

Summary of Research and Scientific Accomplishments

[Appendix 2b]

dr Iwona Sobol

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1. Name and Surname

Iwona Sobol

2. Diplomas and Academic Degrees, Education

- | | |
|---------------------|--|
| November 2003 | Doctoral degree in economics
Faculty of Economics, University of Gdańsk
Title of the dissertation:
<i>Faktoring jako forma finansowania handlu zagranicznego</i>
<i>(Factoring as a Form of International Trade Finance)</i>
Supervisor: prof. dr hab. Danuta Marciniak-Neider
Reviewers: prof. dr hab. Wiesław Dębski, prof. dr hab. Edmund Pietrzak
The doctoral degree was awarded with distinction. |
| July 1998 | Master's degree in economics
Faculty of Economics, University of Gdańsk
Major: international economic relations
Title of the master thesis:
<i>Franchising jako forma prowadzenia działalności gospodarczej</i>
<i>(Franchising as a Form of Conducting Business Activity)</i>
Supervisor: prof. dr hab. Anna Barbara Kisiel-Łowczyc
Reviewer: prof. dr hab. Ewa Oziewicz |
| January – June 1995 | Växjö University in Sweden (currently Linnaeus University)
studies within TEMPUS Programme
Scandinavian Business Program |

3. Information on Employment in Academic Entities

Since the beginning of my work at the Faculty of Economics of the University of Gdańsk, I have been employed at the Department of International Financial Markets (which was called Department of International Monetary Relations until 2013) at the Institute of International Business. From February 15, 1999 to January 31, 2004, I was employed as a research assistant, and since February 1, 2004, I have been employed as an assistant professor.

Since October 1, 2017, I have been the head of the Department of International Financial Markets.

In the years 2000-2007 and 2011-2012, I cooperated with Gdańsk Institute for Market Economics. In the first period, I was a member of the project group, whose principle investigator was prof. dr hab. Edmund Pietrzak. The group was responsible for preparation of research papers on the prospects of development of the derivatives market. In 2011-2012, I prepared expert opinions on the market of factoring in Poland.

In the years 2002-2018, I visited and gave lectures 16 times at foreign universities (in Belgium, Germany, Greece, Finland, Spain, Lithuania, Russia and Turkey), either within the Erasmus program or under the auspices of bilateral agreements (appendix 4).

4. Additional Education: the Most Important Seminars and Trainings courses

During my work at the University of Gdańsk, I participated in seminars and training courses aimed at strengthening my academic and didactic competences. Among them were:

- 10.05–04.06.2004 – International Faculty Development Program (IESE Business School in Barcelona, participation owing to scholarship from IESE Business School);
- 19.07–25.07.2009 - European Entrepreneurship Colloquium in Maastricht, organised by European Forum for Entrepreneurship Research, University of Maastricht, RWTH Aachen University and KU Leuven in cooperation with Stanford University, Harvard University, University of Cambridge and IESE Business School;
- 2011 - training courses within the project „Cooperation of Science and Business - the Future of Pomerania” (Human Capital Operational Programme);
- 2017–2019 – training courses within the project "Innovative Didactics - Development of the Competence of Lecturers of the Faculty of Economics" (Operational Programme Knowledge Education Development).

Detailed information on the seminars and training courses in which I have participated are provided in Appendix 4.

5. Description of Achievement Resulting from Art. 16 (2) of the Act of 14 March 2003 on the Law on Academic Degrees and Title and Degrees and Title in the Arts (Official Journal of Laws of 2017, item 1789)

5.1. Basic Information about the Achievement

Author – Iwona Sobol

Title – *Rozwój bankowości islamskiej – uwarunkowania, problemy, perspektywy*
(*Development of Islamic Banking - Determinants, Problems and Perspectives*)

Reviewer– dr hab. Piotr Masiukiewicz, prof. SGH

5.2. Justification for Choice of Subject

The monograph *Rozwój bankowości islamskiej – uwarunkowania, problemy, perspektywy* (*Development of Islamic Banking - Determinants, Problems and Perspectives*) is a comprehensive study on Islamic banking. The monograph is of a theoretical and empirical nature and is an attempt at a multidimensional analysis of the researched phenomenon. This multidimensionality results, inter alia, from the interdisciplinary nature of the book, going beyond economics and finance, but touching upon also other scientific disciplines such as religious studies, history, demography or sociology. At the same time, this monograph reflects my various scientific interests.

Banking system constitutes the basis for the functioning of the economy, and therefore is also one of the crucial areas of research in economics. The state and shape of the banking system in a particular country is determined by many factors, including, among others, the level of economic development, historical and cultural determinants, as well as religion. Islamic banking is the best-developed part of the Islamic financial system, which, in addition to performing the usual functions of a conventional system, should also, according to Muhammad Umer Chapra, one of the leading Muslim economists, "contribute richly to the achievement of the major socio-economic goals of Islam". The most important goals include: economic prosperity, characterised by full employment and optimum rate of economic growth, socio-economic justice and equitable distribution of income and wealth and monetary stability¹. In order to conform with those values, Islamic banks should be governed by morality and the well-being of society. The ethicality of Islamic banks should be ensured by their compliance with a number of principles. These principles are based on sharia, religious law of Muslims, whose revival has been observed for several decades.

Although the principles and values on which Islamic banking activities are based date back to the times of Prophet Muhammad, the first interest-free bank was established in 1963, and the following ones in the 1970s. Also since the 1970s, there has been a growing interest in Islamic economics and finance among scientists - economists, lawyers, and also theologists. In 1976, the First Islamic Conference on Islamic Economics was held in Mecca. And in 1979, King Abdulaziz University from Saudi Arabia, established the International Center for Research in Islamic Economics (ICRIE) to conduct theoretical and applied research in various sub-fields of Islamic economics. It should be noted that interest in Islamic economics,

¹ M. U. Chapra, *Towards a Just Monetary System*, The Islamic Foundation, Leicester 1985, p. 33.

including banking, is mainly expressed by Muslim scholars. English-language literature, also published in the Western world, except for a few exceptions, is authored by Muslims. However, a significant part of it is devoid of any critical analysis of the Islamic banking phenomenon, or even it is its promotion. Sometimes the scientific discussion on Islamic economics, including banking is difficult, because some Muslim scholars, even in publications written in English, use Arabic phrases that they do not explain. This is one of the obstacles in establishing discussion and dialogue with Western non-Muslim economists.

