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SHOULD THE PARADIGMS OF BANKING THEORY BE REDEFINED BASED ON BANKING PRACTICE? (THOUGHTS ON THE POLARITY OF OPINION CONCERNING THE POLISH BANKING SECTOR)

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Abstract

In accordance with the principles of best academic practice, a research community is identified through an internalised paradigm comprising notions and theories that form the foundations of a given academic field or discipline. This paper aims to provide a selective overview of differing opinions with respect to solutions, phenomena or processes concerning the Polish banking sector, as an example of the degree of development of banking theory and practice.

In view of the analysis a question arises as to whether finance and socio-economic practice holds a paradigm that would prove adequate in terms of the level of development of such practice, i.e. the so-called disciplinary matrix, involving symbolic generalisations, informational efficiency of financial markets hypothesis), methodological assumptions (reflecting the cognitive structure of the phenomena, processes or structures researched) or, finally, models for resolving scientific problems (handbooks, monographs, research reports) and practical experience (e.g. methods of arbitration valuation, estimating the risk premium). Or perhaps, as G. Kołodko would put it, the finance paradigm is really based on the fact that "things happen the way they do, because many things are happening all at once". It cannot be ruled out that what finance needs is a change similar to the economics of complexity, defined by A.Wojtyna as the incorporation of a behavioral concept (reconstructing the homo oeconomicus concept) and challenging the traditional understanding of economic system equilibrium and dynamics.

It is also worth considering whether the triad of finance categories (money, risk, time) is not lacking a fourth component, namely trust, essential for financial stability and the balance between finance capital and social capital, serving as the basis for efficient financial intermediation (including the development of an unselfish advisory function, especially with regard to financial products securing the customers' day-to-day existence in the post-employment period).

JEL classification: G00, G21, L25
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Introduction

In accordance with the principles of best academic practice, a research community is identified through an internalised paradigm comprising notions and theories that form the foundations of a given academic field or discipline. As put forward in the theory of cognition, emphasised, in particular, by Thomas Kuhn, the development of a science is not uniform, but rather a science enjoys periods of stable, evolutionary growth, punctuated by revisionary revolutions. Such revolutions, when recognised universally by the academic community, result in a paradigm shift, where the paradigm is understood as a conceptual framework involving a shared set of beliefs and values. An overview of economic doctrines[1] permits the conclusion that in that particular area the question of a paradigm shift is slightly more complex. The difficulty seems to lie in the fact that in a given historical period a number of different paradigms may co-exist or scientists may even revert back to those paradigms that may seem, from the point of the existing practice, to have been rightfully abandoned in a recent or more distant past. Furthermore, one may frequently come across radically contradictory assessments of the same solutions, phenomena or processes, formulated not only by politicians or decision-makers, but also members of the academic community in the fields of economics or finance. Consequently, academics face the risk of erosion of authority, while the finance practice may encounter problems or even full-blown crises.

This paper aims to provide a selective overview of differing opinions with respect to solutions, incidents or processes concerning the Polish banking sector, as an example of the degree of development of finance theory and practice.

Remarks on cognition and diagnosis in the science of finance[2]

One of the key criteria for evaluating the advancement of a scientific discipline is the consensus of the academic community regarding the explanations provided for the processes and phenomena that fall within its substantive scope in a given historical period. As regards fields and disciplines typical for social practice, such as sociology, economics or finance, such a consensus should translate into consistency in diagnoses formulated based on the available information and systematically collected data. A situation where individual opinions voiced by academics, politicians, practitioners or members of the general public differ not only from one another, but also largely within their particular subgroups, suggests that these differences may stem either from axiological premises or the analytical methods employed or, more importantly, from using different information and data. Another important issue is the question of access to such information or data and whether the person conducting the analysis of a given system or process approaches it from the standpoint of an insider or outsider.

As in the case of scientific development, social practice is also affected by historical events that usually spur evolutionary changes in human behaviour and attitudes, and sometimes even result in their radical and revolutionary transformation. With respect to the science of finance (understood as a discipline dealing with the relations and interdependencies between the categories of money, risk and time, with a special focus on budgeting and fund management), the global financial crisis witnessed in the first decade of the 21st century changed the attitudes of ordinary individuals, once again putting in the spotlight the alleged usury of credit institutions. At the same time the organic bond which exists between crediting and loans and civilizational progress was downplayed or disregarded. It is typical that the issue of excessive or even rampant consumerism or lack of prudence in the behaviour of many borrowers and investors was marginalised. In turn, the decision-makers, determined to save the banks and concerned about financial stability, put forward radical legislative initiatives. Those initiatives were introduced with the security of depositors and investors in mind. All these developments were bound to affect the status of academics pursuing research in the field of finance, since, paraphrasing the words of Moises Naim, when financiers err in theory, people suffer in practice.

From the viewpoint of the finance sector things look even worse, since it is the financiers, bankers and banking sector specialists, as well as finance regulators, who are frequently accused of incompetence and cardinal errors. Financial market practitioners are bombarded with

1 Finance, in the broad sense, is considered here a sub-discipline (formally one of the four disciplines of economic science).
2 The contents of the article refer back to the paper prepared by Jan Szambelańczyk for Konferencja Katedr Finansów 2014 (Szambelańczyk, 2014).

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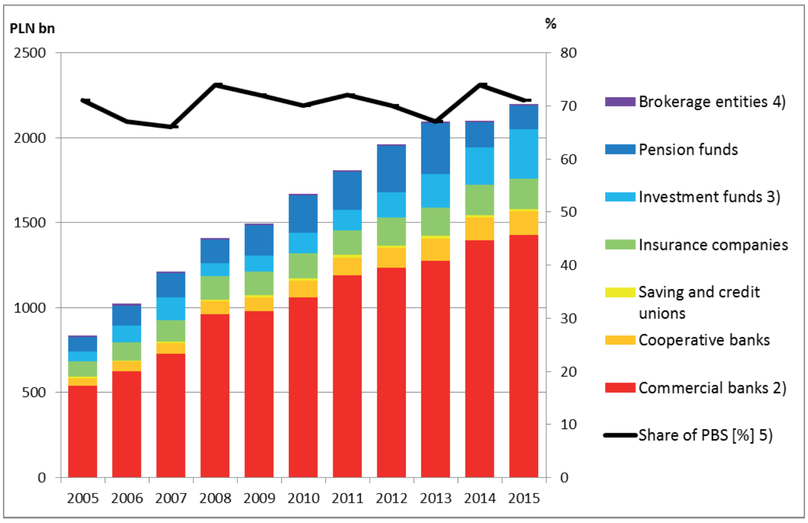
Figure 1: Financial institution assets1) in Poland, 2005-2015 (PLN bn)



1) Net Asset Value in case of banks, investment funds and open pension funds.
2) Banks conducting operating activities jointly with branches of credit institutions.
3) Data as of 2010 is not fully comparable with the data from previous periods.
4) Up to and including 2009 assets of brokerage entities include assets of brokerage houses and brokerage offices. After 2009 only brokerage house assets are included.
5) Share of banking sector assets (including SKOK credit unions) in the financial institution assets in Poland

Source: Own work based on (NBP, 2013a, 2015a) and KNF data

allegations of lack of professionalism or relentless greed. It should be noted that the fierce criticism of the finance community was largely unrelated to the scale to which a given country or even a given group had been affected by the GFC[3].

The crisis which erupted in the first decade of the second millennium has demonstrated that we lack adequate knowledge that would secure steady economic growth or sustainable social development, not only on the global scale, but also at the local level, i.e. with respect to an individual country. This concerns both the ex-ante approach related to the economic policy or macro-prudential oversight, as well as the ex post scientific (non-controversial) explanation of processes and phenomena.

Cognitive controversies exemplified by the Polish banking system

A comprehensive evaluation of the degree to which the science of finance has contributed to economic and social growth, when conducted from the viewpoint of the prescribed components of the disciplinary paradigm, may undermine the self-satisfaction of the finance community in Poland. This problem becomes even more complex when you attempt to analyse the accomplishments of academics in relation to the actual business practice of the Polish or foreign banking systems. This concerns to a large extent diagnosing problems, but to an even larger extent the solutions proposed or the growth forecasts offered, with foreign banking systems serving as a kind of a benchmark.

The rationale behind focusing the discussion on the banking sector is its dominant share in the Polish financial institutions' assets, a share which has, over the past decade, remained within the 66% to 74% range and is thus among the highest in EU Member States (see Figure 1).

