 2007, 1664 and in Giur. Costit., 2007, 2780), according to which "In relations between EU law and national law, constitutional control cannot be excluded: a)when the national law aims to prevent or prejudice the continued compliance with the system or to the essential core principles of EU treaties; b) when there is the relevant issue of the limit of compliance with the fundamental principles of the constitutional system and the inalienable rights of the individual; c) when there is a clash between national regulations and EU regulations that do not have a direct effect";

b) 21 April 1989, no. 232 (in Cons. Stato, 1989, II, 557, in Impresa, 1989, 1402, in Riv. Amm., 1989, 950 and in Riv. Dir. Internaz., 1989, 103, according to which "The Constitutional Court may check, by means of constitutional review of the law of execution, whether the EEC treaty regulations, as they are interpreted and applied by the institutions and EU bodies, are in contrast with the fundamental principles of our constitutional system or undermine the inalienable rights of the individual".

Views on the effects of negative interest rates on a contract

PART TWO

6 Market and legal regulations in the conformation of loan agreements

The conformation of loan agreements includes market trends and legal rules, set by legal systems or chosen by private autonomy. This cooperation remains harmonious as long as the view of the regulators coincides with the effective market organisation and contract regulations. This is what has occurred in the past three centuries of interest rate regulation (see § 1 above). Economic boosts, theory and regulation thus worked in harmony, and this created consistent orientation towards negotiation. Individual transactions found rules in the legislation that were appropriate to market suggestions, because they were based on market dynamics.

However, there is an absence of alignment between law and economy when the market performance moves outside of the pattern on which contract regulations are based. This is precisely what is happening in the current historic period of including negative interest rates and of a financial upside-down world. In variable rate transactions - as demonstrated earlier - the creation of negative rates by the central banks for reasons of monetary policy[60] disproves the traditional logic[61], which assumes the axiom of remuneration for the use of other people's money.

Such a framework produces system tensions and it becomes difficult for interpreters to extract sure solutions appropriate to new scenarios from regulation provisions geared towards something else. As already said, this is specifically true for Italian legislation, in which there is an abundance of regulations on interest, but where there is no clear unitary principle. For this reason, as already noted above, we cannot refer to an assumed shared notion of interest for solutions to regulating the impact of negative rates in the banking market (e.g. with EONIA and Euribor) on variable rate loan (and investment) agreements that refer to it for the calculation of due interest rates. This lack of principle prevents legal experts from tracing back in any way new case law to a principle established under existing law.

Therefore, it is up to the existing law, i.e. to interpretation, here as in other fields affected by axiological shortcomings in legislation[62], to expand the logic of the law. And it must do so by looking beyond the code, which for some time has failed to express the logic of the system. In fact, loan (and investment) agreements are only marginally included under general contract law and more often specifically under the

60 See above, § 3.

61 As has been noted, "the definition of interest rate as a reward for risk and time is unable to explain negative rates; indeed, risk has an impassable limit of zero, whilst time can only pass by and cannot reverse its direction of travel." (I. Fogliata, Tassi negativi, deflazione ed effetti collaterali della grande crisi: le distorsioni del c.d. "financial upside down world" esaminate dal lato tecnico, in www.dirittobancario.it/approfondimenti, p. 2).

62 R. Guastini, Defettibilità, lacune assiologiche ed interpretazione, in Revus, 2010, p. 57 et seq.

so-called new contract law, essentially European, inspired by principles of market efficiency and the protection of technically weak contracting parties[63].

Therefore, it must be acknowledged that, today, only interpretation can provide a reasoned solution, if the legal tools made available by the law and by private autonomy for loan (and investment) transactions, in the case of negative interest that becomes part of trading due to market fluctuations, are once again adapted to the market, and thus upturn the normal credit-debt relationship, or obstruct this economic effect and force it to be corrected.

7 Interest rates in the Italian Civil Code

Given that we must discuss interest rates under Italian civil law, we must start by stating that our law distinguishes between three categories of interest: interest due, compensatory interest and default interest. It is clear that the economic theory that sees interest as "reward for the financial cost of time and risk of an investment"[64], i.e. payment offered to savers for overcoming their natural preference for cash, understood in the economic sense to mean abstention from investment[65] can only be applied to the first category, i.e. conventional interest rate. More specifically, interest can be said to reward the foregoing of the preference for cash only in long-term loan agreements and derived legal figures. This is not the case for default and compensatory interest, nor for non-negotiable interest due that is provided for directly by law[66]. Furthermore, as demonstrated earlier (see § 3 above), it concerns

63 Literature on the relationship between general and special contract law is too broad to be referred to here. For an overview, see Trattato di diritto privato europeo, edited by N. Lipari, Padova 2003; Diritto privato euro- peo, edited by C. Castronovo, S. Mazzamuto, Milano 2007; G. De Cristofaro, Le discipline settoriali dei contratti dei consumatori, in Mercati regolati, Tratt. Roppo, vol. V, Milano 2014, p. 5 et seq.; V. Roppo, Prospettive del diritto contrat- tuale europeo. Dal contratto del consumatore al contratto asimmetrico? in Corr. giur., 2009, p. 267 et seq.; C. Castronovo, Diritto privato generale e diritti secondi. La ripresa di un tema, in Eur. dir. priv., 2006, p. 397, p. 399 et seq.; F. Ferraro, Analogia e codici di settore, in R. d. civ., 2011, p. 521; E. Minervini, Codice del consumo, in Dig. disc. priv. Sez. civ., Aggior. III, 2007, p. 182 et seq., spec. p. 187 et seq.; F. Addis, Il "codice" del consumo, il codice civile e la parte generale del con- tratto, in Obbligazioni e contratti, 2007, p. 872 et seq.; N. Irti, "Codici di settore": compimento della "decodificazione", in

D. e società, 2005, p. 131 et seq. and in M.A. Sandulli (a cura di), Codificazione, semplificazione e qualità delle regole,cit. p. 17 et seq.; A. Plaia (edited by), Diritto civile e diritti speciali. Il problema dell'autonomia delle normative di settore, Milan 2008. On the same theme, see also S. Mazzamuto, Il contratto europeo nel tempo della crisi: ed ecco venire un grande vento di là dal deserto (Giobbe 1, 19), in Europa dir. priv., 2010, p. 601 et seq.; L. Rossi Carleo, La codificazione di settore: il codice del consumo, in M.A. Sandulli (a cura di), Codificazione, semplificazione e qualità delle regole, Milan 2005, p. 67 et seq.; G. ALPA, Il codice del consumo, in Contratti, 2005, p. 1058; ID., I diritti dei consumatori e il «codice del consumo» nell'esperienza italiana, in Contr. impr./Europa, 2006, p. 27; ID., Art. 1, in G. Alpa, L. Rossi Carleo (a cura di), Codice del consumo, cit., p. 26 et seq.; U. Breccia, La parte generale fra disgregazione del sistema e prospettive di armonizzazione, in

R. crit. d. priv., 2008, p. 375, p. 402. We can also talk about "micro-systems": A. Pajno, Una codificazione per frammenti, in M.A. Sandulli (a cura di), Codificazione, semplificazione e qualità delle regole, cit. p. 158; N. Irti, L'età della decodificazione, Milano 1979, p. 39, p. 36 et seq., and amplius, p. 91 et seq. Accenti critici in L. Nivarra, Diritto privato e capita- lismo: regole giuridiche e paradigmi di mercato, Napoli 2010.

64 In Italian literature, see the investigation of A. Pellanda in Le teorie contemporanee dell'interesse, Bologna, 1979 and G. Pietranera in Interesse, in Dizionario di economia politica edited by C. Napoleoni, Milan, 1956, p. 729.

65 See G. Marinetti, Interessi, in Noviss.dig.it., VIII, Turin, 1962, p. 858.

66 G. Marinetti, Interessi, in Noviss.dig.it., VIII, Turin, 1962, p. 859

elements that must be reconsidered in the light of the evidence of (even) negative nominal rates currently found in financial markets.

In Italy, the civil code makes no mention of possible negative interest rates due to those who lend (or deposit) money. Interest rates are classed as "unearned income" based on the view that he who lends money intends to receive a reward and not to incur a cost[67]. Indeed, Art. 820, Par. 3 defines unearned income as "income earned on something as payment for its enjoyment by others". This includes interest on capital, annual lease payments, annuities and any other income, payment for renting". This definition was also found in the pre-existing Italian code of 1865, under Art. 444, Par. 3: "unearned income is that obtained by opportunity from a thing, such as interest on capital, annual lease payments, charges, annuities and any other income".

In general, for the civil code[68], interest is nothing other than a particular type of financial obligation that has the characteristic of being ancillary to a principal financial obligation, i.e. that it is added to this principal obligation as unearned income[69].

With negative market rates, it would appear that the ancillary nature of interest no longer applies and interest becomes an amount that is added or detracted from the principal amount based on the progression of time. Italian doctrine has already in the past highlighted some difficulty in determining a legal notion of interest that strictly complied with the established regulations[70]. Today, the problem becomes even more complex with the phenomenon of negative rates. Perhaps we should first establish our legal definition of the function of interest before considering its structure.

However, in Italian legislation, there is an abundance of individual provisions on interest but we are missing a clear unitary principle, and in its place we refer to an assumed shared notion of interest, from which the interpreter has to derive its function from a legal point of view. It is useful to address both these points.

As we have said, there is an abundance of individual provisions. Existing legislation regulates interest under Art. 820, Par. 3 of the Civil Code as "unearned income obtained from a thing, such as payment for its enjoyment by others"; in Art.

67 See B. Inzitari, Interessi, in Dig. Disc. Priv., Sez. civ., Vol. IX, 1993, p. 566 et seq.; id., La moneta, in Trattato di dir. comm. e dir. pubbl.econ., directed by F. Galgano, VI, 1983, p. 191; E. Simonetto, Interessi, in Enc. Giur., XIX, Rome, 1989, p. 1 et seq.; M. Libertini, Interessi, in Enc. Dir., XXII, Milano, 1972, p. 95.

68 The civil code regulations that discipline interest are numerous and non-systematic (see Articles 1277, 1282, 1224, 1813, 1782, 1825, 1834, 1499, 2788, 2802, 2855, etc.).

69 On the general theme, see, for all, T. Ascarelli, Obbligazioni pecuniarie, in Comm. al cod.civ. Scialoja-Branca, IV, Bologna-Rome, 1959; E. Simonetto, G. Tantini, E. Maschio, Gli interessi nei rapporti a funzione creditizia, Padua, 1981; O.T. Scozzafava, Gli interessi monetari, Napoli, 1984 and D. Sinesio, Interessi pecuniari fra autonomia e controlli, Milan, 1989; c. Mazzoni, Frutti civili e interessi di capitale, Milan, 1985. The ancillary nature of interest in relation to a principle financial obligation is highlighted by M. Libertini, Interessi, in Enc. Giur., Vol XXII, cit. p. 95, F. Ferrara Jr., Il fallimento Milan, 1966, p. 291 according to which "interest is an ancillary payment, consistent with the main payment, that is added to it based on the progression of time and which is proportionate to a rate of this main payment".

70 Libertini, Interessi, cit., p. 96-97.

1224 as the ex lege effect of default, independent of proof of damage in financial obligations; in Art. 1282 as a product of full entitlement, without prejudice to exceptions by law or by right, of liquid and enforceable receivables; under Art. 1714 as a necessary ancillary payment due by the agent to the principal in addition to the amounts received and not delivered or invested; under Art. 1720 as a necessary payment in addition to the repayment by the principal to the agent of downpayments; under Art. 1782 as a naturalia negotii of the "irregular" deposit of money or other fungibles, the depositary being obliged to pay it unless otherwise agreed with the depositor; under Art. 1815 as the naturalia negotii of a loan, the borrower being obliged to pay it to the lender unless otherwise agreed; under Art. 1825 as a consequence of bank account remittance. This is without prejudice, in any case, to the precedence of special laws (Art. 1281).

However, there is an absence of unitary principle; and there is the unfounded presumption that it is replaced by a shared understanding[71]. Unity of concept is already opposed by the fact that the regulations include different types of interest (interest due, compensatory interest and default interest[72]), which do have something in common[73] but, above all, it is their differences[74] that stand out. A more serious problem is that from the regulatory classification of interest under unearned income[75] appears to be inadequate and thus unitary and consistent regulation[76] is impossible. But the greater problem is the fact the the shared understanding, which should serve to organise conceptually the diversified regulation, in reality cannot be derived from economic concepts, to which legal doctrine would like to refer[77]. It cannot because such concepts prove to be multiple and disparate.

In the past three centuries of interest rate regulation, after abandoning (as noted earlier) the ideologies on usury, legislators have based their rules on the indications of economic science (in turn developed, as noted earlier, on the basis of a history of rates that were always positive). The influence of Adam Smith[78] has also been decisive in this

71 With this view, M. Libertini, cit. p. 95: "the legislator, though he disciplines the obligation of interest in numerous regulations, has not felt the need to specify the notion, trusting in the dissemination and unequivocal nature of traditional understanding".

72 On this theme: M. Libertini, Interessi, cit. p. 97 et seq.; V. Pandolfini, Gli interessi pecuniari, Milan, 2016, p. 13 et seq.

73 Such as the emphasis on time and, in particular, deferral or delay.

74 Such as the remunerative nature of the first two and the compensatory nature of the third.

75 Which default interest certainly is not. On this theme, B. Inzitari, Interessi. Legali, corrispettivi, moratori, usurai, anatocistici, Turin, 2017, p.1 et seq.; Id., Interessi, in Dig. discip. priv., Sez. civ., IX, Turin, 1993, p. 567; Id., Delle obbligazioni pecuniarie, in Comm. cod. civ., edited by A. Scialoja, G. Branca, Bologna-Rome, 2011, p. 30 et seq.; G. Marinetti, Interessi (dir. civ.), in Nov.mo Dig. it., VIII, Turin, 1962, p. 860.

76 V. Pandolfini, Gli interessi pecuniari, cit. p. 6; for M. Libertini, Interessi, p. 97 it is difficult even to find a coherent basic notion behind the diversified regulations.

77 Esemplary position of T. Ascarelli, Obbligazioni pecuniarie, in Comm. cod. civ., edited by A. Scialoja, G. Branca, Bologna-Rome, 1959, sub art. 1284, p. 575 and nt. 1, which refers to J.M. Keynes.

78 A. Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, cit. (here cited in the London edition of 1892; our italics).

field. He states that: «Whoever derives his revenue from a fund which is his own, must draw it either from his labour, from his stock, or from his land. The revenue derived from labour is called wages. That derived from stock, by the person who manages or employs it, is called profit. That derived from it by the person who does not employs it himself, but lends it to another, is called the interest or the use of the money. It is the compensation which the borrower pays to the lender for the profit which he has the opportunity of making by the use of the money. Part of that profit naturally belongs to the borrower, who runs the risk and takes the trouble of employing it; and part to the lender, who affords him the opportunity of making this profit». It is precisely on the basis of this statement that legislators adopted as natural his notion of interest, which presumes its positive value. The possibility of a negative rate remained a theoretical hypothesis[79], only found in the pages of manuals.

The economic concepts of interest prove to be, moreover, multiple and disparate. Put briefly, it is not difficult to demonstrate that the different concepts of interest currently found in the field of law reproduce a variety of perspectives that is found, first and foremost, in economic science. A short list will make the idea clear.

The theory of the natural fecundity of money, which was already shared by Claudio Salmasio and Carlo Molineo and is found in the Relazione al Codice Civile[80] and in Art. 820 of the Civil Code, re-echoes the Marxian observation that money in capitalist economies is no longer just a tool of consumption but is also a productive factor, "capital"[81].

The widespread legal theory of interest as compensation for use[82], whilst similar to the previous theory, as it still considers money to be productive, takes a different direction because it shifts the fecundity away from the nature of the use of the money, returning to an idea that was seen earlier with Smith and that is revisited in Marshall[83] and in subsequent literature.

79 In truth, it had already been considered in the period in which the notion of interest was consolidated as "fruits of money" and thus as a positive value, in relation to the occurrence of historical events. In fact, the pages of F. Galiani, Della moneta, cit., already include both the idea that "rich men have harvested the fruits of their money in various forms of agreements since ancient times" (p.390) and mention of the fact that (in the words of the authors) this "surcharge" is not intrinsic to loans, but instead "falls at times to zero (as it is in banks and companies of the republics) and talvolta anche sotto al zero, scendendo nelle quantità negative (come avvenne in Francia al tem- po del sistema del Law even below zero, falling to negative values (as occurred in France in the time of the Law system)" (p. 398, our italics).

80 Report by Minister Guardasigilli, § 593.

81 81 C. Marx, Capital, III, 2. In Italian doctrine, this view is found in, e.g. E. Quadri, Gli interessi, in Tratt. di dir. priv., dir. da P. Rescigno, IX, Turin, 1999, p. 642; and (though not exclusively) is emphasised by E. Simonetto, Interessi: I, in Enc. giur., XVII, Rome, 1989, p. 5.

82 For the Nutzungtheorie in Italian doctrine, see M. Libertini, Interessi, cit. p. 97 (but obviously limited to interest due only); U. Breccia, Le obbligazioni, in Tratt. di dir. priv., dir. da G. Judica, P. Zatti, Milan, 1991, p. 351.

83 A. Marshall, Principi di economia, (1920), Turin, 1959, Libro VI, Cap. VI, p. 546 et seq.

The different theory, though present in legal doctrine, according to which interest is explained as compensation for waiting, that is to say the deferral of the enjoyment of money by whoever provides the capital[84], was theorised by J.S. Mill[85], reiterated in 1903 by Gustav Cassel[86], and taken up again with corrections by Pigou[87].

