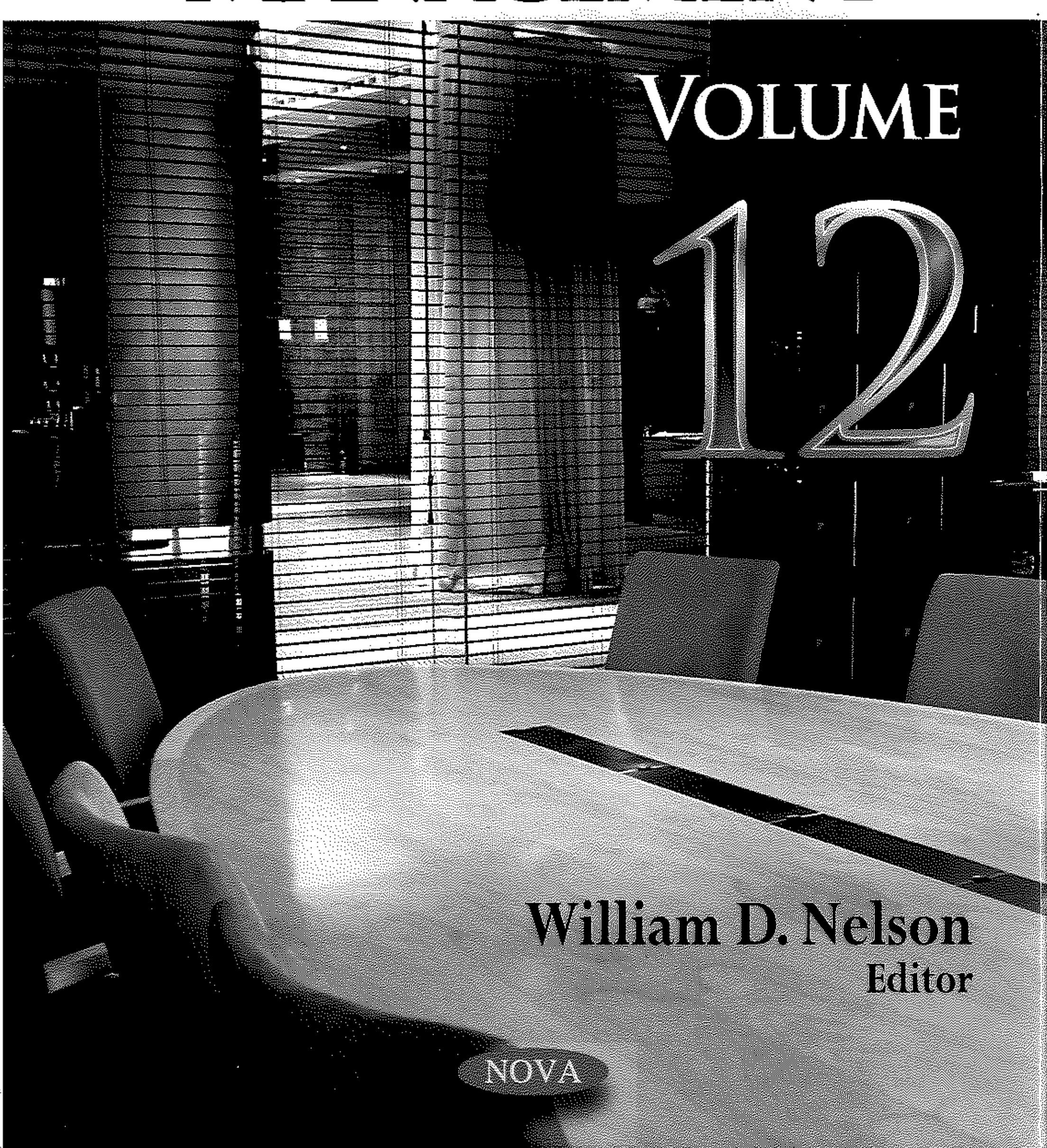
Advances in Business and Management



Volume 12

William D. Nelson
Editor

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ADVANCES IN BUSINESS AND MANAGEMENT