The key issue in formulating diagnoses and evaluations of the Polish banking sector (hereinafter PBS) is the choice of the criteria employed, in the context of operating objectives. If you prefer a praxeological approach, you may focus on the efficiency of operations and effectiveness in accomplishing the goals set. Without

3 A case in need of in-depth reflection by social psychologists or sociologists is the recent Volkswagen emissions scandal. Initial analyses indicate that in Poland the disclosure of the automotive giant's dishonest and illegal practices (relatively greater than those of Lehman Brothers) has neither resulted in the drop in demand among new buyers for Volkswagen cars, nor in a crusade of cheated consumers, as opposed to the outrage expressed by the media, politicians, the general public or even academics at the Polish banking system after 2008.

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prejudice to other objectives[4], stability of banking operations and generating value for stakeholders, owners in particular, have been deemed of crucial importance.

Considering the deviating interests or expectations of bank stakeholders in the broad sense, conflicts of objectives set for the banks are inevitable. These objectives may, at times, be contradictory or, in other cases, differ in terms of their hierarchy or priority. The following expression offers a synthetic reflection of this complex system: there is no contradiction between freedom (market efficiency) and security (credit institution stability in the banking system). Either we enjoy both of those benefits or we are left with none. The relationship between the objectives is further complicated by the disaggregation of synthetic objectives.

The examples of such conflicting objectives and expectations are presented in Table 1: columns A1 and B1 present competitive objectives, the stakeholders interested in achieving those goals are listed in columns A2 and B2 respectively, and their specific interests and expectations are enumerated in columns A3 and B3. Thus we can analyse competition (or trade-off) between different bank goals and therefore competition (or trade-off) between different stakeholders' expectations[5]. The management of those conflicts of interests constitutes a bank's strategy and affects the bank's results. On the other hand, a bank's performance can be assessed also in the light of the objectives chosen[6].

The most fundamental and universally observed conflict is the attempt to strike the right balance between the need to generate high profits and the need to ensure the security of operations (thus limiting the risks taken). A particularly vivid example of a conflict are the objectives formulated by members of state authorities, who serve two roles: on the one hand, since they are responsible for economic growth, they expect banks to extend more loans (both to businesses, in order to encourage more investment, and to households, in order to boost consumption and investment), while on the other hand, acting as financial system supervisors, they expect banks to limit risk and the scale of their operations. Similarly, the steps aimed at limiting systemic risk, encouraged by both financial supervision authorities (responsible for ensuring secure system operations) and the financial markets themselves (wishing to operate as efficiently as possible) are contrary to the expectations of owners and managers of certain institutions, who wish to expand the scale and scope of their operations and ensure global availability of their services. The growth in the bank penetration ratio, albeit socially desirable, may naturally generate risk and, which is highly likely, limit the profitability potential.

An interesting example of objectives that require a compromise for the system optimum to be established is the behavior of competitors in the PBS. As a matter of principle, any bank operating in the free market economy wants to build a lasting competitive advantage and improve its market standing. However, the financial sector requires a certain degree of co-operation between competitors, for instance when it comes to building consumer confidence in the banking sector, developing payment systems, exchanging information about the customers, etc. [7]

In day-to-day business practice the objectives of managers and owners, aiming for the greatest possible efficiency, clash with the expectations of customers, who wish to be offered personalised, widely available and inexpensive financial services.

Similar conflicts abound and are coupled with the fact that the individual groups of stakeholders are far from uniform, which means that expectations may differ even within one and the same group (e.g. majority shareholders may have objectives that differ from those of minority shareholders), and, furthermore, the subjective aims of individuals and business entities may also be different.

Consequently, the conflicts of objectives or expectations outlined above make it very difficult to offer an unequivocal assessment of banks without setting a specific criterion or a set of criteria. At this moment we should therefore analyse the criteria offered by the theory of banking and finance to assess the performance of banks.

4 A synthetic overview of this issue can be found in (Marcinkowska, 2013).

5 It should be noted, that in certain cases the specific interest of different stakeholders are not opposing; in fact there can be indirect link between achievement of some goals viewed as competitive or opposing (some of such the examples presented in Table 1 are indicated with a question mark which question mark that symbolizes that in certain circumstances the expectations seen as contradictory, in fact, are not competitive, and even meet some it is conditioned by the realization of the latter).

6 A good example would be the assessment of a bank's profitability: while this is a fundamental factor in any economic entity evaluation, in the case of cooperative banks and so called alternative (or ethical) banks this objective is compromised for other goals (eg fulfillment of the needs of cooperative bank's members or ethical behavior and realization of the needs of broader society).

7 This is an example of the so-called coopetition, i.e. co-operation between competitors.

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Table 1: Examples of conflicting objectives of bank stakeholders

Column A				*Column B*		
Stakeholders, their objectives and expectations - one side of the coin				**Stakeholders, their objectives and expectations - other side of the coin**		
A1	A2	A3		B 3	B2	B1
OVERRIDING OBJECTIVE	Stakeholders	Expectations/interests		Opposing expectations/interests	Competing stakeholders	COMPETITIVE OVERRIDING OBJECTIVE
Security (banks, system, customers)	state	Limiting risk	⇔	Increasing profits	owners, management, employees	Profitability of operations
	supervision, financial markets	Limiting systemic risk	⇔	Global availability Expanding scale of operations	management, owners	Growth and profitability
	supervision	Recapitalisation of banks	⇔	High leverage	owners	Return on investment
	supervision	Limiting banking risk and scale of banking operations	⇔	Increased loan financing	state	Economic growth
	customers, consumer protection institutions	Consumer protection Responsible loan financing	⇔	Increased loan financing	state, customers	Economic growth and more customers
	supervision	Limiting the scale of bank operations, limiting risk	⇔	Increased bank penetration ratio	state, public	Preventing financial exclusion
	supervision, state	Stability	⇔	Quick changes, adaptability	customers	Competitiveness
	supervision	Return to traditional banking	⇔	Diversifying and stabilising income	owners, creditors, customers	New financial instruments
	supervision	Return to traditional banking	⇔	New products, streamlined processes	customers	Innovation
	supervision	Return to traditional banking	⇔	New products	customers, public	Adapting to social and cultural trends
	state, supervision	Protection against bankruptcy and domino effect	⇔	Liability for risk	state, supervision	Limiting moral hazard

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Security and growth	banks, supervision, customers, competitors	Co-operation with other banks, co-opetition	⇔	Improved competitive position	owners, management	Competitiveness
	state, supervision	Local growth Local supervision Local market growth	⇔	Global availability Efficient management	management	Growth and profitability
	state, economy, supervision markets, customers	Stable growth, long-term prospects	⇔	Rapid growth in profits, quick realisation of own gains	management	Pay, bonuses
Profitability, efficiency	owners, supervision, management	Growth in profit	⇔	Return to traditional banking	supervision	Security
	owners, supervision, management	Growth in short-term profits	⇔	Long-term relationships	customers	Value for customers
	owners, management	Standardized products and service	⇔	Personalized products and service	customers	Tailored, personalized solutions
	owners, supervision, management	Growth in profit	⇔	Multi-channel, round-the-clock availability	customers	Availability, convenience
	management, customers	Efficient organisational structure	⇔	Global availability Growth in the scale of operations	owners, management	Growth
	owners, supervision, management	Growth in profit	⇔ ?	Growth in the bank penetration ratio	state, public	Preventing financial exclusion
	owners	Growth in profit	⇔ ?	Social responsibility of banks	customers, communities, natural environment	Sustainable growth

Source: Own work

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Bank and banking sector Bank and Banking sector assessment – the theory

As stated in the previous section, the evaluation of bank performance is based on the set of criteria against which the assessment is made. Those criteria depend on the goals and perspectives of the evaluation. There is no universal set of bank performance measures, as different stakeholders have different views on bank[8]. However, we can generalize the attitude towards bank performance by taking the view on the institutions' value. The most comprehensive view regards all stakeholders' interests, suggesting a balanced approach. One example of the tools used may be the Balanced Scorecard by Kaplan and Norton (1996), which comprises of indicators allowing for the assessment of four perspectives: financial, customer, internal-business-process, and learning and growth[9]. Nelly, Adams and Kennerley (2002) developed their Performance Prism, which allows for the evaluation of contributions and satisfaction of all relevant stakeholders (as well as the assessment of strategies, processes and capabilities of organization)[10]. An approach concentrating on the shareholder value is more popular. It concentrates on the internal financial factors, but takes into account also the external factors (non-controllable environmental factors). The most general approach includes three factors contributing to bank's shareholder value: returns, risks and growth (Cf. Rappaport, 1998; Black, Wright, Bachman & Davies, 1998; Mabberly, 1998; Sinkey, 2002; Schroeck, 2002; Gup & Kolari, 2005).