Therefore, the economic doctrine contains different perspectives on the function of interest. Nor is that all. There are also economic perspectives on interest rates that enrich the understanding but that have been ignored by legal theory. We can recall the theory of Ricardo[88], according to which the rate is not directly affected to by the behaviour of the monetary authority, which rather has an impact on the value of the currency, but by the comparison between the rate of profit that can be obtained by investing the capital and the rate at which the bank is prepared to lend it. Or the theory of the Austrian school, according to which interest rate varies based on the variations in inter-related price levels of consumer goods and capital assets[89]. And above all, the theory of J.M. Keynes that interest is influenced by level of income, the inclination towards consumption and by the marginal efficiency of capital.

This macro-economic perspective would be useful today for legal considerations of negative rates, which are based precisely on macro-economic arguments. However, they have remained outside of the micro-economic view of the code.

On the other hand, there are aspects of the notion of interest, not insignificant for the new phenomenology, used by the legal doctrine and found in economic science, that have contributed very little to shaping the alleged shared notion. Indeed, in banking and financial brokerage, interest is also influenced[90] by its functions of rewarding risk, covering the cost of bank funding, recovering management costs, remedying the effect of the tax burden, reflecting the shortage of capital[91].

84 Allusions to this are made by e.g. V. Pandolfini, Gli interessi pecuniari, cit., p. 8, and E. Simonetto, Interessi: I, cit., p. 2. It appears evident that the theory more takes on board the case law of default interest rather than that of non-default interest (due and compensatory).

85 J.S. Mill, Principi di economia politica, II, XV, (1848), Milan, 2009, p. 582.

86 G. Cassel, The Nature and Necessity of Interest, London-New York, 1903.The theory is criticised by J.M. Keynes, Teoria generale dell'occupazione, dell'interesse e della moneta, Torino, 2006, p. 369, noting that "The error lies in considering interest as compensation for waiting in itself, instead of as compensation for the non-hoarding of cash."

87 .C. Pigou, The Economics of Welfare, London, 1920, II, VII, § 3

88 D. Ricardo, Principi di economia politica, Turin, undated, p. 275 et seq.

89 L. von Mises, Theorie des Geldes und der Umlaufsmittel, Wien, 1912.

90 C. Marx, Capital, III, 2. In Italian doctrine, this view is found in, e.g. E. Quadri, Gli interessi, in Tratt. di dir. priv., dir. da P. Rescigno, IX, Turin, 1999, p. 642; and (though not exclusively) is emphasised by E. Simonetto, Interessi: I, in Enc. giur., XVII, Rome, 1989, p. 5.

91 In recent legal doctrine for these profiles, see E. Simonetto, Interessi: I, cit., p. 3. Economic analysis of the effects of negative rates on the structure of financial brokerage can be found in F. Heider, F. Saidi, G. Schepens, Life Below Zero: Bank Lending Under Negative Policy Rates, August 23, 2017.

It follows that legal regulations, and above all the regulations of the civil code, that cover interest rates from the perspective of contract regulation - relevant to this paper - has neither a legal principle nor unitary and consistent concept from which the function of interest can be directly derived and in the light of which solutions to new and unforeseen situations, such as negative rates, may be established.

To be more precise: existing law has a structural notion of interest but not a functional notion.

The structural notion is characterised by the ancillary nature of the obligation of interest in relation to the principal obligation, of the homogeneity between the two, of its periodic nature and proportionality[92]. These characteristics are certain; they are not undermined by new scenarios but they do not have the specific explanatory or guiding capacity in relation to the new phenomenology.

On the other hand, the multiple functional notions generally underlying the current interpretation of the provisions on interest do not draw on the role of inviolable legal principle applicable to any scenario for its founding value, precisely due to the fact that the functions of interest are many and disparate, and the choice of the code considers this only partially. As some have noted, in our legislation, the Geschäftsgrundlage (ratio legis) does not entirely absorb the Rechtsgrundlage (Ithe social and economic basis of the law)[93], and thus leaves exposed that which it fails to consider. Later, we will state which theoretical conditions will enable the formulation and resolution of the problem of negative rates in loan agreements[94].

8 The different legal views on the effects of negative interest rates

In the absence of both a legal principle and an economic concept, in order to derive a legal response to the phenomenon of negative interest rates from the logic of the system, we must, by way of introduction to the correct answer, perform an initial assessment of the theoretically possible responses, and of their possible supporting regulatory indicators.

With some analysis, we find three possible responses:

a) *Full automatism*: we can presume - and as we will see, this is what happens, for example, in ISDA contract negotiation - that negative rates are automatically included in the agreement without limits, for the full period in which interest is generated;

b) *Full irrelevance*: We can allege - and it has effectively been sustained - that our legal system contains conceptual and/or legal limits insurmountable to reversing the sign of interest rate, for which a drop in the rate would mean the impassable

92 For all, M. Libertini, Interessi, cit. p. 96

93 E. Simonetto, Interessi: I, cit., p. 1.

94 See above § 10 et seq

limit of a minimum level of payable interest rates of at least the so-called "zero floor" limit.

c) *Conditional irrelevance*: we can allege- and we will see how this has been debated in various courts and implemented in practice - that theoretically, the reversal of the sign of interest rates works in contracts, but that in practice, this workability can be halted by specific tools of negotiation (floor clauses).

It is to be noted that the framework presented herein is not theoretical. It is useful to remember, case by case, that each of the three concepts has been acknowledged in practice, in order to consider both the actual reality of the phenomena in progress and the reasons and arguments that have been put forward for and against the different solutions.

8.1 The theory of full automatism

The view in part a) has been consolidated in the trading system that refers to the International Swaps and Derivatives Association (ISDA). Thus, in the sector or derivative contracts, to which the Master Agreement set out by the ISDA offers the most common model of framework contract required by Articles 37 and 38 of CONSOB Regulation 16190/2007. In the field of Interest Rate Swaps in particular, the recent phenomenon of negative reference rates has posed problems in the accurate framing of calculation methods.

For this purpose, on 12 May 2014, the ISDA set out a Collateral Agreement Negative Interest Protocol[95], open to adherence by operators, to - as explained in the enclosed Background - "address the concerns of ISDA members that if negative interest rates were to set in OIS benchmarks used as the Interest Rate for cash collateral it may be unclear how such negative rates should be treated under ISDA collateral documentation."

The indications provided by the Protocol are clearly summarised by the Market Guidance concerning Interest Rates on Cash Collateral under ISDA Collateral Agreements of 13 May 2015, in the following words: "[the Protocol] is intended to provide an efficient method for market participants to clarify how negative interest is to be settled under most forms of ISDA-published collateral agreements. Specifically, the Protocol provides that when a negative interest rate for cash collateral is observed in the market, that interest rate should be utilized in the computation of the relevant interest amount, which may therefore be negative. Further, the Protocol provides that negative interest amounts shall be settled between the parties, in a manner similar to positive interest amounts except that the direction of payments is reversed[96]."

This is evidently an approach that ends the regulation of the phenomenon by private autonomy. Nor could it be otherwise: the ISDA system (as indeed with all

95 See above § 10

96 Our italics.

international contract[97] procedures) does not fall under any particular legal system. And thus it demands its autonomy: It is to be noted that the Protocol does not fail to include an 'entire agreement' clause, i.e. on the completeness of the regulations and the irrelevance of other sources[98]. Therefore, it would make no sense to assume principles or concepts in its logic that are not founded on the choices of the private autonomy of the parties. It remains to be seen whether this logic will truly be followed, without interference. But there will be more about this below[99].

Ridding this view of anything linked specifically to financial derivatives only and to investment agreements in general, as well as anything linked specifically to the trading system put in place by ISDA agreements, the driving automatism can also be attributed to common banking contracts. In fact, it is the natural consequence of the indexing clause. If - and this remains to be seen - no assumption is made of the existence of a limit in the legal system (binding principles and concepts) or in private autonomy (impediment or limit clauses), negative rates, and thus the inversion of the credit-debt ratio of interest is the direct effect of the indexing mechanism when the reference index is inverted. Besides, the case law to which this paper refers, of contracts with common users of banking and financial services, is not a unicum: it is part of a framework of an interbank market in which brokers lend money to one another at negative rates and, as mentioned earlier, the banks pay to deposit with central banks, which, conversely, lend money at negative rates to encourage investment by households and enterprises[100].

In any case, the general outcome of such an approach appears to be evident: in variable rate contracts, the negative value of the reference rate, when it exceeds the usual spread applied in addition to the granted loan to determine the rate, determines an inversion of the credit-debt ratio of the interest for as long as this situation lasts.

8.2 The theory of full irrelevance

The view in part b) is actually outlined as part of a recent doctrinal debate, It was claimed that "for the jurist, the question today of negative interest rates for loans and financing, as it is already for financial derivative contracts, must be founded on the legal nature of the contracts and thus their characteristic cause that justifies, within the legal system, the judgement of lawfulness and worthiness[101],"

97 For an overview, see, for all, G. Cordero Moss, International Commercial Contracts, Cambridge, 2014.

98 G. Cordero Moss, International Commercial Contracts, p. 47; in Italian literature, M. Foglia, Il contratto autoregolato: le merger clauses, Turin, 2016.

99 See above § 10 et seq

100 In addition to that illustrated above (§ 3), see I. Fogliata, Tassi negativi, deflazione ed effetti collaterali della grande crisi: le distorsioni del c.d. "financial upside down world" esaminate dal lato tecnico, p. 6.

101 D. Maffeis, La Causa di finanziamento esclude la sopravvenienza di c.d. tassi negativi e richiede la sostituzione, convenzionale o giudiziale, del parametro esterno divenuto durevolmente negativo, in Riv. dir. bancario, 2016, no. 3, p. 1 et seq.; F. Civale, Euribor negativo, interessi e clausole floor: prime riflessioni, in Dir. bancario, www.dirittobancario.it/approfondimenti, p.2.

This doctrine gives a negative response: it argues that, even in the absence of a conventional decision on the issue, the cause of financing on a conceptual level, and Articles 117, Par. 4 TUB and 1346 of the Civil code on a legal level, prevent the borrower from taking any loan from the lender at a negative interest rate because interest is unearned income and represents payment for others' enjoyment of the money lent.

The cause of the contract, it is stated, cannot be changed during its execution just because the indexing would invert the ratio. This affects the ratio only if the contract is originally drafted with negative interest rates or if the contracting parties expressly provide for interest becoming negative. In this case, an uncertain element is added to the inherently commutative financing contract. But there is no presumption of a clause to this effect[102]. What is more: neither can long-lasting zero-setting transform a contract for consideration into a free contract. Therefore, we can imagine an obligation of the parties to renegotiate in good faith[103] or, in some cases, a judge may decide a fair rate, along the lines of Art. 1349 of the Civil Code on the third-party determination of the subject of the contract with fair value. Alternatively, the only remaining option would be annulment for supervening impossibility[104].

Less radically, but along the same lines, other doctrine[105] doubtfully considered the idea that the cause of a contract, the unearned income nature of interest, the possibility that the loan is free, yes, but the silence and thus (supposed) implicit exclusion of it being a cost for the lender, as well as the profit-making nature of the bank, introduce to the loan, and by conceptual extension to all lending contracts, a limit to interest "zero setting" ("zero floor" limit). Or, as an alternative, they justify on behalf of the bank the practice of ius variandi. Even though this doctrine appears to be forced to exclude the fact that a negative Euribor (or other reference) in a variable rate contact is the "justified reason" required by the standard[106] to practice ius variandi.

Contrary to that seen in the preceding sub-paragraph, here the theory is based on principles and concepts that are assumed to be rooted in the legal system. The legal nature of the contract and of the interest would override the economic phenomenon and correct the natural results of the negotiation choice of indexing. It goes without saying that, to support it, a definite approach must be taken in this direction by the legal system, and thus not the simple normality of the positive value of interest and payment to the lender, but its legal necessity.

Following these doctrinal indications, in our legal system, it is the very nature of interest according to their legal understanding ("unearned income") and the very nature of the loan as an agreement that does not allow "loss" to the lender that would prevent negative rates, irrespective of the variable determination mechanism

102 We will examine the existing hypothesis in the following sub-paragraph

103 F. Civale, Euribor negativo, interessi e clausole floor: prime riflessioni, cit., p. 2.

104 D. Maffeis, La causa di finanziamento esclude la sopravvenienza di c.d. tassi negativi ecc, cit., p. 3.

105 Thus, but doubtfully, A.A. Dolmetta, Tasso variabile e valori negativi, in Riv. dir. bancario, 2016, no. 35.

106 These arguments are found in part in A.A. Dolmetta, Tasso variabile e valori negativi, cit.

adopted by the parties. Therefore, the occurrence of a negative reference rate would have no effect on the credit-debt ratios, from the moment that and for the full period in which, despite the spread, it generates a periodic balance of negative interest for the lender.

The theory was acknowledged in reality in the practices of certain Italian banks (as will be further explained a little further down) and was expressly argued in a recent dispute before he EU Court of Justice[107]. The Spanish banks indeed alleged in this circumstance that the nature of the transaction and the necessary stability of the banking system lead to the outcome of a "zero floor" limit in financing operations, point upheld by the Advocate General[108], but not by the Court.

But the dispute is of limited use to investigations into the theory because the case included the presence of special floor clauses in the contracts and concerned above all the repayment of that paid by the lenders; this will be discussed in further detail below.

8.3 The theory of conditional relevance

The view in part c) was occasioned by the prompt reaction of the banks to the performance of the reference indexes of variable rate contracts. Indeed, the brokers intended to neutralise the erosion of the spread caused by the occurrence of a negative value in indexing parameter. This was done mainly by applying so-called floor clauses, included in the contract forms[109].

The assumption of this view from the offset is that, on the one hand, the desired indexing mechanism operates as the performance of the reference rate, and thus where necessary even inverting the normal credit-debt ratio of interest, and, on the other hand, correction via ad hoc clauses may be just as desirable. Those rate variation limit clauses that we discussed earlier from a financial point of view. Private autonomy, as required, can limit rate variability.

As can be seen, it is a new solution entirely internal to private autonomy, which rejects the assumption - of the previously examined view - of a definite approach by the legal system in favour of the necessary positive value of interest and payment to the lender.

The result of including floor clauses in financing contracts is obvious: the determination of interest time by time will follow the performance of the reference index (plus the spread in use); but if the reference index becomes negative to the

107 United cases C-154/15, C-307/15, C-308/15, Cajasur Banco SAU, ECLI:EU:C:2016:980

108 On the conclusions of Advocate General Mengozzi in the proceedings referred to in the preceding note, see S. Pagliantini, L'interpretazione dei contratti asimmetrici nel canone di Gentili e della Corte di Giustizia (il dopo Radlinger aspettando le clausole floor sullo sfondo del nuovo art. 1190 code civil), in Contratti, 2016, p. 1039 et seq.

109 This summary of the practice can be derived from the notice of the Banca d'Italia of 7 April 2016, Parametri di indicizzazione dei finanziamenti con valori negativi: trasparenza delle condizioni contrattuali e correttezza nei rapporti con la clientela (Indexing parameters of negative value loans: transparency of conditions of contract and fairness in relations with customers).

extent that, despite the spread, it falls to below the agreed minimum, the borrower will continue to pay the minimum for the full interest period. It can occur that this minimum is agreed as zero ("zero floor" limit). In this case - although the loan remains on a payment basis, according to the contract reason, as desired by the parties - the loan will actually become free until the reference index rises again. In any case, the possibility of inverting the credit-debt ratio is excluded. The floor clauses in loan agreements have not given rise to problems of lawfulness, except for that mentioned below, but they have given rise to issues of enforceability. Indeed, at times, these clauses have not appeared to be adequately advertised and various claims have been made concerning their ineffectiveness with regard to the borrowers, resulting in their disapplication and the subsequent refunding of the difference. The EU Court of Justice recently intervened on this matter[110] in the aforementioned case involving the Spanish banks to assert the requirement to refund in full the debt paid by the borrower when the floor clauses that limit the effects of negative rates are proved to be null and void for reasons of unlawfulness.

It is to be reminded that, in Italy, the Banca d'Italia intervened on this case law, highlighting the due compliance with the principle of transparency, the requirement of accurately determining the rate involving a negative index and, where applicable, to proceed with the due refunds[111]. Furthermore, the Italian Competition and Market Authority also intervened with a measure of 7 February 2017 that suspends the infringement proceedings against a bank in relation to the application of a floor clause to loan agreements, subject to a series of undertakings on text transparency, its wide publication and extraordinary compensation to the borrower.

The issues of enforceability will be discussed in Part Three.

9 The loan as a paradigm of reference

The phenomenon of negative rates in loan agreements does not just concern ordinary loans but can potentially be extended to all "credit" or "loan" contracts[112]. Their shared characteristic is that they procure the enjoyment of the fungibles of others (as assumed by Nutzungstheorie). Alongside this characteristic, other features relevant to category classification are the phenomena of delivery and return and deferral[113]. An element that is only legally possible, though in practice almost always used, is payment for use by the borrower, precisely in the form of periodic interest.

110 ECJ Grand Chamber, 21 December 2016, Naranjo v Cajasur Banco SAU and others (Case C-154/15, C-307/15, C-308/15. On this theme, see A. Dalmartello, Epilogo della questione della clausola floor in Spagna? Chiarimenti della Corte di giustizia sugli effetti della non vincolatività delle clausole abusive, in Riv. dir. bancario, 2017, no. 2.

111 This is the aforementioned notice of the Banca d'Italia of 7 April 2016, Parametri di indicizzazione dei finanziamenti con valori negativi: trasparenza delle condizioni contrattuali e correttezza nei rap- porti con la clientela (Indexing parameters of negative value loans: transparency of conditions of contract and fairness in relations with customers).

112 On the category, E. Colagrosso, G. Molle, Diritto bancario, Rome, 1960, p. 340 et seq.

113 113 E. Simonetto, I contratti di credito, Padua, 1953, p. 44 et seq.

Although it is not the only form, a standard loan is the paradigm of "credit" agreements and is the type that most often allows companies and private individuals to obtain the financial resources they need[114]. Therefore, for reasons of brevity and without prejudice to the peculiarities of the security loan described below (§ 13), it is helpful to use it as a reference for that discussed in this paper. Especially as a reference for the type of loan granted by banks and financial institutions because, as has been realistically observed[115], it is the credit system that provides the majority of financial resources, thus it is mainly banks and financial institutions that perform the serial drafting of these agreements[116]. Hence the central importance of the bank loan.