I would like to add that in the Polish scientific literature Islamic economics and banking is rarely discussed. Books that have been published on this subject only partially focus on the issues raised in my monograph². Thus my studies, the results of which are presented in the monograph, as well as in numerous articles, fill the gap related to this subject in the literature. Moreover, due to the fact that Islamic banking has become a permanent element of the global financial system, getting to know and understanding its essence and the determinants of its development is also important from the macroeconomic point of view as well as from the point of view of economic practice.

5.3. Goals, Hypotheses and Structure of the Monograph

The main goal of the monograph is to identify the specificity, role, and prospects of development of Islamic banking in the world. I also formulated the following additional objectives:

1. To present the principles explaining the functioning of modern Islamic banking and to examine the reasons for their application.
2. To examine historical factors that had an impact on the development of Islamic banking institutions and to identify contemporary determinants of the development of Islamic banking.
3. To compare the profitability of Islamic and conventional banks and to determine factors affecting the profitability of Islamic banks.

Having analysed literature, I formulated the following working hypotheses:

1. The sharia principles governing the operations of Islamic banks determine the nature of Islamic financial instruments which is different from conventional ones both in terms of their structure and the way of generating revenues and costs.

² See J. Adamek, *Finanse muzułmańskie: zagadnienia wybrane*, Wydawnictwo Naukowe PWN, Warszawa 2016; M. A. Bonca, *Islamskie instrumenty finansowe*, Wydawnictwa Akademickie i Profesjonalne, Warszawa 2010; K. Górak-Sosnowska, P. Masiukiewicz, *Bankowość muzułmańska*, Oficyna Wydawnicza SGH, Warszawa 2013.

2. Islamic banks constitute an alternative to conventional banks in building the financial system of Muslim countries, and the main determinant of their development is an active support of this banking sector from the state authorities.

3. Conventional banks are characterised by higher profitability than Islamic banks.

The monograph consists of six chapters.

The first chapter is an analysis of the religious and historical aspects of Islamic economics, with particular emphasis on banking. Since Islamic banking is based on the religious law of Muslims, sharia, in the first subchapter I explained what sharia is and I characterised its sources. Then I made a critical analysis of selected aspects of Islamic economics. First, I analysed issues related to Islamic economics as a science, and then I pointed out the features that should characterise the Islamic economic system, referring them to modern capitalism. In the next subchapter I presented definitions of Islamic finance and banking. The first chapter is concluded with a detailed analysis of the evolution of Islamic banking, from the times of Muhammad to the present day. This analysis was aimed at identifying the factors that had the most significant impact on the emergence, development and current state of this banking sector.

The second chapter of the monograph is devoted to the basic principle of Islamic banking - the prohibition of interest rate (*riba*). The chapter begins with a short presentation of views on usury and interest over the years. The history of interest and usury dates back several thousand years, and this topic, being one of the important issues in the history of economic thought, was already raised by ancient philosophers. And already in the earliest times, it aroused much controversy. After presenting views on usury, I analysed opinions on interest and usury in Islam, and explained what *riba* is and what types of *riba* can be distinguished. The second chapter ends with a discussion on the economic as well as religious and social reasons for the prohibition of interest rate by Islamic banks.

The prohibition of *riba* is not the only principle on which Islamic banks must base their activity. I discussed the other principles in the third chapter of the book. I presented both the theoretical foundations of those principles as well as their translation into banking practice. I devoted the first part of the chapter to the avoidance of uncertainty (*gharar*) and the prohibition of speculation (*maysir*). I pointed out how these principles were interpreted in the past, and how they are interpreted in modern times in relation to economics and finance. Then I explained how important obligation of alms-giving (*zakat*) is and indicated the role of banks in adherence to this principle. Another principle, which I discussed in the third chapter is the prohibition of investing and trading in illegal products (*haram*), which include, among others, tobacco, alcohol, drugs, pornography, weapons, entertainment, but also, for example, pork. In the next subchapter, I presented the concept of profit and loss sharing (PLS), which should constitute the basis for the operations of Islamic banks. Supervision over the compliance of the Islamic bank's activities with the above-mentioned principles is usually exercised by the

sharia board. In the last part of the chapter I discussed the role and tasks of sharia board and indicated who can be its member. I also pointed out the problems and controversies related to the functioning of sharia boards in Islamic banks.

In the fourth chapter, I presented the essence of financial instruments offered by Islamic banks, I analysed their structure, problems related to them and also indicated the scope of their use. I focused on the instruments that are Islamic equivalents of loans and deposits offered by conventional banks. First, I characterised financing instruments and then the deposits of Islamic banks. Two groups of financing instruments can be distinguished. The instruments from the first group are based on the concept of profit and loss sharing. The second group of Islamic financing instruments is based on debt. I analysed both groups in terms of their structure, use, and the controversy they arouse. In the next two subchapters, I discussed Islamic deposits. First I focused on current and savings accounts, as well as the possibilities and scope of using of Islamic payment cards. Then I characterised term deposits. I devoted the most attention to deposits based on the *mudaraba* concept, the most desirable from the sharia point of view. The last subchapter is devoted to the Islamic deposit guarantee schemes.

The fifth chapter is a case study on Islamic banking in Malaysia. The choice of this country is not accidental. In terms of asset value, Malaysia is not the largest Islamic banking market in the world, but it is considered to be the best developed market where both Islamic and conventional banks work side-by-side in similar conditions. In this chapter, first I presented the evolution of Islamic banking in Malaysia and analysed the factors that contributed to its development. Then I examined the state of development of Islamic banking in comparison with conventional banking, taking into account total assets, the value of the financing provided and the value of deposits. In this part of the chapter, I also examined the structure of financing provided by Islamic banks in Malaysia and the structure of Islamic deposits, paying special attention to the compliance of those instruments with sharia. Economic efficiency is also the subject of my research - in the next subchapter, I analysed the profitability of conventional and Islamic banks in Malaysia in the years 2010-2016 and examined whether there were statistically significant differences in profitability in these two groups of banks. In the last subchapter, I conducted an econometric study aimed at identifying factors determining the profitability of Malaysian Islamic banks.

The sixth chapter of the book is an attempt to assess the state and prospects of the development of Islamic banking. At the beginning, I analysed its current state of development, taking into account such elements as: total Islamic banking assets and their share in total Islamic finance assets, the size of Islamic banking assets in particular regions of the world and particular countries, penetration of Islamic banking in particular countries. In this part of the chapter I also indicated how many banks in the world and its particular regions offer Islamic financial products and services, and also presented the world's largest Islamic banks. The second subchapter is devoted to international cooperation, which is undertaken by

central banks, market regulators and various supporting institutions from countries in which Islamic banks operate, as well as by Islamic banks themselves. The international organisations that I discussed in this chapter are, among others, the creators of standards that aim to unify instruments, procedures and regulations in countries where Islamic banks operate and adapt them to the requirements, which have to be met by conventional banks. In the summary of the chapter I examined opportunities and challenges of further development of Islamic banking in the world.