VOLUME 12

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PREFACE

Using a classification of production related organizations, Chapter One proposes a historical sketch of the growing popularity of project management (PM) within businesses and accounts for this popularity by characterizing PM as a distinct set of elements among components making up a firm. Chapter Two examines the possible two-way link between corporate social responsibility (CSR) and earnings management (EM) corporate strategies, and whether there are any corporate governance differences at the international level in this respect. Chapter Three analyzes design management (DM), design concepts and design thinking (DT) for promoting socially responsible solutions. The chapter provides a deeper understanding of DT, ascertains its meaning and characteristics, determines gaps among different DM approaches, design concepts and DT in the context of social responsibility and reveals why and how DT helps us to deal with complex problems regarding social responsibility. Chapter Four focuses on how businesses can improve health and working conditions for their employees. Using results from a 2016 NPR/Robert Wood Johnson Foundation/Harvard T.H. Chan School of Public Health survey of 1601 workers nationwide in the U.S., the chapter represents one of the broadest examinations of how workers see health in their workplace experiences. Chapter Five examines the challenges and opportunities in public-private partnerships (PPP) for housing the low-income urban residents in Nigeria. The chapter relies on a systematic review of research literature and empirical data derived from oral interviews with 27 experts in nine PPP housing projects in Nigeria to achieve its goal. Chapter six deals with an analysis of standards for usury thresholds in Italy. The authors' work consists of a close examination on Italian Legislative Decree 70/11 that has modified the aforementioned standards. Chapter Seven discusses the influence of the accounting value of conservatism, proposed by Gray (1988) as part of the cultural relevance theory. The possession of derivative financial instruments (DFI) was used as proxy to define it. This chapter concludes the book by assessing the existence of the explanatory variables of this accounting value, such as regional groups, firm level controls and qualitative characteristics.

Chapter 1 - Using a classification of production related organizations, the chapter proposes an historical sketch of the growing popularity of PM within businesses and accounts for this popularity by characterizing PM as a distinct set of elements among components making up a firm. In this analytical framework derived from the theory of the firm, globalization calls for more administration; it is also a factor contributing to make these PM elements more valuable. The contractual paradigm of the theory of the firm is then used to discuss the issue of flexibility in adapting PM to the business context.

Chapter 2 - This chapter examines the possible two-way link between corporate social responsibility (CSR) and earnings management (EM) corporate strategies, and whether there are any corporate governance differences at the international level in this respect. Using data from an international sample of 1960 firms for the period 2002-2010, the use of simultaneous equations for panel data, via the GMM estimator proposed by Arellano and Bond (1991), highlights the existence of an inverse two-way relationship between social performance and EM which is especially relevance in the Anglo-Saxon, Germanic and Asian governance systems.

Chapter 3 - The need for socially responsible products and environments has increased noticeably in recent years and the latest research shows that the design thinking (DT) approach is a potentially effective way to develop and implement creative ideas and innovation. A shift to a more comprehensive and transformative design management (DM) approach in the context of organizations and society and a more autonomous theoretical framework gives us the opportunity to develop a DM and DT approach that helps us to manage and solve complicated issues and allows architects and designers to use and combine them effectively in order to create more socially responsible solutions that take into consideration all four dimensions of social responsibility – social, environmental, cultural and economic.

The aim of this chapter is to take a critical look at the DM, design concepts and DT for promoting socially responsible solutions. It provides a deeper understanding of DT, ascertains its meaning and characteristics, determines gaps among different DM approaches, design concepts and DT in the context of social responsibility and reveals why and how DT helps us to deal with complex problems regarding social responsibility. This study

provides a new approach and the new terminology of Socially Responsible DM, Socially Responsible DT and Socially Responsible Design Concepts.

Chapter 4 - This chapter focuses on how businesses can improve health and working conditions for their employees. Using results from a 2016 NPR/Robert Wood Johnson Foundation/Harvard T.H. Chan School of Public Health survey of 1601 workers nationwide in the U.S., the chapter represents one of the broadest examinations of how workers see health in their workplace experiences. (Workers are defined as adults working full- or part-time, and excludes self-employed workers and those who work less than 20 hours per week at their main job).

More than four in ten American workers report that their job has an impact on their health, and one in four say that impact is positive. However, one in six workers report that their current job has a negative effect on their health. A number of workers also report that their job has a negative impact on their levels of stress, eating habits, sleeping habits, and weight. Almost half of all working adults give their workplace only fair or poor ratings in its efforts to reduce their stress.

About one in four workers rate their workplace as only fair or poor in providing a healthy work environment; however, one in three give their workplace a rating of excellent. About half say their workplace offers any formal wellness or health improvement programs to help keep themselves healthy. Nearly half of all workers rate their workplace as only fair or poor in providing healthy food options.

A majority of working adults say they go to work when they are sick. Half of restaurant workers and more than half of workers in medical jobs say they go to work always or most of the time when they have a cold or the flu. Despite most working adults being offered paid vacation days by their workplace, less than half of all workers who receive paid vacation days have used all or most of them in the past year.

