The Application of Regulatory Impact Assessment (RIA) on the Czech Financial Market

Jana Chvalkovska, Petr Jansky, Petr Teply

Abstract—The impact assessment in its various forms has recently become a very important part of policy-making and legislation in many different countries. Regulatory impact assessment (RIA) is yet another set of analytical methods deployed in the legislation of the European Union, of many developed countries as well as in many developing ones such as Mexico, Malaysia and Philippines. The aim of this paper is to provide a theoretical background for economic models in regulatory impact assessment and an overview of their application especially on the financial market in the Czech Republic. We found out an inadequate application of these models, what makes room for further research in this field.

Keywords—regulatory impact assessment, RIA, impact evaluation, building societies, Czech Republic

I. INTRODUCTION

THE impact assessment in its various forms has recently become a very important part of policy-making and legislation in many different countries. The impact assessment is usually defined as a set of methods designed to evaluate the scope and intensity of a certain group of problems. Among other areas, it is very often used in the public sector to evaluate different situations, regulatory acts and policies as detailed in [10].

As far as the environmental law and regulation in the European Union (EU) is concerned, the impact assessment is very well developed. All member states of the EU are in specified situations required to carry out an *environmental impact assessment* (EIA), in which is well described in [1]. EIA is also applied in the United States, Canada, Australia, and New Zealand, and in emerging economies, including India [2]. EIA often employs methods such as environmental risk mapping, life cycle analysis, environmental impact assessment, multi-agent system, linear programming and agroenvironmental indicators [3], complemented by cost-benefit or multi-criteria analysis.

Dr. Jana Chvalkovska is with Institute of Economic Studies, Faculty of Social Science, Charles University in Prague, Opletalova 26, Prague, Czech Republic (telephone: +420 222 112 328, fax: +420 222 112 303, e-mail: jana.chvalkovska@zindex.cz).

Petr Janský, M.Sc. is with Institute of Economic Studies, Faculty of Social Science, Charles University in Prague, Opletalova 26, Prague, Czech Republic (telephone: +420 775 022 260, fax: +420 222 112 303, e-mail: jansky@fsv.cuni.cz).

Dr. Petr Teply is with Institute of Economic Studies, Faculty of Social Science, Charles University in Prague, Opletalova 26, Prague, Czech Republic (telephone: +420 222 112 320, fax: +420 222 112 303, e-mail: teply@fsv.cuni.cz).

The sub-sample of EIA is the climate change impact assessment [4].

Regulatory impact assessment (RIA) is yet another set of analytical methods deployed in the legislation of EU, many developed countries as well as in many developing ones (e.g. Mexico, Malaysia, and Philippines), as discussed in [5]. Among the RIA methods prevails cost-benefit analysis, multicriteria analysis, qualitative description of risks related with baseline alternative (if regulation is not adopted) [6]. Recent trend in RIA methods is the deployment of composite indicators [7]. RIA evaluates usually economic, social, and environmental impacts of the legislative or non-legislative act in question.

Among other, minor, specific sub-sets of impact assessments, can be named e.g. social impact assessment [2], [8], health impact assessment [9], or corruption impact assessment [10].

The paper continues as follows. Section 2 introduces the MAC concept as an alternative to RIA. In Section 3, we provide background information on the Czech financial market. The third part provides an overview of the worldwide private equity market and key players. Section 4 analyses the application of RIA in the Czech financial market. Finally, in Section 5 we conclude the paper.

II. THE MAC QUESTIONS CONCEPT AS AN ALTERNATIVE TO RIA?

Before discussing application of RIA at the Czech financial market, we will introduce the "MAC" questions concept in regulation theory as developed by [24] and [25]. When intending regulation of any industry and entity, regulators should ask the following six fundamental questions related to Materiality, Accountability and Credibility of intended regulatory rules (therefore the acronym MAC):

- 1. Materiality in this concept refers to significance of regulated entities on the market (for more detail on competitive policy see, for instance, [11], [22] or [23]) and the regulator should ask these questions:
 - Are activities of a regulated entity material and significant on the relevant market?
 - Does this future regulated entity play a significant role on the relevant market?
- 2. Accountability stands for a possibility to define and detect regulated entities, what is not always easy, however. In other words, this part of the MAC concept investigates if the regulated entity is accountable for the regulator. The relevant questions are as follows:
 - Is the regulated entity accountable?

