

BANK LENDING, THE IMPACT OF ENVIRONMENTAL FACTORS

Jana Erina¹, Natalja Lace²

Riga Technical University, 1/7 Meza str., Riga, LV-1048, Latvia
Email: ¹Jana.Erina@rtu.lv, ²Natalja.Lace@rtu.lv

Abstract. In recent years most growing importance is given to the environment and its consequences, so this question becomes an issue not just for manufacturing companies, but also for the banks. In order to prevent threats to the environment, banks bring a new lending operations should be carried out by the environmental risk assessment. In this article, the author's empirical study carried out by looking at the relationship between bank loans and a request for environmental information. In these research took part the biggest Latvian banks, taking into account the corporate lending decisions. The objective of this research paper is to specify environmental criteria which should be taken into account in the bank lending decisions. To achieve the goal were used a questionnaire, quantitative and qualitative methods, including the method of sociologic research, monographic and descriptive method.

Keywords: banks, environmental factors, environmental reporting, corporate lending, annual report.

Jel classification: D02, G21

1. Introduction

The impact of bank crediting transactions on environmental factors is a completely new and so far not widely investigated issue. Recently in the world they more and more discuss and assess the influence of factory produced hazardous substances on environmental factors, one has produced special guidelines for businessmen to start environmentally harmless business, however, little or no attention to this issues has been paid at banks upon performing lending transaction assessment for corporate clients. Thus also the available literature on bank-performed analysis with regard to environmental factor assessment is rather limited.

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 crediting transactions, maximally reducing both, social and financial risks. The importance of this issue has also been highlighted by Cheng, Liu and Qian (2006). Whereas McInnes, Beattie and Pierpoint (2007) points out that banks should reflect the importance of environmental factors to lending transactions also in banks' annual statements, for also this issue can have influence on potential financial risks of the financial services sector.

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 Thamootheram (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).

Comparing European banks with American banks, initially Europe focused more on development of financial services and introduction of new products, whereas American banks start to pay attention to environmental factor assessment upon considering lending transactions. Only in the middle of 1990s in Europe one developed a policy to start handling environmental factor issues (Jeucken, Bouma 1999). The first European state to start focusing on environmental factor impact in the banks services sector was UK (Thompson 1995). Thus the most research on environmental factor impact has been done exactly in UK.

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, Bebbington 2001).

The objective of this research paper is to specify environmental criteria which should be taken into account in the bank lending decisions in case of banks of Latvia.

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

2. 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.

Murray, Sinclair, Power, and Gray (2006) (2006) in they study revealed that regular environmental information communication plays an important role in considering corporate lending transactions and decision making, Juravle and Lewis (2008) is of similar opinion. Whereas Davis, Lukomnik and Pitt-Watson (2006) noted that if one fails to take into consideration environmental factors, banks analysts may only rely on short-term objectives, taking into account only annual statements. Upon considering crediting transactions there is a gap between environmental factor defining risks, for so far the businessmen who have caused harm to the environment have not been punished, thus bank analysts in their as-

essment pay little attention to environmental factors (Sullivan, MacKenzie 2006). Also in the Czech Republic carried out a research showing that environmental factor assessment and monitoring plays an important role in the competitiveness of the enterprise and sustainable development, as well as it gives additional incentives for enterprises (Kocmanov *et al.* 2011).

Environmental reporting plays an important role for creditors in capital markets, analysts of financial services and investors to obtain as detailed information as possible from businesses on impact of environmental factors on lending transactions. The first studies on the role of environmental reporting and their importance in environmental factor record were carried out in 1993 (DTTI *et al.* 1993). Other studies on this issue were undertaken only in 1998 by pointing out that environmental reporting can ensure sustainable development of financial services, as well as the fact that it would be necessary to include in loan agreements of corporate lending transactions certain provisions aimed at environment risks assessment. Scientific literature also discusses that there is a classification which can have influence on environmental reporting:

1. Enforced environmental reporting, based on legislation of environmental organizations;
2. Self-regulation and voluntary reporting - Autonomous Self-Regulation the European Community Eco-Management and Audit Scheme (EMAS) and ISO 14001 schemes.
3. Sector self-regulation measures – via production sector associations;
4. Self-regulation – state legislation on annual statements of businesses, as well as making environmental factor reports public;
5. Confidentiality disclosure in trade relations, e.g., between purchasers and suppliers;
6. Voluntary information disclosure – may include also confidential and enforced reporting, as well as willingness of a company to promote its environmental activity (Labatt, White 2002).