Chapter 5 - Since 2002 when the Nigerian government gave official recognition to public-private partnerships (PPPs) in housing, several PPP housing projects have been implemented in this country. However, the challenges and opportunities in PPP for housing the low-income urban residents who incidentally have the most critical housing needs in Nigeria are not clearly understood. This chapter examines the challenges and opportunities in PPP for housing the low-income urban residents in Nigeria. The chapter relies on a systematic review of research literature and empirical data derived from oral interviews with 27 experts in nine PPP housing projects in Nigeria to achieve its goal. The chapter reveals that the PPP experience in the Nigerian housing sector has mainly been in the provision of housing for the high-income earners; and also that the main reasons why PPP has not made any significant contribution to housing for the low-income earners in Nigeria were poor access to housing finance and developable land, the lack of uniform national policy on PPP in housing and over emphasis on housing for the high-income earners by the operators of PPP housing projects. The chapter argues that although these challenges are not new to the Nigerian housing sector, PPP in housing for the low-income people presents a plethora of opportunities in promoting popular participation in public housing provision, encouraging the adoption of realistic housing standards; the use of local building materials; and leveraging the existing huge housing supply deficit in Nigeria to achieve efficiency in large scale production of affordable housing. The chapter concludes by suggesting that further research is needed to explore how Nigeria can take maximum advantage of these opportunities in PPP in housing for the low-income earners.

Chapter 6 - The chapter deals with an analysis of standards for usury thresholds in Italy.

Our work consists of a close examination on Italian Legislative Decree 70/11 that has modified the aforementioned standards.

In particular, the authors show the problematic aspects related to testing usury thresholds both with respect to the article 644 of penal code and with reference to the calculus of OER (*Overall Effective Rate*), as stated by Bank of Italy. Specifically, as demonstrated by formulas, OER is lower than APRC (*Annual Percentage Rate of Charge*): this fact gives flexibility to intermediaries, who can arbitrarily modify credit cost (lower than the real applied rate). Then the authors analyze the principal effects of the standard changes, illustrating the peculiarities of the Italian contest. In more detail the authors show that in a period of low rates, the current standards do not work in order to safeguard consumers against banking usury. The authors conclude the chapter shedding light on banks' usual attitude of bypassing usury thresholds, through selling derivative products such as options and interest rate swaps.

Chapter 7 - The influence of the accounting value of conservatism, proposed by Gray (1988) as part of the cultural relevance theory, has been widely debated in the literature. The possession of derivative financial instruments (DFI) was used as proxy to define it. This study aims to assess the existence of the explanatory variables of this accounting value, such as regional groups, firm level controls and qualitative characteristics. Content analysis was used in 2013 and 2014 annual reports and consolidated accounts disclosed by non-financial entities listed on five stock market indexes of the

European Union (EU), namely: PSI-20, IBEX-35, FTSE-100, DAX-30, and OMX-S30. After the application of the selection criteria, the population of this study encompasses 137 entities. The findings indicate that conservatism differs significantly according to the regional groups, as suggested by the literature. Additionally, firm level controls such as size and profitability, as well as the fundamental qualitative characteristics, can explain conservatism. One of the main contributions of this research is to consider the impact of culture on the financial reporting, even bearing in mind the latest convergence efforts among the main accounting standard setting bodies at international level.

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Chapter 6

THE CURRENT STANDARDS FOR USURY THRESHOLDS IN ITALY: THE EFFECTS ON THE CREDIT MARKET*

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ABSTRACT

The chapter deals with an analysis of standards for usury thresholds in Italy.

Our work consists of a close examination on Italian Legislative Decree 70/11 that has modified the aforementioned standards.

In particular, we show the problematic aspects related to testing usury thresholds both with respect to the article 644 of penal code and with reference to the calculus of OER (*Overall Effective Rate*), as stated by Bank of Italy. Specifically, as demonstrated by formulas, OER is lower than APRC (*Annual Percentage Rate of Charge*): this fact gives flexibility to intermediaries, who can arbitrarily modify credit cost (lower

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than the real applied rate). Then we analyze the principal effects of the standard changes, illustrating the peculiarities of the Italian contest. In more detail we show that in a period of low rates, the current standards do not work in order to safeguard consumers against banking usury. We conclude the chapter shedding light on banks' usual attitude of bypassing usury thresholds, through selling derivative products such as options and interest rate swaps.

INTRODUCTION

We conduct a discriminating analysis on the Italian Legislative Decree 70/11. In particular we show the problematic aspects related to testing the usury thresholds both with respect to the article 644 of penal code and with reference to the calculus of OER, as stated by Bank of Italy. Then we analyze the principal effects of the standard changes, illustrating the peculiarities of the Italian contest. Finally, we shed light on banks' usual attitude of bypassing usury thresholds, through selling derivative product such as options interest rate swaps.

THE STANDARDS TO TEST THE USURY THRESHOLDS: PROBLEMATIC ASPECTS

We start with the definition of usury rate stated by the article 644 of penal code: "*in order to set the usury rate, fees, any sort of remunerations and expenses, with the exceptions of those for taxes and duties referred to credit supply, are included.*" So each cost element, functional to credit supply, is considered in order to define the usury rate. The rule explicitly excludes taxes. Expenses remunerating just the financial service, but not specifically dealing with credit, have to be taken apart. It's clear that in terms of usury, the definition of interest is different than the usual and civil meaning.