The "returns" perspective measures the effectiveness of a bank. The most common indicators include[11]: profitability ratios (eg return on equity, return on assets, return on sales), margin ratios (eg net profit margin, net interest margin), cost ratios (cost/income, costs/revenues, costs/assets), employment efficiency ratios (assets/FTEs, income/FTEs). A more sophisticated approach uses also economic profit, i.e. Economic Value Added (Cf. Stewart, 1991).

The risk perspective includes the main kinds of financial (eg. portfolio risk: credit risk, interest rate risk, FX risk, investment risk, liquidity risk etc), operational (eg technology, regulatory, fraud risk, personnel risk etc) and strategic risk. The most widespread risk in banking is credit risk, therefore financial analysis concentrates on this form. The basic indicators include non performing (impaired) loans ratio, loan loss provisions/loan portfolio. The basic measures for market risk are: FX position (foreign currency risk), gap and duration (interest rate risk), value-at-risk. Liquidity exposure can be measured by financing gap, ratios comparing liquid assets and current and nonstable liabilities and regulatory measures (LCR, NSFR). Overall assessment of bank risk can be based on capital adequacy ratios and financial structure ratios (financial leverage ratio, loans/deposits, sources of funding ratios, concentration of assets or liabilities ratios)[12].

It is also worth noting that it is possible to use risk adjusted performance measures (RAPM), that include both perspectives: returns and risk[13] (Cf Matten, 2000). Those indicators however are used more often in internal bank analysis, as they require more detailed data (usually not publicly available)[14].

The enumerated measures are the main tools for assessing financial performance of banks. As mentioned, external factors also influence value creation, among which the most important are: macroeconomic factors, supervisory and regulatory environment, market (competition) structure. The latter issue is directly affecting bank efficiency[15].

The analysis of bank performance is conducted not only from the value creation perspective, but also from the perspective or risk generated by the bank (and in extreme cases – the risk of bank insolvency). There are two main sources of problems with the solvency of banks: external and internal. External includes: macroeconomic environment volatility and downturn, political

8 Additionally, the views on bank value sources and priorities of these institutions' goals change in time, therefore the attitude towards performance measurement changes respectively.
9 A similar approach is proposed by Ernst & Young (1995) - balanced performance measures include:

1) internal view: measures based on internal operations and financial results,

2) market / industry view: measure relative to external indicators (industry trends, norms, market),

3) customer view.

10 For the adaptation of the Prism to the specificity of banks see (Marcinkowska, 2013).
11 The financial ratios enumerated in this section are described in detail (the method of calculation, rules for the assessment, the required level for banks) for example in: (Fraser & Fraser, 1991; Woelfel, 1993; Marcinkowska, 2007; Iwanicz-Drozdowska, 2012). Marcinkowska (2012) discusses the principles for comparative assessment.

12 For the detailed presentation of risk measures see for example (Saunders, 1994, Bessis, 2010).
13 Examples are: risk-adjusted return on assets (or capital), return on risk-adjusted assets (or capital).
14 Further presentation of tools used in internal bank analysis is available for example in: (Smullen, 1995; Schierenbeck, 2001).
15 The most popular market structure (concentration) ratios are: the share of 3/5/10 biggest institutions in the market and Herfindahl-Hirschman Index (HHI). It is especially important for new and young banks (Cf. DeYoung & Hasan, 1998).

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interference, inefficient regulations and supervision, too strong safety net, lack of efficient marked discipline. Internal sources include: bad bank management, inefficient corporate governance mechanisms, excessive risk taking and inappropriate risk management, low asset quality (and improper valuation), low profitability and cost inefficiency, too high rate of growth, low liquidity, fraud and embezzlement (Marcinkowska, 2005)[16]. These issues are therefore subject to detailed analysis.

This aspect leads to another perspective of bank analysis: systemic risk and the stability of banking sectors. This analysis includes both: examination of an individual bank's performance and the performance of the whole sector (which includes – among other things – interconnectedness of its institutions)[17].

Some indicators are appropriate to evaluate individual banks and the analysis can be broadened to the whole sector[18] (with the remark that in the case of certain indicators the mean values are not fully informative and their distribution across the banks in the sectors should be used instead to obtain better information allowing for the sector assessment[19]).

The issue of banking stability became a hot topic in academic and supervisory research surprisingly late (at the turn of the century). The term 'banking (or financial) system stability' has may different definitions[20], but the easiest is to define the opposite: the lack of financial stability and then to conclude, that the stability of the financial system is a condition in which the probability of episodes of instability is very low (Allen & Wood, 2006). Another view is to see the state (or range) of financial stability in a way that the system is able to facilitate the functioning of the economy and disperse financial imbalances growing internally as a result of significant adverse and unexpected events (Schinasi, 2004). More general opinion would lead to the observation that the financial system is stable when it can efficiently and effectively perform its functions[21] (of which resource allocation seems to be basic).

The key pillars of financial stability are: macroeconomic conditions, regulatory and supervisory architecture[22] and market infrastructure (Das, Quintyn & Chenard, 2004). Furthermore, systemic risk may be endogenous (produced in at least one of the elements of the financial system: institutions, markets or infrastructure) or exogenous (due to problems outside the financial system) (Schinassi, 2005). Therefore, those aspects are crucial for banking sector analysis.

The International Monetary Fund (2003) has developed a framework for analysis of systemic risk, taking into account the analysis and supervision of the different areas: observation of current conditions in the financial market (in order to assess the risk of shocks), the prudential analysis of macro scale (the condition of non-financial sector, the sensitivity of the financial sector, capital adequacy of the financial sector), analysis of financial links at the macro level and the observation of macroeconomic conditions. The IMF has developed financial soundness indicators (FSI). In relation to deposit taking institutions they include indicators of: capital adequacy, profitability, asset quality, liquidity, sensitivity to market risk (IMF, 2006).

The simplest approach in the analysis of systemic risk is the study of profitability (return on assets) of individual banks (and its changes over time). To capture the systemic effect, however, the correlation between the investment portfolios of various institutions and the relationships between the participants of the financial system are also taken into account (Lehar, 2005).

In addition, the assessment of systemic risk is carried out largely on the basis of scenario analysis and stress testing. Such analyses can help to understand the nature and scale of the risks faced by the financial system (Haldane, Hall & Pezzini, 2007).

Even though limiting systemic risk and safe functioning of a banking system seem to be a priority, in practice there is a trade-off between this goal and the development of an economy (banks contribute to

16 See also: (Hononan, 1997; Office of the Comptroller of the Currency, 2001; Fraser & Fraser, 2001; Iwanicz-Drozdowska, 2002; Zaleska, 2002; Llewellyn, 2002; Basel Committee on Banking Supervision, 2004). Broad and detailed analysis of banks and banking systems are performed by safety net institutions (Cf. Marcinkowska, 2010). Some data and outcome of analysis (usually concerning the whole sector and not individual institutions) are made publically available.

17 Nier (2009) distinguishes systemic risk at the macro and micro level. Systemic risk at the macro level occurs when the financial system is exposed aggregate risk, which occurs when the risks taken by the various institutions are correlated. Systemic risk at the micro level is created when the bankruptcy of a single financial institution has a negative impact on the financial system as a whole.

18 This is the case for profitability and cost ratios, for example.

19 This is especially the case of capital adequacy ratios and risk ratios.

20 See (Iwanicz-Drozdowska, 2008) or (Szczepańska, 2008) for a review of definitions.

21 Merton (1995) defined core functions that must be performed by the financial system: payment system, pooling of funds, transfer of economic resources, management of uncertainty and risk control, provision of price information and delivery of information (decrease of information asymmetry).

22 Even though banking regulation and supervision are designed to limit the risks taken by banks, they are not always effective (and sometimes even counterproductive). Impact analysis is conducted on a large scale, among others, by the world bank (Cf. Barth, Caprio & Levine, 2004, 2008).

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this mainly by financing enterprises, households and sovereign debt). Contemporary financial sectors in the world differ in terms of strategy for the development of banking sectors. According to Maimbo and Melecky (2016) banking sectors can be analysed against the following country characteristics: legal system (civil, common, mixed, religious)[23], macroeconomic environment (stability and level of income)[24], public governance and supervisory structures in the financial sector[25], financial depth and inclusion[26], ownership in the financial sector (foreign/domestic, private/public/state-owned)[27], and previous experience of banking crises[28].