5.4. Research Results and Contribution of the Monograph to the Development of the Discipline

Achieving the objectives formulated in the monograph and verifying the hypotheses required undertaking comprehensive theoretical studies, carrying out empirical research as well as performing advanced statistical and econometric studies.

As I pointed out in the monograph, the principles of Islamic economics, on which Islamic banks must base their activities, are based on sharia. Muslim jurists try to prove the necessity to obey them by finding appropriate references in the Koran and hadiths.

I partially confirmed the hypothesis that those principles determine the nature of Islamic financial instruments which is different from conventional ones both in terms of their structure and the way of generating revenues and costs.

Due to the necessity to comply with the principles of sharia, especially the prohibition of *riba*, the Islamic banking instruments have in most cases different structure than conventional instruments. The most unique are instruments based on the concept of profit and loss sharing. These instruments are the most desirable from the point of view of sharia and according to theorists of Islamic economics, the whole banking system should be based on them. Not only is their structure different from loans and deposits offered by conventional banks, but also their basic assumption. Namely, in contrast to loans, in the case of PLS financing, there is no guaranteed rate of return on investment, because the income depends on the financial result achieved by the financed entity, which can mean both profit and loss. The income received by depositors depositing their money on PLS-based deposits depends also on the financial result of the venture. However, as I pointed out in the monograph, there are various problems with instruments of finance based on the PLS principle, the largest of which is moral hazard problem. Due to these problems, in practice other instruments are much more often used, especially *murabaha* and its modifications. These instruments are based on the sale of a specific asset. According to Muslim jurists, the fact that the subject of financing is the existing physical asset, makes *murabaha* legal. The bank, being in possession of such an asset, even for a very short period, bears full risk for it. This exposure to risk is a justification for existence of the mark-up, which constitutes the bank's income. It should be noted that the

mark-up is usually benchmarked to rates on the conventional interbank market. Thus, apart from the structure, *murabaha* is not essentially different from interest-based instruments.

The largest use of *murabaha* and its modifications is confirmed by the analysis of Islamic banking in Malaysia, carried out in the fourth chapter of the book. At the end of 2016, these transactions accounted for over 50% of the total financing provided by Malaysian Islamic banks. Also in other countries, including Sudan, where legal steps have been taken to reduce the importance of the *murabaha* instrument, it is the most widely used financing instrument. According to data from the central bank of Sudan, in 2016, *murabaha* transactions accounted for 46.2% of financing provided by Sudanese banks.

And when deposits are based on the PLS principle, there is a risk that if they do not generate comparable income, like deposits in conventional banks, depositors withdraw their money from Islamic institutions and transfer them to conventional banks. To prevent this, Islamic banks apply various types of income smoothing techniques, but in this case another problem arises. Namely, the rate of return from the deposit does not reflect the PLS principle, but is benchmarked against the interest rate of a conventional bank.

With regard to *mudaraba*-based deposits, in countries other than Malaysia, they are more often used than instruments of finance based on the PLS principle. In Malaysia, transactions based on commodity *murabaha*, have the largest share in the deposits of Islamic banks, just like is the case of financing instruments.

It should be added that the relationship between the interest rate and profitability of Islamic banks has been confirmed by the econometric study, presented in chapter five, based on panel data from the Malaysian market, aimed at identifying determinants of the profitability of Malaysian Islamic banks. I found a statistically significant positive relationship between the interest rate on the conventional market and the profitability of Islamic banks. This proves that, as in the case of conventional banks, the interest rate is invariably an important factor determining the Islamic bank's income, despite the fact that theoretically Islamic banking is considered to be interest-free banking.

The analysis carried out in the monograph allows to conclude that the structure of most Islamic financial instruments indicates that they differ significantly from conventional instruments. However, the mechanism of generating revenues and costs for the bank, is often based on interest rate, just as it takes place in conventional banking.

I confirmed the hypothesis that Islamic banks constitute an alternative to conventional banks in building the financial system of Muslim countries, and the main determinant of their development is an active support of this banking sector from the state authorities. The emergence of Islamic banks was caused by Islamic movements, which aimed at the social and cultural revival of Muslim societies in the spirit of Islam and which were opposed to the culture of colonial states. Such movements included, among others, the organisation Muslim Brotherhood, which was founded in 1928 by Hasan al-Banna. The oil crisis of the 1970s was another very important factor that contributed to the emergence of Islamic banking. The high

income, which as a result, began to flow into the Gulf states, was the main source of capital for the establishment of Islamic banks. In the 1970s, almost all banks in the Middle East and Africa were established thanks to the capital from oil exports. At that time, it was debated whether Islamic banking would be a temporary phenomenon. Including a religious element in such a secular area, which is banking, may have seemed peculiar and hardly anyone thought that Islamic banking could become an alternative to conventional banking.

Meanwhile, as I pointed out in the monograph, in some Muslim countries, Islamic banking has indeed become an alternative to conventional banking, and even in two countries, Iran and Sudan, Islamic banks are the only banks on the market. Therefore, the assets of Islamic banks operating there have a 100% share in the banking sector's assets of these countries. The Muslim countries, where Islamic banking is of the greatest importance, also include Brunei Darussalam (57% share in the assets of the domestic banking sector in 2016), Saudi Arabia (51%), Kuwait (39%), Qatar (27%) and also Malaysia, which was analysed in detail in the book. At the end of 2016, the assets of Islamic banks in Malaysia accounted for 23.80% of the assets of the entire Malaysian banking sector, while in 2007, they had a share of 12.9%. In 2007-2016, the Compound Annual Growth Rate (CAGR) of Malaysian Islamic banking was 16%, while CAGR of conventional banking assets in the same period was only 6.8%. If such a growth rate is maintained, around 2030, the banking sector in Malaysia will be divided more or less by half between Islamic and conventional banks.

The example of Malaysia indicates that if Islamic banking is to become an alternative to conventional banks, it cannot be just a grassroots initiative. Banks must have sufficient support from the state authorities. In Malaysia, thanks to special regulations, Islamic financial transactions are not taxed differently from transactions of conventional banks, despite their fundamental differences. Moreover, Islamic banking has been the subject of special plans, developed and introduced by the central bank and the government of Malaysia. For example, in 1993 interest-free banking program was introduced, which was transformed in 1998 into the Islamic banking program. Islamic banking and other Islamic financial markets have also been assigned a central role in the central bank's strategy for 2011-2020 - "Financial Sector Blueprint 2011-2020", which is a part of the Malaysian government's policy to make Malaysia a highly developed country. In 2005, the central bank founded the International Center for Education in Islamic Finance (INCEIF), a university that educates personnel for Islamic financial institutions.

