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ENVIRONMENTAL QUESTION IMPACT FOR LENDERS AND THE RISK MANAGEMENT PROCESS

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Abstract

Environmental risks and their impact on financial and non-financial indicators of the bank are analyzed in the article as well as what kind of mechanisms may be used in order to perform assessment and monitoring of environmental risks. On the basis of the existing lending assessment system in the commercial banks, a new lending assessment structure was created, where factors related to environmental risks as well as mechanism of their assessment were included.

The lending assessment mechanism developed by the authors will take an important role in further lending decision making process in each of the commercial banks, performing the assessment of environmental risks.

The research data were obtained from commercial banks to the public available information, as well as the banks`s internal work out documentation and procedures that were collected, and based on the information and other European banks good practices and experience was created by environmental factors affecting risk assessment process mechanism and its monitoring.

Keywords: environmental risks, monitoring, lending.
JEL Classification: E51, M20, Q56.

Introduction

Banks play the leading role in business and service financing in all the economy sectors, thus it is important that bank analysts perform environmental factor assessment while considering new lending transactions and thus avoid unexpected expenditure to finance environmentally unfriendly lending transactions, maximally reducing both, social and financial risks. According to one of the researches, performed by authors, on the decision making of the bank regarding lending transactions, a conclusion was made that a little importance is paid to the assessment of environmental factors while reviewing new lending transactions, besides most of commercial banks of Latvia do not perform such assessments at all, because it is still a new and unusual practice. While elsewhere in Europe, particularly in Great Britain, the assessment and monitoring of environmental risks is a regular practice for already more than 15 years. Therefore the authors see a need to develop mechanism of assessment of environmental risks in the bank.

The environmental factor assessment in relation to bank lending transactions has been done by several scientists, such as Thompson and Cowton (2004), Deegan (2004), Solomon and Solomon (2006), Aintablian, McGraw and Roberts (2007), Mainelli, Stevenson and Thamotheram (2009). They also stress that upon considering new lending transactions it is important to focus not only on financial indicators of a company but also it is necessary to submit a detailed environmental factor analysis thus showing the banks the need for environmental reporting and monitoring. The fact is proved also a study PricewaterhouseCoopers (2009).

Financial services sector, such as banks which do not produce dangerous chemical substances and do not pollute the environment, are still jointly responsible for financing of environmentally unfriendly lending transactions, as well as are equally liable for hard cause to the environment. (Gray and Bebbington, 2001).

In the article the authors discuss the current credit assessment mechanisms of several commercial banks in order to be able to develop the structure of lending transactions, where also factors related to environmental risks would be included, therefore they would have also objective, not only subjective nature upon taking the decisions of lending transactions, providing sustainable cooperation and development both for banks as well as customers. Environmental risks and their impact on financial and non-financial indicators of the bank are analyzed in the article as well as what kind of mechanisms may be used in order to perform assessment and monitoring of environmental risks. On the basis of the existing lending assessment system in the commercial banks, a new lending assessment structure was created, where factors related to environmental risks as well as mechanism of their assessment were included.

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and other European banks good practices and experience was created by environmental factors affecting risk assessment process mechanism and its monitoring.

The purposes of this research are to develop the lending environmental risk evaluation mechanism for banks, and establish its subsequent monitoring process and management.

To achieve the goal were used quantitative and qualitative methods, including the method of sociologic research, monographic and descriptive method.