- Can the regulator easily describe and define a regulated entity?
- 3. Credibility is related to a success or failure of similar regulations or regulations on similar markets. The key questions to be answered are:
 - Were similar regulations successful?
 - Does any applicable best-practice regulation exist?

Under the MAC concept, effective regulation requires positive answers to at least five out of six questions. However, none of global financial market regulations fulfils the MAC concept (i.e. costs of the regulation outweigh its benefits). As a result, efforts on global financial market regulation usually spur financial upheavals rather than prevent the world from future crises. We can list several examples. First, Basel II rules made provision of mortgages more profitable for banks compared to the Basel I capital accord. As a result, the subprime mortgage crisis came in 2008. Second, Basel II did not require any capital cushion against purchased high-rated government bonds into bank portfolios. Thus banks were motivated to hold government bonds that were perceived as risk-free. However, the 2010-2011 sovereign crisis proved it was a mistake.

A third example of regulatory failure regulation comprises the financial private equity regulation fulfils. As to Materiality, private equity business seems to be insignificant in a global scale. We estimate that private equity business amounted to USD 2.6 trillion as of the end of 2010 or less than 2% of total global financial assets under management (Figure 1), so it is not a significant market share. As to Accountability, the term private equity encompasses many forms of business, what makes the scope of the regulation difficult to capture. Moreover, private equity firms are usually non-transparent and do not produce publicly available reports. As to Credibility, regulation of financial markets does not seem to be efficient when considering both Basel capital accords (Basel I and Basel II) in the field of banking industry.

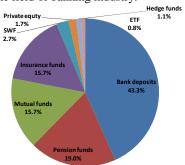


Fig. 1 Global assets managed by financial institutions as of 31 December of 2010 (total = \$157 trillion)

Source: Authors based on The City UK (2011)

Note: SWF = Sovereign Wealth Funds, ETF = Exchange traded funds

III. THE CZECH FINANCIAL MARKET

A. History of the Czech financial market

Since the fall of communism in 1989, the Czech Republic has stabilized its economy, built up institutions and the legal underpinnings of a market economy, and achieved sustainable economic growth up to the year of 2008. While many global financial institutions have been significantly affected by the 2008/2009 financial upheaval, the Czech financial system remained isolated from the global turbulence. The same hold for the Czech banking sector that survived the crisis mainly for the three following reasons. Firstly, Czech banks held a minimum amount of risky assets such as subprime mortgages or collateralized debt obligations (CDO). Secondly, the Czech banks focus on a traditional banking business "deposit-loan" model and report high liquidity and capital buffers. Last but not least, TOP Czech banks were bail-outed by the Czech government in late 1990s and early 2000s [19].

B. Structure of the Czech financial market

The Czech financial market ranks to bank-oriented systems meaning that banks are the most important channel for funding both companies and households (similar systems can be found, for instance, in Germany and Japan). Figure 1 depicts a structure of the Czech financial market as of 31 December 2010 and demonstrates the significance of the Czech banking sector that comprises both deposits and building savings with a 69% total market share.

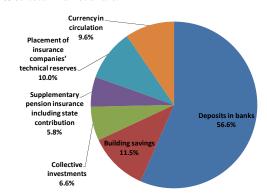


Fig. 2 Structure of the Czech financial market as of 31 December 2010 (total = CZK 3.7 trillion)

Source: Authors based on MFCR (2011)

Figure 1 shows development of the Czech financial market in the 2006-2010 period. As of 31 December 2010, bank deposits amounted CZK 2.5 trillion (approx. USD 120 million); from that deposits worth CZK 430 billion were placed in building societies discussed later in this paper. On the other hand, pension fund industry and insurance sectors are still relatively undeveloped, what is a typical feature of Central European countries [27].