Civil law regulations on loans is found under Art. 1813 et seq. of the Civil Code, outlining the fundamental characteristic of such an agreement and its purpose from a legal point of view: according to the legal definition, a loan agreement involves one party (lender) delivering to the counterparty (borrower) a determined quantity of money or other fungible, with the obligation of the borrower to repay the same quantity of things of the same type and quality[117]. But in parallel with the reality, which sees bank loans at the centre of the phenomenology, the regulations are also not exhausted by that set out by the Civil Code, but are enhanced by a series of special regulations[118]. These regulations, whilst on the one hand reveal the legal focus on the social function pursued by the credit institutions (Art. 47 of the Constitution), on the other hand have a significant impact on the loan agreement regulations practised by the banks, to the extent that it is seen as a generally autonomous figure[119]. This figure is characterised both – from a broker perspective - by the principles of the sectional credit system (investor protection, broker stability) and - from a user perspective - by the principles of the new contract law (transparency and fairness). However, practice and special regula-

114 See S. Cherti, Il mutuo (tra codice civile e legislazione speciale), in I contrati bancari, edited by F. Piraino and S. Cherti, G. Giappichelli Editore, Turin, 2016.

115 P.L. Fausti, Il mutuo, in Tratt. Dir. Civ., CNN directed by P. Perlingieri, Napoli, 2004.

116 See Articles 10 and 106 of Leg. Decree no. 385 of 1 September 1993 (Consolidated Law on Banking).

117 On the notion and the legal nature of the loan agreement, within broad literature, see, for example: L. Ferroni, La nuova disciplina del contratto di mutuo ad interessi usurari, Napoli, 1997; M. Fragali, del mutuo, in Com- mentario del codice civile, A. Scialoja - G. Branca (ed.), Rome, 1966; A. Galasso, Mutuo e deposito irregolare, Milano, 1967; B. Gardella Tedeschi, Mutuo (contratto di), in D. disc. Priv. Sez. comm., Vol XI, Turin, 1994; G. Giampic- colo, Mutuo (dir. priv.), in Enc. dir., vol. XXVII, Milano, 1977; S. Mazzamuto, Mutuo di scopo, in Enc. giur., vol XX, Rome, 1992; L. Nivarra, Il mutuo, Milan, 2000; G. Porcelli, Mutuo (contratto di), in Il Diritto Enc. giur., Vol. 9, Milan, 2007; A. Riccio, Il contratto usurario nel diritto civile, Padua, 2002; G. W. Romagno, Il mutuo, Milan, 2000; E. Simonetto, Mutuo, in Enc. giur., Vol. XX, Roma, 1992; A. Zimatore, Mutuo di scopo, Padua, 1985; F. Gambino, I mutui usu- rari tra logica imperativa ed analisi economica del diritto, in Contr. e Imp., 2001, 644; V. Cuffaro (dir.), Il mutuo e le altre operazioni di finanziamento, Bologna, 2005; M. Tatarano, Il mutuo bancario tra sistema e prassi, Naples, 2012; A. Orestano, Il mutuo, Tratt. Roppo-Benedetti, IV, 2, Milan, 2014.

118 See Fauceglia, sub art. 1813, in Dei singoli contratti, edited by Valentino, Articles 1803-1860, in Commentario Gabrielli, Turin, 2011.

119 See M. Tatarano, Il mutuo bancario, in I contratti bancari, edited by E. Capobianco, Milan, 2016.

tions enhance, but do not change, the figure. From a causal point of view, the type of contract to which it belongs is, and continues to be, the loan as provided for by the Civil Code[120].

As concerns the obligations of the contracting parties, a distinction must be made between the position of the lender and that of the borrower.

As is well-known, the lender, pursuant to Art. 1813 of the Civil Code is, first and foremost, obliged to deliver the money, or other fungible, that becomes the property of the borrower. The delivery finalises the contract ("real" contract)[121]. The acquisition of ownership of the things loaned grants the party the full right of enjoyment and use. However, the contract position of the lender is not exhausted by the delivery of the money, but is completed by the general obligations of fairness and good faith (Articles 1175 and 1375 of the Civil Code), as well as the obligations specifically provided for by the Code regulations on loans[122], and by the code regulations on consumption, where the borrower does not act in a professional capacity, and finally by the Consolidated Law on Banking (especially Articles 116-119 TUB). There are special rules for particular sub-types (consumer credit, mortgage credit, land credit, etc.).

There are essentially two borrower obligations that arise due to the conclusion of the loan contract: repay the capital and, usually, pay interest.

The first obligation comes from the very definition of loan, where it is foreseen that the borrower is obliged to "repay the same quantity of things of the same type and quality", which can occur in a single payment or, as often happens, in instalments[123]. The repayment obligation of the borrower cannot be considered compensation, in a technical sense, in relation to the delivery performed by the lender. If this were the case, we would end up recognising "the existence of a bilateral structure even in free loans, which, obviously, cannot be"[124]. Therefore, the obligation to repay the sum borrowed must be deemed to perform, on the one hand, the function of restoring the pre-delivery economic and legal position of the lender

120 With the same view, M. Tatarano, Il mutuo bancario tra sistema e prassi, Naples, 2012; G. Fauceglia, sub art. 1813, in Comm. C.c., Gabrielli, 3, Turin, 2011, p. 119 et seq.

121 In case law, for the theory of the reality of the loan agreement, Court of Cassation, 26 March 2002, no. 4327, in Riv. Giur. Edil., 2002, I, p. 1015; Court of Cassation, 8 March 1999, n.1945, in Foro it., 1999; Court of Cassation, 21 July 1998, no. 7176, in Contratti, 1999, with note by E. Goltara, Mutuo di scopo e consegna; Court of Cassation, 12 October 1992, no. 11116, in Banca borsa tit. cred., 1994, II, p.2.

122 Consider the liability of the lender for damages to the borrower for defects of the things borrowed, as referred to in Art. 1821 of the Civil Code.

123 In this assumption, Art. 1819 of the Civil Code establishes that: "If [...] the borrower fails to fulfil the obligation to pay even a single instalment, the lender may demand, according to the circumstances, the immediate repayment of the loan in full." For the applicability of Art. 1819 of the Civil Code to the free loan only, see Court of Cassation, 21 February 1995, no. 1861, Vita notarile, 1996, 243; in the relevant legal theory, T. Monza, 2 May 2002, Giur. Milanese, 2002, 408).

124 P.L. Fausti, Il mutuo, cit. p. 65.

and, on the other hand, a "standardising function", in that, without it, the actual loan agreement could not be said to be formulated, including the free version[125].

The second obligation (the payment of interest) - which is obviously our focus here - is not, in reality, a necessary legal consequence of the loan agreement. Payment is not, in fact, an essential requirement of a loan, but merely a rebuttable presumption (Art. 1815, Par. 1, Civil Code)[126] and widespread practice.

From this is derived the classification of the loan agreement in terms of "variable cause contract"[127], in that it may, depending on the willingness of the parties, be either for consideration or free[128]. The principle of the "variable cause" of a loan agreement is to be understood, however, in reference to theory, and certainly not in reference to an actual case and its difficulties. Effectively, in theory, whatever the practice, it is possible that the contract be formulated as either free or for consideration. But once identified in a specific contract, the cause remains as it is, with no possibility that events may affect attribution of the contract to the type agreed by the parties. In other words, and amicably, there is the applicable principle that the cause cannot be changed once it has been defined in the signed agreement.

This means that what happens to the obligation of interest, if agreed, has no effect on the cause of the loan: It is still for consideration, or "usurious", even when for whatever reason - and one could be the performance of the reference rate in variable rate loans - no interest is due for one or more periods. We will see how this assumption informs in itself the solution to the problems that we will examine later on.

In loans for consideration, interest serves as payment for use of the money or the price of enjoyment for whoever receives it. As already mentioned, it is precisely this that distinguishes the contract position of the borrower of a loan for consideration from a borrower of a free loan, and certainly not the full repayment in full of the borrowed capital, which must be part of all variants of the contract in question[129]. Instead, the difference lies in the fact that the borrower has to pay an ancillary

125 See M. Tatarano, Il mutuo bancario tra sistema e prassi, cit., p. 50. This obligation must in any case be deemed characteristic and intangible. Therefore, if the interest on a variable rate loan were to be negative enough to render the borrower creditor of the lender at the maturity date and for this bond, this would not affect the obligation to repay the capital. In fulfilling their obligations, the parties would simply find themselves mutually in credit and have to apply payment compensation.

126 M. Fragali, Del mutuo, cit., p. 384

127 See M. Tatarano, Il mutuo bancario tra sistema e prassi,cit., p. 40 et seq.

128 It is important to emphasise that the hypothesis of a free loan, within the context of bank agreements, is almost unheard of; indeed the bank, even if it decides to grant a free loan, will never be able to practise any generosity in a technical sense, for the obvious reason that, given that a bank has to take the form of corporation or cooperative, the act of giving would prove somewhat inconsistent with the objective of dividing assets among shareholders or, respectively, the shareholders achieving mutualistic advantage. For further discussion on the theme, see F. Messineo, Manuale di diritto civile e commerciale, Milano, 1952; See R. Casulli, Donazione (Diritto civile), in Enc. Dir., Milan, 1964, XIII.

129 Given that, as observed by E. Simonetto, Mutuo (Disciplina Generale), in Enc. Giur. Treccani, Rome, 1990, XX, p.7, "repayment aims only to terminate the contract and eliminate contract imbalance".

payment consistent with the former, i.e. Interest, for the loan for consideration only (Art. 1815, Par. 1, Civil Code)[130].

Here, as is clearly inferred, we are talking about paid interest. In fact, this is compensation for enjoyment of the loan for as long as it lasts, and is paid periodically. The obligation to pay interest is established in the so-called repayment plan, as mentioned earlier, which includes a list of the deadlines on which the capital and interest have to be paid, indicating the precise sums that must be paid at each instalment of capital or interest[131], respectively.

Depending on the terms agreed in the contract, the interest rate may be fixed, variable or in mixed form[132]. Where there is a variable interest rate, in a bank loan, this is usually made up of two elements: a fixed component, identified in the spread, and a variable component (e.g. Euribor). With a variable rate, the repayment plan - outlined in § 2 - cannot be pre-defined in all its details upon concluding the contract, insofar as the total cost of the interest to be paid by the borrower will depend on the variation in rate over time. However, although it is not determined in advance, in the case of a variable rate, it should be at least possible to determine it exactly based on accurate criteria specified at the start of the contract, under penalty of the contract being declared null and void for uncertainty (Art. 1346, Civil Code)[133]. This explains the intervention by the Court of Cassation on the determination of interest measurement, which rules that an agreement relating to interest is deemed valid pursuant to Art. 1284, Par. 2 of the Civil Code when its content is totally unequivocal, with precise specification of the interest rate[134].

130 For particular hypotheses of loans for consideration in which the ancillary obligation, in relation to that of repaying the capital, can also consist of an obligation to do or not do, or of an uncertain or extraordinary return, see

G. Giampiccolo, Comodato e mutuo, in Tratt. Dir. Civ., dir. da G. Grosso and F. Santoro-Passarelli, Milan, 1972.

131 The Arbitro Bancario Finanziario (Financial Banking Arbitrator), Collegio di Roma, with Decision no. 813 of 12 February 2013 (in www.arbitrobancariofinanziario.it) reprimanded for negligence a bank that failed to deliver the repayment plan to the customer.

132 For more detailed analysis of the subject, see M. Tatarano, Il mutuo bancario, p. 868 et seq.

133 On this point, see V. Sangiovanni, Mutui bancari, ammortamento alla francese e nullità delle clausole sugli interessi per indeterminatezza, in Corriere Giuridico, 8-9/2014.

134 Along these lines, Court of Cassation, 19 May 2010, no. 12276, in Giust. civ., 2011, I, 178: "In relation to loan agreements, in order that an agreement on interest be deemed valid pursuant to the overriding regulation of Art. 1284, Par.3 of the Civil Code, it must be in written form and its content must be totally unequivocal with regard to the precise specification of the interest rate; this condition, which, upon entry into force in the former regime of Law no. 154 of 1992 can be fulfilled even by means of referring to pre-established criteria and extrinsic elements, as long as they can be identified objectively, used for the practical determination of the interest rate, requires, in the case of reference to conditions usually practised by credit companies on the market, the existence of binding regulations set on a national scale with cartel agreements, with it otherwise being impossible to establish to provision to which the parties intended to refer when faced with different types of interest; where the agreed rate is variable, for the purpose of its precise identification reference may be made to nationally set parameters in relation to interbank agreements, whereas generic references which fail to identify clearly the provision to which the parties intended to refer are not sufficient (in application of these principles, the Supreme Court overturned the relative ruling, which, deeming the clause that required the payment of "receivable compound bank interest" to be valid, in a period in which such practice was widespread but there were no existing binding regulations, had quantified the interest based on the first instalments, despite the fact that, in practice, greater or smaller interest rates can be applied."

In relevant law, see, for example, Milan Tribunal, ruling no. 13980 of 30 October 2013, in which it was established that the existence, in a bank loan agreement, of multiple incompatible interest rate clauses makes it impossible to ascertain the rate actually agreed between the parties, rendering the subject of the clauses themselves indetermina-

The interest agreement gives rise to much more delicate issues than the other loan clauses because it defines the bilateral nature of the contract, and thus the terms of trade. Therefore, this mainly includes provisions for brokers on the correct performance of their role of creditor and provisions of the new law on the transparency of contracts for consumers and users of banking and financial services. The zero or even negative contract rate, which can occur in the current scenario of negative rates, gives rise to new and complex legal problems. As we will see, those who believe that this should work automatically in the contract, revoking or inverting the roles of creditor and debtor of the ancillary obligation, are opposed by those who believe, to the contrary, that the cause of the loan involving payment should prevent this effect. Procedure has provided a solution including the possibility of variation falling below the agreed limit. However, its validity and enforceability are unclear to the borrower.

On the regulations on the effects of negative interest rates in a contract

PART THREE

10 Statutory regulations and regulations in the case of the application of ad hoc clauses to the contract

Once the possible theories - and in any case supported in practice - on the effects of negative interest rates have been acknowledged (and the loan taken as paradigm of reference), we can move on to their critical assessment. The results of such assessment can lead to conclusions on the regulation of the effects of negative rates.

Given the contrasting theories, it is clear that the fact that negative rates tend to have an impact on variable rate transactions negotiated with brokers by users of banking and financial services it is not really in question. The question is rather:

– whether insurmountable legal and/or conceptual limits to negative rates exist within our legal system;

– in alternative, whether valid contract limits (floor clauses) can exist

Therefore, we must first reconsider these two possibilities critically and in sequence.

ble, and thus the clauses null and void, with the consequence that the interest due shall be calculated according to the legal provisions of Art. 1284, Civil Code.

11 On the existence of insurmountable legal and/or conceptual limits to negative rates

We cannot follow the theory illustrated above in § 8.2 of the existence of objective legal and conceptual limits. Nor can the cause of financing or the classification of interest as "unearned income", or the profit-making status of the banking and financial institution, or system stability, on a conceptual level, or Art. 47 of the Constitution, or Articles. 820, 1284, 1346, 1815 of the Civil Code and 117, Par. 4 of the TUB, on a legal level, exclude the borrower and the party who receives the loan in general from demanding credit in the form of negative interest, where applicable. Therefore, the legal system is lacking real legal and/or conceptual limits to negative rates in contracts. The reasons are illustrated below.

They are not excluded by the cause of the contract, for various reasons: previously, loans and financing agreements were of course normally characterised by compensation to the lender; but there is nothing to prove that this was and is an essential condition of the system. Both the possible free nature of the loan and also the fact that the regulatory provisions can be waivered and are certainly not of public order, remit the structure of the contract to private autonomy. And in indexing choices, private autonomy rationally includes the effect of negative rates, unless expressly and duly agreed otherwise. In terms of classification of an indexed contract, we can discuss whether it is a legally or socially typical contract with the addition of a reason-based clause, (reasons which, even if decisive and common, do not, in any case, alter the cause)[135], or whether instead it is an irregular contract, established in practice. But there shall be no doubt that the first case involves the inclusion of a legitimate clause and the second case involves the drafting of an irregular contract worthy of protection[136], in which the indexing introduces an element of lawful uncertainty to the relationship[137].

They are not excluded by the classification of interest as "unearned income": as already mentioned above, the legislation doesn't offer its own idea of interest inspired by a principle or concept with an underlying choice of legal policy of public order value; instead, it simply refers to practice and to current economic views.

The provisions that classify interest as unearned income representing compensation for "others'" enjoyment of the money borrowed are descriptive, not prescriptive. Types of interest that do not fit this notion are already in the system (essentially default interest), which, by demonstrating their relativity, demonstrate that no irrevocable choice has actually been made by the legal system. Which opens the door to even the legal possibility of a different case law, such as that of negative rates.

135 Thus, the assertion of the doctrine (D. Maffeis, La causa di finanziamento esclude la sopravvenienza di c.d. tassi negativi etc.,cit., in § 2) adopted in this paper appears, in itself, correct: that the caue of the contract is unaffected by the events that occur. However, precisely for this reason, the assertion that the inversion of the sign of the reference index would cause an inadmissible variation in the cause appears to be untrue.

136 No one has ever doubted the validity of indexed contract, or in any case the lawfulness of the indexing clause.

137 On uncertainty, see E. Gabrielli, Alea, in Enc. giur., I, Rome, 1988: "The inclusion of a speculative element does not cause a true change in cause of contract, but simply an extension of conventional contractual uncertainty" (p.3).