It should be noted that although the research on banking system stability is developing very rapidly, it is still not sure whether in practice the tools are adequate (and whether the results of these analyses are adequately interpreted).

The traditional theory of banking and finance does not offer answers for many phenomena we observe in practice nowadays. The new economic, regulatory, market and social environment create new conditions for banks (and other parts of a financial system) and therefore old paradigms are not always current. Some old questions have to be asked again and new answers must be found, as what we knew in the past is in many cases no longer true.

As Allen and Gale (2000, p. 497), after analyzing financial systems, concluded: "There are no simple conclusions. We have derived a number of results that go against what many might regard as the conventional wisdom"[29]. Heffernan (1996, p. 71) also delivers an important remark: there is a question mark over the accuracy of many of the indicators used as performance measures on banking. As the business of banking and its environment change, the focus of the analysis changes as well. Therefore, some measures tend to be no longer adequate and in the case of many indicators their interpretation (and benchmarks for them) may change. Furthermore, if priorities and expectations toward banks changes, the measures (or expectations as to their level) of achieving those new goals should change respectively.

Therefore, the assessment of banks and banking systems is nowadays even more difficult than in the past which leads to the polarization of opinions concerning many issues of bank (and banking system) performance.

The next section of the paper presents analysis of the Polish banking system concerning selected issues described within this section. The last section summarizes the polarized views on the Polish banking system.

Analysis of diverse assessments of the Polish banking system[30] - the practice

The issue of bank penetration and the size of banking system

One of the key considerations when evaluating the financial sector is its size, determined primarily through the comparison with the gross domestic product. Over the past twenty five years the Polish financial sector has been growing dynamically, albeit at a varied pace (Cf. Figure 2). As already mentioned, banks play a dominant role in the Polish financial system. Although growing, the relative size of the system (as compared to GDP) is still slow in comparison to other countries' systems (Cf. Figure 3).

From the cognitive perspective, a question arises as to whether the degree and nature of bank penetration

23 "If a country's legal system is based on mixed law, and on civil, common, or mixed law, the country is, respectively, more attentive to financial development objectives, and to planning for implementation in its financial sector strategy. Interestingly, countries with legal systems based on civil law and religious law are more likely to address trade-offs between financial development and stability."
24 "As their per capita income increases, countries pay less attention to development objectives, and, surprisingly, they also pay less attention to systemic risk."
25 „Greater governance effectiveness helps countries address policy trade-offs in their financial sector strategies."
26 "As financial inclusion increases and country financial systems deepen, the national financial sector strategies progressively neglect development objectives and systemic risk, respectively. Concurrently, the increasing depth of credit markets sharpens countries' focus on broader financial development objectives—presumably concerning other financial services, not just credit."
27 "Greater foreign ownership in the domestic banking system intensifies the attention countries pay to the trade-off between financial development and systemic risk management."
28 "Experience of past banking crises raises countries' awareness of challenges in the financial sector and stimulates greater planning for implementation of financial sector strategies.

However, as the memory of past banking crises fades, that experience can become counterproductive and weaken financial sector strategies and planning for implementation."

29 For example, they concluded that:
1) competition in banking can be undesirable,
2) financial crises can be good as well as bad,
3) separation of ownership and control can be desirable,
4) participation costs are high in financial markets, and intermediaries are necessary complements rather than substitutes for financial markets.

30 The assessment of financial growth is affected by the development of financial institutions and market, analysed in terms of their size, availability and efficiency.

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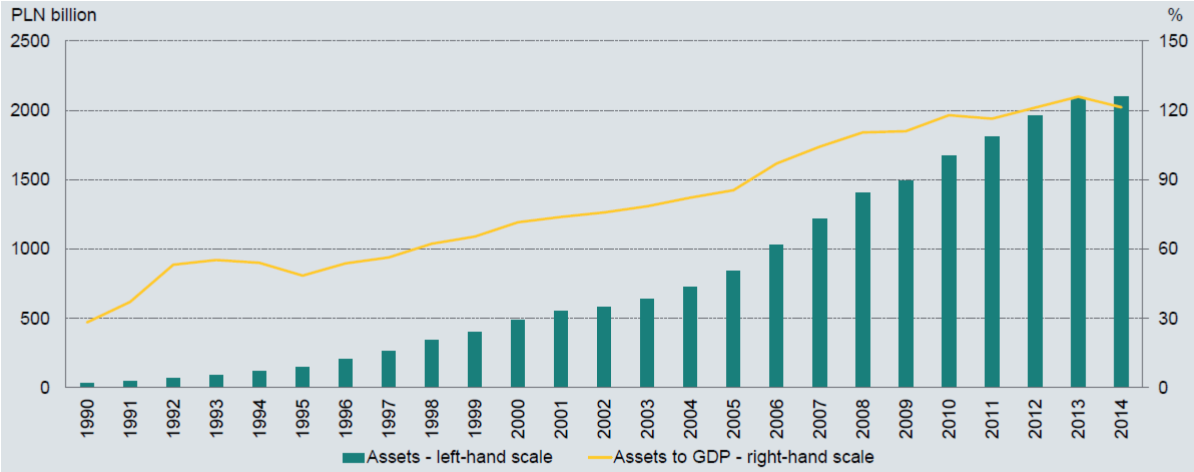
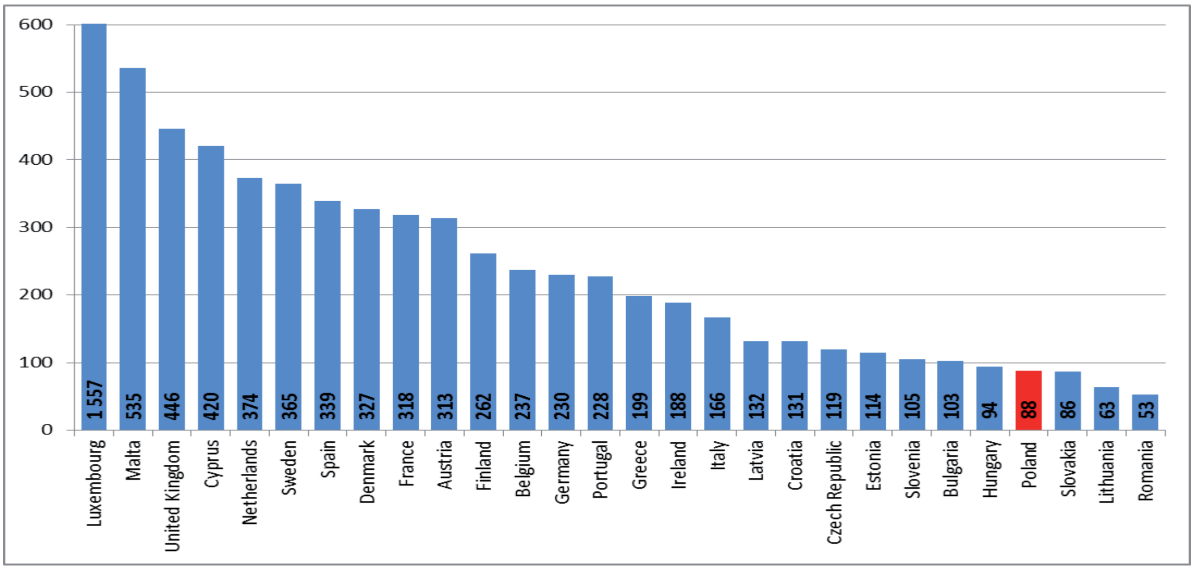
Figure 2: Assets of financial system institutions in Poland, 1990-2014



Source: (NBP, 2015a)

Figure 3: Relation of banking sector assets to the GDP (as at the end of 2015)



Source: Own work based on ECB Statistical Data Warehouse

or the pace of the country's financialisation can be considered the determinants of regulatory architecture, including the prudential standards taking into account the principle of proportionality and whether these processes are universal in nature.

It is worth taking a look at the findings of a study conducted by the International Monetary Fund measuring the level of financial development[31] (Sahay et al., 2015). The curve depicting the impact of financial development on economic growth has the shape of an inverted letter U, whereas the curve of the impact of the degree of financial development on growth volatility has the shape of the letter U. It should be noted that the assessment of the Polish financial system in both cases yielded the optimum result, which means that the Polish financial system supports economic growth to the optimum extent. At the same time the analysts stressed that excessive expansion of the financial sector may pose the risk of loss of stability[32].