Law 108/96, modified by the Decree Law 70/2011, disciplines an articulate administrative procedure to determine the *threshold-rate*: MEF and Bank of Italy quarterly notice AOER (*Average Overall Effective Rate*), i.e., a standard that is flexible and endogenous to the market, made by the average of rates ordinarily adopted by financial intermediaries. Since it derives from the *category average* of OER (*Overall Effective Rate*), it has the statistical purpose of catching a market average figure.

As stated by the Law 108/96, it has to be a physiological market rate that expresses the usual credit price applied to the clients. According to Bank of Italy's Instructions, the survey deals only with ordinary records, ignoring extraordinary, historical or pathological phenomena: the latter, in fact, would twist the correct representation of market effective average rate applied at the time of the survey.

Furthermore, the concept of "picture" recalled many times by the Court of Cassation, imposes a methodology of calculus characterized by a clear and transparent objectivity.

So in order to calculate usury thresholds, a spread made by 25% plus 4 percentage points is added to AOER (before 2011 reform, it was 50% of AOER itself). Specifically, spread is made by the remuneration of peculiar aspects of risk, intrinsic in the specific loan: beyond the threshold credit supply is inefficient and gets into usury terms. The problematic aspects of this methodology of calculus are shown by the comparison of OER formula with APRC's (*Annual Percentage Rate Change*), as stated by banking technique, European Directive and Legislative Instructions.

Shown below are both formula:

$$OER = \frac{Interests * 36.500}{Capital * days} + \frac{AnnualizedExpenses(Overdraftfeeinclusive) * 100}{Grantedcredit}$$

Versus

$$APRC = \frac{(Interests + Expenses + OverdraftFee) * 36.500}{Capital * days}$$

OER is made by the sum of two fractions (one dealing with interests and one referring with the annualized costs, inclusive of overdraft fee) with different denominator, while in the case of APRC, there's a unique ratio, inclusive of all cost elements, referring to the average credit granted along the trimester. According with Regulations there isn't a unique aggregate, as suggested by article 644 of penal code. In particular interests and annualized expenses are referred, respectively, to supplied credit and to granted credit (i.e., overdraft).[1] This formula, stated by Bank of Italy's Instructions, causes an improper slackening of the restriction imposed by the article 644 of penal code, introducing a discrimination between interests on one side and

[1] Or, at most, to maximum supplied credit along the trimester.

commissions and costs on the other. This fact gives flexibility to the intermediary, who can arbitrarily modify credit cost (lower than the real applied rate): as the proper calculi show, in fact, the value of OER is lower than APRC's one.

Instructions referred to the survey of AOER prescribe – with relation to *overdraft facilities*, *advance payments*, *factoring* and *revolving credit* – to adopt the different formula of OER: the aim is not generate very high threshold-rates connected to cash accounts that have an average utilization very reduced, with respect to credit supplied. Since Law has stated the quarterly update of thresholds, the test has to be made on an analogous period in order to determine the effective annual interest rate.

In the meantime, we note that the global average effective rate censused by Bank of Italy is an annual rate, but calculated on a quarterly basis: in other words, the quarterly interests are implicitly multiplied by four, that is, adopting simple interest accounting. Mathematically it's not correct: since there's the widespread banking normal practice of the quarterly capitalization of interests, it's appropriate to apply the formula of the equivalent rates. Specifically, as banks make an infra-annual (i.e., quarterly) charge of interests in compounded capitalization, it would be more fitting calculating yearly APRC in terms of *Effective Annual Interest Rate*, that is as $i_{eff} = [(1 + t_m)^4 - 1] * 100$; in this way we obtain a level of APRC higher than the one calculated using simple capitalization.

The following example clarifies the formula.

Supposing the granting of a loan for 1.000 euros and a 10% annual interest rate, paid quarterly and payback at the date of maturity; the amortization schedule is the following one:

I trimester: 25 euros
II trimester: 25 euros
III trimester: 25 euros
IV trimester: 25 euro + Payback of capital for 1.000 euros

Applying the calculus formula for APRC proposed by Bank of Italy we have:

$$APRC = (25*36.500) * (1.000*90)^{-1} = 10,14\%$$

Instead, using more correctly the compound capitalization and, consequently, the *Effective Annual Interest Rate*'s formula, the result would be:

$$APRC = i_{eff} = [(1 + 0,025)^4 - 1] * 100 = 10,38\%$$

It's clear that the value obtained is greater than the preceding.