Neither are they excluded by the profit-making nature or the stability of the banking institution: the response to these arguments was rightly that, first of all, a temporary negative value of the rate does not necessarily lead to the whole transaction arriving at a negative balance for the bank in its relationship with the customer, and that, in any case, the abstract aim of profit-making is not enough to guarantee it compulsorily in practice; second, the "proper and prudent Management" of the banking institution pursuant to Art. 5 TUB and the requirement of credit system stability in general can justify the banks' introduction of "zero floor" clauses but it cannot compensate for their absence. Nor - it has been established - is it possible here to rely on ius variandi, because this is allowed under Art. 118 TUB to change in peius clauses in the contract, not to introduce new clauses.

Nor does the legal system include any real legal limits to negative rates in contracts.

In relation to the principle established under art. 47 of the Constitution, we mentioned earlier how current interpretation of investor protection is performed by means of legislation on lending that ensures organisation, solvency and stability. But in the same way as this doesn't include a guarantee of the profitability of individual investments, it also doesn't mean that a case or error of valuation won't lead to reduced profits or even losses for the broker, in individual transactions.

Nor do the provisions of Articles 820, 1284, 1346, 1815 of the Civil Code and 117, Par. 4 TUB exclude the possibility of negative rates in variable rate contracts: these regulate the normality, not the necessity, of the cases considered here. This normality is tied to a historically dominant scenario (positive rates) that, however, has nothing to do with any direction of legal policy other than that of remitting the structure of the transaction to the market and to the parties.

Confirmation of this is also provided by the consolidated legislation on compound interest, built on the presumption that the rules with which interest in bank transactions are traditionally governed are not regulatory customs, i.e. choices adopted by the legal system, but simple negotiation customs, i.e. choices granted to private autonomy but unrelated to a stance of the system dictated by specific legal policy demands[138].

Thus, there are neither conceptual nor legal limits. And it can be useful to add a consideration that clearly emerges from the provisions of general contract law for the case of costs that fall outside of the envisaged trade plan. Whilst the phenomenon of negative rates appears in relation to exceptional and unpredictable stories, at least before it becomes fully apparent, and can lead to significant costs charged to the lender when the ratio is inverted so incisively and for enough time as to lead to negative payment to the lender for the investment made, invocation of the rule under part 2 of Art. 1467, Par. 1 of the Civil Code is precluded, insofar as index-

138 See, among many, Court of Cassation, 11 November 1999, no. 12507, in Corriere giur., 1999, p. 1485, with note by Carbone.

ing places the inversion within the normal uncertainty of the contract[139]. To summarise: there are no conceptual and legal limits that prevent the possibility, following the reference index becoming negative, the credit-debt ratio of the interest between lender and borrower in variable rate contracts changing and, where applicable, inverting, leading to negative payment to the lender.

12 On the possible existence of valid contractual limits (floor clauses)

We must now consider the question of whether the limits that are not derived from the law can derive from private autonomy. In other words, can there be valid contractual limits (floor clauses) to the full overturning of interest obligations.

From the above - i.e. that the direction of legal policy on the subject is that of remitting the structure of the transaction to the market and to the parties - it emerges immediately that the lawfulness of resorting to floor clauses or "zero floor" limits, in itself, is not in question. In other words: in the same way as opening up to regulations on contracts and interest exposed to overturning the normality of positive rates and payment to the lender is remitted to private autonomy, limiting or correcting these possible effects of indexing, via dedicated clauses, is also remitted to private autonomy. Therefore, it seems of little use to investigate further a point that is self-evident.

The question that really arises, and that has attracted the attention of doctrine, is another. It is certainly legitimate to resort to floor clauses in loan (and investment) agreements, but with two limits: one a certain limit, transparency, and the other a possible limit, balance.

12.1 On necessary transparency

One certain limit is transparency. The principle is firmly rooted in the new law on the contracts of consumers and users of banking and financial services, and is explicitly based on this legislation. This is because the new contract law, although it is in no way involved in the content of the agreement (which can therefore shape the obligation of interest as it likes, including linking it to variable indexes liable to invert the ratio, limiting their capacity with floor clauses), it is, on the other hand, involved in guaranteeing the rationality of the procedures of negotiation. In consumer law, and the law on the users of banking and financial services, one condition of the legitimacy of contract decisions - whatever they may be: freedom is unaffected - is that they are made freely and in full awareness and formulated and expressed on the basis of informed consent.

139 For a similar case, see Court of Cassation, 21 April 2011, no. 9263, in RFI, 2011, Contratto in genere, no. 521, on the subject of the normal uncertainty of a loan that is tied to a variable index, at the will of the parties (in this case, the fluctuations of the foreign currency market). With the same view, Court of Cassation, 17 July 2003, no. 11200, ivi, 2003, Contratto in genere, no. 584.

On the transparency of financial transactions

We mentioned earlier that the principle of investor protection set out under the Constitution has been translated into a sectional credit system intended to guarantee its stability and effectiveness, with the aim of maximum possible economic development. Within this context, we must also look at the interventions of the central banks intended to stimulate the economy by means of interest rate measures that can lead to the unusual phenomenon of negative rates. But the legislative picture is completed only by considering how this macro-economic and - in a manner of speaking - macro-legal approach is accompanied by a micro-economic legal approach towards the efficiency of individual financial transactions. The specific animating principle - which owes much to the action of the EU in this field - is the principle of transparency: ensuring for the operator, including non-professional operators, adequate information on financial products, contract terms and conditions, connected opportunities and risks, to allow him to make an informed choice. It goes without saying that the efficiency of individual choices must contribute to the general efficiency of the system.

The regulations of the Civil Code already imposed on the contracting parties a duty of fairness and good faith, obviously also applicable to the contracts and financial transactions. For several decades after the promulgation of the code, the law gave little importance to these general clauses. The dominant principle of caveat emptor formed the basic inspiration behind contract law, consolidated with the coding.

The situation changed with the arrival in the early 1980s of the new EU contract law, intended to protect the consumers

to and users of general interest services from their characteristic imbalance of information[140], especially by means of contract transparency rules and information obligations for professional contracting parties[141]. On the one hand, numerous rules of conduct were introduced to the special regulations[142] for professionals with the aim of ensuring the informed consent of the counterparty[143]. On the other hand, the criteria of good faith and fairness already found in the code[144] were re-evaluated and expanded in terms of interpretation.

140 M. De Poli, Asimmetrie informative e rapporti contrattuali, Padua, 2002.

141 D. Russo, Sull'informazione nei contratti, Naples, 2016; R. Senigaglia, Accesso all'informazione e trasparenza: profili della conoscenza nel diritto dei contratti, Padua, 2007; E. Morelato, Nuovi requisiti di forma nel contratto. Trasparenza contrattuale e neoformalismo, Padua, 2006.

142 Essentially with the TUB, Leg. Decree No. 385 of 1 September 1993 and subsequent additions and amendments.

143 P. Gaggero, La trasparenza del contratto. For analysis of credit brokering, Milan, 2011; G. Alpa, La trasparenza dei contratti bancari, Bari, 2003; A. Scarpello, L'illecito da informazione economica e le nuove frontiere della responsabilità civile, Milan, 1998.

144 F. Piraino, La buona fede in senso oggettivo, Turin, 2015. In case law, Court of Cassation, 23 March 2016, no. 5762, in Foro it., 2016, I, no. 1703, Pardolesi P., and in Nuova giur. civ., 2016, no. 1063, Scaglione, and in Contratti, 2016, no. 986, Alberti: "The breach of the obligation to behave in good faith in the negotiation and stipulation of the contract assumes significance not only in the case of unjustified breach of contract or termination of an invalid contract, but also in the case of a valid contract proved to be prejudicial to one party victim of the improper behaviour of the other party."

This led to special detailed legislation, which it is worth outlining by distinguishing between the provisions specifically set out for bank contracts and those set out instead for financial products.

Transparency and information in bank contracts

Today, special legislation on banking includes a series of provisions on "transparency of contract terms and conditions and customer relationships"[145]. This pursues the objective of notifying customers of contract conditions in advance, and thus informed consent, but also that of allowing competition between brokers[146]. This legislation does not contrast the practice of the contract regulations being made available by the professional[147]. But this discretionary capacity is limited by the power of the Interministerial Committee for Credit and Savings (CICR) to set regulations on the form and content of the contract, on the indication and calculation of interest rates and any other price or condition, on the essential elements to be indicated in advertisements and offers, on the form, as well as by the power of the Banca d'Italia to require certain typical content for certain types of contract[148]. The contract conditions and, in this case, the interest rates and other prices and conditions must be advertised in detail and outlined in detail in the words of the contract and/or in its annexes, without which the minimum and maximum rates of the ordinary treasury bills (BOTs) and the advertised conditions will apply (and if not advertised, nothing is owed)[149]. In long-term contracts, the conditions agreed can be changed by the bank only if the customer has specifically approved the ius variandi and subject to due justification. The interest rates of forward contracts can never be changed[150].

The conditions normally set out by the bank in compliance with these operating regulations must be drafted "in such a way as to guarantee the fairness, completeness and comprehensibility of the information, in order to allow the customer to understand the features and costs of the service, easily compare products, make well-thought out and informed decisions"[151]. These conditions must be clearly communicated not only with the provision of an advance copy of the contract (and before that with adequate advertising tools) but also with the provision of clear and detailed explanatory information documents, which include a simulation of the impact that the economic condi-

145 TUB, Articles 115-128 ter.

146 See the provision of the Banca d'Italia of 29 July 2009 (as amended by the provision of 15 July 2015) Trasparenza delle operazioni e dei servizi bancari e finanziari; correttezza delle relazioni tra intermediari e clienti, Art. 1.1.

147 P. Gaggero, cit., p. 65.

148 TUB, Articles. 116, Par. 2 and 3, Art. 117.

149 TUB, Articles 116, Par. 1., and 117, Par. 7.

150 TUB, Article 118, Par. 1.

On the jus variandi M. Gambini, Fondamento e limiti dello jus variandi, Naples, 2000; A. Barenghi, Determinabilità e determinazione unilaterale nel contratto, Naples, 2005; G. Iorio, Le clausole attributive dello jus variandi, Milan, 2008; P. Gaggero, La modificazione unilaterale dei contratti bancari, Padua, 1999.

151 Provision of the Banca d'Italia of 29 July 2009, Art. 1.3

tions will have on the total amount to be repaid upon maturity.

It is clear that the regulations on transparency remedies the customer's contractual weakness deriving from an imbalance of information. From this point of view, it is first and foremost a tool of market preservation, correction of its failures and, by reflection, protection of the customer. How effective the remedy[152] actually is (whether, for example, the information truly leads to comprehension, whether the option of comparing the offers leads to efficient selection by the bank counterparty) is another question.

However, whether it should serve and actually does serve to remedy the contractual weakness that derives from inferior negotiating strength is debated. In short, whether transparency should and can also guarantee overall equality of negotiation, in terms of balance between the parties. But in actual fact, it appears that there are only legal measures taken on contractual balance in the area of contracts with users of banking services for non-professional requirements and only in relation to the regulatory clauses of the agreements, From this it can be concluded that interest rates, which in loan agreements for consideration fulfil the function of compensation and identify the terms of trade, are remitted to the free choice and discretion of the parties as long as they are expressed in transparent clauses and based on adequate information.

This gives rise to the principle by which the clauses that define the economic and regulatory terms of trade are invalid if not expressly and transparently included in variable rate loan agreements from the beginning. This principle is easily avoided by Art. 34 of the Consumer Code and, more relevant to our subject matter, by Articles 117, Par. 4 TUB, interpreted in the light of the provisions of the Banca d'Italia on the Transparency of Banking and Financial Transactions and Services. Fairness of Relations between Brokers and Customers of 29 July 2009 and of 9 February 2011 and Art. 21, Par. 1, Lett. A) of the Consolidated Law on Finance (TUF) in the light of CONSOB Regulation no. 16190/2007, spec. Art. 28. These include specific obligations of information, for the professional, and compulsory requirements of contract clarity and comprehensibility, in favour of the counterparty[153].

152 Doubts, among others, in G. Greco, Trasparenza bancaria e condizioni generali alla luce della direttiva sulle clausole abusive, in Studi e ricerche, 1995, p. 60 et seq.

153 153 It is clear that the obligation of transparency is valid, in the field of financial brokering, even for qualified investors: T. Milano, 19 April 2011, in Contratti, 2011, no. 761, Autelitano: "Financial brokers are obliged, even when the customer is a qualified operator under Art. 31 of CONSOB Regulation 11592/1998, to comply with the obligation to behave with diligence, professionalism, fairness and transparency, in the interests of the customer and for the integrity of the markets, provided for by Art. 21, Lett. a) TUF; Articles 27, 28 and 29 of CONSOB Regulation no. 11592/1998, on adequacy, information and conflict of interest, provide for further fulfilment, in addition and not in exception to the aforementioned primary obligation"; T. Orvieto, 12 June 2006, in Rass. giur. umbra, 2007, no. 628, Tuccani:

"The fact that the customer is an expert investor of financial instruments does not exempt the bank from its obligation to provide complete and accurate information in all the stages of the relationship, an obligation which stands both at the time of the investment proposal and subsequently, in compliance with the contractual transparency and good faith imposed by the legislator." However, for these, existing regulations reserve a slight mitigation of the protection, in terms of the range of due information: see Art. 34 of CONSOB Regulation no. 16190/2007.

The question arises as to when a clause can be considered transparent. An obvious requirement is that it be included in the contract documents and formulated using clear and comprehensible words even for a poorly qualified user of banking and financial services. But some experts demand that it also be particularly clear and particularly highlighted[154]. And on this point, whilst not decisive, it is significant that the Italian Competition and Market Authority (AGCM)[155] has suspended the infringement procedure set in motion subject to specific undertakings by the broker to highlight the floor rate clause in particular in the first parts of the SECCI form, of the information sheet, of the General Information and of the Standard European Information Prospectus, and to remind the borrower of it annually.

Another important question is what should the consequences of a lack of transparency be? At first glance, this is a dubious issue.

An initial perspective would lead us to say, following the guidelines asserted by the Sezioni Unite (United Divisions) of the Supreme Court[156], that it is a breach of an obligation of conduct and thus the sanction is the compensation for pre-contractual liability damages (but including positive contractual interest, as the Court has clarified).

Another perspective, however, considers the lack of transparency in itself to be a case of "unconscionability", and thus grounds for declaring the contract null and void. According to this perspective, no objection can be made that the assessment of unconscionability by its nature bears no relation "to the adequacy of compensation" (which interest certainly is in these contracts) because the law includes the provision of the review of unconscionability even for economic clauses if the compensation is not identified clearly and comprehensibly[157]. And it is certainly not without significance that the European Court of Justice did not hesitate in the aforementioned case of the Spanish banks to presume the unconscionability of floor clauses that the Tribunal Supremo had instead deemed non-transparent, establishing the obligation of the repayment of the full difference.

As is clear to see, the question is not hard to solve and to practical effect is not very significant.

154 A.A. Dolmetta, op. cit., p. 4.

155 See the provision of 7 February 2017, cit.

156 Court of Cassation, United Divisions, 19 December 2007, no. 26725, in Contratti, 2008, no. 221, Sangiovanni, and in Giur. it., 2008, no. 347, Cottino, and in Dir. fallim., 2008, II, no. 1, Sartori: "The breach of the obligations of customer information and of the proper execution of transactions that the law imposes on the bodies authorised to provide financial investment services can give rise to pre-contractual liability, with the resulting obligation to compensate any damages, where such violations occur prior to or at the time of the stipulation of the brokering contract intended to regulate the subsequent relations between the parties; it can, however, give rise to contractual liability and possibly lead to the termination of said contract, where the violations concern the investment or disinvestment transactions performed under the brokering contract in question; in the absence of the relative regulatory provisions, the breach of the aforementioned obligations of conduct can in neither case be deemed grounds for declaring the brokering contract, or of the subsequent individual terms of contact, null and void, pursuant to Art. 1418, Par. 1 of the Civil Code ."

157 See Art. 34, Par. 2 of the Consumer Code

The solution involves establishing that the transparency is, at the same time, a broker's duty of conduct with regard to providing clear and comprehensible information, but also a content requirement of the contract, with regard to the drafting of the clauses. Whereas, in accordance with the Italian Court of Cassation, an infringement of the rules of conduct leads to damages, an infringement of the rules of content clearly leads to the contract being declared null and void. Besides, as already stated above, the legislation establishes explicitly that even the clause on the scope of a contract which causes significant imbalance between what is given and what is received, if it is not transparent ("clear and comprehensible"), is null and void, in the same way as unconscionable regulatory clauses.

The practical irrelevance derives from the fact that the obligation to pay compensation for the infringement of a rule of conduct ends there, mainly to coincide with the obligation of repayment for a contract rule being declared null and void: effectively, in either case, the customer has the right to recover the difference. The only significant difference are the court costs of accompanying the application for a declaration of unconscionability with an application for a ruling obliging repayment.

From this, we can conclude that the floor clauses widely used today in variable rate loans, are lawful only if formulated clearly and comprehensibly and adequately highlighted.

12.2 The interpretation of an "embedded derivative"

A different, negative, assessment of the legitimacy of floor clauses included in variable rate loan agreements is given by the doctrine according to which such clauses are allegedly an embedded derivative included in the bank contract[158]. Therefore, we must first remind ourselves of this construction and perform a critical evaluation.