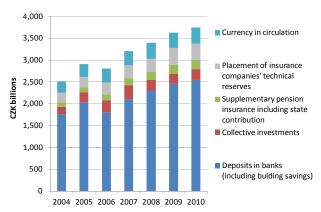


Fig. 2 Development of the Czech financial market in the 2006-2010 period

Source: Authors based on MFCR (2011) and MFCR (2008)

We should also note that the Czech Republic has its own currency (Czech koruna, "CZK"), therefore currency in circulation worth CZK 358 billion as of the end of 2010 comprises predominantly CZK rather than other currencies such EUR or USD. Not surprisingly, the amount of currency in circulation increased by 13% in 2008 (Figure 3), what might be attributed to a change in Czech households' preferences towards to safe and liquid instruments during the global crisis (so called "flight to safety" in financial theory).

IV. THE APPLICATION OF RIA IN THE CZECH FINANCIAL $\label{eq:market} \mathsf{MARKET}$

A. General information

As mentioned, the Czech financial market is a bank-oriented system indicating a high role of bank industry, which ranks to the most regulated sectors. Since the Czech Republic has been a member of the EU since 2004, RIA on financial market regulation is usually provided usually on the EU level than on the national level. As a result, EU directions are frequently transposed to the Czech law without RIA on particular regulation, so only few RIAs have been prepared in the Czech financial industry. Therefore in the following part we will discuss two RIAs on changes in Buildings Savings Act in years 2010 and 2011.

B. Basics of building savings

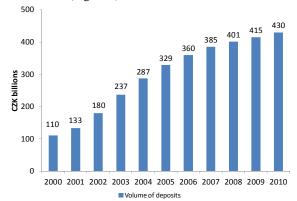
Building savings are similar to banking products widely used in Europe and in a lesser extent in countries such as China, India, Kazakhstan, New Zealand or Vietnam [15]. Building savings enjoy state support in Europe and also in the Czech Republic. "Building savings was formed and exists in order to help finance better housing for as many people as possible, under conditions which are stable and at the same time more favourable than with other common products on the market" (ACSS [1], p.2).

TABLE I BUILDING SAVINGS IN EUROPE (2009)

Country	Number of construction savings contracts	Loan/deposit ratio	Number of inhabitans	Penetration
Germany	30,109,800	79.6%	82,268,000	36.6%
Czech Republic	4,926,183	64.4%	10,334,000	47.7%
Austria	5,096,658	94.4%	8,315,000	61.3%
Slovakia	1,011,753	100.8%	5,397,000	18.7%
Croatia	330,165	70.5%	4,436,000	7.4%
Hungary	590,820	11.6%	10,056,000	5.9%
Romania	254,639	11.5%	21,547,000	1.2%
Belgium	7,060	1151.2%	10,626,000	0.1%
Total	42,327,078	79.9%	152,979,000	36.6%

Source: The European Society of Building Societies

Building societies play an important role in the Czech financial market with more than 4.5 million clients and an approx. 11.5 % market share and collected deposits worth CZK 430 billion as of the end of 2010 up from CZK 110 billion in 2000 (Figure 4).



Source: ACSS (2010)

C. RIA on changes in the Buildings Savings Act in 2010

The 2010 sovereign crisis has pushed governments around the world to make budget cuts in order to maintain public debt sustainable (for more details on the global crisis, see [20], [21], [27] or [29]). The same story happened in the Czech Republic, where government decided to reform building savings and the Ministry of Finance of the Czech Republic prepared a RIA on proposed changes in The Buildings Savings Act [16].