The development of Islamic banking in Malaysia is an example that proves that Islamic banks may fulfil the bank's functions just as well as conventional banks. It should also be noted that there are reasons to expect further development of Islamic banking in the world.

One of the main opportunities for the development of Islamic banking is the growing number of Muslim population in the world, which is mainly responsible for the demand for Islamic financial products. According to the Pew Research Center's estimates, the growth rate of the Muslim population in 2010-2030 will be on average 1.5% and will be over twice as

high as the growth rate of the remaining population (0.7%). Moreover, according to research, there is a very large group of religious Muslims and many of them support the sharia law on which the principles of Islamic banking are based. An opportunity for the development of Islamic banking is also a greater involvement in the services provided to small and medium-sized enterprises as well as the poorest people. Increased financing to these entities would not only positively affect the development of Islamic banking, but would also strengthen the status of Islamic banks as socially responsible institutions.

However, it should be noted that there are also many challenges ahead of Islamic banks (mainly on the supply side). Among them is the aforementioned divergence between Islamic banking theory and practice, manifested by non-compliance of Islamic banks with the PLS principle, as well as problems with risk management, small size of Islamic banks and the lack of properly educated staff. An important problem of Islamic banking is also differences in opinions as to which financial instruments are sharia-compliant and which are not. That is why the activities of organisations such as the Islamic Financial Services Board (IFSB) or the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) are so important. They set standards aimed at standardising instruments, procedures and legal regulations in countries where Islamic banks operate, as well as adapt them to the requirements of conventional banking. Such standards include, among others, standards on the capital adequacy of Islamic banks, published by the Islamic Financial Services Board in 2013, which are compatible with the Basel III standards. It should be emphasised that the IFSB standards do not in any way change the requirements developed by the Basel Committee on Banking Supervision, but they adapt them to the specificity of Islamic banking and Islamic financial instruments. A widespread acceptance of standards, developed by organisations such as IFSB and AAOIFI, is necessary for the further development of Islamic banking.

The hypothesis that conventional banks are characterised by higher profitability than Islamic banks has been partially confirmed. In order to verify this hypothesis, I chose banks operating in Malaysia. As I pointed out, the importance of Islamic banking in Malaysia is systematically growing. These banks operate in the same legal environment as conventional banks. Islamic financial transactions are not taxed differently from transactions of conventional banks, regardless of the crucial differences between the two. Islamic banks, as well as conventional banks are subject to the supervision of the Central Bank of Malaysia (Bank Negara Malaysia) and must comply with the same prudential standards. In the monograph, I examined whether there are statistically significant differences between the return on assets (ROA) and the return on equity (ROE) in both groups of banks. I conducted the study for the years 2010-2016. It covered 16 Islamic banks, i.e. all Malaysian Islamic banks and 22 out of 27 conventional banks operating in 2016. Five conventional banks were excluded from the research, since their presence on the market has been too short. In order to conduct the research, I created a database with data from over 300 financial statements of

Malaysian banks for the years 2009-2016, published on the official websites of banks, as well as from Thomson Reuters Eikon database. The database was also used for the study of factors affecting the profitability of Islamic Malaysian banks. I verified the hypothesis using the non-parametric U Mann-Whitney test. The test showed that there were statistically significant differences in the level of ROA in Islamic and conventional banks in Malaysia throughout the analysed period, and the sum of ranks indicated that ROA of conventional banks was higher than ROA of Islamic banks. As far as ROE is concerned, the U Mann-Whitney test showed that in the entire analysed period there were no statistically significant differences between ROE of Islamic and conventional banks in Malaysia.

I also conducted an econometric study aimed at identifying determinants of profitability of Malaysian Islamic banks. The estimated models indicated that in the years 2010-2016 ROA and ROE of Islamic banks operating in Malaysia, were significantly dependent on three factors: the size of banks measured by the value of assets, the ratio of deposits to total assets and the lending rate charged by commercial banks. Moreover, in the model estimated for the ROA variable, the ratio of financing to total assets had a statistically significant positive impact on the size of the dependent variable. Since the size of the bank has a positive impact on the profitability of the Islamic bank, mergers and acquisitions (M&A) in Islamic banking sector should be encouraged, especially that Malaysian Islamic banks, just like Islamic banks operating in other countries, are relatively small when it comes to the size of assets. However, as it was indicated in the book, most M&A attempts in Malaysian Islamic banking ended in failure. Moreover, it should be added that if Islamic banks want to strive for greater profitability, they should try to attract as many customers as possible, both depositors and entities expecting financing from the bank. The factors that can contribute to this may be, among others, promotion and education of clients in the range of financial products offered, emphasising their uniqueness in comparison with conventional banking products, as well as greater use of new technologies in customer service.

In conclusion, I would like to emphasise that the value of this monograph is its interdisciplinary character. The functioning of Islamic banking is deeply rooted in religion and culture, and therefore in order to understand the essence and specificity of this banking sector it was necessary to study literature and knowledge coming from various disciplines of science. I would like to add that the monograph deals with topics that in the Polish literature have been present to a very limited extent. When it comes to the contribution to the development of science I indicate the following issues:

- systematisation of scientific knowledge on the principles of Islamic economics, on which Islamic banks base their activity, as well as examination of the reasons for applying these principles and their critical assessment;
- identification of factors that contributed to the emergence, development and current state of Islamic banking in the world, as well as indication of the determinants of further development of this banking sector;

- comparison of the return on assets and the return on equity of Islamic banks and conventional banks operating in the same market on the example of Malaysia;
- identification, by means of advanced econometric methods, factors determining the return on assets and the return on equity of Islamic banks in Malaysia, and on that basis, indication of actions that these banks could take to increase their profitability;
- conducting an in-depth case study on Islamic banking in Malaysia.

The monograph also drew attention to the need to conduct further research devoted to Islamic economics and banking. Further research should include:

- research into the conditions of application of financing instruments in Islamic banking, based on the concept of profit and loss sharing (hitherto used only to a small extent), and into the creation of new financial instruments, which would not be an imitation of conventional products;
- research on the methods of conducting monetary policy by the central bank, since traditional instruments of monetary policy are not applicable in the Islamic financial system;
- further research on risk management by Islamic banks, both traditional risks and those unique to Islamic banking,
- further research on the determinants of profitability of Islamic banks.