Literature review

Scientific literature provides a lot of discussion and stresses that only based on effective assessment of social and environmental factors banks will be able ensure sustainable development of financial services. The importance of environmental risks is lending assessment has been addressed by a number of scientists (Thompson and Cowton, 2004; Weber, 2005; Weber et al., 2003). Based on Grunert et al. (2004) the impact of environmental factors is also called nonfinancial factors. For instance, Thompson and Cowton (2004) in their study defined three determining risks which can have an impact on corporate lending transactions in the field of environmental factors: indirect and direct risks, as well as a bank reputation risk. A similar research was also done by Aintablian et al. (2007) who found out that environmental factors can have an impact not only to financial indicators of banks but also on reputation, thus upon corporate lending it is important to assess also environmental factors, as well as strict monitoring of them and introduction of a special system. The issue of potential threats to reputation upon considering new lending transactions with regard to impact of environmental factors is also referred to in a number of annual statements of European financial services, such as Bank Track (2007), European Bank for Reconstruction and Development (2007). Also Kolk, Levy and Pinkse (2008) points out to the impact of environmental factors on bank reputation. Whereas, in relation with direct risks several authors mention that banks should not finance such lending transactions, where as warranty serves property with high environmental pollution, because in case of lending default the bank will take over this property in its possession along with environmental pollution, which will create additional costs for its prevention to be able to find new owner for this property for adequate price, because anybody will not want to acquire it with pollution (Kneipper and Hooks, 1990; Busch, 1991). As well as there exists risk by financing purchase of equipment, because very often by the end of contractual liabilities, their owners are the banks, in result of which they always are responsible for environmental risk as company, which has undertaken financial liabilities (Frye, 1998). But according to statement of Case (2000), then the indirect risks very often are related with higher risk than direct ones, so, for example, borrower's ability to repay lend, as well as decrease of guarantee value, therefore they are more important.

Nature of risk management concept is that it is tended to logical and systematic method, which makes identification, analyzing, processing and monitoring on the base of risks, which is pointed to decrease of losses of organization and to obtain maximal profitability (Richardsson et al., 2005). Several authors such as Case (2000), Barannink (2001), Coulson and Dixon (2004) have created components of risk management in lending process, attention of which are pointed to environmental importance. Weber (2005) has directly discussed how risk management operates and how it can be integrated by performing monitoring of environmental risks. Whereas, Kang and Kim (2005) suggests division of risk management process in five parts: by identifying credit rating should be taken into account borrower's default risk, calculation of costs, pricing, monitoring and formation of documentation. In case of default risk also banks should form special reserves, as well as they should perform sale of credit guaranties, which can create losses in case of market fluctuations. As stated by Stein (2005), then also pricing is important stage, which intends additional payments for untimely repaid lending, which will create additional costs and possible losses by making restructuring processes of lending to promote recovery of customers' solvency. Thereby it is important for banks to implement also environmental risk management processes according to risk management system, formed by Kang and Kim (2005), to avoid of lending, which create threats to environment, in such a way creating also motivation from the side of banks and clients, as well as by undertaking socially corporative responsibility. Similarly, the banks should include in lending contracts not only issues related with finances and special provisions, but also environmental factors, in such a way ensuring regular monitoring of loans and notifying of their non-fulfillment. One more issue, established by banks, where environmental risk monitoring is successfully implemented, is that very often clients do not want to sign lending contracts, where are included special provisions in relation with environmental risk, as well as insufficient knowledge of employees for implementation of such kind of policy (Inter-American Investment Corporation).

On the base on International Finance Corporation (2008) environmental risks can be divided in three categories: high, medium and low. To high risk sectors are included mining, large-scale forestry, and complexes of manufacturing plants, oil and gas development, non-ferrous metal processing, paper manufacturing, fertilizers, hazardous waste storage, large-scale tourism development, and transport projects. Whereas, as medium risk are referred small-scale agriculture, manufacturing of food products, manufacturing of leather products, food product processing, manufacturing of timber products, but low – for business service sectors, education and training, health, art, provision of various services. Also Gray (1994) suggests division of environmental risk in three categories, which a little bit differ from International Finance Corporation (2008). So, for example, Gray (1994) includes manufacturing of leather products in group of low risk.