3. Methodology

As shown by the Financial and Capital Market Commission (FCMC) data for the 2nd quarter of 2011, Latvian banking services are provided by 22 banks and 10 foreign bank branches, as well as the European Economic Area countries established credit institutions or their branches, which submitted the application to the FCMC, the with one bank – "VEF Banka" from 26.05.2010. License has been revoked. Latvian Bank also registered six electronic money institutions and two money mar-

ket funds (Association of Latvian Commercial banks 2011).

The research was carried out from October to November 2011 in largest banks and branches of foreign banks operating in Latvia to empirically evaluate the link between bank loans and demand for environmental information.

The authors developed survey forms based on studies of scientists, such as Harte et al. (1991), Epstein un Freedman (1994), Cowton and Thompson (2000) and other former empirical studies, the questions consisted of five blocks.

The survey questions mainly consisted of closed questions, the assessment of which applied a five-point Likert scale (1 – strongly disagree, 5 – strongly agree), except for questions of demographic nature. The data obtained in the research were summarized and analyzed, as well as represented graphically. One surveyed bank employees whose daily work is related to corporate client lending issues.

4. Research results

Total of 300 electronic questionnaires were sent to three commercial banks of Latvia, of which 244 were returned back and accepted as valid.

The Bank's employee demographic data and personal data showed that from all respondents take part 69 % of women, but 31 % of men. 48 % of the respondents are aged 20–29 years old, and 45 % of 30–39 years old, and 7 % over 40 years. The majority part of respondents, i.e. 56 % have higher education, 43 % have a master's degree and 3 % in secondary education, taking about in terms of time spent working at the bank, the majority of respondents are from 1–5 years, 72 %, 24 % of 5–10 years, while 4 per cent work more than 10 years.

4.1. Environmental factor assessment upon taking a lending decision

Questions that are related to the evaluation of environmental factors in considering and adopting decisions on corporate lending are depicted in Figure 1.

The question 5., what are related to the bank's sustainable development strategy show when the bank 1 worked based on the short-term and medium-term development objectives, contrary as it is in bank 2 and bank 3, which might suggest that the bank's development of the process of braking.

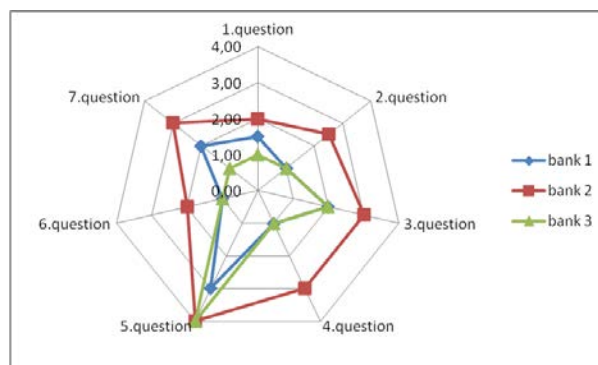


Fig.1. The role of environmental factors on corporate lending (1.question. The Bank conducts continuous environmental risk reduction measures; 2.question. The Bank is carried out the environmental risk management; 3.question. The Bank monitoring the environmental risks of regulatory requirements; 4.question. Corporate lending interest rate policy is closely linked to environmental risks; 5.question. The Bank has developed and implemented policy of sustainable development; 6.question Through environmentally responsible lending is enhanced image of bank; 7.question Environmental factors play a crucial role in the lending business in the market).

The issue of disregarding environmental factors upon considering and accepting corporate lending transactions, as well as not developing a separate interest rate pricing policy for environmentally friendly and environmentally unfriendly lending transactions, in they study revealed also Cowton and Thompson (2000).

4.2. Environmental factor standarts

Corporate client lending the environmental risk assessment of existing and possible standards and the nature of them by the bank employee opinion shown in Figure 2.