I would also like to point out that my future scientific plans also include further research on Islamic economics and banking.

6. Other Scientific Achievements

6.1. Main Areas of Research Activity

Since the beginning of my work at the University of Gdańsk, my research has focused on international aspects of economics and finance. This is confirmed by the list of publications, included in Appendix 3 to the application to initiate the habilitation proceedings, as well as the list of conferences where I presented my research results, also included in Appendix 3. In the period since I was awarded the doctoral degree, my research has focused on three areas. These are: factoring as a form of finance, particularly finance of international trade, functioning of international financial markets and Islamic economics and banking.

Factoring as a form of finance, particularly finance of international trade

My interest in issues connected with financing of international trade transactions, began when I started working as a research assistant at the Institute of International Business

at the University of Gdańsk in February 1999. Since the beginning of my work I have conducted classes and lectures on International Settlements, where I discuss this subject. Among the issues that most interested me was factoring. My doctoral dissertation, which I wrote under the supervision of prof. dr hab. Danuta Marciniak-Neider was devoted to this subject. In 2005, on the basis of my doctoral thesis, a monograph *Faktoring międzynarodowy. Sposób na finansowanie eksportu (International Factoring. A Way of Export Finance)* was published by Oficyna Ekonomiczna in Kraków.

My other publications devoted to factoring, which were published after I had completed my PhD, include among others:

- I. Sobol, *Amerykański rynek usług faktoringowych (American Market of Factoring Services)* [in:] *Rozwój regionalny i globalny we współczesnej gospodarce światowej*, tom 2, eds. J. Rymarczyk, W. Michalczyk, Akademia Ekonomiczna we Wrocławiu, Wrocław 2004, pp. 274-280;
- I. Sobol, *Porównanie rynku usług faktoringowych w Polsce i Niemczech (Comparison of Factoring Services Markets in Germany and Poland)* [in:] *Małe i średnie przedsiębiorstwa w Polsce i Niemczech. Finansowanie, internacjonalizacja, zmiany strukturalne*, Tom 1, eds. H.H. Bass, E. Gostomski, Fundacja Rozwoju Uniwersytetu Gdańskiego, Sopot-Bremen 2006, ISBN 83-89786-98-2, pp. 95-104 (the 2nd Volume contains the German version of the article);
- I. Sobol, *Factoring as a Tool of Financing of Polish Exporters*, "Working Papers. Institute of International Business. University of Gdańsk" 2006, No. 21, ISSN 1230-6444, pp. 147-153.

Most of my publications on factoring focus on the analysis of functioning of factoring services markets in Poland and selected countries around the world. In these publications I discussed, among others, such issues as the factoring volume in comparison with other markets, the most frequently used forms of factoring, the specificity of a particular market, and the reasons for using factoring on a particular market.

In 2011 and 2012, due to my research interests, I was commissioned by Gdańsk Institute for Market Economics to prepare expert opinions on the prospects of development of factoring services market in Poland. In these expert opinions I outlined both the current state of development of this market and I pointed out the supply and demand factors that would determine its further development.

Factoring can be considered as an alternative to other forms of international financing, hence my interest in other forms as well. Factoring and forfaiting were discussed in the chapter *Faktoring i forfaiting w handlu zagranicznym (Factoring and Forfaiting in Foreign Trade)* which I wrote for the book *Rozliczenia międzynarodowe (International Settlements)* (ed. D. Marciniak-Neider, PWE, Warszawa 2011). And international short-term financing, such as international trade finance transactions (trade credits, discount credits and factoring),

loans in foreign currencies and issuing commercial papers on foreign markets were the subject of the chapter *International short-term financing* which I wrote for the book *Finanse międzynarodowe. Wybrane Problemy (International Finance. Selected Problems)* (ed. M. Markiewicz, U. Mrzygłód, PWE, Warszawa 2016). Choosing the right financing tool is one of the crucial economic problems faced by business entities. This decision should be supported by both the analysis of benefits and costs as well as access to alternative financing methods. In both publications, I put emphasis on those issues.

Functioning of international financial markets

Since the beginning of my work at the University of Gdańsk I have been interested in aspects of international economics and international finance, related to the functioning of international financial markets, mainly the foreign exchange market and derivatives market. In the years 2000-2007, I participated in the project of Gdansk Institute for Market Economics, regarding the forecasts of external factors which determine Polish banks' strategies. The principal investigator of the part devoted to the derivatives market was prof. dr hab. Edmund Pietrzak, while I was responsible for preparing forecasts of development of derivatives market in selected countries of Central and Eastern Europe. The reports which I prepared included both the assessment of the current state of development of over-the-counter and exchange-traded derivatives markets in such countries as Russia, the Czech Republic, Hungary, Romania, as well as the forecasts of development of these markets for subsequent years, taking into account macroeconomic aspects. In 2007, the report which I prepared covered the markets of the countries that joined the European Union in 2004 and 2007.

I have also received two grants of University of Gdansk for the research projects devoted to the derivatives market:

- 2007 – *Analysis of the Current State and the Prospects of Development of Financial Derivatives Markets in Selected Countries of Central and Eastern Europe*;
- 2009 – *Foreign Exchange Derivatives – Analysis of Instruments and Determinants of Development of Polish Market*.

Publications where I presented the results of my research on derivatives markets include:

- I. Sobol, *Development of Exchange-traded Derivatives Markets in Central European Countries* [in:] *Business and Management' 2008, Conference Proceedings*, Vilnius Gediminas Technical University "Technika", Vilnius 2008, ISBN 978-9955-28-267-9, pp. 308-313;
- I. Sobol, *Polish Market of Financial Derivatives*, "International Journal of Emerging and Transition Economies" 2008, Vol. 1, No. 2, ISSN 1308-2701, pp. 329-339;

- I. Sobol, *Analiza rynków derywatów giełdowych w Polsce i na Węgrzech (Analysis of Exchange-traded Derivatives Markets in Poland and Hungary)* [in:] *Procesy globalizacji internacjonalizacji i integracji w warunkach współczesnej gospodarki światowej - wybrane problemy*, tom 1, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego, Katowice 2009, ISBN 978-83-7246-507-8, pp. 317-326;
- I. Sobol, *Forwards and Options on Polish Foreign Exchange Market* [in:] *8-th European Conference on Young Research and Scientific Workers. Proceedings, Section 2 – Economics and Management*, part 2, eds. L. Tulejová, M. Kormacová, M. Varmus, P. Brida, University of Zilina, Zilina 2009, ISBN 978-80-554-0040-2, pp. 117-120;
- I. Sobol, *Nierzeczywiste transakcje terminowe na światowym i polskim rynku walutowym (Non Deliverable Forwards on the World and Polish Market)*, „Zeszyty Naukowe Uniwersytetu Ekonomicznego w Poznaniu” 2009, nr 125, ISSN 1689-7374, pp. 227-236.