Methodology

The authors made qualitative analysis of: 1) the scientific literature on environmental risks assessment for lending deals, and 2) information about the five Latvian commercial banks publicly available from their home pages and banks' internal documentation and procedures. It was done with the purpose to specify: 1) needs for allocation of risk monitoring in lending procedure and 2) activities required for decrease of environmental risks in lending deals. In the results new structure of lending procedure was formed.

Types of environmental risks were selected from scientific literature and split into categories according to the NACE codes of industry classification and risk level. Approach for interest rate calculation was elaborated taking into account commercial banks' practice of lending deals.

The results of carried out analysis was verified by use of focused interview, which was represented by one entrepreneur, the basic activity of which was directed to renewable power resources, two lending managers from banks, as well as two persons with practical experience in environmental risk management.

Research data

According from Latvian Statistical Year Book NACE 2nd redaction by mode of operation in the Latvia are twenty sectors, which authors based on scientific literature were to divide into two categories what were verified with the help of focus group, how it is illustrated in table 1.

Table 1. The sector breakdown by environmental factors

The environmental factors affecting sectors	The environmental factors not affecting sectors
A – agriculture, forestry and fishing	K – financial and insurance activities
B – mining and quarrying	L – real estate activities
C – manufacturing	M – Professional, scientific and technical activities
D – electricity, gas, steam and air conditioning supply	N – administrative and support service activities
E – water supply, sewerage, waste management and remediation activities	O – public administration and defense; compulsory social security
F - construction	P - education
G – wholesale and retail trade; repair of motor vehicles and motorcycles	Q – human health and social work activities
H – transportation and storage	R – arts, entertainment and recreation
I – accommodation and food service activities	S – other service activities
J – information and communication	U – activities of extraterritorial organizations and bodies

On the base of current decision making scheme for lending in banks and scientific literature, the authors made new decision making model for lending, where also environmental factors were included. After involvement of focus group, decision making structure, formed by authors, was almost completely approved, except stage of decision making, where the focus group reached the conclusion: "that at taking lending decision, corporate social responsibility should be undertaken not only by client's side, but also by banks". Thereby the authors supplemented their initial decision taking structure, taking into account proposals of focus group, which is illustrated in figure 1.

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Where,

- the existent bank's decision-making structure
- the added bank`s decision-making structure
- the focus group added bank`s decision-making structure