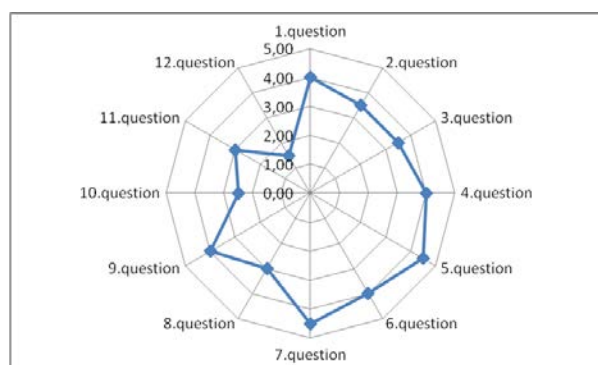


Fig.2. Environmental factors assessment standards (1.question. Compliance with all known and potential future environmental control standards; 2.question. Environmental liability insurance; 3.question. Importance have a high environmental standards; 4.question. The need for environmental analysis; 5.question. Use for environmentally friendly technologies; 6.question To

establish the environment control system in enterprises; 7.question Interchangeable use of the resources in the production process; 8.question Compliance with EU environmental requirements for control; 9.question The enterprise principal activities related to environmentally friendly products production; 10.question The enterprise are focused on the protection of the environment; 11.question Encouraging recycling products, by-products and waste recycling without the risk to the environment; 12.question The enterprise produced products registration and eco-labelling).

In the questionnaires obtained data in figure 2. shown when more importance for manage the environmental factors for the evaluation of the standards should be given to environmentally friendly technologies and products in the manufacture of precious resources, compliance with environmental control standards, environmental analysis, control system, but as less important is the concentration on the environmental protection and eco-labelling.

Bank staff at this block of questions pointed out that at banks where environmental factor assessment is carried out, it is only of formal nature, for environmentally friendly lending for businesses, as well as for commercial banks in Latvia is a new and so far unexplored step.

Whereas Gray and Bebbington's (2001) in they study expressed that banks are jointly liable for granting environmentally safe lending transactions and that businesses themselves must implement an environmental factor development and monitoring system by which we can conclude, and this is also confirmed by the opinion of bank staff, that Latvian financial institutions have still a long way to go achieve the results of other states and assessment standards in environmentally friendly lending.

4.3. Client lending risk assessment

For a taking a decision based on lending, the bank employees shall carry out a series of measures, therefore, were created the questions which includes financial and non financial information about lending enterprises, as well as the amount to be credited as the source of this type of information are used mostly (see Fig. 3).

The lending risk factor evaluating and assessment showed that the more importance for considering the new lending transactions or make changes to existing corporate lending credit agreements, the most attention is given to the enterprise annual reports, the information what are available to the Register of enterprises, the enterprise assets and enterprise lending history based on the information from the register of debtor.

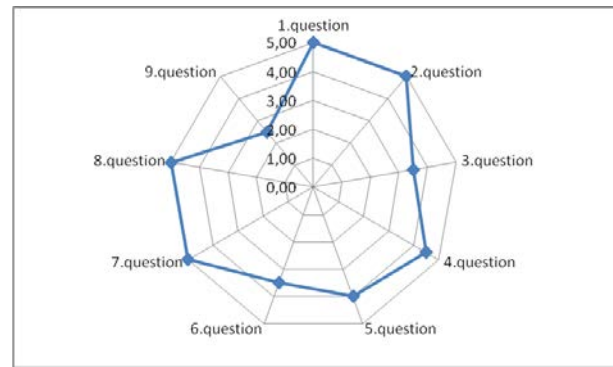


Fig.3. Lending risk factors evaluation (1.question. Audited and unaudited annual and quarterly statement filing; 2.question. The information available from the enterprise register; 3.question. Information what are collected by the enterprise production premises and manufacturing process inspection; 4.question. Personal discussions and interviews with the enterprise leadership or its representatives; 5.question. In the public space available information; 6.question Enterprise industry data and development trends; 7.question The lending enterprise assets evaluation; 8.question Enterprise credit assessment from the register of debtor; 9.question Environmental information about the enterprise).

But as more less importance have those factors, such as enterprise production premises, enterprise industry data and environmental information.