We highlight that the APRC obtained from this methodology of calculus, let verify the definition of internal rate of return, so that the capital invested at time zero, is equal to the sum of the actual value of the future cash flows. In fact:

$$25(1,1038)^{-0,25} + 25(1,1038)^{-0,50} + 25(1,1038)^{-0,75} + 1.025(1,1038)^{-1} = 1.000$$

The example reported imputes just interests, as cost components; nevertheless, as shown by the formula indicated by the doctrine, the presence of other costs is usual. For this reason, it's also questionable including in a unique factor both "interests" and "costs" components: if, for instance, there was an overdraft facility fee, it wouldn't be financially correct multiplying it by the discount factor, since it would be placed in time zero.

The Peculiarities of the Italian Credit Reality

Over these last years, we're registering rates of the financial market characterized by values that are at record low. Even though there has been a decrease of AOER among credit categories, the excessive contraction of related spreads raises worries about a credit rationing: a reduced OER spread, cannot be sufficient to hedge risks of the marginal customer's segments that have a low creditworthiness. This issue would generate the formation of an unsatisfied demand, induced to find out external solutions, alternative to the official channels. In order to overcome this problematic, Government has intervened with a general extension of the spread for all credit categories. The methodology for calculation of the threshold-rate has been modified, through the reduction of percentage spread from 50% to 25% and the addition of a 4 percentage points fixed margin (*floor rate*); in the meantime, the maximum gap between AOER and the thresholds (*cap rate*) is made by 8 points.

However this limitation, that is theoretically in favor of consumers, triggers just for AOER higher than 16%.

Even in this case, we show an example that allows us to compare the calculus of threshold-rate before and after the approval of Law 70/11.

If there's a AOER equal to 6%:

BEFORE:

- There was the addition of 6 percentage points to 6% itself (that is 3%), obtaining a 9% usury rate.

NOW:

- There's the addition of a quarter of 6 percentage points to 6% rate (that is 1,5%) obtaining a first 7,5% threshold; then 4 percentage points have to be added to this value, having 11,5% as result.

Resuming, if there is a 6% AOER we have:

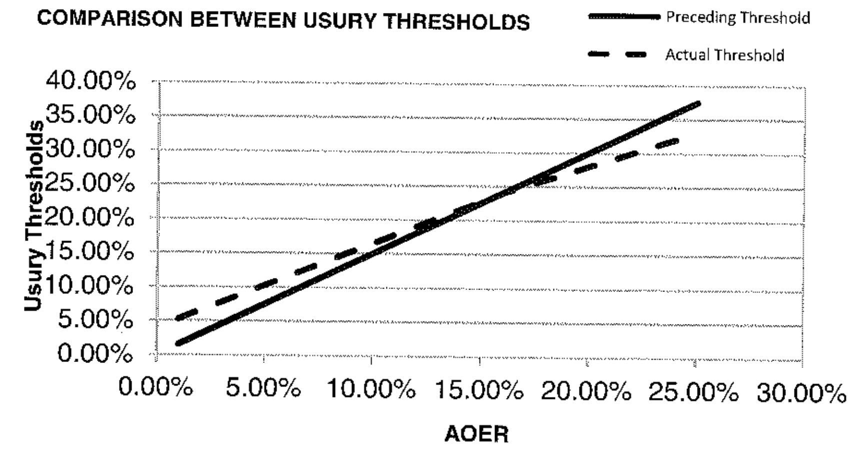
- Old usury rate before 14th May 2011 = 9%
- New usury rate since 14th May 2011 = 11,5%.

It means that interest rate of a loan belonging to a credit category for which Bank of Italy measures a 6% AOER over the trimester, can be "pushed" until 11,5% without incurring in the crime of usury; in the past, instead, overcoming 9% threshold was sufficient.

As shown by the table and graphic reported below, with respect to the previous system of calculation, until a 16% AOER, the usury threshold is increased in a significant way with regard to the lower rates and to a lesser extent with reference to higher ones. Otherwise over 16% AOER, the new way of calculus leads to thresholds values lower than the previous: the break-even point between the preceding criterion ad the one in force, is placed with reference to a threshold equal to 24%, that is a 16% AOER. From a methodological point of view, the new threshold-rate curve's slope is lesser: when average rates are particularly low, the values are higher than the previous ones; when their threshold-rates grow, values tend to decrease.