All the above mentioned publications are devoted to derivatives markets - I discussed the state of development of these markets, their size and structure, as well as the factors determining the supply and demand on these markets. The research carried out in the first three of the above-mentioned articles covers markets of derivatives based on various financial instruments. I would like to pay special attention to the first article (*Development of Exchange-traded Derivatives Markets in Central European Countries*), where I made an analysis of the exchange-traded derivatives markets in Central European countries. I would like to emphasise that while the results of research on derivatives markets in highly developed countries have been widely discussed in English-language scientific literature, the topic of derivatives markets in Central European countries has been almost absent in English-language literature. That is why I believe that it is so important that I could share the results of my research with foreign economists. I would like to add that I presented the paper on the results of the above-mentioned research at the *Business and Management 2008* conference, organised by Vilnius Gediminas Technical University in Vilnius.

The last two articles from the above-mentioned publications on markets of derivatives are devoted to foreign exchange market transactions. In the article *Forwards and Options on the Polish Foreign Exchange Market*, I presented the situation on the Polish foreign exchange market with regard to forward transactions and currency options, with particular emphasis on the crisis on the options market, which took place in 2008. I presented a paper on this topic at the *European Conference of Young Research and Scientific Workers, Transcom 2009*, organised by the University of Zilina. The article *Nierzeczywiste transakcje terminowe na światowym i polskim rynku walutowym (Non Deliverable Forwards on the World and Polish Market)* is a detailed analysis of the market of non-deliverable forwards. In this article, among other things, I pointed out that the rate in these transactions may depend on additional factors

compared to the exchange rate in deliverable forward transactions, whose calculation is based on one of the fundamental theories of economics, relating to exchange rates, the theory of interest rate parity. In this article I also investigated the reasons for the emergence and the state of development of the market of these transactions in the world, as well as in Poland. I pointed out that the use of these transactions is largely determined by foreign exchange restrictions, introduced by the monetary authorities of particular countries, motivated by, among other things, a fear of losing control over monetary policy.

I also discussed selected issues on foreign exchange market in the book *Rozliczenia międzynarodowe (International Settlements)*. In the chapter *Funkcjonowanie rynku waulowego (Functioning of Foreign Exchange Market)*, I discussed the basic issues related to the functioning of this market, including brief presentation of such aspects of international economics as the types of exchange rates and factors affecting them. In the chapter *Instrumenty pochodne w zarządzaniu ryzykiem walutowym (Derivatives in Currency Risk Management)*, I analysed the following foreign exchange market instruments: forward transactions, foreign exchange swaps, currency futures and currency options. I indicated what is the reason for choosing particular instrument when the company makes a decision about the management of foreign exchange risk.

My studies of the financial international centres are also included in the field of research into international financial markets. The publications on this topic include:

- I. Sobol, *Główne centra finansowe świata (Main Financial Centres of the World)* [in:] *Finanse, bankowość i rynki finansowe*, eds. E. Pietrzak, M. Markiewicz, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2006, ISBN 83-7326-392-6, pp. 32-41;
- I. Sobol, *Analiza funkcjonowania głównych centrów finansowych świata – Londynu i Nowego Jorku (Analysis of the Major Financial Centers in the World - London and New York)* [in:] *Handel i finanse międzynarodowe w warunkach globalizacji*, eds. J. Schroeder, B. Stępień, Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2007, ISBN 978-83-7417-272-1, pp. 253-263;
- I. Sobol, *Analiza funkcjonowania finansowych centrów uprzywilejowanych (Analysis of Offshore Financial Centres)*, „Prace i Materiały Instytutu Handlu Zagranicznego Uniwersytetu Gdańskiego” 2006, nr 23, ISSN 1230-6444, pp. 153-162;
- I. Sobol, *Hongkong jako międzynarodowe centrum finansowe (Hong Kong as an International Financial Centre)*, „Prace i Materiały Instytutu Handlu Zagranicznego Uniwersytetu Gdańskiego” 2008, nr 26, ISSN 1230-6444, pp. 104-114;
- I. Sobol, *Międzynarodowe centra finansowe (International Financial Centres)* [in:] *Finanse międzynarodowe: wybrane problemy*, eds. M. Markiewicz, U. Mrzygłód, Polskie Wydawnictwo Ekonomiczne, Warszawa 2015, ISBN 978-83-20802178-9, pp. 166-180.

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In publications on financial centres, I focused on identifying their characteristic features and analysing the factors that contributed to their development. In addition, I examined the position of such centres as London, New York and Hong Kong in comparison with other centres of the world, taking into account, among others, qualitative and quantitative state of development of respective markets in these centres. I also studied offshore financial centres - OFCs. I analysed in detail the features, types, and ways of using these centres. Moreover, I pointed out what steps are being taken to counteract the negative effects of the activities conducted in OFCs.

I would also like to add that I share the knowledge on the international financial markets with students of undergraduate, graduate and postgraduate studies (including MBA Postgraduate Studies, Postgraduate Studies of International Business).

Islamic economics and banking

My interest in Islam goes back to high school. It was during my work as an assistant professor at the Department of International Financial Markets at the University of Gdansk when I first became interested in Islamic economics and especially Islamic banking

I started research on this topic in 2011. In addition to the monograph, which I indicated as the main scientific achievement, I wrote 17 scientific publications on this topic (articles in scientific journals and chapters in books). 12 of them are written in English. I also presented this topic at international conferences, such as *Arab and Muslim World in International Relations*, which was organised by Polish International Studies Association, *Initiatives Towards Political, Economic and Social Development of Europe*, organised by the Kaunas University of Technology and two conferences, organised by the University of Economics in Wroclaw - *Asian Economies in the Context of Globalization and Redefinition of the Role of Asia-Pacific Region in the Global Economy. Partnership or Leadership?*.

Among the publications devoted to Islamic banking, I would like to draw attention especially to two groups of articles. The first one is devoted to risk management in Islamic banking and Islamic derivatives, while the second is devoted to the analysis of functioning of Islamic banking in selected countries. These articles complement the monograph. They are focused on topics which are either not discussed in the book or are discussed only partially.