The obtained data show that each bank has a different scale of lending assessment criteria, for instance, at some banks all the lending transaction analysis is actively done by analysts, whereas in some banks up to certain amount the analysis is done by credit managers themselves thus making a certain information discrepancy, also not all lending transactions are subject to inspection of production premises. Also with regard to environmental information of businesses; banks still carry out lending transactions by fully or partially disregarding the importance of environmental factors.

Harte *et al.* (1991) in they study revealed that the most important ones when taking lending decisions are annual statements of businesses, as it was derived from the study carried out by the authors, while Berry *et al.* (1993) showed that what matters is communication – this factor in the case of Latvian commercial banks is of average importance, for, as mentioned before, banks have different lending assessment standards in place.

4.4. Sections of annual statements

In order to establish the respondents views on enterprises annual statements prepare and included of them part suitability, as well as the measures taken by the environment impact (see Fig. 4).

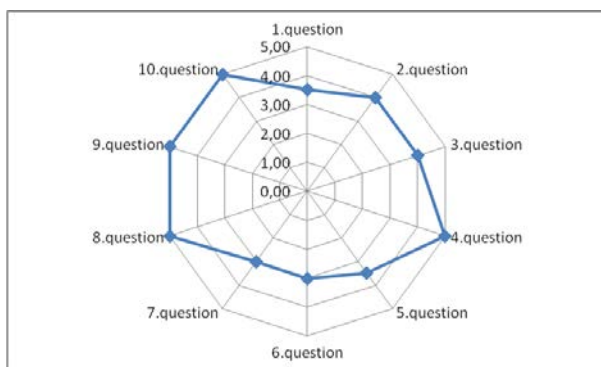


Fig.4. In annual statements included chapters (1.question. Enterprise department head statements; 2.question. Statement by the Chairman of the Board; 3.question. Information about the offered products and services by segments; 4.question. The enterprise financial performance report 5.question. Statistical information about the enterprise; 6.question The formed accounting policy; 7.question Independent Auditors ' statement; 8.question Full coverage of the balance statement by segments; 9.question Profit and loss statement; 10.question Comprehensive cash flow statement)

To carry out the respondent's summary of answers, the obtained data showed, that as major sections that should be included in the annual statement are balance sheet with those sections reflections, profit and loss calculation, as well as cash flow statement. But more less importance are given for the statistical information, accounting policies, because the mostly corporate enterprises it is the same, as well as the independent auditor's statement.

Also Harte *et al.* (1991) while carrying out a study proved that quantitative data play an important role in company annual statements, as well as one cannot neglect qualitative information; they all comprise a corporate image also in relation to environmental factors.

4.5. Annual statements in environmental protection

Questions that are related with the banking and the enterprises environmental factors annual statement submission and measures for the protection of the environment are reflected in Figure 5.

According to the data of founding it can be concluded that the annual statement reporting, should be also included information that is associated with the leadership prognosticate plan and results, as well as spending on the environment issues, the enterprises environmental policy statement and related factors in the financial statements. On the other hand, as minor factors are listed by the independent auditor's statement, the accounting policy on the environment issues, con-

centration on environmental factors, as well as leadership competences in environmental issues.

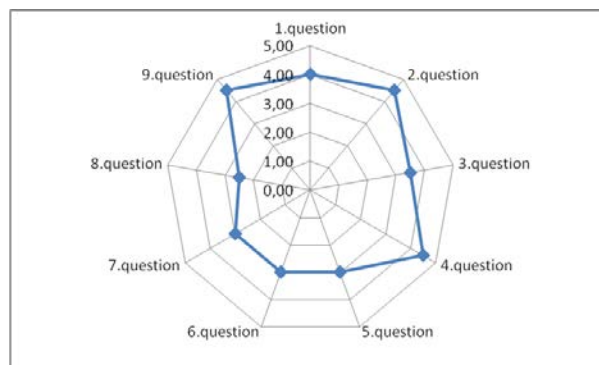


Fig.5. Annual statements in environmental protection (1.question. Information about defined environmental factors standards of a breach; 2.question. Management estimates the impact on future results, as well as environmental expenditure; 3.question. Environmental audit summary of results; 4.question. The enterprise environmental policy statement; 5.question. Independent Auditors ' statement on the environmental audit; 6.question Developed accounting policy with respect to environmental issues; 7.question Enterprise leadership statement on the implementation of the concentration on environmental law development; 8.question Leadership competences in matters of environmental factors; 9.question Environmental factors including in annual statements)

As revealed by Taberner *et al.* (1991), concentration on environmental factors and their integration into annual statements allows making forecasts and focusing on the result thus achieving sustainable mutual cooperation and development.