However, there is no shortage of opinions that Polish banks are failing to develop their lending to a sufficient extent. Criticism is directed primarily at the barriers to

31 The assessment of financial growth is affected by the development of financial institutions and market, analysed in terms of their size, availability and efficiency.

32 It must be stressed that the size of the financial system is only one of the variables used in the quoted model. Therefore, it cannot be concluded that the size of the Polish financial system is optimal. Furthermore, the model analysed the whole financial system, and not only banks, so the assessment of the size of PBS remains an open issue.

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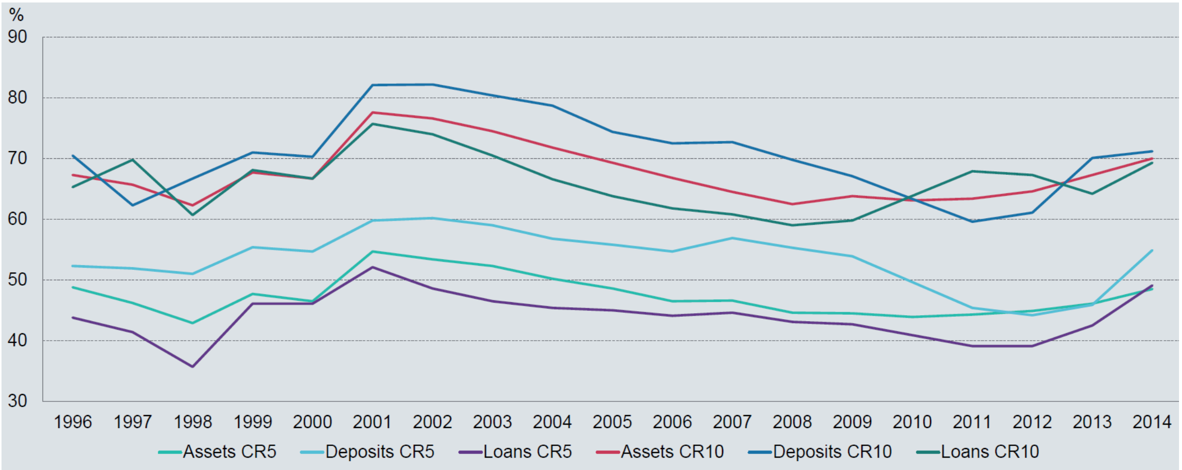
credit availability which affect small and medium-sized enterprises that are believed to be the driving force behind the economy.

The issue of banking sector consolidation

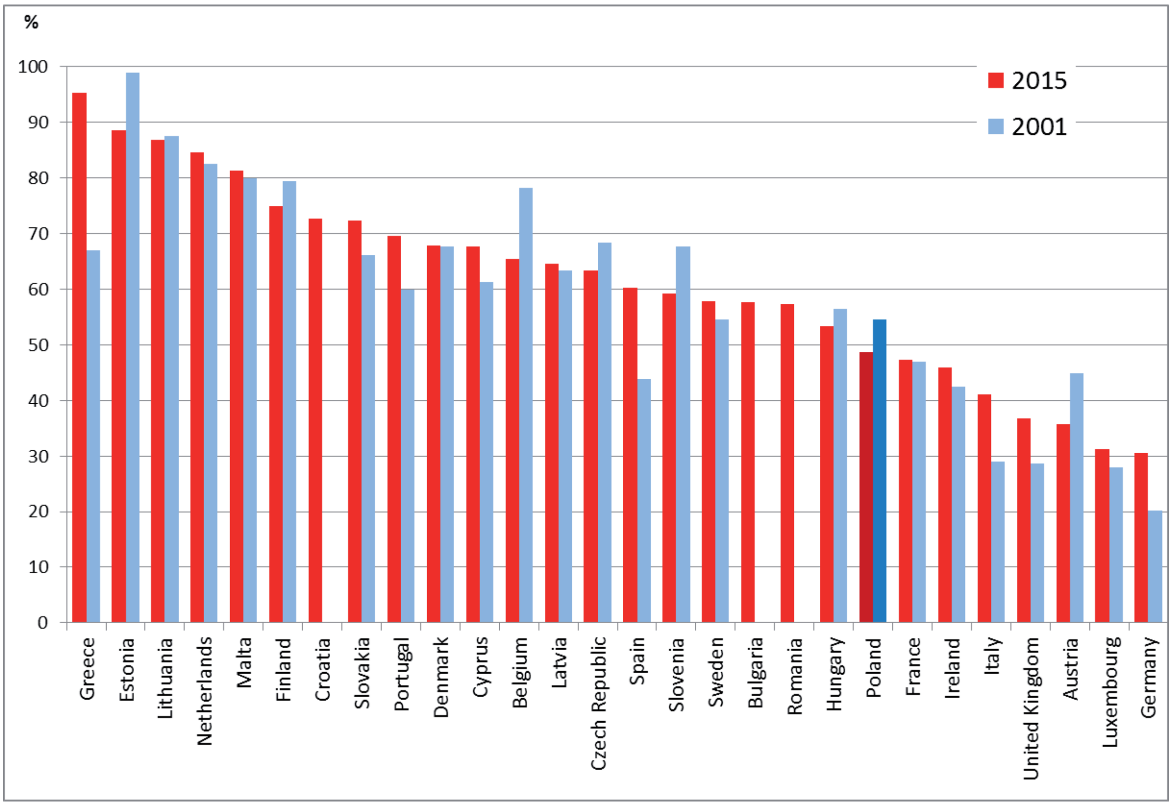
In theory there is no hard and fast rule determining the optimum degree of consolidation. However, it is often claimed that excessive banking sector consolidation limits the competition on the one hand (which may translate into higher prices, less innovation and lack of overall appeal to the customers) and exacerbates systemic risk due to the fact that the PBS comprises banks of systemic importance or even considered TBTF. On the other hand, limited competition may lead to greater efficiency of banks, reduced inclination to take excessive risks and

Figure 4a: CR5-PL and CR10-PL in assets, deposits and loans in the years 1996-2014



Source: Own work based on (NBP, 2015a) and ECB Statistical Data Warehouse

Figure 4b: CR5 in the EU countries in the years 2001-2015



Source: Own work based on (NBP, 2015a) and ECB Statistical Data Warehouse

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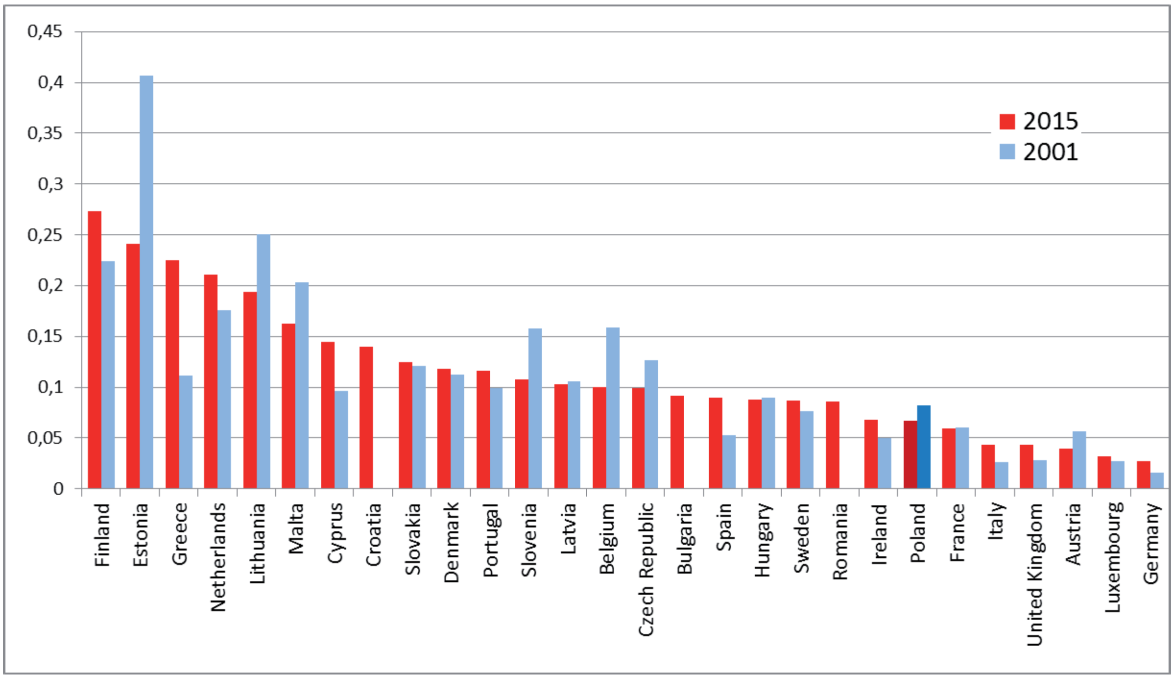
Figure 5: HHI indices* in the EU countries in the years 2001-2015



*- a measure of market concentration (Herfindahl-Hirschman Index)

Source: Own work based on ECB Statistical Data Warehouse

easier supervision of fewer banking sector entities.