The RIA fulfilled all standard requirements set by Czech and EU law and focused on the following three main topics:

- 1. Change in state support of building savings (5 options)
- 2. New tax imposed on interest income from building savings (2 options)
- 3. Limits on building and bridge loans (4 options).

All options included a cost-benefit analysis and discussed impacts on interested parties with primary focus on state budget. Along with standard practice, the RIA recommended to decision makers the most viable option for every topic.

D. RIA on changes in the Buildings Savings Act in 2011
The Ministry of Finance of the Czech Republic continued in reforming the building savings market in the year of 2011 and issued another BIA [18]. Again, the BIA has fulfilled all

issued another RIA [18]. Again, the RIA has fulfilled all standard requirements set by Czech and EU law but dealt with two topics only:

- Introduction of limits on the use of building savings (5 options)
- Product approach and enlargement of providers of building savings also to banks (5 options).

As in the previous RIA, all options were properly analyzed and best solutions have been recommended to decision makers.

V. CONCLUSION

The impact assessment in its various forms has recently become a very important part of policy-making and legislation in many different countries. RIA is yet another set of analytical methods deployed in the legislation of the European Union, of many developed countries as well as in many developing ones such as Mexico, Malaysia and Philippines. In this paper we provided a theoretical background for economic models in regulatory impact assessment and an overview of their application in the Czech Republic. We focused on RIAs on changes in the Buildings Savings Act in the 2010-2011, that were done relatively precisely, what makes them exceptional, however. In general we found out an inadequate application of RIA on the Czech financial market, what makes room for further research in this field.

ACKNOWLEDGMENT

Authors are thankful for comments to Hana Reimarova, Jiří Skuhrovec, Michal Mejstrik and Yael Roshwalb. Financial support from The Czech Science Foundation (projects under No. GA 403/10/ and GA P403/10/1235), The Grant Agency of Charles University (GAUK 387611/2010) and The Technology Agency of the Czech Republic (TACR TD010136) is gratefully acknowledged.

REFERENCES

- C. Wood, Environmental Impact Assessment: A Comparative Review, 2nd edition. Person Prentice Hall. 2003. p. 399
- [2] B.K. Dutta, S. Bandyopadhyay, "Environmental Impact Assessment and Social Impact Assessment - Decision Making Tools for Project Appraisal in India", International Journal of Human and Social Sciences vol.5, n. 6, 2010, pp. 350 - 355
- [3] S. Payraudeau, H.M.G. van der Werf, "Environmental impact assessment for a farming region: a review of methods", Agriculture, Ecosystems and Environment, vol. 107, 2005, pp. 1–19
- [4] J. F. Feenstra, I. Burton, J.B. Smith, R.S.J. Tol (eds.), Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies, UNEP, 1998
- [5] C. Kirkpatrick, D. Parker, "Regulatory impact assessment and regulatory governance in developing countries", Public Administration and Development, vol. 24, n. 4, pp. 333–344, October 2004
- [6] C. Kirkpatrick, D. Parker (eds.), Regulatory Impact Assessment Towards Better Regulation, Edward Elgar Publishing, 2007, p. 286
- 7] F. De Francesco, C.M. Radaellli, "Indicators of regulatory quality", in Regulatory Impact Assessment Towards Better Regulation, C. Kirkpatrick, D. Parker (eds.), Edward Elgar Publishing, 2007, p. 36
- [8] H.A. Becker, "Social Impact Assessment", European Journal of Operational Research, vol. 128, n. 2, 16 January 2001, pp. 311–321