5. Conclusions

This study provided the authors an insight into the application of environmental information by Latvian commercial banks upon reviewing and taking decisions on corporate lending while taking into account environmental issues, as well as possibilities for their reflection in annual statements.

The obtained data showed that at banks where environmental factor assessment is done, it is a rather formal measure. This could be explained by the fact that currently in Latvia environmentally friendly lending has not become popular yet, as well as the large bank concentration and the fact that banks base their activity on short-term, not long-term objectives.

There is also no environmental factor assessment and their integration in annual financial statements; as a shortcoming one must mention the fact that neither businessmen, nor banks have an environmental factor assessment system and strategy.

Environmental information is only a small but a very significant part of the social record. As showed the analysis of scientific literature and the study performed, banks play an important role in financing economic activity of businesses, although the so far available literature in social accounting is rather limited.

The authors believe that environmental factor assessment upon taking lending decisions will play an increasingly important role, for the world is constantly moving towards “green” financing and application of renewable resources.

References

- Aintablian, S.; McGraw, P. A.; Roberts, G. S. 2007. Bank monitoring and environmental risk, *Journal of Business Finance and Accounting* 34(1): 389–401. <http://dx.doi.org/10.1111/j.1468-5957.2006.00644.x>
- Bank Track 2007. *ABN AMRO financing for Sakhalin II poses huge risk for potential buyers* [online] [accessed 20 December 2011]. Available from Internet: http://www.banktrack.org/show/news/abn_amro_financing_for_sakhalin_ii_poses_huge_risk_for_potential_buyers.
- Berry, R.H.; Crum, R.E.; Waring, A. 1993. *Corporate Performance Evaluation in Bank Lending Decisions*. Chartered Institute of Management Accountants Press, London.
- Cheng, Y., Liu, M. H.; Qian, J. 2006. Buy-side analysts, sell-side analysts and investment decisions of money managers. *Journal of Financial and Quantitative Analysis* 41(1): 51–82. <http://dx.doi.org/10.1017/S002210900002428>
- Cowton, C. J.; Thompson, P. 2000. Do codes make a difference? The case of bank lending and the environment. *Journal of Business Ethics* 24 (2): 165–178. <http://dx.doi.org/10.1023/A:1006029327264>
- Davis, S., Lukomnik, J.; Pitt-Watson, D. 2006, *The new capitalists*. Boston, MA: Harvard Business School Press.
- DOI. [online] [accessed 17 September 2011] Available from Internet: <http://www.doi.org/index.htm>.
- DTTI, IISD and SustainAbility 1993. *Coming Clean: Corporate Environmental Reporting, Opening Up for Sustainable Development*, SustainAbility, London.
- Epstein, M. J.; Freedman, M. 1994. Social disclosure and the individual investor. *Accounting, Auditing and Accountability Journal* 7 (4): 94–109. <http://dx.doi.org/10.1108/09513579410069867>
- European Bank for Reconstruction and Development 2007. *Sakhalin II project* [online] [accessed 15 November 2011] Available from Internet: <http://www.ebrd.com/pages/news/press/2007/070807>.
- Financial and Capital market commision [online] [accessed 15 September 2011] Available from Internet: http://fckk.lv/lv/statistika/kreditiestades/ceturksna_parskati/2010-08-09_banku_darbiba_latvija_20/.
- Gray, R.; Bebbington, J. 2001. *Accounting for the Environment*, second ed., Sage, London.
- Grunert J.; Norden L.; Weber M. 2004. The role of non-financial factors in internal credit ratings, *Journal of Banking and Finance* 29: 509–531. <http://dx.doi.org/10.1016/j.jbankfin.2004.05.017>