The degree of Polish banking sector consolidation is low compared to other EU Member States (Figures 4a, 4b and Figure 5). This means that changes to the structure of the PBS after 1990 have not resulted in excessive consolidation[33]. At the same time, it is pointed out that mergers and acquisitions within the PBS did lead to greater efficiency, however, usually without any lasting impact (Stępień, 2004).

The issue of bank privatisation

One of the commonly discussed controversial issues with respect to which the Polish academic community represents differing, or, at times, radically opposing views, is the question of bank privatisation and the ownership structure created as a consequence of the turn-of-the-millennium transformation and reorganisation (Cf. Kowalski, 2013). These opinions, formulated from the "here and now" perspective, do not take into account the circumstances prevailing at the time of privatisation, in particular the systemic risk and the situation on the capital market, not to mention the willingness of the decision-makers to inject capital into the struggling banks. The problem of bank privatisation (Baka et al., 1995), considering the passage of time and the systemic context in the analyses, requires a scientific standard of assessment, free from axiological criteria, as well as access to data that can be found in the archives of the safety net entities.

The issue of foreign capital stakes in the PBS

The share of foreign capital in the PBS is the consequence of the privatisation process and the trading of shares on the capital market, particularly as part of domestic and international consolidation processes (Table 2 presents the ownership structure of the PBS in the years 2005-2014)[34]. As a result of privatisation processes executed with limited availability of Polish capital, followed by consolidation processes, the number of banks in which the State held a majority stake or with a dominant share of private domestic capital gradually declined, making room for foreign capital (Figure 6). It should be noted here that Poland finds itself among EU Member States with a moderately high share of banks with a majority foreign shareholder in the financial sector's

33 Compare the findings of empirical studies concerning competition (and its determining factors) in the Polish banking sector (Pawłowska, 2014) and the banking sectors of European countries undergoing transformation (Baszyński, 2014).

34 It should be noted that the individual positions are more a matter of personal opinion rather than reliable research findings which would take account of the wider systemic context and the consequences of the passage of time since the decisions were taken until the present day.

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Table 2: Ownership structure of Polish bank sector's assets (%)

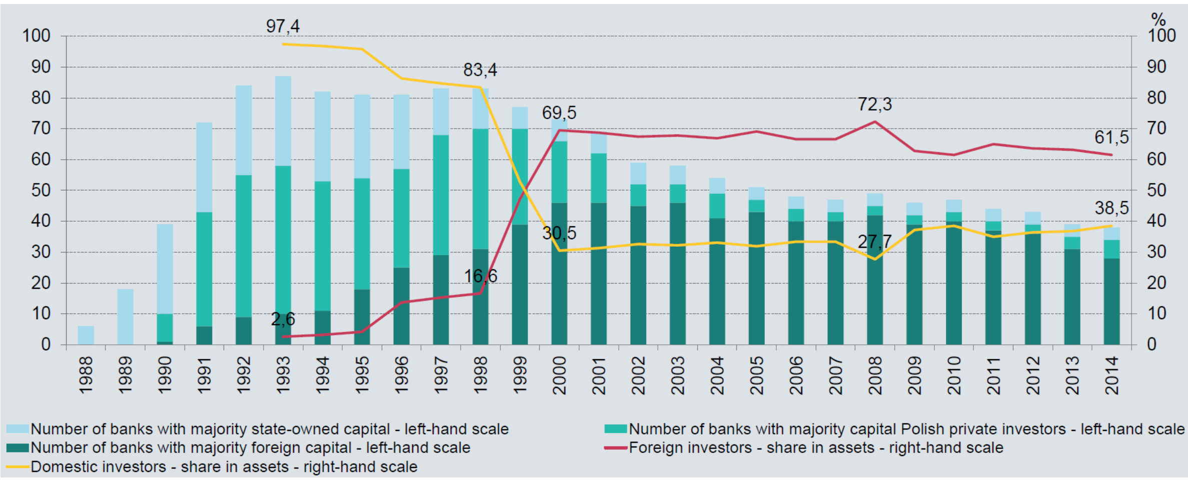
Breakdown	Years									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Commercial banking sector										
1. Commercial banks	**92**	**91,5**	**91,7**	**92,7**	**92,2**	**91,7**	**91,8**	**91,4**	**90,8**	**91,1**
1.1. Domestic banks	91,1	88,4	87,7	87,3	87	87	89,6	89,3	88,5	89
1.1.1. With a majority stake held by the State	20,3	19,8	18,4	17,3	20,7	21,5	22,2	23	22,3	24,1
1.1.2. With a majority stake held by private shareholders:	70,8	68,6	69,3	70	66,3	65,5	67,4	66,4	66,2	64,9
- Polish	1,7	2	2,5	3	3,3	3,9	4,6	5	5,3	5,5
- foreign	69,1	66,6	66,9	67	63	61,6	62,8	61,4	60,9	59,4
1.2. Branches of credit institutions	0,1	3,1	4	5,4	5,2	4,7	2,2	2,1	2,3	2,1
Co-operative banking sector										
2. Co-operative and affiliating banks	**8**	**8,5**	**8,3**	**7,3**	**7,8**	**8,3**	**8,2**	**8,6**	**9,2**	**8,9**
2.1. Affiliating banks	2,2	2,3	2,1	1,9	2	2,2	2,1	2,2	2,3	2
2.2. Co-operative banks	5,8	6,2	6,2	5,4	5,8	6,1	6,1	6,4	6,9	6,9

Source: Own work based on (NBP, 2013a, 2015a)

assets (as opposed to other countries in the region, e.g. Estonia, Lithuania, the Czech Republic or Romania, as well as countries following a different development path, such as Finland or Malta – see Figure 7).

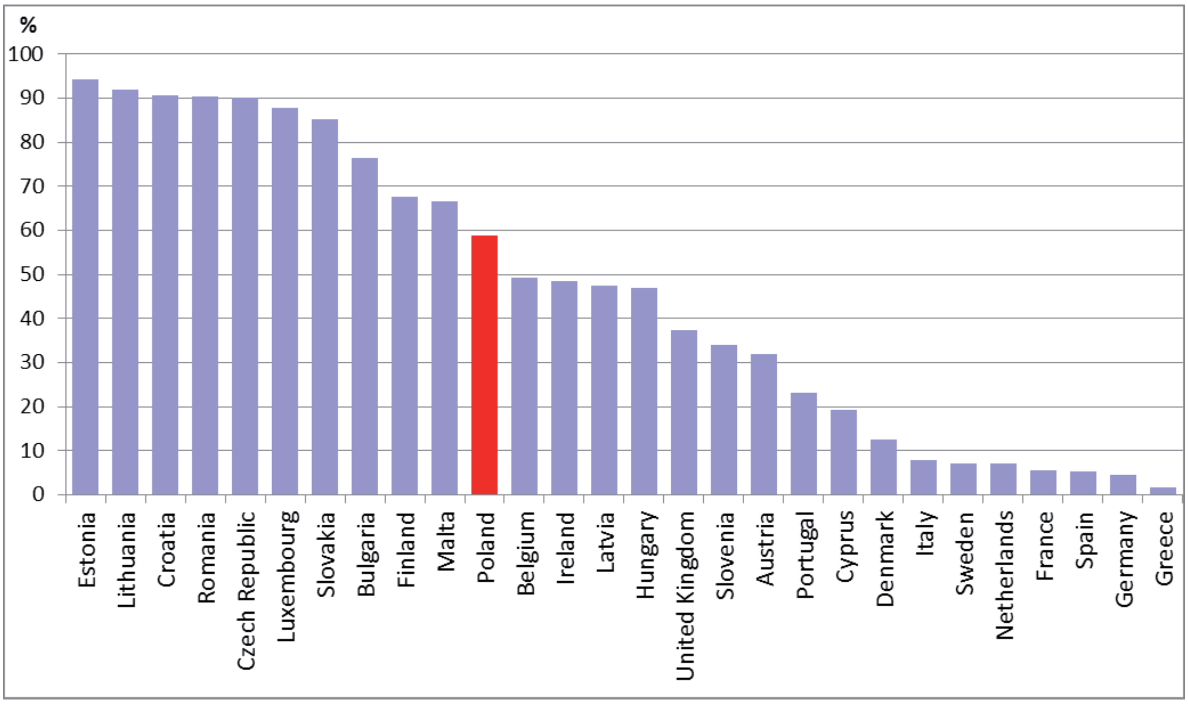
In Poland opinions about the share of foreign capital in the banking sector focus primarily on the transfer of profits to the parent undertakings or on the credit discrimination of domestic business entities, failing to recognise the stabilising role of foreign strategic investors in Polish subsidiaries, injecting steady financing into their operations or, finally, the regulatory solutions securing the fiscal costs of potential bankruptcy (e.g. TLAC, resolution colleges etc.).