USURY THRESHOLDS: the preceding and the actual one			
AOER	Preceding Threshold	Actual Threshold	Actual – Preceding
1.00%	1.50%	5.25%	3.75%
2.00%	3.00%	6.50%	3.50%
3.00%	4.50%	7.75%	3.25%
4.00%	6.00%	9.00%	3.00%
5.00%	7.50%	10.25%	2.75%
6.00%	9.00%	11.50%	2.50%
7.00%	10.50%	12.75%	2.25%
8.00%	12.00%	14.00%	2.00%
9.00%	13.50%	15.25%	1.75%
10.00%	15.00%	16.50%	1.50%
11.00%	16.50%	17.75%	1.25%
12.00%	18.00%	19.00%	1.00%
13.00%	19.50%	20.25%	0.75%
14.00%	21.00%	21.50%	0.50%
15.00%	22.50%	22.75%	0.25%
16.00%	**24.00%**	**24.00%**	**0.00%**
17.00%	25.50%	25.00%	-0.50%
18.00%	27.00%	26.00%	-1.00%
19.00%	28.50%	27.00%	-1.50%
20.00%	30.00%	28.00%	-2.00%
21.00%	31.50%	29.00%	-2.50%
22.00%	33.00%	30.00%	-3.00%
23.00%	34.50%	31.00%	-3.50%
24.00%	36.00%	32.00%	-4.00%
25.00%	37.50%	33.00%	-4.50%

Source of data: Bank of Italy.



Authors' elaboration of Bank of Italy data.

It's also true that in times of relatively low rates, AOER slot of fluctuation tend to remain heavily under 16% rate for all the financial operations. That said, it's clear that the aforementioned limitation, as it works just for AOER higher than 16%, has no application with the current rates;[2] on the contrary, the increase of usury thresholds impacts to each credit operation.

We make an in-depth analysis with reference to the following table.

OVERALL AVERAGE EFFECTIVE RATES MEASURED IN ACCORDANCE WITH THE LAW 108/96 PERIOD: 1st April 2016-30th June 2016			
CREDIT CATEGORIES	**AMOUNT CLASSES** expressed in euro units	**OVERALL AVERAGE EFFECTIVE RATES** on an annual basis	**THRESHOLDS** on an annual basis
Overdraft facilities	Until 5.000 Over 5.000	11,53 9,41	18,4125 15,7625
Advance payments	Until 5.000 From 5.000 to 100.000 Over 100.000	9,80 7,64 4,66	16,2500 13,5500 9,8250
Factoring	Until 50.000 Over 50.000	5,33 3,50	10,6625 8,3750
Personal Loans	For all credit amounts	10.65	17.31
Consumer credit	Until 5.000 Over 5.000	12,16 10,79	19,2000 17,4875
Fixed Rate Leaseback **Variable Rate Leaseback**	For all credit amounts For all credit amounts	5,34 3,52	10,6750 8,4000
Revolving credit	Until 5.000 Over 5.000	16,34 13,58	24,3400 20,9750
Fixed Rate Mortgage **Variability Rate Mortgage**	For all credit amounts For all credit amounts	3,39 2,72	8,2375 7,4000

Source of data: Bank of Italy.

In the whole universe of credit, rates are quite diversified. In Bank of Italy's survey, referred to the period 1st April 2016 - 30th June 2016, AOER is included between a minimum value equal to 2,72% with regard to *variable rate mortgages loans* and a maximum value equal to 16,34% referred to *revolving credit* (until 5.000 euros), registering a 1:6 ratio. There are minimum values for *variable rates mortgages loans,* for which expenditures are restrained with reference to the amount and risks are better hedged by mortgages; furthermore competition, also thanks to standardization and portability typologies, has more chances to develop. Very high levels, instead, belong to *personal loans* and to *consumer credit* that show the following

[2] The only exception is made by revolving credit, that registers a 16,34% AOER the for amounts lower than 5.000 euros.

issues: retainer fees and operating expenses higher proportionally to the credit amount, a wider insolvency risk and the market itself, more sticky and less efficient. For this reason, *cap rate*'s ineffectiveness it's clear.

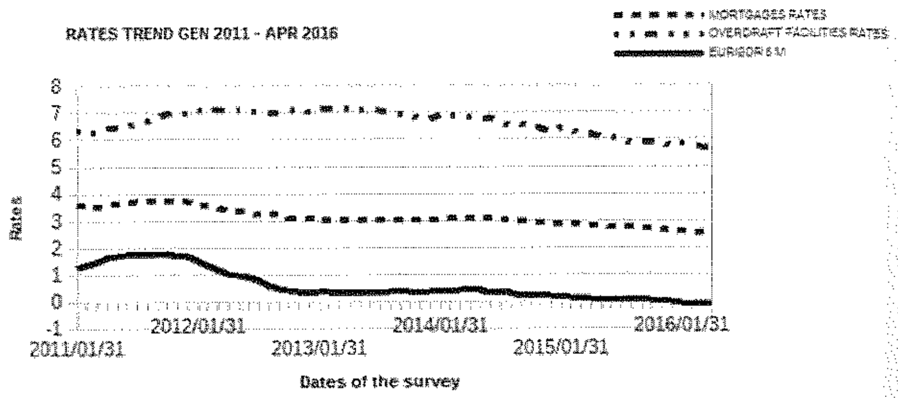
In more detail we declare that adopting this ceiling to the practiced rates, in absence of flexibility margins, can produce various inconsistencies:

a. a significant decrease of rates, as widely reduces the operating margin available by intermediaries, can induce an excessive selection and rationing of credit although in presence of solvency, with the exception of more risky investments;
b. in order to replace the shortcomings of rates in terms of hedging of risk margins, integrative and significant collateral can be requested: in this way new and little businesses, characterized by a weaker capital, are discriminated;
c. economic operators can be directed to credit categories that, even though are less appropriate for their investments, exhibit higher threshold-rates.