Risk management in Islamic banking and Islamic derivatives

Due to the specific nature of financial instruments offered by Islamic banks, their exposure to risk differs from the exposure to risk of conventional banks. In addition, risk management instruments and processes in Islamic banks are also of a different nature. I devoted the following articles to risk issues, as well as to instruments for managing various types of risk in Islamic banking:



- I. Sobol *Liquidity Management Practices in Islamic Banking*, "Journal of Management and Finance" 2013, No. 2, Part 1, ISSN 2084-5189, pp. 566-576;
- I. Sobol, *Credit Risk Management in Islamic Practice*, [in:] *Theory of Management 7, The Selected Problems for the Development Support of Management Knowledge Base*, ed. S. Hittmár, Faculty of Management Science and Informatics, University of Zilina, Institute of Management by University of Zilina, Zilina 2014, ISBN 978-80-554-0954-2, pp. 71-73;
- I. Sobol, *Analiza instrumentów pochodnych z perspektywy finansów islamskich (Analysis of Derivatives from the Point of View of Islamic Finance)* „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu” 2012, nr 267, tom 2, ISSN 1899-3192, pp. 252-261;
- I. Sobol, *Analiza możliwości zawierania transakcji opcyjnych na islamskim rynku finansowym (Analysis of the Possibility of Conducting Options on Islamic Financial Market)*, „Acta Universitatis Lodzianis. Folia Oeconomica” 2012, nr 273, ISSN 0208-6018, pp. 385-395;
- I. Sobol, *Currency Risk Management from Islamic Perspective* [in:] *Management Trends in Theory and Practice: Scientific Papers*, ed. S. Hittmár, Faculty of Management Science and Informatics, University of Zilina, Institute of Management by University of Zilina, Zilina 2013, ISBN 978-80-554-0736-4, pp. 114-116;
- I. Sobol, M. Szmelter, *Derivatives Trading and Clearing Practices in Developed European and Islamic Emerging Markets* [in:] *Nowe praktyki na rynku kapitałowym: fuzje i przejęcia, strategie inwestycyjne i zarządzanie ryzykiem, fundusze inwestycyjne i emerytalne, polityka reasekuracyjna zakładów ubezpieczeń*, eds. R. Karkowska, A. Sopoćko, Wydawnictwo Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego, Warszawa 2014, ISBN 978-83-63962-62-3, pp. 84-98 (the share of I. Sobol – 70%);
- I. Sobol, *Wykorzystanie islamskich transakcji terminowych w zarządzaniu ryzykiem walutowym (Islamic Forward Transactions in Currency Risk Management)* [in:] *Zarządzanie ryzykiem w działalności gospodarczej: InfoGlobMar 2015*, ed. J. Winiarski, D. Wach, Uniwersytet Gdański. Instytut Transportu i Handlu Morskiego, Gdańsk 2015, ISBN 978-83-7939-012-0, pp. 87-98.

The purpose of the article *Liquidity Management Practices in Islamic Banking* is to investigate the problems of Islamic banks with regard to liquidity risk and analyse selected instruments which are used by Islamic banks as liquidity management tools. As I pointed out in the article, if Islamic banking were based on instruments based on the principle of profit and loss sharing, as the theorists of Islamic economics postulate, Islamic banks would be exposed to lower liquidity risk than conventional banks. However, in practice, this is not the case, and like conventional banks, Islamic banks are vulnerable to liquidity risk. At the same

time, instruments for liquidity management which are used by conventional banks are not available to Islamic banks, as they are based on interest rate. In the article, I presented two ways of liquidity risk management in Islamic banks: based on the commodity *murabaha* mechanism and with the help of *ijara sukuk* certificates. I pointed out, however, that there are some problems when it comes to those two methods of liquidity risk management.. First of all, they do not have a liquid secondary market. Secondly, there is controversy regarding their compliance with sharia. As I pointed out, liquidity management is one of the main challenges faced by Islamic banks.

In the publication *Credit Risk Management in Islamic Practice*, I drew attention to the degree of credit risk associated with respective types of Islamic financing instruments. As I pointed out the greatest risk is associated with the *mudaraba* contract, the smallest with the *murabaha* one. In the following step, I characterised the process of credit risk management in Islamic banking and indicted its specificity.

Other important research problems which are included in my articles are devoted to Islamic derivatives. Research on Islamic derivatives combine my interests in Islamic banking and conventional derivatives. In articles devoted to Islamic derivatives, I discussed the reasons why Muslim companies cannot manage financial risks using conventional derivatives. I paid special attention to the different interpretation of sharia with regard to the structure of various derivatives. I also examined the possibility of using those instruments as hedging and speculation tools. I also examined the possibility of replacing conventional derivatives with Islamic instruments.

In the article written together with Monika Szmelter. I also examined exchange-traded conventional derivatives in selected Muslim countries and indicated trading and clearing practices related to those derivatives.

Analysis of Islamic banking in selected countries

A separate area of research, which I devoted to Islamic economics and banking, focuses on the functioning of Islamic banking in selected countries. My articles dedicated to this subject include:

- I. Sobol, *Islamic Banking – the Case of Malaysia*, „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu” 2014, nr 370, ISSN 1899-3192, e-ISSN 2392-0041, pp. 240-250;
- I. Sobol, T. Michałowski, *Islamic Financial System in Sudan: Evolution and Assessment*, „African Journal of Economic and Sustainable Development” 2015, Vol. 4, No. 2, ISSN 2046-4770, pp. 109-124 (the share of I. Sobol – 75%);
- I. Sobol, *Islamic Banking in the European Union Countries*, “European Integration Studies” 2015, No. 9, ISSN 1822-8402, e-ISSN 2335-8831, pp. 184-197;

- I. Sobol, *Development of Islamic Banking in Indonesia*, „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu” 2016, nr 447, ISSN 1899-3192, e-ISSN 2392-0041, pp. 168-177;
- I. Sobol, *Uwarunkowania i perspektywy rozwoju bankowości islamskiej w Wielkiej Brytanii*, „International Business and Global Economy” 2016, No. 35/2, ISSN 2300-6102, e-ISSN 2353-9496, pp. 111-122;
- I. Sobol, G. Mieczkowska, *Islamic Banking Development in GCC region on the Examples of the Kingdom of Saudi Arabia and the United Arab Emirates* [in:] *Islamic World in International Relations*, red. S. Gardocki, R. Ożarowski, R. Ulatowski, Peter Lang. International Academic Publishers, Berlin 2019 (the share of I. Sobol - 50%)³.

These publications focus on the description and assessment of the state of development of Islamic banking in selected countries. Although a certain group of factors that had impact on the development of Islamic banking in the world is common for all countries where Islamic banks function, there are individual factors that determined the development of Islamic banking in particular countries. It should also be noted that in particular countries, the state of development of this banking sector, determined by both supply and demand factors, as well as its significance and specificity, differ, which I have identified in my research. I have also identified the determinants and prospects of further development of Islamic banking in the analysed countries.