This doctrine states that the floor is not merely a technique for determining the price, or rather interest rate, but an autonomous interest rate floor contract and thus an interest rate option[159]. This is said to give rise to a derivative "whose payoff depends on the value of the underlying element"[160], which is embedded in the host

158 A.A. Dolmetta, Di derivati impliciti e di derivati apparenti, in Riv. dir. bancario, dirittobancario.it, 21, 2016; F. Sartori, Sulla clausola floor nei contratti di mutuo, in Contratto e impresa, 2015, p. 698 et seq; F. Greco, La violazione della rego- la di trasparenza nel mutuo con tasso floor ed il problema della scommessa razionale nel derivato implicito, in Resp. civ. e prev., 2015, p. 25 et seq.; D. Maffeis, I derivati incorporati sono derivati ed incidono sulla qualificazione civilistica dei contratti di finanziamento, in Società, 2016, p.1385; the theory of embedded derivatives in loan agreements is criticised with good arguments by E. Girino, I derivati 'impliciti': virtù e vizi della scomposizione, in Riv. dir. banc., diritto- bancario.it, 2016, esp. § 3; as well as by F. Caputo Nassetti, Le clausole di indicizzazione nei finanziamenti e nel leasing, in Giur. comm., 2016, I, p. 352 et seq. A definition of embedded derivatives is given in § 4.3.1. Of EU Regulation 2067/2016, but it is intended for the drafting of financial statements and financial assessment. This focuses on the characteristic of "causing a change in financial cash flows".

159 This is presented as such in the information documents of many banks (see, e.g. Banca Ifis Information Document, in §1. 4, under the heading (Interest Rate Floor)).

160 F. Sartori, Sulla clausola floor nei contratti di mutuo, cit., § 4, which recalls for definition purposes IAS 39, § 10. The legal doctrine in favour of the theory of floor clauses in financial agreements as 'embedded derivatives' is heavily

variable rate loan agreement, and which, it is alleged[161], "alters the operation of the host contract in the light of an external variable that affects the future regulation of cash flows"[162]. The rulings of some judges on this subject have fallen in line with this doctrine[163].

With the case law set out in this way, mainly for the purpose of identifying the specific rules on information and transparency applicable to the case, identified in the regulations of the TUF[164], certain exponents of this doctrine have gone on to observe that, looking more closely, the clause in question doesn't concern (only) the price of the service and thus the scope of the contract and the adequacy of compensation, and thus it is not merely an economic clause such as that excluded by the review of unconscionability when clear and comprehensible, but concerns first and foremost the distribution of the risk of the performance of the underlying element[165] and, and therefore, according to this line of thought, it is a regulatory clause open to review, and declared null and void if it causes "significant imbalance". And the imbalance is evident, and the clause cannot be seen to overcome the ruling of unconscionability, when the distribution of risk is "not symmetrical". Non symmetrical is when - in the case of a customer who signs a variable rate loan agreement with the bank with a floor clause - no reduction in the usual spread with which the contractual rate is determined in relation to the reference rate is awarded to the borrower, or when the bank that buys the floor doesn't pay the premium or up front usual for these derivatives.

Without prejudice to the financial considerations (see above, § 2), the doctrine recalled here generates some doubts. There are two reasons for this.

First of all, the founding classification of the floor as an embedded derivative appears flawed by multiple doubts on the imperviousness of the conceptual construction.

First: the so-called floor does not appear in reality to have the characteristics of a conceptually autonomous contract, although embedded in the loan agreement. Looking more closely, it is not even easily formulated as an autonomous clause of the agreement. In fact, this does not in itself determine any right or obligation

influenced by the financial approach to the case and accounting techniques, such as the IFRS 9, Art. 2426, 11°-bis of the Civil Code, the criteria of the Banca d'Italia circular no. 262/2005 on the structure of financial statements. But these techniques do not appear to be relevant to legal classification.

161 Sartori, Sulla clausola floor nei contratti di mutuo, in Contratto e impresa, cit., § 5

162 This formulation as a derivative would mean that the obligations of information for the professional are no longer (only) those of the TUB, but (also) those of the TUF (see F. Civale, Clausole floor nei contratti di mutuo e di leasing: prime riflessioni, in Giustizia civile. Com, 2015, p. 4).

163 Udine Tribunal, 15 May 2015, no. 711; Udine Tribunal, 29 February 2016.

164 But we must remember that the Banca d'Italia regulations (Banca d'Italia, Trasparenza delle operazioni e dei servizi bancari e finanziari. Correttezza delle relazioni tra intermediari e clienti, (Transparency of Transactions and Banking and Financial Services: Fairness of Relations between Brokers and Customers) Sect. I, no. 1.1) have established that, in the case of compound products whose main purpose is financing and not investment, there is the exclusive application, including for information purposes, of the provisions of the TUB. In opposition, Udine Udine Tribunal, 15 May 2015, no. 711, cit.

165 Contra F. Civale, Clausole floor nei contratti di mutuo e di leasing: prime riflessioni, in Giustizia civile. Com, 2015, p.6.

between the parties: the obligation of interest is rather derived from the overall variable rate clause, certainly not from the floor that, without determining itself any obligation, simply contributes to specifying the terms of the variation. But that which in itself does not determine but only contributes to the specification of the respective rights and obligations cannot be considered an autonomous "contract". Asserting the contrary would be like considering the identification in an agreement of the deadline for fulfilment or place of delivery an autonomous contract. The floor is rather a fragment of the clause on the contractual variable rate, determined by three contributing factors: the reference variable rate (market rate), the spread and the floor. Its entire function is reduced to identifying the limit down of the variation.

Second: "Derivative", i.e. financial tool whose total amount depends on an "underlying element", is certainly not the floor. If we adopt the current understanding of the derivative as an instrument whose value varies depending on an external "underlying" variable, this is certainly not the floor, which doesn't vary at all, but rather the contractual variable rate that - having taken into account the growth determined by the spread and the limit set by the floor - varies on the basis of the reference rate. So, it certainly is not the set limit given by the floor, but the clause that determines the variable rate by means of an external reference; i.e. the clause that determines the variation in interest, the "embedded derivative" wedged inside the loan agreement. But this means that every variable rate loan is in itself a derivative contract, irrespective of the floor; however, no one has ever asserted that "variable rate" loans, or their variable interest rates, are by their very nature all derivatives (even without floors)[166]. In any case, as we can see, the variable derivation that classifies a derivative cannot conceptually refer to a floor[167].

It also appears to be begging the question. It assumes indiscriminately that the "economic" clauses, i.e. that determine the scope or compensation of the contract, if they can also be formulated as regulatory clauses (distribution of risk), that is to say assigning rights and obligations, also become subject to the review of unconscionability. But this is entirely unfounded and appears contrary to legislation and to the ratio legis.

Unfounded: there is no affirming argument; in theory, this is as possible as the opposite, and it would be much easier to think that, if the "price" of a good were a contractual obligation (e.g. a consumer loans the use of a software and "pays" for it by accepting liability for the cost of all the updates required for use and permitted by computer developments), this (even) "regulatory" clause, inasmuch as the clause that determines the compensation to be paid, would (even though it makes the use of the software significantly expensive) is beyond any rule of unconscionability (because it is transparent).

166 The unsustainability, with specific reference to variable rate loans, is argues by da E. Girino, I derivati 'impliciti': virtù e vizi della scomposizione, cit., § 6, § 7.

167 The fact that the floor is a fragment of a clause very widely used in the formation of derivatives is does not affect in any way the classification as derivative of that to which the floor is appended

In any case, it appears to be contrary to legislation: provisions such as Par. 4 and 5 of Art. 33 of the Constitutional Code demonstrate that certain "regulatory" clauses (such as those mentioned above on interest rate variation in financial agreements and on their "price" in general), insofar as they are first and foremost "economic", are beyond the review of unconscionability.

Finally, it appears contrary to the ratio legis: the new European contract law is also based on the freedom of contract. An "abuse" of price is unthinkable. The abuse can only refer to that which in no way expresses the terms of trade[168], It is absolutely clear that our legal system is inspired by the principle of the indisputable nature of the compensation[169]. And the new contract law that exempts the clauses that define the adequacy of the compensation for goods and services from the review of balance appears to be the same.

It follows that the formulation of the floor as an "embedded derivative" doesn't seem very convincing; and that, in any case, even accepting it as the correct classification in this case, this classification concerning an indisputable clause determining the compensation for the financial service does not legitimise a review of unconscionability. Moreover, the ABF legislation follows this logic[170].

After all, it would be very embarrassing to set parameters for such a review of unconscionability. And it could not be done without contradicting the legal precepts on the method of assessing unconscionability.

The breach of the law is evident. In order to identify the alleged significant imbalance "in the distribution of risk", "taking into account the nature of the good" - here, the use of money - "and referring to the circumstances existing upon completion of the contract"[171] - here, the existing world of (even) negative market rates -, we would have to be able to maintain that where the risk in favour of the bank lessens thanks to the floor, the risk run by the borrow does not fall, indeed it increases. But a ruling of unconscionability founded merely on the theoretical lack of a symmetrical clause would presume precisely an evaluation made in theory and refer-

168 This was confirmed by the European Court of Justice, on 30 April 2014, in proceedings 26/13, Árpad Kásler, which removes from under the control of unconscionability any clause that "sets an essential provision of the contract and characterises it as such". It is useful to know that the decision concerned precisely a loan agreement. It is obvious to think that the rate clause sets an essential provision of the loan and thus characterises it (not by chance it is called a "fixed/variable rate" loan).

169 The departure point is the principle of contractual freedom, which leads to the tendency towards incompetence in public authority - law, administration, jurisdiction - in its assessment of the decisions of private contracting parties, and in particular the economic terms of their trading (except for in specific sectors in which public price control is deemed appropriate). The principle of the incontestability of the compensation emerges clearly from the system data. The regulations on rescission indicate that the economic imbalance of contractual trade is insignificant, apart from in extreme cases in which negotiations prove to be contaminated by unusual and penalising circumstances (situation of danger or need). (...) The incontestability of the economic adequacy of the trade is reiterated even in a context dominated by policies to protect weaker contracting parties from abuse by stronger contracting parties: in contracts between consumers and professionals, the classification as unconscionable of the established clauses generally "does not concern...the adequacy of compensation for the goods and services" (Art. 34, Par. 2, Constitutional Code)." (V. Roppo, Il contratto, Milan, 2011, p. 364 et seq.).

170 See Collegio di Napoli, 16 September 2015, no. 7355 (www.arbitrobancariofinanziario.it/decisioni/Dec-20150916-7355PDF).

171 This is the known criterion provided for by Art. 34, Par. 1, Constitutional Code.

ring to a hypothetical future (the possibility that during the contract the rates will increase significantly), where the law requires it to be made in practice and referring to the actual present: the existing circumstances at the time of drafting the contract (Art. 34, Par. 1, Constitutional Code).

Furthermore, from the point of view of financial assessment, is has been pointed out (see above § 2) that, whilst, on the one hand, analysis "by components" can serve to reinforce he elements supporting the decision to sign the agreement or to fulfil accounting purposes (e.g. for IAS-IFRS purposes), on the other hand, the indexing rule and all of its components determine - jointly - the economic reason for the contract; in other words, interpreting the contract technically, "by components" cannot alter its logic and unitary nature.

Therefore, it seems more accurate to formulate the floor clauses included in variable rate loans as a simple fragment of the clause determining the contractual rate, in itself extraneous to any judgement of unconscionability because expressed clearly and transparently to the borrower, allowing him to prefigure the possible legal and economic consequences of the minimum variation limit appended to the contract.

12.3 On the presumed unlawfulness of the floor clause due to the absence of a symmetrical clause

To the certain limit of transparency, there are some who would like to add the (very debatable) limit of balance. Here, again, the case is of a customer who signs an agreement with a bank for a variable rate loan with a floor. According to certain doctrine, it is assumed that the inclusion of floor clauses is legitimate only if accompanied by the simultaneous inclusion of cap clauses. Or by a significant reduction in spread. Or by the payment of a premium. In their absence, the contract would be unworthy of protection, defending the bank from possible negative values but leaving the customer exposed to an increase in rates[172], that is to say, it would be a contract of "unilateral uncertainty", and this would be, in fact, unworthy of protection[173].

It is a complex issue. The special regulations on loans (and on financing agreements in general) in themselves, which, as described above, contribute to their regulation, do not refer to the principle of fairness - unlike the regulations on consumer contracts, which are however applicable to certain bank contracts. Nor do they refer to the fairness established by law and referable to the terms of trade. However, we cannot exclude the possibility that the principles of fairness of trading can give rise to limits to negotiation imbalanced too far in favour of the broker.

172 A.A. Dolmetta, Tasso variabile e "valori negativi", cit., p. 4.; F. Sartori, Sulla clausola floor nei contratti di mutuo, cit.

173 In agreement on this point, in addition to the authors in the previous notes, see M. Barcellona, I derivati e la causa negoziale, in Contratto e impresa, 2014, p. 571 et seq.; F. Greco, La violazione della regola di trasparenza nel mutuo con tasso floor ed il problema della scommessa razionale nel derivato implicito, in Resp. civ. e prev., 2015, p. 25 et seq.

Legislation has not yet ruled specifically on this point. However, it must be recalled that the issue that animates this doctrine - i.e. the unworthiness of protection of unilateral uncertainty - has at times been acknowledged in other cases of financial negotiation[174]. Though it is true that it has been disregarded by other rulings[175]. The theory of the unworthiness of protection of unilateral uncertainty and of the need of balance in the terms of trade, here given by the provisions on variable interest rates, gives rise to doubts: the suggestion it contains is understood, because the risk relating to variation in rate has, in one sense, limits that the other sense doesn't recognise, at least in theory (a part from the limits imposed by anti-usury regulations); but looking more closely, it doesn't provide real technical and legal arguments for the alleged unworthiness.

The doctrine in question refers to the legislation that has on various occasions considered financial contracts with unilateral uncertainty[176] to be unworthy, or

174 T. Salerno, 2 May 2013, in Corti salernitane, 2015, no. 476, Malomo: "Given that interest rate swap contracts are speculative contracts, the risk must be bilateral and thus divided proportionately between the contracting parties, otherwise you have a unilateral uncertainty that makes it unworthy ab origine; in this case, the swap contract is null and void, insofar as the underlying interest rates are unworthy of protection pursuant to Art. 1322 Civil Code, resulting in it being impossible to request payment for the closing value"; T. Brindisi, 8 July 2008, in Dir. e pratica società, 2008, fasc. 20, no. 62, Giannini, Vitali: "The transaction consisting of the concession by the bank offering the investment of a loan the intended exclusively for the purpose of buying particular financial instruments attributable to the bank itself cannot be classified as simple loan nor as a loan for a special purpose; this insofar as the principal characteristic of a loan is making available a sum of money to the borrower, who takes ownership of it, with the obligation of repayment upon reaching a deadline; the aforementioned contract is thus atypical, with its cause not only and not just being the loan of a sum of money by the bank offering the investment, but also the sale of particular financial products by this same bank; such a contract is previously unknown to the Italian legal panorama of the contract of unilateral uncertainty, in which the uncertainty is wholly concentrated in the legal sphere of the saver who pays a fixed interest rate with the real risk of loss even in excess of the original outlay; the irremediable initial imbalance between the provisions of the bilateral contract thus render the whole contract in question totally null and void, due to its opposition to the provisions under Art. 1322-1343 Civil Code, given that this transaction is not aimed at the protection of interest worthy of protection according to legal system; this insofar as the legal system cannot acknowledge the validity of atypical contracts that, far from providing for simple methods of differentiating different risk profiles, rather transfer all the uncertainty deriving from the contract to one party." With the same view, T. Salerno, 12 April 2007 in Giur. it., 2008, 134; T. Brindisi, 21 June 2005 in Danno e resp., 2006, no. 179, Liace and in Contratti, 2006, no. 884, Velluzzi.

175 Court of Cassation, 25 November 2002, no. 16568, in R.F.I., 2002, Contratto in genere [1740], no. 405: "In the performance of their private autonomy, the contracting parties can easily agree to the unilateral or mutual assumption of a prefigured possible future risk, extraneous to the pre-chosen type of contract (in this case, land mortgage linked to loan in ecu), amending it for this purpose and making this aspect of the contract speculative, with the effect of excluding, in the case that such risk occurs, the applicability of rebalancing mechanisms provided for by ordinary contract regulations"; Court of Cassation,12 October 2012, no. 17485, in Giur. it., 2013, no. 2476, Pennazio: "Even for the so-called commutative contracts, the parties, in their power of contractual autonomy, can prefigure the possibility of contingencies, which affect or may affect the balance of the provisions, and assume the risk reciprocally or unilaterally, thus altering the typical model of commutative contract and making it speculative with regard to this aspect"; Court of Cassation, 31 May 1986, no. 3694, in R.F.I., 1986, Contratto in genere [1740], no. 335; "A contract is deemed speculative and not subject, pursuant to Art. 1448, Par. 4 Civil Code, to the rescission for damages when the uncertainty, under specific agreement of the parties of by the very nature of the transaction, is characteristic of the entire contract and has been so since it was put together, so that the economic advantage is fundamentally uncertain in one or all of its parts in relation to the risk to which these parts are exposed." See also Arb. Milan, 23-09-2015, in Banca, borsa ecc., 2016, II, no. 490, Giudici: "For the purposes of the validity of the interest rate swap contract, the uncertainty does not need to be divided equally."

176 Court of Cassation, 30 September 2015, no. 19559, in R.F.I., 2015, Contratto in genere [1740], no. 303: "Interest pursued via an atypical contract founded on professional operators' exploitation of the social security concerns of the users and involving complex trade transactions relating to the management of shared funds that include bonds of doubtful profitability, whose risk is unilaterally transferred to the customer, to whom, however, the product is presented as a low-risk, supplementary social security with the possibility of disinvestment at no cost, is not worthy of protection pursuant to Art. 1322, Par. 2, Civil Code; this is insofar as it goes against the principles set out under

lacking in real cause. However, here the reference is irrelevant: whilst it makes sense to deem without cause and unworthy a financial product purchased for the purpose - known to the counterparty - of covering and limiting risk, if its actual structure proves unsuited to the purpose, it would make no sense to deem without cause and extraneous to protectable interest a loan in which the floor guarantees the lender a minimum interest rate regardless of the rates reaching zero or negative values. Nor, besides, do certain experts deny the worthiness in itself of interest that leads the bank to including a minimum rate in the contract, either positive or "zero floor" limit, to prevent the transaction going into negative territory. Finally, the floor clause fulfils the task of keeping fluctuations towards the lower end of the contractual rate, within a normal range of uncertainty, forcing the actual steep decrease or even fall below zero of the rate to be deemed an exceptional event[177].