In order to evaluate the aforementioned standards, it's necessary analyzing the evolution of usury thresholds since '96 until today and the problematic issues emerged.

With the aim of avoiding excessive limits to credit access, it seemed opportune referring to a wider variability interval as well as to a distribution of the usury thresholds over a more extended template of categories: Italian credit reality, in fact, is very diversified in terms of territory and sectors. Usury threshold-rates' template, if too shrunk, can become a cage of limitations that would restrain economic development generated by the activity of companies and would foment the different and criminal usury.

Because of the pronounced decrease of rates, there have been variations of usury thresholds very diversified among categories, that show different levels of competition and, consequently, a different elasticity to rates of the financial market. The decline of short-time rates has caused a moderate reduction of usury thresholds, with reference to *overdraft facilities* and *advances*: as rates have flexed on very low levels, thresholds have shown measured elasticity for these categories. Both *fixed* and *variable rate mortgages*, present interest rates very close to Euribor and to swap market: that means that loans' market is quite mature and has got an adequate level of competition, able to cause important effect in terms of credit price control. An analogous trend is also observed with regard to *leaseback* and *revolving credit* that, starting from significantly high values at the beginning of 2000, after a first phase of decline, have recorded nearly systematic stabilization. Also *personal loans,* after a first time of assessment, have shown a substantial stability of rates on really high values.



Authors' elaboration of Bkl and ECB data.

DERIVATIVES AND USURY

OTC markets (i.e., over-the-counter) are deregulated markets, where derivative contracts are stipulated between counterparties who set the related terms, according to their personal needs. As they are characterized by strong opacity, they have become an ideal platform for speculation through derivative products. Given their disorganized structure, where positions are strongly interconnected, they have allowed the degeneration of counterparty risk[3] to systemic one, during the period of financial crisis.

OTC derivatives have been also used with the purpose of bypassing restrictions in terms of anti-usury, allowing banks to gain the same yield of usury loans, through the selling of very complex products especially to local institutions and enterprises. In this regard, we mention options[4] and interest rate swaps (IRS).[5]

[3] In more detail counterparty risk, or credit risk, is related to the possibility of loss determined by counterparty's default or insolvency.

[4] An option is an asymmetric contract, that gives the buyer the right to exercise it; in this way the counterparty is bound in function of the trend of the underying's quote, with respect to a price (called strike-price) settled at the stipulation of the contract. The most known options are calls and puts. Call's buyer is a bullish, while put's buyer is a bearish. A call (put) option is in the money (ITM), when the price of the underlying is higher (lower) than the strike-price. A call (put) option is out the money (OTM), when the price of the underlying is lower

As concerns the use of options in the field of usury, we refer to the concept of *put-call parity*.[6]

Adopting the aforementioned logic banks, without formally selling loans, obtain returns higher than usury thresholds.

The following table clears up this mechanism.

Time 0	Time T	
	$S_T < K$	$K \le S_T$
S_0	S_T	S_T
$-c_0$	0	$-(S_T - K)$
p_0	$K - S_T$	0
B_0	K	K

B_0 = price of a *z.c.b.* having nominal value K maturity T, at time t_0.

S_0 = stock price at time t_0.

$c_0(p_0)$ = value of *call* (*put*) having *strike-price* K, maturity T and the stock itself as underlying, at time t_0.

S_T = stock price at time T.

Using *put-call* parity logic, a bank can hide the purchase of a bond at B_0 price, heavily below par (P < NV), that implies the successive payback by the client of the nominal value K. Given the very low bond price, this operation would yield a return over the usury threshold to the investor bank. The same result can be obtained through selling financial product constituted by a portfolio composed by a stock and two options (a long call and a short put), written on the stock itself. Options' maturity is equal to the life of loan and their strike-price corresponds to the capital to require at the expiration date.

(higher) than the strike-price. A call (put) option is at the money (ATM), when the price of the underlying is equal to the strike-price.

[5] IRS is a contract by which, at fixed dates and over a prearranged period, the two counterparties pay cash flows having opposite signs, through the application of two different interest rates on the same notional. For instance, if Bank A has borrowed a fixed rate loan from Bank B and fears the interest rates' reduction, will desire to convert the passive interest rate, from fixed to variable; the opposite situation, deal with bank B.