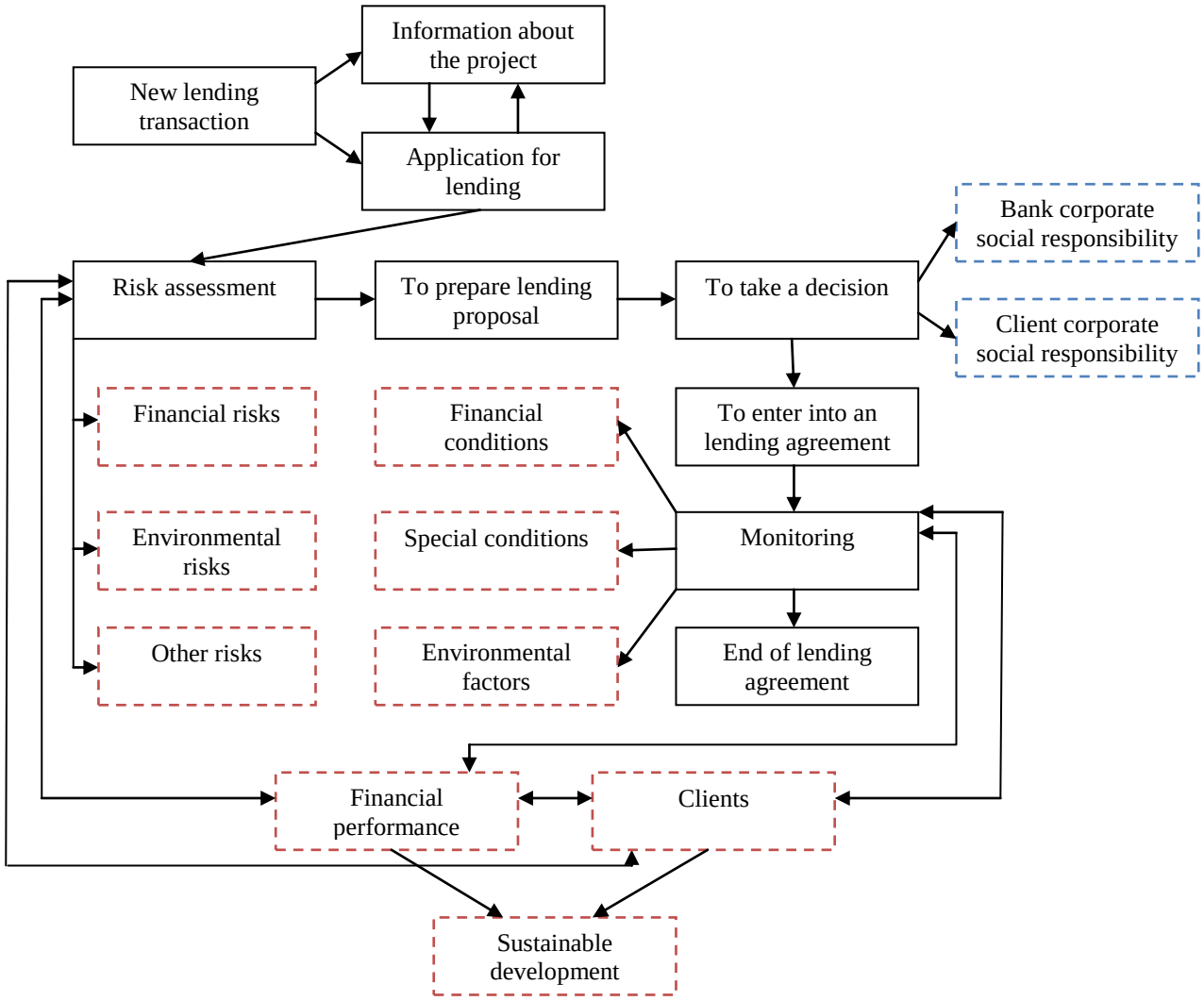

Figure 1. Lending decision making structure

According to International Finance Corporation (2008) and Gray (1994) taking as the base division of sub-sectors of Central Statistical Bureau of Latvia and information, summarized in table 1, the authors created table for lending risk assessment and determined interest rates for lending, taking into account possible environmental threats, applying it to specificity of Latvian sectors and commercial banks. Also the authors divided environmental risks in three groups: A1 – low risk sectors, B1 – medium risk sectors, and C1 – high risk sectors.

Performing verification of table 2 with mediation of focus group, it was completely approved. As well as authors' proposal that in such sectors as agriculture, fishery, electricity generation, and in tourism and catering services can be applied the lower risk level – A1, if in these sectors are used renewable resources or they have concluded contracts with other enterprises on further usage of waste, created during manufacturing, in renewable resources.

This kind of environmental risk assessment will initially ahead for customers and banks alike take responsibility for environmental risk threats, as well as will be one of the early stages of lending and environmental risk management.

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Table 2. Environmental risk breakdown by categories