Therefore, we are led to believe that the suggestion leading to a conclusion of unworthiness comes from configuring the floor as an embedded derivative and thus the whole contract as a wager that, from that clause, proves to be imbalanced. But here we must first reiterate the error in configuration (the loan remains a loan, even with an element of uncertainty) and also, in any case, the freedom of the informed parties to distribute that uncertainly between them.

Rather, we must ask whether the agreement of a minimum interest rate has a reason and justification other than the power of the bank to impose it on the customer. Therefore, the question is whether, in an atypical market situation in which the borrower, thanks to the unusual fall in rates, could end up using the loan for free or even at a profit, instead of paying for the availability of the borrowed capital, that which first appeared worthy becomes unworthy.

It is easy to respond negatively to this question, based on the recent legal guidelines on worthiness[178]. Apart from types unrelated to this case (such as putting the counterparty in a state of subjection or behaving in a manner contradictory to constitutional obligations), this is identified as an unfair and gratuitous advantage of one of the parties.

Art. 38 and 47 of the Constitution on investor protection and the incentive for social security (including private), therefore it is ineffective where it involves granting the investor a loan of considerable duration ,intended for the purchase of financial products from the lender, and simultaneously giving the lender a mandate to purchase products even in situations of potential conflict of interests"; Court of Cassation 10 November 2015, no. 22950, in Società, 2016, no. 725, Costanza, and others. See also A. Milano, 13 November 2008, in Giur. it., 2009, no. 1690, Inzitari: "In view of the criteria of fairness, diligence and transparency of execution and determination of a contract, the service of constructing and marketing derivative financial products that are structurally unfit, due to the way they are designed, to cover the risk of a medium-size customer or body or enterprise in relation to fluctuations in interest rate is not sufficient; this is because they are almost inevitably destined to close at a loss for such contracting parties, who are thus forced to renegotiate their position under conditions of even greater cost, without, moreover, the estimation of any transparent and objective mechanisms for setting the prices and brokering commission."

177 Court of Cassation [ord.], 21 April 2011, no. 9263, in R.F.I., 2011, Contratto in genere [1740], no. 521: "The normal uncertainty of a contract, which, according to Par. 2 of Art. 1467, Civil Code, does not legitimise termination for excessive consideration, also includes the fluctuations in value of the provisions caused by the regular and normal market fluctuations, when the contract is expressed in foreign currency: in fact, in such cases, in exercising their contractual autonomy, the parties have assumed future risk, unrelated to the pre-selected type of contract, thus rendering the loan agreement uncertain in both an economic and legal sense, in terms of its value."

178 Court of Cassation, 28 April 2017, no. 10506, Court of Cassation, 10 November 2015, no. 2295, in R.F.I., 2015, Contratto in genere [1740], no. 302:

But in variable rate loans, the offset of the payment of interest exists by definition because the borrower continues to enjoy the borrowed capital even in periods of interest in which the floor is actually in operation. As established earlier, the cause of the loan is for consideration even when the actual situation reduces the interest rate to zero or even to a negative value. Therefore, it is consistent with the cause for consideration of the loan that irrepressible minimum compensation be paid to the lender, by means of a floor clause, for the borrower's enjoyment of the use of the money. This is an expression of the Nutzungstheorie that the doctrine has for some time considered the basis for the category of loan agreements. It shows that the definition of interest as the "price of time" is essentially correct.

To summarise on the issue of worthiness: the circumstance of negative rates makes it possible to cancel or invert the sign of the contractual rate, but it does not change the nature of the loan, which remains usurious. This, in itself, cannot paralyse the variable rate mechanism with an intrinsic "zero floor" limit. For this effect, the parties must introduce a floor limit to the terms of contract (i.e. the floor). But it is valid justification for the willingness to negotiate introduced by this limit because the choice to maintain the compensatory nature of the loan that the parties agreed to and accepted from the start is certainly not unworthy of protection.

So, even variable rate loans with a limit down do not appear unworthy of protection, and thus null and void, without setting a cap or otherwise counterbalancing the floor. In addition, there is the observed inadequacy of the remedy to protect the interest it is intended to protect. Indeed, it is hard to envisage a declaration of only partial invalidity based on the unworthiness of protection, i.e. limited to the part of the clause on the variation in rate that foresees a limit down. Indeed, it is hard to maintain that the bank has allegedly signed a contract even without the invalid part, i.e. taking the risk, given the current scenario, of not receiving any interest or even having to pay it. And it is also clear that the remedy would not achieve the result of counterbalancing the floor with a cap or a reduction in spread, or any other compensatory advantage.

Therefore, the idea that variable rate loans with floors but without compensatory advantage are actually null and void seems rather unconvincing. On the condition, however - as reiterated on several occasions - that the borrower has been analytically informed of the significance of the clause and has been able to evaluate its possible effects[179]. Here, we must recall the due emphasis placed by the TUB on

179 A. Lecce, 12 February 2010, in Corti pugliesi, 2010, 225: "The broker's infringement of the so-called preliminary obligations of information is directly harmful to the individual right of the potential investor, the so-called right to free and informed contractual self-determination; free, because the decision to make a legal commitment must be the natural result of personal ambitions and the perceived adequacy of the interest regulations to satisfy the needs on which the decision is based, as well as the so-called functional element of the provision, as referred to under Art. 1174 Civil Code; informed, because only the advance understanding of the factors of potential impact on the economy of the transaction can constitute fertile ground for cultivating productive investment choices, both for the individual and for the wider community; therefore, the infringement of these standards and of the rules of fair conduct applicable to the pre-contractual stage give rise to so-called pre-contractual liability, whenever it occurs in the stage preceding the conclusion of the contract"; Court of Cassation, 29 May 1998, no. 5297, in Rep. Foro it., 1998, Contratto in genere [1740], no. 321: "In the stage preceding the conclusion of the contract, the parties have, at any time, the right to verify their personal advantage of signing the agreement and to request all information they believe to be relevant in relation to the content of the mutual future obligations, with the resulting freedom, for either

the transparency of the clauses regulating interest rates (Art. 117, Par. 4). The exclusion of invalidity does not certify the total irrelevance of the fact that the bank has agreed to a floor that does not provide for any offset. The advantage that the floor guarantees the lender only seems fair as long as the bank can provide "objective" reasons for guaranteeing itself minimum compensation even in the event that the interest rate falls to zero or below. Therefore, it is possible to imagine that, in particular cases, there may not be full justification for the advantage that guarantees the bank the application of a floor to the contract. In view of the legislation, or at least of some of its main aspects, this can assume negative importance, though in terms of infringement of the rules of conduct, and not in terms of a breach of the rules of validity.

Indeed, in the appropriate circumstances, if the contract, although valid, proves to be concretely prejudicial to the counterparty, and if this is not based on the random nature of the performance of the external reference rate but instead on the unfair conduct of the bank in the negotiation of the contractual conditions, this may constitute pre-contractual liability on behalf of the bank. More specifically: if the bank could have granted the compensatory benefit of a floor in the given conditions, in view of recent legal guidelines[180] highlighting the duty of the contracting party to contribute to upholding the interests of the counterparty, this may be included as liability in the conclusion of the contract and may give rise to compensation. Effectively, we may question whether the proposal of the bank concerning a variable rate that, within the context of falling rates, requires a floor without offsetting it with a reduction in spread, which is normal practice in similar transactions, can be justified.

In addition: following other widespread lines of legislation[181], which are supported in part of the doctrine, good faith appears to serve as an integration criterion of contract regulations, and could thus legitimise the judges' decision, when the provision of a floor justifies a specific compensatory advantage, to include further

party, to withdraw from negotiations, irrespective of the existence of valid justification, with the sole limit of compliance with the principle of good faith and fairness, to be understood to mean, inter alia, the duty to inform the counterparty of the real possibility of conclusion of the contract, without omitting circumstances significant to the value of the contract."

180 Court of Cassation, 23 March 2016, no. 5762, in Foro it., 2016, I, no. 1703, Pardolesi P., and in Nuova giur. civ., 2016, no. 1063, Scaglione, and in Contratti, 2016, no. 986, Alberti: "The breach of the obligation to behave in good faith in the negotiation and stipulation of the contract assumes significance not only in the case of unjustified breach of contract or termination of an invalid contract, but also in the case of a valid contract proved to be prejudicial to one party victim of the improper behaviour of the other party"; with the same view, Court of Cassation, 21 October 2013, no. 23873, in Contratti, 2014, no. 339, Purtignano

181 Court of Cassation, 7 June 2006, no. 13345, in Rep. Foro it., 2006, Contratto in genere [1740], no. 492: "On the theme of contracts, the principle of objective good faith, i.e. mutual fairness of conduct, must govern the execution of the contract, in the same way as it governs its creation and its interpretation, and, ultimately, it must accompany every stage of the contract, given that the general clause of good faith and fairness applies as much to the behaviour of the debtor and creditor under the individual contractual obligations (Art. 1175, Civil Code) as to the overall structure of the interests underlying the execution of the contract (Art. 1375, Civil Code); it is manifested in the duty of each contracting party to contribute to fulfilling the interest of the counterparty and sets itself as the limit of every contractually attributed active or passive situation, thus determining in an integrated manner the content and effects of the contract; good faith, therefore, acts as a commitment or obligation of solidarity, which obliges each party to maintain such behaviour that, irrespective of the specific contractual obligations and the duty of care, and without it constituting a significant sacrifice on his behalf, ensures the preservation of the interests of the other party."

obligations in the contract regulations, if this does not cause significant sacrifice on behalf of the party concerned. In the case in question, the concession of a cap, or of a reduction in spread, is certainly significant, but perhaps it is not a "sacrifice" when compared with the "sacrifice" required of the borrower to guarantee a floor rate. The practice is not indifferent to these requirements. It is observed that, where they have seen the need in the current scenario of possible negative rates, to guarantee themselves a minimum return on the loan by means of floor clauses, many brokers have, however, accompanied this personal guarantee with the concession to the borrower of a lower spread than is otherwise applied. This line of behaviour seems prudent and justified, and to be encouraged. It is useful to recall that - as mentioned earlier - this is one of the conditions for AGCM's interruption of the formal proceedings launched against certain banks.

12.4 Summary

In conclusion, as long as compliance is upheld of the provisions of the new contract law on the correct forms of negotiation, especially the principle of transparency of contract terms and conditions, there seems to be nothing to prevent the inclusion of a limit down or "zero floor" limit clause in variable rate loan agreements.

The economic public order of direction here has nothing to say about the possibility of rates becoming negative. Indeed, it may see it as a possible additional (reflected and desired) effect of the economic policy reasons that persuaded central banks to trigger the phenomenon. The question remains entirely down to the choices of private autonomy, even if the economic public order of protection requires, here as elsewhere in contract negotiation by non-professional operators, limits of transparency and information sufficient to guarantee informed and rational contractual decisions.

13 Peculiarities of bond loans

Whereas the above refers to all financing agreements in general (of which loans are the paradigm), it is worth examining bond loans specifically and independently, given the importance of this form of loan on the financial markets.

From a legal point of view, bonds - based on regulatory data found in the Civil Code under Articles 2410/2420-ter - are debt securities (to the bearer or registered securities) issued in series by joint-stock or unlimited liability companies[182], standardised and tradable on capital markets, which represent fractions of equal nominal value and with equal rights of a unitary financing transaction in the form of a loan of a predetermined amount[183]. This transaction gives rise to multiple credit

182 The system allows limited liability companies to issue debt securities but not bonds.

183 F. Signoretti, Azioni, obbligazioni e strumenti finanziari partecipativi, Milan, 2006, p. 53. With the same view, N. Abriani, L. Calvosa, G. Ferri Jr., G. Giannelli, F. Guerrera, G. Guizzi, C. Motti, M. Notari, A. Paciello, D. Regoli, G. A., Rescio, R. Rosapepe, M. Stella Richter Jr., A. Toffoletto, Diritto delle società, Milan, 2004, p. 157.

agreements between companies and individual bondholders[184] subject to conventional and uniform regulations[185].

Italian civil law on bonds is primarily intended to bestow particular legal significance on the unitary nature of financing operations, highlighting the consequent and needed shared interest that is determined among the bearers of bonds from a single issue. In fact, alongside becoming a creditor of the company, the bondholder also becomes, by law, a member of the group organisation that gathers in the bondholders meeting, which is expressly assigned the power to influence the substantive content of the legal rights of the individual bondholder (Art. 2415, Par. 1, no. 2 of the Civil Code)[186]. This mechanism prevents the individual bondholder from acting individually to protect his own rights in a manner that does not conform to that established by the bondholders' meeting in implementation of the principle of subjugation of individual protection to the collective protection established by Art. 2419 of the Civil Code.

The necessary organisation of bondholders is the point of equilibrium reached by the legislator in order to fulfil a dual requirement: that of guaranteeing a collective protection instrument for underwriters and that of enabling the conditions of the loan to be revised by a majority, including to the benefit of the issuing company which, in this way, will not be forced to obtain the consent of all the individual underwriters (Art. 2415, Par. 1, no. 2)[187].

Secondly, with the civil code regulations concerning bonds, the legislator sought to prevent disproportions occurring within the company between the company's own risk capital and its loan capital, imposing quantitative limits on the level of indebtedness[188].

The maximum limit on bond issue - equal to double the share capital, the legal reserve and the available reserves appearing on the financial statements - envisaged by Art. 2412, Par.s 1 and 2 of the Civil Code[189] is attributable to this requirement.

184 For all see: D. Pettiti, I titoli obbligazionari delle società per azioni, Milan, 1964, p. 11 et seq.

185 Così Campobasso, cit., p. 381.

186 See D. Pettiti, I titoli obbligazionari delle società per azioni, Milan, 1964, p. 10; N. De Luca – A. Stagno d'Alcontres, Obbligazioni di società (entry), in Enc.Dir., Updated VI, Milan, 2002, p. 791 et seq.; G. Pellegrino, L'organizzazione degli ob- bligazionisti, Milan, 2008, p. 4 et seq.

187 See G.F. Campobasso, Le obbligazioni, in Trattato delle società per azioni (series editors G.E. Colombo and G.B. Portale), 5, p. 379 et seq. and R. Cavallo Borgia, Azioni e obbligazioni di società, Padua, 1988, p. 347 et seq.

188 On this matter, for all references see M. Palmieri, I nuovi limiti all'emissione di obbligazioni, in Giur. comm., 2006, I, p. 293 et seq. as well as the Report on Italian Legislative Decree containing the Company Law Reform, in implementation of Italian Law of 3 October, 2001, no. 366, Par. 7

189 Quantitative limit that can be exceeded by the company in four distinct cases:

- when the issue is guaranteed by a first mortgage on properties owned by the company and up to two thirds of their value;
- when the issue is intended for institutional investors subject to prudential supervision;
- when exceeding the limit is permitted by a provision from the governing authority, for reasons affecting the national economy;

The third main characteristic of bonds that emerges from the civil code regulations (as well as later resulting from the 2003 Company Law Reform) and that distinguishes them from both shares and other financial instruments endowed with proprietary or administrative rights that the company may issue in accordance with Art. 2346, final paragraph of the Civil Code[190] - and that is evidently the most significant for the purposes of this study - is the range of rights that the bond grants its bearer.

The Civil Code sought to outline a system characterised by the identification of categories of bonds with essentially typical content: ordinary bonds with the right of repayment of the capital and interest (Art. 2411, Par. 1 of the Civil Code); bonds subordinated to the fulfilment of the rights of the corporate creditors but not those of the shareholders (Art. 2411, Par. 1 of the Civil Code); variable and participating bonds for which the interest (and not capital) payment deadlines and amount depend on "objective parameters, including relating to the company's economic performance" (Art.2411, Par. 2 of the Civil Code); bonds convertible into shares (Art. 2420-bis of the Civil Code)[191].

After having defined the characteristics of bonds with typical content, the civil law system also left a wide margin of freedom to statutory autonomy insofar as the parties, in conformity with the aforementioned basic characteristics, can also "freely choose the content and, therefore, the amount of interest, the methods of subordination and the variability parameters, the conversion methods" of the bonds themselves[192]. Thus, for example, within the context of variable bonds, the benefit attributed to the

- when the issue is intended to be listed on regulated markets or in multilateral trading facilities, or when it concerns bonds that entitle bearers to purchase or underwrite shares (in fact, in these cases the underwriter is protected in two ways: thanks to the tradability of the security disclosure obligations to which companies with listed shares are subject). On this matter see: C. Angelici, La riforma delle società di capitali. Lezioni di diritto commerciale, Padua, 2003, p. 68; R. Costi, Il mercato mobiliare, Turin, 2006, p. 405; P. Ferro Luzzi, Riflessioni sulla Riforma; I: La società per azioni come organizzazione del finanziamento di impresa, in Riv. dir. comm., 2005, I, 697; M. Sarale, Delle obbligazioni, in Il nuovo diritto societario, Commentary by G. Cottino, G. Bonfante, O. Cagnasso, P. Montalenti, Bologna, 2004, p.1273.

190 It goes without saying that, despite the use of the same name, the financial instruments to which the Civil Code refers are different from the much larger list of financial instruments set out under Art. 1, Par. 2 of the Consolidated Law on Finance (TUF), which includes transferable securities, money market instruments, shares in undertakings for collective investment, currency derivatives, etc. and which is mainly used by the legislator to delimit the scope of the reserve of assets payable to investment firms (See R. Costi - L. Enriques, Il mercato mobiliare, in Trattato di diritto commerciale (series editor Cottino), vol. VIII, Padua, 2004, p. 38.