[6] Simplifying put-call parity concept, is explained by the aforementioned equivalence that states what follows: the price of a zero- coupon-bond at time zero, is equal to the value, at time zero itself, of a portfolio given by the sum of the actual value of a stock and the difference between the price at time zero of a put and a call, written on the stock itself. The value of the portfolio at the maturity (time T), is always equal to the nominal value, K, of the zero-coupon-bond [if $S_T < K$ then $S_T + 0 + (K - S_T) = K$, otherwise if $S_T \ge K$ then $S_T - (S_T - K) + 0 = K$].

With relation to the adoption of IRS, instead, we shed light on the so-called *synthetic loans*, namely loans resulting by the combination of two operations marked by a negotiation element (*mortgage*) and a financial instrument (*swap*).

Also in this case, through an academic example, we want to clear better the concept.

ORDINARY LOAN		
Ordinary Loan	1.000 euros loan	Maturity 15 years
		Annual payment
	Variable payment, Interest Rate: EURIBOR 6 months + 9,82%	

SYNTHETIC LOAN		
Ordinary Loan	1.000 euros loan	Maturity 15 years
		Annual payment
	Constant payment, 10% interest rate	
Swap	1.000 euros notional, decreasing according to an amortization plan	Maturity 15 years
	The client pays The bank pays	6 months EURIBOR 0,18%

In this example, we have a usury threshold for loans to enterprises and to families equal to 10,30% and 6 months EURIBOR equal to 0,5%. In order to exceed the threshold and apply a 10,32% rate, it would be sufficient supplying a 1.000 euros loan, with 15 years maturity, a 10% fixed rate and contextually swap the fixed rate versus the variable one. Supposing that the client pays a variable flow equal to EURIBOR 6M and the bank pays a fixed flow equal to 0,18%, the net flow the client would pay to the bank would be equal to a 10,32% rate; it is obtained by algebraically adding the values included in the two contracts of *mortgage* and *swap* (i.e., (10 + 0,50)% - 0,18%).

So by the combination of two financial product (a *mortgage* and a *swap*), we obtain *de facto* the same usurious result of an ordinary *mortgage* analogous to the first one, but with a variable rate given by EURIBOR 6 M + 9,32% rate.

Finally, always with reference to IRS, we mention the use of the *up-front* for purposes analogous to the previous ones. In this sense, we start by saying that the most common kind of interest rate swaps, is called *plain vanilla*. These swaps can be *par* or *not par*. The first ones are structured in order to make the two positions connected to the interest rates current at the moment of stipulation of the contract; so at this date, the contract has a null value for both

the counterparties. *Non par* contracts, instead, at the moment of the stipulation, present a negative value for one of the two counterparties, as one of the two payment flows doesn't reflect the level of the market rates. In general, the financial transaction should get balanced by a money amount given to the counterparty that accepts more disadvantageous conditions, just to cash in. Practically, by the adoption of the *up-front*, we have a loan supplied by the intermediary versus a refund distributed over time. That induces the raising of the mark-up, which causes the rise of the applied rate to level greater than the usury threshold.

Conclusion

In conclusion by the light of our study, we think that usury thresholds have to be placed on values sufficiently close to market's ones, in order to highlight the acquisition of abusive income at the expense of businessmen and consumers. At the same time thresholds ought to be quite far: the aim is to not influence the free development of credit market and allowing its access within margins adequate to adjust credit cost to the project financed until that maximum value, beyond which the cost of loan compromises the investment. The wide spread and the extended template of Italian usury thresholds categories, couldn't maintain a balance between protection from excessive credit expenses and a fitting distribution of rates in function of borrower's credit risk. Government has promptly reacted with a Law Decree that has removed the problematic, through the extension of a spread generalized and uniform to all categories. This is in contrast with the obvious necessity to keep a safeguard to rates adopted by intermediaries, especially with regard to loans directed to consumers, artisans and little entrepreneurs. Credit categories mostly supplied to consumers and little entrepreneurs, characterized by quite high rates, haven't received relevant benefits by the reduction of rates in the financial market: nevertheless, there's an unjustified slackening usury protections. Having regard to the various feasible technical solutions, this aim can be easily pursued maintaining only the percentage spread introduced by L.D. n. 70/11 and diversifying its application among the categories considered. This criterion would soon allow to slacken threshold restriction to classes that have granted less benefits. Furthermore, especially on a future phase of rate increase, standards of spreads fixed but diversified, would cause a significant temperament of the effects of the raise on consumer credit and on credit to little enterprise; this would happen without detriment for the correct credit allocation, through adequate distribution of rates in function to the risk of business lent.

We deem interesting carry on this study, also shedding light on specific concrete cases, in particular with relation to the calculus of AOER as standard to determine threshold-rates and the use of derivatives in order to bypass the thresholds themselves.

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Web Sites Used for Data Mining

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