A1	B1	C1
Forestry and logging	Crop and animal production, hunting and related service activities	Manufacture of coke and refined petroleum products
Manufacture of food products, beverages, tobacco products,	Fishing and aquaculture	Land transport and transport via pipelines , water transport, air transport
Printing and reproduction of recorded media	Mining of coal and lignite, quarrying	Manufacture of paper and paper products,
Manufacture of computer, electronic and optical products, electrical equipment	Manufacture of basic pharmaceutical products and pharmaceutical preparations	Manufacture of motor vehicles, trailers and semi-trailers
Manufacture of textiles, wearing apparel, leather and related products	Manufacture of basic metals, fabricated metal products, except machinery and equipment	Manufacture of rubber and plastic products
Repair and installation of machinery and equipment	Other manufacture	Manufacture of other non-metallic mineral products
Water collection, treatment and supply, sewerage	Electricity, gas, steam and air conditioning supply	
Remediation activities and other waste management services	Waste collection, treatment and disposal activities, materials recovery	
Construction of buildings, civil engineering, specialized construction activities	Wholesale and retail trade; repair of motor vehicles and motorcycles	
Publishing activities, motion picture, video and television production, sound recording and music publishing activities, programming and broadcasting activities, telecommunications, computer programming, consultancy and related activities, information service activities	Warehousing and support activities for transportation, postal and courier activities	
Financial service activities, insurance, reinsurance and pension funding, activities auxiliary to financial services	Accommodation and food service activities	
Real estate activities	Veterinary activities	
Legal and accounting activities, activities of head offices, management consultancy activities, architectural and engineering activities, scientific research and development, advertising and market research		
Employment activities, travel agency, tour operator and other reservation service and related activities, security and investigation activities, services to building and landscape activities, office administrative	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	
Public administration and defense; compulsory social security	Manufacture of furniture	
Education	Rental and leasing activities	
Human health activities, residential care activities, social work activities without accommodation	Repair of computers and personal and household goods, other personal service activities	
Creative, arts and entertainment activities, libraries, archives, museums and other cultural activities, gambling and betting activities, sports activities and amusement and recreation activities		
Activities of membership organizations		
Activities of extraterritorial organizations and bodies		

Using the bank`s lending interest rate existing policy and the results from focus group, created lending interest rate calculation policy by authors, that are directly related with the environmental risk assessment, as it shown by the following formulas.

A1 – low risk for environment. In this level of lending transactions, it is possible to leave the banks minimum interest rate without additional interest rates lifting:

$$c = b + 0\% \quad (1)$$

B1 – medium risk for environment. In B1 level of lending transactions the standard commercial banks set interest rate should be increased by 0,75%, because in this sector transactions exist the threat of environmental risk. In exceptional cases sectors, on the other hand, as the authors mentioned above, may apply a reduced rate of interest as defined in the B1 transactions:

$$c = b + 0,75\% \quad (2)$$

In exceptional cases for environmental risk:

$$c = b + 0,25\% \quad (3)$$

C1 – high risk for environment. In these sectors lending transactions in the case of a company for the not corrected action can be a serious threat to the environment and also for the commercial banks, with lending such as the bank of reference interest rate should be increased by 1.25%:

$$c = b + 1,25\% \quad (4)$$

Where
c – lending interest rate
b – bank standard rate

Conclusion

During the research the authors came to a conclusion that banks, which are performing the environmental risks assessment, pay only a formal attention to that and after the lending decision is taken no meaning is given any longer to that as well as the further monitoring is not performed, thus exposing the image and reputation of the bank to the environmental risks. Therefore it is even more important to develop the assessment of lending criterions in relation to the issues of environmental risks and quality further monitoring of them until the end of lending liabilities.

Basically, all commercial banks of Latvia have developed a lending valuation policy or rating system, setting the interest rate of the granted credit, without taking into account the environmental risks, but taking account only lending risks. Upon the assessment mechanisms of environmental risks, which are developed by the authors, with number influencing factors included, such as lending valuation, setting customer's rating and the monitoring process of it, banks will be able to make a quality assessment of influencing factors of environmental risks and their possible threats to banks, as well as to develop the sustainable mutual cooperation between the bank and customer. The lending assessment mechanism developed by the authors will take an important role in further lending decision making process in each of the commercial banks, performing the assessment of environmental risks, also they management process.

Decision making structure for lending and environmental risk assessment, formed in the article, is only the part of environmental risk management processes, thereby the authors consider as necessary to perform elaboration, development and implementation of further environmental risk management in commercial banks.

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