Figure 6: Number of commercial banks in Poland and their share in the sector's assets according to the ownership structure



Source: (NBP, 2015a)

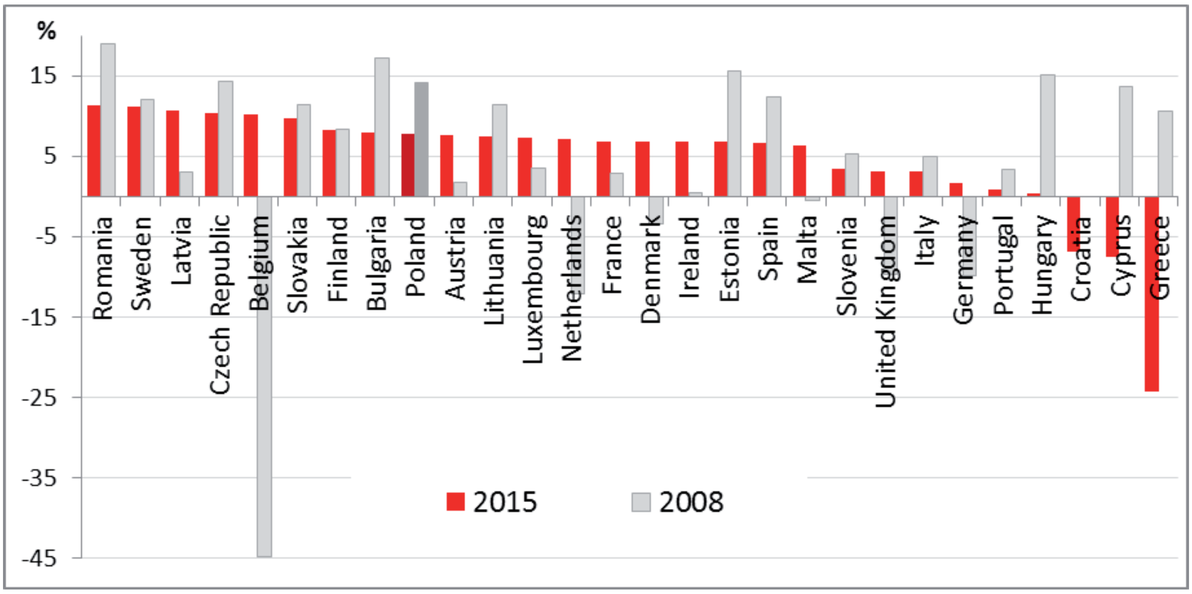
Figure 7: Share of banks with a foreign majority stake in the sector's assets (as at the end of 2015)



Source: Own work based on ECB Statistical Data Warehouse

In view of the earlier remarks on assessment criteria, empirical research[35] has demonstrated that foreign investors have exerted a positive influence on the development of the PBS, both in terms of increased competitiveness (e.g. introducing the latest technologies and banking procedures, training staff), as well as PBS stability (e.g. introducing international prudential norms and developing a risk management culture); concerns about the potentially negative impact on the effectiveness of the fiscal policy have proved unfounded. On the other hand, there is no shortage of opinions that foreign capital in the PBS does not foster the growth of the Polish economy (chiefly due to the restrictive lending policy) and discriminates against Polish businesses.

Figure 8: Return on equity (ROE) of banking sectors within the EU



Source: Own work based on ECB Statistical Data Warehouse

35 See for instance (Jurkowska 2006).

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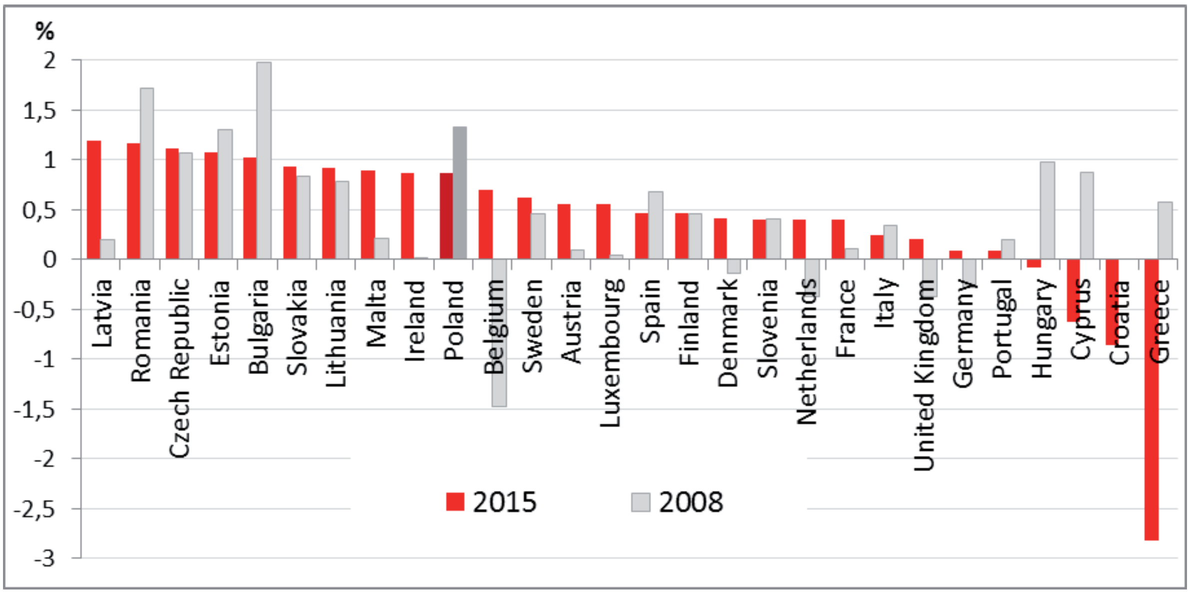
Figure 9: Return on assets (ROA) of banking sectors within the EU



Source: Own work based on ECB Statistical Data Warehouse

The issue of banking efficiency in Poland

Among the problems causing controversy in Polish finance is the question of evaluating the efficiency of the PBS from various viewpoints (e.g. banking efficiency vs. the socio-economic cost of financial intermediation, efficiency of credit brokerage in banks with a domestic or foreign majority stake, efficiency of commercial banks vs. co-operative banks or credit unions, particularly in view of their mission and unique characteristics) (Cf. Marcinkowska, 2013).

At present, the banks' return on equity (Figure 7) and return on assets (Figure 8) ratios are much lower than before the global financial crisis, although the PBS continues to keep their levels above the EU average. Some academics claim that this results from a certain "development gap" (primarily the scale of operations and experience in using innovative, but risky, financial instruments), others argue that it is the consequence of prudent and responsible policies implemented by the banks and adequate financial supervisions, whereas, finally, there is a fairly large group who attribute these positive results to banking greed and exploitation of Polish consumers. Despite these opinions the performance of banks against other sectors is not that impressive. It is estimated that the average return on equity is lower than the cost of capital which means inefficiency from shareholders' perspective.

Irrespective of the largely positive ratings presented above, resulting from a comparative analysis of PBS efficiency, it should be noted that one of the major causes of a drop in Polish banks' profitability was the decline in the quality of their credit portfolio. Importantly, the share of impaired in the household loans portfolio in some categories continues to rise (Figure 10a). The issue of loan quality is at the moment one of the fundamental problems in European banking sectors (Figure 10b).