191 In these terms D.U. Santosuosso, La Riforma del diritto societario, Milan, 2003, p. 164. Whereas the ordinary bond model (according to the traditional concept and according to the regulatory provisions of Arts. 2411, Par. 1 and 2, 2414, Par. 4 and 2414, Par. 1, no. 2) is attributable to the loan contract - being characterised by the right to reimbursement of the capital (Art. 1813, Par. 1 of the Civil Code) and, unless otherwise provided for by the parties, by the payment of interest (Art. 1815, Par. 1 of the Civil Code) - conversely other typified bond models, subordinated, variable and convertible, are not fully attributable to the causal framework of the loan (in these terms see A. Audino, Commento sub Art. 2411, in Commentario breve al diritto delle società edited by A. Maffei Alberti, II ed., 2011, p. 869.

192 D.U. Santosuosso, cit.

bond holder may vary freely from the payment of: i) a fixed and pre-determined interest rate to be paid periodically, or in a lump sum (with the so-called issue or reimbursement premium), ii) a floating or indexed rate (i.e. linked to external indexes) or linked to the company's economic performance (both in terms of deadlines and amount) or iii) benefits otherwise identified, even without the benefit requirements of periodicity, proportionality to the nominal value of the capital and to the course of time or, finally, iv) in the form of a premium in kind or in cash to be distributed periodically among the bondholders, v) mixed forms of benefit, including those linked to the company's profits.

On financial markets, the simplest type of bond and the most widespread among the public of investors - the plain vanilla bond - is that which, against the payment of a given amount by investors and the simultaneous issuance of bonds, grants the bond bearer the right to periodic payment of interest, at a fixed or floating rate, and the right to repayment of the nominal value of the bonds at a pre-established future date or based on a pre-set repayment plan[193].

In order to encourage investors' propensity towards this form of investment, the practice has for some time created (and continues to create) special types of bond; i.e. characterised by the diversity of the rights allocated[194]. This diversity that may lie both in the specific content of the rights to compensation and repayment of the capital, and in the allocation of additional rights with respect to those typically associated with the position of lender of a loan (for example bonds of the following types: structured, subordinated, endorsed, fixed rate, floating rate, indexed, with parametric clause, convertible into shares, premium, cum warrant, guaranteed, callable, non-callable, assisted by real guarantees, with advance repayment, zero coupon, foreign currency, commodity linked, equity linked, inflation linked, index linked, credit linked, bond perpetual, mezzanine debt, hybrid, bull-bear, mini-bond).

This broad margin of autonomy granted to private bodies has made it more difficult to identify what should still be considered the essential typological connotations of bond in question, which were not clearly identified by the legislator in Arts. 2410 et seq. of the Civil Code and that, in any case, must represent the limits of private autonomy in the regulation of a debenture loan.

From this point of view, it is observed how, according to mainstream doctrine, the criterion of bond remuneration is not an essential typological connotation of the bond in question, in that today it can be determined at the discretion of the issuing company. In fact, the latter may as much involve the creditor-bondholder in the company risk and the company's fate with so-called participating or related bonds (in the event that it envisages a floating interest rate depending on the objec-

193 For all: G. Niccolini, Il prestito obbligazionario delle società per azioni, in Riv.dir.comm., 1988, I, 442 et seq. as well as P. De Vincentiis, Il mercato obbligazionario, Turin, 2002, p. 3.

194 G. Campobasso, cit

tive parameters relating to the company's economic performance, pursuant to Art. 2411, Par. 2 of the Civil Code) as anchor the bonds' yield to indexes of various kinds (so-called linked or structured indexes), provided that they are objective and external to the company (Art. 2411, Par. 2 of the Civil Code)[195], which can vary both upwards and downwards (until the remuneration is actually eliminated)[196], and even exclude, in toto, the actual individual right of the bondholder to benefits in the event that premium bonds are issued that grant uncertain benefits to the holders, assigned by lot or other methods[197].

It can be definitively stated that the Civil Code has remitted the determination of the if, how much and when of the interest or any other benefit to be paid to the bondholder to the autonomy of the parties, under the sole condition that the rule established is always anchored to objective parameters, possibly even linked to the economic performance of the company (Art. 2411, Par. 3) and with the limit of the prohibition of usury interest rates (Art. 1815, Par. 2 of the Civil Code).

From what has been discussed at length above in terms of loans, we could legitimately also imagine the possibility of bonds issued at negative rates.

From this point of view, the issuing company's interest in collecting negative "rate" capital seems obvious; less obvious however (although widespread in most recent corporate practice)[198] is investors' interest in purchasing securities with negative "rates". However, this interest can be identified in at least the following different possibilities:

195 Art. 2411, Par. 2 of the Civil Code refers to "objective parameters", to be understood as parameters that are not influenced by discretionary decisions made by the issuing company, its shareholders, bondholders or, more generally, anyone who has an interest in the company paying a greater or lesser remuneration to bearers of indexed bonds (See Giannelli, Le obbligazioni ibride, Milan, 2013, p. 70).

196 See. Audino, cit., p. 872 and Giannelli, Le obbligazioni ibride, cit., p. 65 et seq. (who also report the debate surrounding the applicability of the provisions on usury to bond returns); F. Carbonetti, Clausole di indicizzazione, in Dizionario del diritto privato (edited by N. Irti), Milan, 1980, p. 125 et seq.; V. Buonocore, Il prestito Enel e l'indicizzazione delle obbligazioni di società, in Giur. comm., 1974, I, p. 512 et seq.

197 On this point, for all: A. Giannelli, sub Art. 2411, in Commentario alla riforma delle società (series editors Marchetti, Bianchi, Ghezzi and Notari), Vol 7, Obbligazioni. Bilancio, p. 52 et seq.; V. Donativi, Le obbligazioni nelle società per azioni, in Tratt. Rescigno, 16, 3, Turin, 2011, p. 206 and 216; S. Luoni, Obbligazioni. Strumenti finanziari. Titoli di debito nelle società di capitali, Bologna, 2010, p. 30 et seq.; E. La Sala – F. Bruno, Dall'obbligazione plain vanilla all'obbligazione strutturata, in Soc., 2009, p. 695 et seq.; M. Sarale and R. Rivaro, Le obbligazioni, in Le nuove s.p.a., edited by Cagnasso and Panzani, Bologna, 2010, p. 505; M. Cossa and M. Perassi, Le obbligazioni, in Le società commerciali: organizzazione, responsabilità e controlli (edited by M. Vietti), Turin, p. 461. For the opposite theory, according to which the provision of interest would be an indispensable typological connotation of bonds, see: M. Sarale, Sub Art. 2411, in Various Authoris, Il nuovo diritto societario, Commentary by Cottino, Bonfante, Cagnasso, Montalenti, II, Bologna, 2004, p. 1258 et seq. In any case, account should be taken of the fact that private autonomy on this matter encounters the limit imposed by the principle for banking institutions laid down by Art. 117, Par. 8 of the Consolidated Law on Banking, according to which "Banca d'Italia may prescribe that certain contracts, identified by means of a particular name or based on specific qualitative criteria, have a determined typical content. Contracts that do not conform to these criteria are null and void. (...)".

198 On July 12, 2016, the German railway company Deutsche Bahn placed a corporate bond of 250 million euros on the market, with a maturity of 5 years and a negative rate of -0.006%. In the same year, the French company Sanofi and the German company Henkel placed securities with a yield of -0.05%, as did Unilever. A vast number of bonds with negative rates were also placed on the secondary market, issued, for example, by: Johnson & Johnson, General Electric, LVMH Moët Hennessy Louis Vuitton, Philip Morris, BMV Finance NV, Daimler AG, Shell International Finance BV, BNP Paribas SA, GE Capital European Funding.

- an investor may be persuaded to purchase securities that bear a negative interest rate for "security" reasons linked to the solvency of the counter party: investors will consider it useful to invest their savings in more secure securities even if with negative rates (for example securities of a large multinational with a prosperous economic and capital position) rather than in less secure securities, even with positive rates (for example securities of a small company that is already heavily indebted);
- an investor may also be persuaded to purchase securities with a negative rate but expressed in a foreign currency (e.g. Swiss franc), believing that the currency exchange will compensate for the loss caused by the negative return;
- traders may wish to purchase securities at negative rates, believing that these rates would decrease further on the market and that they will be able to resell these securities at a higher price;
- some categories of institutional investors (public or private) who are obliged to purchase securities with a rating no lower than a specific threshold, may find themselves in some way bound to purchase securities, while, for example, they are not in theory allowed to purchase securities with positive rates if and insofar as they are issued by a company with a higher 'counter party risk' than their permitted limit;
- the same brokers may, in some cases, find it advantageous to use their own surplus liquidity in negative rate investments rather than depositing said liquidity at the Central European Bank, which gives a more negative rate;
- Central banks of the individual European Member States could choose to purchase securities with negative rates issued by companies based in their country, being obliged to implement the quantitative easing policy sought by the ECB.

Conversely, as regards the right to repayment of capital upon maturity (of an amount at least equal to the nominal value of the security) it seems reasonable to state that the Civil Code - as well as establishing, albeit implicitly, the rule required by the bond paradigm, which imposes shareholders' priority entitlement to repayment that is not constrained by the negative results of corporate management - sought to assert clearly that this represents the true essential element of the bond in question and marks its boundary in relation to both shares and the financial instruments referred to in Art. 2346, final paragraph of the Civil Code[199].

199 Bartalena, Le nuove obbligazioni, in Banca borsa e tit. cred., I, 2005, p. 548 et seq; Audino, cit.; F. Signorelli, Azioni, obbligazioni e strumenti finanziari partecipativi, Milan, 2006, p. 62 et seq; Ferro Luzzi, cit., p. 702 et seq. In this regard, Giannelli, Le obbligazioni bride, cit., p. 74 and 75 (as also recalled by Donativi, cit., p. 212 and Luoni, cit.,p. 20) recalls how the formulation of the third paragraph of Art. 2411 was the result of a hasty decision. In fact, the draft decree sent by the Council of Ministers to the Chambers on 30 September 2002 provided for the possibility for companies to issue indexed bonds not only on the interest but also the capital, where it envisaged (in the text of Art. 2411, Par. 2) that "the times and amount of the reimbursement of capital and payment of interest may vary according to objective parameters, including relating to the company's economic performance". A short time later the text was rewritten to become what is today the Civil Code, maintaining the principle of the option of indexing the interest only and not the capital as well.

Nothing could prevent the company from anchoring the repayment to indexes (internal or external to said company) capable of increasing the value over time but, conversely, parametric clauses that may lead to a decrease in the nominal value upon maturity must be considered to be incompatible with the "bond" paradigm maturity[200]. For instance, capital-indexed bonds with a monetary protection clause against the performance of money market indexes (such as the Euribor) - commonly known as monetary indexation clauses, which are intended to prevent the gradual misalignment between the conditions of the debenture loan and the pro tempore conditions prevalent in a given reference credit or financial market - should only be considered legitimate within limits including a minimum threshold (floor) of zero, i.e. in the event that the right to repayment of the capital at its nominal value can never be affected by the performance of the indexes.

This bond characteristic - including where the reimbursement of the capital is dependant on satisfying other company creditors, as in the case of the subordinated bonds referred to in Art. 2414 no. 4 of the Civil Code or endorsed bonds referred to in Art.2411, Par. 1 of the Civil Code or in the case of the so-called bail-in introduced by EU Directive 2014/59/EU of 15 May 2014 (Bank Recovery and Resolution Directive, BRRD)[201]- clearly emerges on a systematic and exegetic level from reading the first two paragraphs of Art. 2411 of the Civil Code[202] and from interpretation of mainstream doctrine on the matter[203]. The latter, in particular, attributes the intangibility of the bondholder's entitlement to reimbursement of capital upon maturity for at

200 Thus Donativi, cit., p. 216. The topic if the legitimacy of capital indexation of the debenture loan, i.e. a clause that obliges the issuing company to repay an indeterminable principal sum ex ante, has been discussed in the past by doctrine in terms of infringement of the regulations on issue quantity limits. In this regard, it has been argued that capital indexation could have led the company to borrow beyond the quantitative limits foreseen by law, where the sum of money to be reimbursed upon maturation of the security by way of principal is greater than the value of the capital collected by the company at the time of issue (on this topic see: G. Oppo, Finanziamenti in ECU, clausole monetarie, garanzie del prestito, in Riv.dir.civ., 1985, I, p. 197; A. Mignoli, Il capitale versato ed esistente come limite all'emissione di obbligazioni, Riv.dir.civ., 1961, II, p. 517 et seq.; G.F. Campobasso, Emissione di prestito obbligazionario indicizzato in linea capitale da parte di s.p.a., in Giur. comm., 1983, II, p. 750; P. Casella, Le obbligazioni indicizzate all'indice? ivi, p. 757 et seq.). Today, as has been mentioned, the text of Art. 2412 of the Civil Code, which testifies to the legislator's desire to establish bond issue limits with the purpose of preventing disproportion between debt capital and risk capital, seems to legitimise definitively the possibility of indexing bonds on capital for the purpose of calculating the quantitative limits imposed on bond issue (and not to permit reimbursement lower than the nominal value of the security), "given that the indeterminability of the value of the reimbursement at the time of issue of the loan is insignificant" provided, however, as mentioned, that "the right to reimbursement of the capital paid, which is the essential element of the typical bond, proves intangible" (Audino, sub Art. 2411, cit., p. 874).

201 Directive implemented in Italy with Italian Legislative Decrees no. 180 and no. 181, 2015

202 On this point, for all: Donativi, cit., pp. 212 and 213.

203 In this regard, for all, see: C. Angelici, La riforma delle società di capitali. Lezioni di diritto commerciale, Padua, 2003, p. 67, Bartalena, cit., p. 548; G. Ferri jr., Fattispecie societaria e strumenti finanziari, in AA.VV., Profili patrimoniali e finanziari della riforma (a cura di Montagnani), Milan, 2004, p. 67 and p., 75 et seq.; AA.VV, Il diritto delle società di capitali (Manuale breve), Milan, 2003, p. 78; G. Campobasso, I prestiti subordinati nel diritto italiano, in Ricapitalizzazione delle banche e nuovi strumenti di ricorso al mercato (edited by G.B. Portale), Milan, 1983, p. 366 et seq.; D. Galletti, "Elasticità" della fattispecie obbligazionaria, profili tipologici delle nuove obbligazioni bancarie", in Banca, borsa e tit. cred., 1997, I, p. 258 et seq.; A. Maffei Alberti, Commentario breve al diritto delle società, Padua, 2007, p. 712; M. Cossa – M. Perassi, Le obbligazioni, cit., p. 466; as well as the doctrine previously mentioned in footnote no. 17 which essentially highlights the fact that the bondholder's role as creditor does not change due to the fact that the right to reimbursement of capital may be, entirely or in part, conditional to the satisfaction of the rights of the company's other creditors. The following uphold the theory of the possibility of indexing bonds on capital, especially with a parametric clause that contains the risk of non-repayment: P. Ferro Luzzi, cit.; M. Miola, Gli strumenti finanziari nella società per azioni e la raccolta del risparmio tra il pubblico, in Riv. dir. comm., 2005, I, p. 445 et seq.

least the nominal value of the security to: i) the mass security nature of bonds intended to be purchased by investors who intend to maintain a "low" risk profile and ii) to the consequent need for protection of the trust that the investor places in the term "bond", which has always held the expectation of full reimbursement of the nominal value of the security.

From what has already been said, it appears that in the event that a financial instrument named "bond" were to be issued without, however, the right to reimbursement of the capital upon maturity for at least the nominal value of the security (due to it being subject to indexation or a parametric clause), the relative agreement should be considered null and void (relative invalidity pursuant to Art. 1419, Par. 2 of the Civil Code) within the limits in which it exposes the right to reimbursement to the risk of being fulfilled to a degree that is less than the nominal amount of the security[204].

On the financial markets the topic of transparency is particularly important. As we have already seen with respect to banking contracts, transparency is the only true "limit" encountered by private autonomy in the determination of interest rates.

Transparency and information in financial products

The Italian and European legislation that guarantees the transparency of financial products and imposes organisational and conduct rules on brokers essentially operates on two different levels.

Firstly, it guarantees that anyone intending to offer financial products to the public on the financial markets is required to draw up an information prospectus to ensure the availability of information to investors that, in terms of both quality and quantity, can be considered adequate for the purposes of making an informed judgement on the investment offered (Art. 94 TUF)[205]. On the basis of the regulations envisaged by the TUF, the prospectus must be sent to CONSOB in advance and must contain, in comprehensible and analysable form, all the information, according to the characteristics of the issuer and the financial products offered, necessary to allow investors to reach an well-founded judgement on the issuer's position, as well as on the financial products and related rights[206].

204 On this see Donativi, cit., p. 235 as well as Salanitro, cit., p. 290.

205 For EU financial instruments (i.e. transferable securities and units of closed-ended undertakings for collective investment - UCIs) that fall within the scope of application of the Prospectus Directive (2003/71/EC) the prospectus must be drawn up in compliance with the framework envisaged by Regulation (EC) no. 809/2004, as amended and supplemented by Delegated Regulations (EU) no. 486/2012 and no. 862/2012. Conversely, for the offer to the public of units or shares of open-ended UCIs the regulations are contained in Directive 2009/65/EU (so-called UCITS IV) implemented in Italy by Italian Legislative Decree no. 47/2012.

206 It should be noted that, in turn, CONSOB has successfully broadened the range of information to be provided to retail customers with two separate notices, regarding illiquid financial products (Notice no. 9019104 of 2 March 2009) and complex financial products (Notice no. 0097996 of 22 December 2014) respectively, intended to allow investors to receive information from brokers that is clear, accurate and not misleading, in order to make informed investment decisions.

The characteristics of financial products to be highlighted in the prospectus must include a floating interest rate, that could possibly fall into negative territory.

Again in terms of information, it is worth remembering the European regulations on packaged retail and insurance-based investment products, or PRIIPs, the cornerstone of which is certainly the Key Information Document (KID), i.e. the document prepared by the creators of PRIIPs, which must contain, in just a few pages, the key information to guide investors towards making informed investment decisions[207]. In particular, this information includes a brief description of the characteristics, risks, returns, costs and potential losses of PRIIPs. Based on Art. 4 of the PRIIPs Regulation, these rules are applied to packaged retail and insurance-based investment products (including structured bonds), derivatives and mutual investment funds and, more generally, any retail investment product "in which, regardless of the legal form of the investment, the amount due to the retail investor is subject to fluctuations caused by exposure to reference values or to the performance of one or more assets which are not directly purchased by the retail investor."