The international reach of my articles on Islamic banking has resulted in their citations in foreign scientific journals, as well as in my participation in the reviewing of articles devoted to this subject. Due to my interests, I was also involved in conducting lectures on Islamic banking as part of the course *Economy of Contemporary Middle East Countries* at post-graduate studies “Knowledge about Orient”, at the Faculty of History of the University of Gdańsk.

6.2. Summary of Publication Accomplishments

My scientific accomplishments since I was awarded the doctoral degree cover 57 items. The list of them, broken down into categories, is presented in Table 1.

According to Google Scholar, my Hirsch index is 4, and the number of citations 61 (60 after the doctoral degree). According to the Web of Science (WoS), my Hirsch index is 1, and the number of citations 2.

³ Planned date of publication of the book - May 2019.

Table 1. List of scientific accomplishments

Monographs	2
Chapters in monographs	26
Articles in scientific journals	20
Commissioned expert opinions	6
Popular science articles	3
Total, including:	57
Publications in English	16

Source: Author's own.

Articles in English have been published, among others, in:

- "European Integration Studies" (journal indexed in Web of Science);
- "Finanse: Czasopismo Komitetu Nauk o Finansach PAN" (B list of Ministry of Science and Higher Education, 12 points, 2017);
- „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu” (B list of Ministry of Science and Higher Education, 10 points, 2014, 2016);
- "Journal of Management and Finance" (B list of Ministry of Science and Higher Education, 10 points, 2013);
- „African Journal of Economic and Sustainable Development” (included in Australian Business Deans Council Journal Rankings List and Norwegian Register for Scientific Journals, Series and Publishers);
- "Journal of Entrepreneurship & Innovation" (included in the National Register for Periodicals of Ministry of Education and Science of Bulgaria).

Articles written in Polish have been included, among others, in renowned journals, included in B list of Ministry of Science and Higher Education, such as „International Business and Global Economy”, „Acta Universitatis Lodzianis. Folia Oeconomica”.

I authored or coauthored chapters in the books, that were published, among others, by the following publishing houses:

- Wydawnictwo Naukowe PWN;
- PWE;
- Peter Lang. International Academic Publishers;
- Oficyna Ekonomiczna (since 2006 part of Wolters Kluwer group);
- renowned publishing houses of Polish universities.

6.3. Research Grants

In the period since I was awarded the doctoral degree, I have received the following three individual research grants (grants of the University of Gdańsk):

- 2005 – *Przenoszenie wierzytelności w obrotach międzynarodowych z uwzględnieniem faktoringu (Assignment of Receivables in International Trade Including Factoring)*, BW 3300-5-0311-5;
- 2007 - *Analiza stanu obecnego i perspektyw rozwoju rynku pochodnych instrumentów finansowych w wybranych państwach Europy Środkowo-Wschodniej (Analysis of the Current State and Development Prospects of the Market of Financial Derivatives in Selected Countries of Central and Eastern Europe)*, BW 3300-5-0198-7;
- 2009 - *Derywaty walutowe – analiza instrumentów oraz determinanty rozwoju polskiego rynku (Currency Derivatives - Analysis of Instruments and Determinants of the Development of the Polish Market)*, BW 3300-5-0122-9.

6.4. Awards and Distinctions

2004 – Individual 3rd degree award of the Rector of University of Gdańsk for the doctoral dissertation *Faktoring jako forma finansowania handlu zagranicznego*.

2004 – Award of Gdańsk Scientific Society for outstanding achievements in the field of social sciences and humanities for the doctoral dissertation *Faktoring jako forma finansowania handlu zagranicznego*.

2007 - 1st degree team award of the Rector of University of Gdańsk for the book *Finanse, bankowość i rynki finansowe*.

2010 - Bronze medal for long service.

2012 - 1st degree team award of the Rector of University of Gdańsk for the book *Rozliczenia międzynarodowe*.

2016 - 1st degree team award of the Rector of University of Gdańsk for the book *Finanse międzynarodowe: wybrane problemy*.

6.5. Memberships in Editorial Committees and Scientific Boards

In the years 2007-2013, I was the editor-in-chief (from University of Gdańsk) of the International Journal of Emerging and Transition Economies (IJETE), which is published jointly by the University of Gdańsk and Dokuz Eylül University from Izmir (Turkey). I was also one of persons who created the concept, title, goals, and the thematic scope of this journal.

Currently, I am the editor in the field of "Finance and banking" of the "International Business and Global Economy" journal published by the University of Gdańsk. I am also a member of the editorial committee of Zeszyty Studenckie Wydziału Ekonomicznego Uniwersytetu Gdańskiego „Nasze Studia” ("Our Studies" - the Students' Journal of the Faculty of Economics of University of Gdańsk).

I was also a member of the scientific board of the conference "World and National Economy - its Challenges in Modern Times", National Congress of Doctoral Students, 10-11.09.2012, Szczecin.

6.6. Reviews

In the period since I was awarded the doctoral degree, I have performed the duties of a reviewer in scientific journals, both domestic and foreign ones. I have written reviews for the following scientific journals:

- "European Integration Studies" (Kaunas University of Technology), ISSN 1822-8402, e-ISSN 2335-8831 - the journal indexed in Web of Science, 3 reviews;
- "International Journal of Business and Finance Research Management", ISSN 2053-1842, 1 review;
- "Journal of Entrepreneurship & Innovation" (University of Ruse "Angel Kanchev"), ISSN 1314-0167, e-ISSN 1314-0175, 5 reviews;
- "Journal of Sustainable Finance & Investment" (Taylor and Francis), ISSN 2043-0795, e-ISSN 2043-0809 – the journal indexed in Scopus, 1 review;
- Zeszyty Studenckie Wydziału Ekonomicznego Uniwersytetu Gdańskiego „Nasze Studia”, ISSN 1731-6707 - B list of Ministry of Science and Higher Education, 8 reviews.

6.7. Scientific Care for Students and Doctoral Students

A very important aspect of my academic activity is to provide academic care for students. I was a supervisor of 94 master's theses (including 9 in International Business studies, conducted in English) and 42 bachelor's theses. Among students who wrote a thesis under my supervision were winners of competitions for the best bachelor's and master's theses. I am also the auxiliary supervisor at one doctoral procedure (more in Appendix 4).

In this document, I focused on the description of my scientific and research accomplishments. Information about my organisational and didactic accomplishments, international cooperation and activities promoting science are included in Appendix 4.

M. Sobol