- [9] A. Scott-Samuel, "Health impact assessment—theory into practice", Journal of Epidemiology and Community Health, 1998; vol. 52, pp. 704–705
- [10] J. Chvalkovska, P. Jansky, M. Mejstrik. "Identifying corruption in legislation using risk analysis methods", World Academy of Science, Engineering and Technology, Forthcoming in 2012.
- [11] ACSS, "Building Savings in 2009", Association of Czech Building Societies in the Czech Republic, 2010
- [12] ACSS, "Building Savings in 2010", Association of Czech Building Societies in the Czech Republic, 2011
- [13] J. Cernohorsky, G. Serdarević, P. Teply, P. "Theoretical background for competitive merger analysis", Scientific Papers of The University of Pardubice Series D, University of Pardubice, vol. 16, 2010, pp. 50-57.
- [14] P. Jakubik and P. Teply,"The JT index as an indicator of financial stability of corporate sector", *Prague Economic Papers*, vol. 2, June 2011, pp. 155-175, ISSN 1210-0455.
- [15] R. Horvath, P. Teply, "The future of building savings in the Czech Republic", research study, Prague: Charles University, July 2011
- [16] MFCR, "RIA on proposed changes in the Buildings Savings Act", Ministry of Finance of The Czech Republic, 2010
- [17] MFCR, "Report on financial market developments in 2010", Ministry of Finance of The Czech Republic, June 2011
- [18] MFCR, "RIA on proposed changes in the Buildings Savings Act", Ministry of Finance of The Czech Republic, July 2011
- [19] M. Mejstřík, M., Pečená, M., and P. Teplý, Basic Principles of Banking. Prague: Karolinum press, 2008.
- [20] K. Pokorna and P. Teply, "Sovereign Credit Risk Measures", Proc. of 2010 International Conference on Business and Economic Sciences, Dubai: World Academy of Science, Engineering and Technology, vol. 73, January 2011, pp. 652-656.
- [21] M. Rippel and P. Teply, "Operational Risk Scenario Analysis", Prague Economic Papers, vol. 1, March 2011, pp. 23-39, ISSN 1210-0455.
- [22] G. Serdarevic, P. Teply, "Mathematical models of oligopolies' behaviour", Proc. International Conference on Mathematics and Mathematical Sciences, Bali: World Academy of Science, Engineering and Technology, vol. 58, January 2011, pp. 883-887.
- and Technology, vol. 58, January 2011, pp. 883-887.

 [23] P. Serdarevic, P. Teply," The Efficiency of EU Merger Control during the Period from 1990-2008", *Czech Journal of Finance*, vol. 3, September 2011, pp. 253-276, ISSN 0015-1920.
- [24] M. Sinka, P. Teply, "The (non)sense of private equity regulation?", Scientific Papers of The University Pardubice, vol. 2, 2011, pp.155-166.
- [25] P. Teply, "The importance of MAC questions in regulation", Internal research report, University of Economics, Prague, 2010
- [26] P. Teply, R. Chalupka, and J. Cernohorsky, "Operational Risk And Economic Capital Modeling", Proc. International Conference on Business, Economics and Tourism Management, World Academic Press, Feb. 2010, pp. 70-75, ISBN13: 978-1-84626-026-1.
- [27] P. Teply, "Exit Strategies from The Global Crisis", Proc. of 2010 International Conference on Business, Economics and Tourism Management, Paris: World Academy of Science, Engineering and Technology, 2010, pp. 387-392, ISSN: 2070-3724.
 [28] P. Teply, "The Key Challenges of The New Bank Regulations", Proc. of
- [28] P. Teply, "The Key Challenges of The New Bank Regulations", Proc. of 2010 International Conference on Business, Economics and Tourism Management, Paris: World Academy of Science, Engineering and Technology, 2010, pp. 383-386, ISSN: 2070-3724.
- Technology, 2010, pp. 383-386, ISSN: 2070-3724.
 [29] P. Teply, "The Future Regulatory Challenges of Liquidity Risk Management", Proc. of 2010 International Conference on Business and Economic Sciences, Dubai: World Academy of Science, Engineering and Technology, vol. 73, January 2011, pp. 657-661.
- and Technology, vol. 73, January 2011, pp. 657-661.

 [30] TheCityUK. "Private Equity 2011", August 2011, available at: http://www.thecityuk.com/media/179004/private%20equity%202011.pd f