For structured bonds that refer to money market rates (in the same way as derivatives or mutual fund units) the KID must also contain information on the risk of the rate entering into negative territory and, consequently, must also take into account the possible return scenarios for the investment products.

Secondly, the law also establishes specific rules relating to investment services and activities provided by brokers to their customers, consisting of all activities that enable investors to invest their savings, in various forms, in financial instruments[208].

In short, these are the regulations on investment services included in Directive 2004/39/EC (MiFID), which generally requires that the broker: a) "conducts himself with diligence, fairness and transparency, in order to best serve the interests of customers and towards market integrity"; b) "acquires the necessary information from customers and operates in such a way as to ensure customers are always adequately informed"; c) uses "accurate, clear and non-misleading" advertising and promotional communications (see Art. 21, Par. 1 of the TUF and Art. 27 et seq. of CONSOB Regulation no. 16190 of 29 October 2007 - "Regulations on Intermediaries"). The interpretation of these general rules largely varies according to whether the customer is a retail customer, a professional customer (counterparty) or an eligible counterparty, insofar as the legislation (MiFID and the TUF) graduates differently for each of these three categories both the rules of conduct imposed on brokers based on the nature of the service offered and the information that must be requested of and provided to customers[209].

207 See EU Regulation no. 1286/2014 of November 26, 2014 on key information documents for packaged retail and insurance-based investment products.

208 In accordance with Art. 1, Par. 5 of the TUF, among others, these are the activities of: proprietary trading, submission of orders on the behalf of customers, subscription and/or placement with firm underwriting or standby commitments to the issuer, portfolio management, order routing, investment consultancy.

209 On this topic, see the Tecnical Document deposited by CONSOB Commissioner A. Genovese during the CONSOB Hearing of 22 November 2016 before the Parliamentary Commission for Simplification as part of the Indagine cono-

First of all, we must clarify how the general rule contained in Art. 23, Par. 1 of the TUF, according to which all contracts for the provision of investment services (excluding consultancy services) must be drawn up in writing, under penalty of being declared null and void, and that this technicality may only be applied by the customer, applies to all categories of customer (retail, professional investors and eligible counterparties). This rule only has one exception: "Having heard the opinion of Banca d'Italia, CONSOB may issue a regulation establishing that, on justified grounds or in relation to the professional nature of the contracting parties, particular forms of contract may or must be stipulated in another form."

At the same time, the rules concerning information, advertising communications (Arts. 27-28, Regulations on Intermediaries) and the general description of the nature and risks of the financial instruments in question are also applicable to all categories of investor, although the regulations require greater attention for retail customers (Art. 31, Broker Regulations)[210]; in the same way as the so-called suitability rule, which requires brokers to acquire information from the customer on their knowledge and experience in the investment sector, their financial position and their investment objectives, all necessary to recommend the most suitable financial services and instruments, is also applicable to all categories of customer (see Arts. 39-40, Regulations on Intermediaries)[211].

When consultancy and portfolio management services are provided to a professional customer, brokers can assume that:

– they have the necessary level of experience and knowledge of the instruments, transactions and services provided for the purpose of evaluating their adequacy in

scitiva sulla semplificazione e sulla trasparenza nei rapporti con gli utenti nei comparti finanziario, bancario e assicurativo (Fact-finding investigation on simplification and on transparency in user relations in the financial, banking and insurance sectors) (available at: http://www.consob.it/documents/46180/46181/ Audizione_+Genovese_20161122.pdf/3f9f339a-f308-46fa-8a56-6a8765f63557). In doctrine, for all see: F. Annunziata, La disciplina del mercato mobiliare, VII Ed., 2014, Turin, p. 153 et seq.; A. Tucci, "Servizio" e "contratto" nel rapporto tra intermediario e cliente, in I contratti del mercato finanziario (edited by R. Lener and E. Gabrielli), II ed., Turin, 2010, p. 181 et seq.; M. Cian, L'informazione nella prestazione dei servizi di investimento: gli obblighi degli intermediari, in I contratti del mercato finanziario (edited by R. Lener and E. Gabrielli), II ed., cit..; C. Colombo, Adeguatezza, appropriatezza e mera esecuzione nell'offerta di servizi di investimento, in La MiFID II, - Rapporti con la clientela – regole di governance – mercati (edited by V. Troiano and R. Motroni) Padua, 2016. We remind you here that, before the entry into force of MiIFD, the Consolidated Law on Finance separated customers into just two categories: ordinary customers and eligible customers. While all of the rules of conduct envisaged by the Broker Regulations were applied to the former, no rules tended to be applied to the latter.

210 Although, in the latter case, the broker must still take account of the customer's classification as retail or professional customer.

211 For order execution only services, the option of disregarding information and evaluation of adequacy and appropriateness is permitted, provided that (Art. 43, Broker Regulations): a) the services are related to "non complex" financial instruments; b) the services are provided upon the customer's request; c) the customer has been informed of the execution only nature of the service and the consequences of this; d) the broker complieds with the obligations on conflicts of interest.

terms of understanding the risks (Art. 40, Par. 2, Regulations on Intermediaries);

– the customer is financially capable of bearing any investment risks compatible with his personal investment objectives (Art. 40, Par. 2, Regulations on Intermediaries)[212].

At the same time, the rules of conduct that brokers must uphold with regard to retail customers in the provision of order execution services, proprietary trading services and order routing services are not applicable to agreements with eligible counterparties.

This basic approach to the matter established in the MiFID will remain practically unchanged - for aspects that concern transparency - even with the entry into force, on 3 January 2018, of Directive 2014/65/EU, also known as MiFID II[213], the latter being limited to extending certain rules to eligible counterparties and professional investors, which with MiFID were only applicable to retail customers (for example on information relating to costs and charges)[214].

The area in which MiFID II has brought about the most changes, however, is broker conduct and organisation, an area that makes the fulfilment of information requirements more effective due to the simple fact that investment firms must "guarantee and prove" that the individuals assigned the task of providing consultancy and information possess the "necessary knowledge and skills" to fulfil the information obligations prescribed by said directive (see Art. 25, Par. 1, MiFID II).

We must also interpret from this last point of view the new regulations under Regulation no. 600/2014 (MiFIR)[215] on product governance, which require investment firms not only to understand the characteristics of the products that they offer or recommend to their customers to best serve their interests, but also to develop these products - during both conception and subsequent distribution - according to customer needs.

This refers in particular to the duty of manufacturers - i.e. those who engineer financial products - to design products in such a way that they are conceived to meet the requirements of a specific reference market of end customers, guaranteeing moreover that they are subsequently distributed on the reference market identified. There is also the duty of the brokers who handle the "distribution" and customer relations - the distributors - to define their commercial and business strategies in line with with the

212 In other words, it can be said that, for professional customers, the adequacy assessment is essentially reduced to the simple evaluation of correspondence with their investment objectives.

213 As a general rule, Art. 24 of MiFID II requires brokers to "act honestly, fairly and professionally in accordance with the best interests of their customers", guaranteeing that the information provided to customers is "accurate, clear and not misleading".

214 For a general analysis of the regulations contained in the MiFID II see: N. Moloney, EU Securities and Financial Markets Regulation, III ed., Oxford, 2016, p. 352 et seq.; J. Armour, D. Awrey, P. Davies, L. Enriques, J.M. Gordon, C. Mayer, J. Payne, Principles of Financial Regulation, Oxford, 2016, p. 205 et seq.; D. Busch and G. Ferrarini, Regulation of the EU Financial Markets - MiFID II & MiFIR, Oxford, 2017.

215 Regulation on financial instrument markets of 15 May 2014

needs and characteristics of the investors served.

These regulations were intended to bring customer protection forward from the strictly pre-contractual stage to the even earlier stage of the creation of the product and its distribution policy[216].

Precisely to this end, the MiFIR granted the competent national authorities the power to activate increasingly pervasive product governance whenever they discovered that an intermediary (be they "manufacturer" or "distributor" of a product) creates or markets a product without complying with the regulations of the MiFID (for example, by creating a conflict of interests, or due to the excessive complexity of the product, or the product's non-fulfilment of reference customer expectations).

In this way, the authorities will initially be able to carry out "proactive" enforcement against the brokers, for example by indicating which corrective actions to apply to their activities or products. In the event that this activity proves to be insufficient, the regulatory authorities may also perform so-called product intervention - regulated by Arts. 39-42 of the MiFIR - which may be graduated with a series of measures that range from a simple request to amend advertising material, to the temporary suspension of marketing of a product, to restrictions on the sale or distribution of the product or service (for example to non-retail customers only), and even a permanent ban on the marketing, sale or distribution of certain financial instruments or certain financial activities or practices. In this case, the competent authority must publish a notice relating to the decision to impose any bans or restrictions on its website[217].

In any case, it should be pointed out here that the competent national authorities' exercise of their powers of product governance or product intervention must kept separate, from both a conceptual and official point of view, from the approval of prospectuses.

In fact, as is known, according to the provisions of Art. 2, Par, 1, Letter q) of Directive 2003/71/EC (Prospectus Directive), when approving prospectuses, the competent national authorities have the power/duty to verify (only) the completeness, coherence and comprehensibility of the information provided to the public with the document in question. Therefore, according to these regulations, when approving a prospectus relat-

216 These are the terms of expression of the contents of the Technical Document attached to the text of the Hearing of CONSOB Commissioner A. Genovese of 22 November 2016 cit.

217 The product intervention power held by the competent national authorities has been described by the European legislator as a sort of extrema ratio of enforcement and surveillance due to the strong impact it has on the contract autonomy of private individuals. In fact, Art. 42, Par. 2, Letter b) of the MiFIR provides for product intervention only in the event that the national authorities have reasonable grounds to believe that the regulatory requirements envisaged by EU law for the investment product, financial instrument, structured deposit, activity or practice, are not sufficient to protect investors,or ordered market operation or the integrity of the financial markets and that supervision or application of the existing requirements would not allow the problem to be tackled more effectively. On this point, see S. Alvaro, Regolazione e Product Intervention, in Le negoziazioni del rischio finanziario: patologie dei rapporti e profili di sistema (edited by R. Di Raimo and A. Gentili), Diritto Privato – Nuovi Orizzonti, 2016, vol. 7, p. 299 et seq.

ing to a particularly complex and/or risky and/or innovative financial product, the national authorities may only intervene in the disclosure to the market, possibly by highlighting the relative risk factors[218]. Obviously, this scrutiny cannot be an obstacle to the potential subsequent (or even simultaneous) adoption of product intervention measures founded on the evaluation of the separate application requirements (which do not include disclosure considered in and of itself)[219]. For this reason, it may occur that the marketing, distribution or sale of a specific financial instrument is prohibited by a national authority independent of the fact that the information prospectus relating to the same product was approved previously by the same authority[220].

From what has been mentioned so far, it seems possible to infer that, within the context of investment services, intermediaries are required, on the one hand, to describe any existing variable rates (including negative rates) to retail investors as part of the information provided on the nature and risks of the financial instruments offered; on the other hand, they must comply with the provisions of the MiFID, which requires them to design and distribute financial instruments exclusively in order to meet the requirements of a specific reference market of end customers.

In this sense, it would seem natural to expect that a manufacturer will design a variable rate bond with a "zero floor" limit (to prevent the national authorities from considering possible product governance and product intervention measures). This is not so much, and not only, due to the typological characteristics of bonds, but above all due to the fact that retail customers who venture onto the bonds market generally intend to purchase a financial product that not only guarantees the repayment of the principal upon maturation, but also does not see them pay interest to the issuer in the event of potentially negative market rates; this is an eventuality that, in any case, should be stated clearly for structured bonds, both in the information prospectus and in the KIDs.

Finally, we should recall here that the collection by joint stock companies or limited partnerships of capital with a fixed negative "rate" - negative coupon and/or,

218 Therefore, from this point of view it appears impossible that the national authority could be held liable for the prospectus as a result of approving an offer document for a particularly complex and/or risky product. It should then be considered that, especially in the case of non-equity products, issuers/bidders frequently use basic prospectuses relating to offer programmes, so that the effective characteristics of the individual product issued or offered will only be disclosed at the time of publication of the definitive conditions.

219 Based on the same considerations, it must be concluded that the subsequent exercise of the power governed by Art. 32, Par. 1, of the MiFIR does not invalidate the prospectus published previously, nor could it, in itself, determine the approving authority's liability for the prospectus. In fact, this responsibility necessarily assumes an infringement of the duties of the authority pursuant to Directive 2003/71/EC.

220 It also goes without saying that, as regards financial instruments, there are crossovers between the activity carried out by a national authority during approval of a prospectus and product intervention. The preliminary approval of the prospectus (alongside, in the case of a basic prospectus, subsequent analysis of the definitive conditions) is the preferred moment for intercepting ab origine, i.e. before the offer to the public, products that must also be considered under product intervention.

given the market price, with negative return rate - or with parametric capital indexation clauses that could cause a decrease in the nominal repayment amount upon maturation, is in any case wholly legitimate if performed by means of the issue of the financial instruments referred to in Art. 2346, final paragraph of the Civil Code[221].

In fact, the fundamental decision made on this matter by the Company Law Reform of 2003 specifically consisted of affirming the principle of the subsidiarity of legal rule on the free development of the interests of the contractual parties in order to enable joint stock companies to use the widest possible range of financial products to collect both debt and risk capital[222].

In other words, the legislator sought to expand the financing techniques available to joint stock companies and limited partnerships as much as possible by both, as mentioned, enabling statutory autonomy to outline varied bond content, and by introducing the broadest category of participatory, non-participatory and "hybrid" financial instruments, i.e. those with proprietary and administrative rights (excluding the right to vote at the shareholder's meeting) that can be freely determined by the parties[223]. Instruments that have greatly weakened, if not surpassed, that which was once considered the traditional distinction between risk capital and loan capital and between investment and financing, i.e. between the forms of savings collection that, at least officially, attribute a right to credit upon reimbursement of the payments made and those that, rather, constitute risk capital[224].

Therefore, while the system imposes limits on the rights that can be incorporated into a security called a "bond" in order to protect the trust that investors place in this nomen (right to repayment of the nominal value of the capital invested at nominal value invested upon maturation but no additional right to compensation), conversely Art. 2346, Par. 6 of the Civil Code awards the issuing company full and unconditional freedom in the formation of the proprietary rights connected to the security[225].

221 Therefore, if the reference index is represented by deposit securities, there will not be a bond, but rather a financial instrument which may be a reverse convertible, i.e. a capital raising security that contains an embedded option at its basis and is only repaid in full upon expiry in the event that the price of a specific reference share (underlying the option) is greater than a specific value (strike price). Conversely, where the value is lower than the strike price the repayment of the security would occur through the provision of a pre-determined number of underlying shares or by means of the payment of the corresponding value, lower than the nominal value of the security. (On this topic see CONSOB Communication n. DEM/81249 of October 31, 2000)

222 M. Vietti, Nuove Società per un nuovo mercato – La riforma delle Società commerciali, Rome, 2003, p. 15 and 34.

223 See A. Giannelli, Le obbligazioni ibride, Milan, 2013; M. Lamandini, Autonomia negoziale e vincoli di sistema nell'emissione di strumenti finanziari da parte delle società per azioni e delle cooperative per azioni, in Banca, borsa e tit. cred., 2003, I, p. 519; id., Struttura finanziaria e governo nelle società di capitali, Bologna, 2001, p. 141 et seq.; L. Enriques, Quartum non datur: appunti in tema di 'strumenti finanziari partecipativi' in Inghilterra, negli Stati Uniti e in Italia, in Banca, borsa e tit.cred., 2005, I, p. 166; M. Notari, Azioni e strumenti finanziari: confini delle fattispecie e profili di disciplina, in Banca, borsa e tit. cred., 2003, I, p. 542; F. Corsi, La nuova s.p.a.: gli strumenti finanziari, in Giur. comm., 2003, I, p. 414; U. Tombari, Azioni di risparmio e tutela dell'investitore (verso nuove forme rappresentative della società con azioni quotate), in Riv.soc., 2002, p. 1068; M. Cian, Strumenti finanziari e poteri di voice, Milan, 2006: A Bartolacelli, La partecipazione non azionaria nella s.p.a. Gli strumenti finanziari partecipativi, Milan, 2012; P. Spada, Obbligazioni, titoli di debito e strumenti finanziari non partecipativi, in Riv.dir.imp., 2004, 253 et seq.

224 M. Miola, cit., p. 439

225 In these terms Donativi, cit

This contractual autonomy is nothing more than the direct application of the general principle established by Art. 1322 of the Civil Code, according to which the parties may freely both "determine the content of the contract within the limits imposed by law" (Par. 1), and "enter into contracts that do not belong to the types governed by particular regulations, provided that they intend to fulfil the interests worthy of protection by the legal system" (Par. 2).

From what has been said thus far, we can assert that the topic of Italian companies raising capital at a fixed negative "rate" does not seem to be as much a problem of lawfulness (of which there is no doubt), but rather a problem of attributing this capital raising to the "bond" typology or the "financial instrument" typology referred to in Art. 2346, final paragraph of the Civil Code, according to the methods by which it is performed. Where the collection involves repayment of the principal upon maturation for at least the nominal amount of the security is classed as a bond and, in all other cases, the security is classed as a financial instrument.

Therefore, there appears to be a considerable loss of significance for any investigations intended to understand, for example, whether the issue of negative "rate" bonds where the burden of paying the return is reversed to become from the lender to the borrow or where the negative rate is 'incorporated' into the higher issue price with respect to the nominal repayment rate (zero coupon bonds) represents a typological mutation of the bond into a financial instrument, as referred to in Art. 2346, Par. 6 of the Civil Code.

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