- Harte, G.; Lewis, L.; Owen, D. 1991. Ethical investment and the corporate reporting function, *Critical Perspectives on Accounting* 2 (3): 227–253. [http://dx.doi.org/10.1016/1045-2354\(91\)90012-3](http://dx.doi.org/10.1016/1045-2354(91)90012-3)
- Jeucken, M.; J. Bouma. 1999. The changing environment of banks. Pages 24–38 in J. Bouma, M. Jeucken, and L. Klinkers (eds.), *Sustainable Banking: The Greening of Finance*. Sheffield, UK: Greenleaf.
- Jeucken, M. 2001. *Sustainable finance & banking*. The Financial Sector and the Future of the Planet, Earthscan Publications Ltd.
- Juravle, C.; Lewis, A. 2008. Identifying impediments to SRI in Europe: a review of the practitioner and academic literature. *Business Ethics: A European Review* 17(3): 285–310. <http://dx.doi.org/10.1111/j.1467-8608.2008.00536.x>
- Kocmanova, A.; Docekalova M.; Nemecek P.; Simberova I. 2011. *Sustainability: Environmental, Social and Corporate Governance Performance in Czech SMEs*, The 15th World Multi-Conference on Systemics, Cybernetics and Informatics, 94–99.
- Kolk, A.; Levy, D.; Pinkse, J. 2008. Corporate responses in an emerging climate regime: the institutionalization and commensuration of carbon disclosure, *European Accounting Review* 17(4): 719–745. <http://dx.doi.org/10.1080/09638180802489121>
- Labatt, S.; White, R. R. *Environmental finance. A Guide to Environmental Risk Assessment and financial Products*. Publisher of Environmental finance magazine.
- Latvian Commercial Bank Association [online] [accessed 10 August 2011] Available from Internet: <http://www.bankasoc.lv/lka/statistika>.
- Mainelli, M.; Stevenson, J.; Thamotheram, R. 2009. *Sell-side research: three modest reform proposals, Network for Sustainable Financial Markets* [online] [accessed 10 December 2011] Available from Internet: <http://www.sustainablefinancialmarkets.net/2009/01/19/sell-side-research-3-modest-reform-proposals>.
- McInnes, B.; Beattie, V.; Pierpoint, J. 2007. *Communication between management and stakeholders: A case study*. London: ICAEW.
- Murray, A.; Sinclair, D.; Power, D.; Gray, R. 2006. Do financial markets care about social and environmental disclosure? Further evidence from the UK, *Accounting, Auditing and Accountability Journal* 19(2): 228–255. <http://dx.doi.org/10.1108/09513570610656105>
- PricewaterhouseCoopers 2009. *Investment community wants environmental disclosure. Governance and corporate reporting world Watch* [online] [accessed

- 14 December 2011]. Available from Internet: http://www.pwc.co.uk/pdf/world_watch_issue_1_2009.pdf 1.
- Solomon, J. F.; Solomon, A. 2006. Private, social, ethical and environmental disclosure, *Accounting, Auditing and Accountability Journal* 19(4): 564–592. <http://dx.doi.org/10.1108/09513570610679137>
- Sullivan, R.; Mackenzie, C. 2006. *Responsible investment*. Sheffield: Greenleaf.
- Taberner, J.; Gibb, S.; Sweeney, D. 1991. Learning to live with green law, *International Financial Law Review* 2: 7–10.
- Thompson, H. 1995. The role of financial institutions in encouraging improved environmental performance. In M. Rogers (ed.), *Business and the Environment*. London: MacMillan Press.
- Thompson, P.; Cowton, C. J. 2004. Bringing the environment into bank lending: implications for environmental reporting, *British Accounting Review* 36(2): 197–219. <http://dx.doi.org/10.1016/j.bar.2003.11.005>
- Weber, O. 2005. Sustainability benchmarking of European banks and financial service organizations, *Corporate Social Responsibility and Environmental Management* 12: 73–87. <http://dx.doi.org/10.1002/csr.77>
- Weber, O.; Köllner T.; Scholz, RW. 2003. Nachhaltigkeit im Finanzgeschäft [Sustainability in the finance business]. *Schweizer Personalvorsorge* 01/03: 21–24.