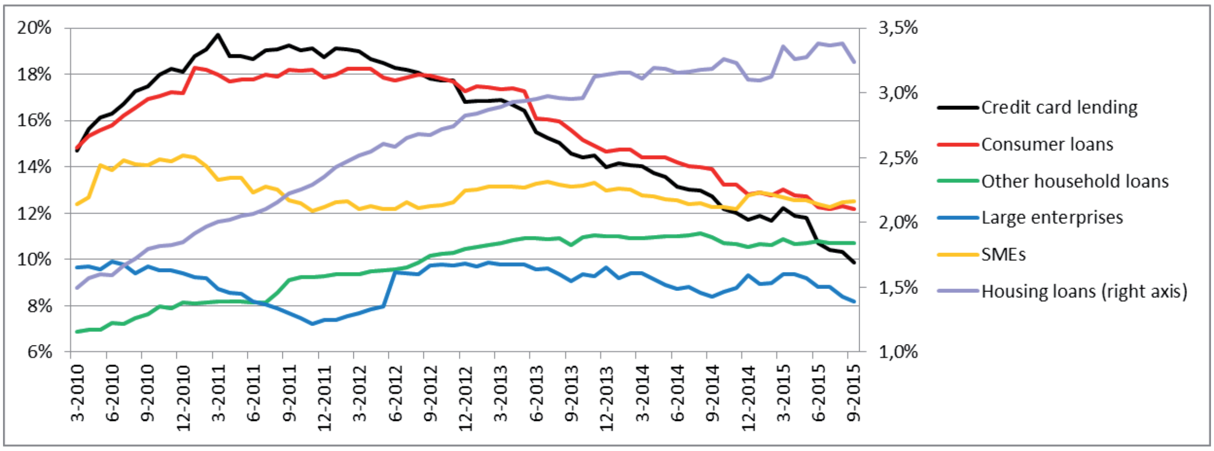
Surprisingly, research into the PBS is clearly dominated by the ex post approach, focusing primarily on past events and using easily available data or information derived from fragmentary surveys. Moreover, few researchers are involved in designing new regulations or prudential standards. The academic discourse is largely limited to presenting the existing regulations, rather than criticising them and when so, then only from the ex post perspective. There is a shortage of forward-looking analysis, in particular, taking into account the unique nature of the PBS, a shortage of work providing the grounds for adequate application of the proportionality principle in practice.

The issue of the so-called foreign currency loans

The finance practice awaits a systemic examination and suggestions of solutions to the problem of the so-

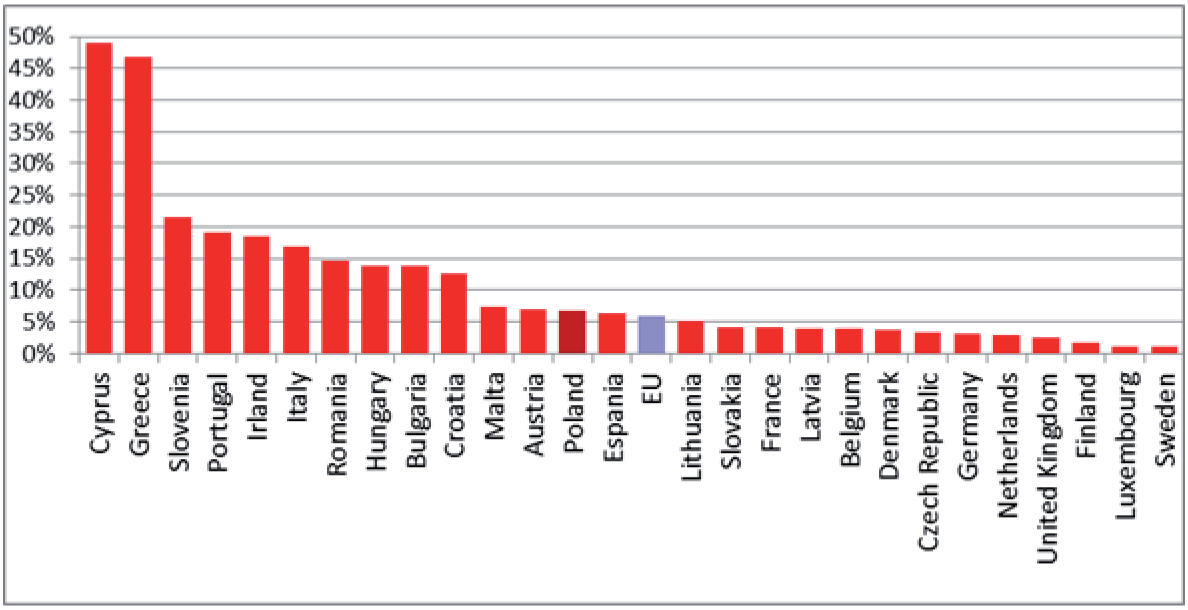
Figure 10: Credit portfolio quality (non-performing loans ratios)

a) Poland (2010-2015)



Source: Own work based on (NBP, 2016)

b) European Union (as at the end of 2015)



Source: own work based on EBA Risk Dashboard

called foreign currency mortgage portfolio[36], in view of the high risk of sudden and dramatic changes to the exchange rate. The scale of this problem would require not only negotiations between the banks and borrowers, but also comprehensive proposals of the finance academic community. Such proposals should, on the one hand, take into consideration the social aspect (e.g. risk of homelessness), while on the other keeping in mind the need for stability of the lending banks and taking into account their overall fiscal and para-fiscal burdens and regulatory requirements. Sadly, the discussions on the issue are dominated by the negative attitude of politicians and a sizeable portion of the media towards banks and assertive behaviours of many borrowers who disregarded the risks related to the loans extended to them.

The issue of financing the economy by banks

Studies into the financing of the economy in Poland by credit institutions are limited mainly to statistical and

36 Marek Belka, President of NBP, believes foreign currency loans to be a "ticking social time-bomb" in the Polish banking system. Address delivered at 2014 Banking Forum in Warsaw (http://www.polskieradio.pl/42/259/Artykul/1073743,Szef-NBP-kredyty-walutowe-sa-jak-tykajaca-bomba) (accessed 24 March 2014).

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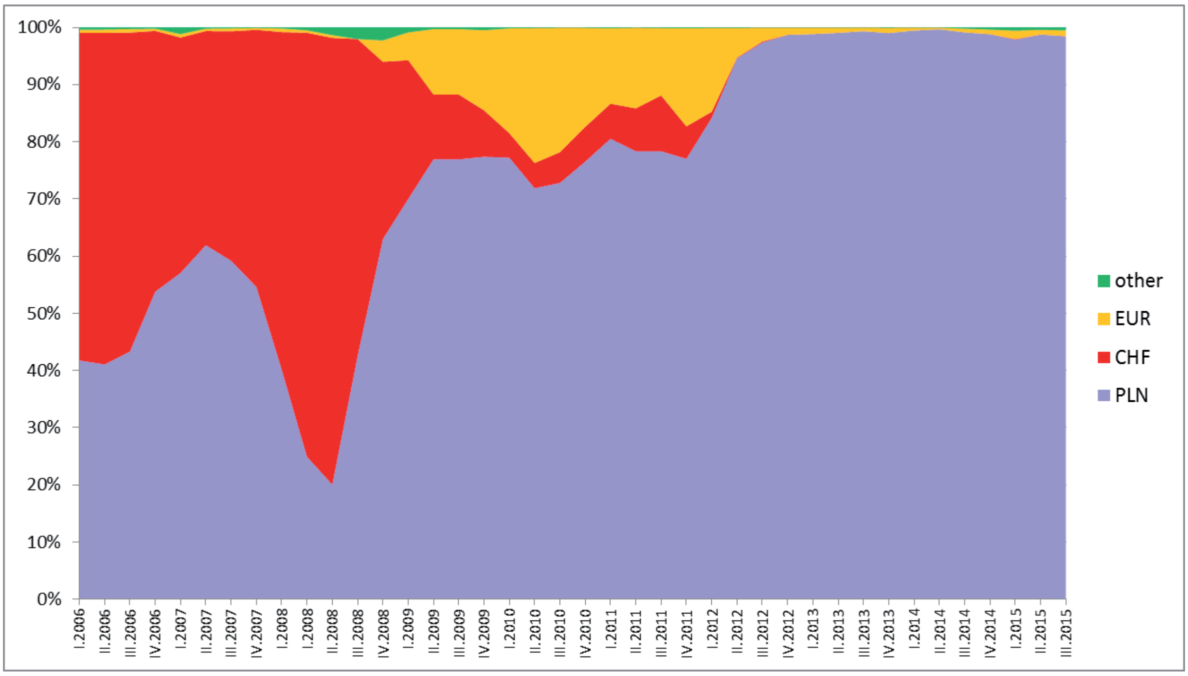
Figure 11: Currency structure of newly extended mortgages



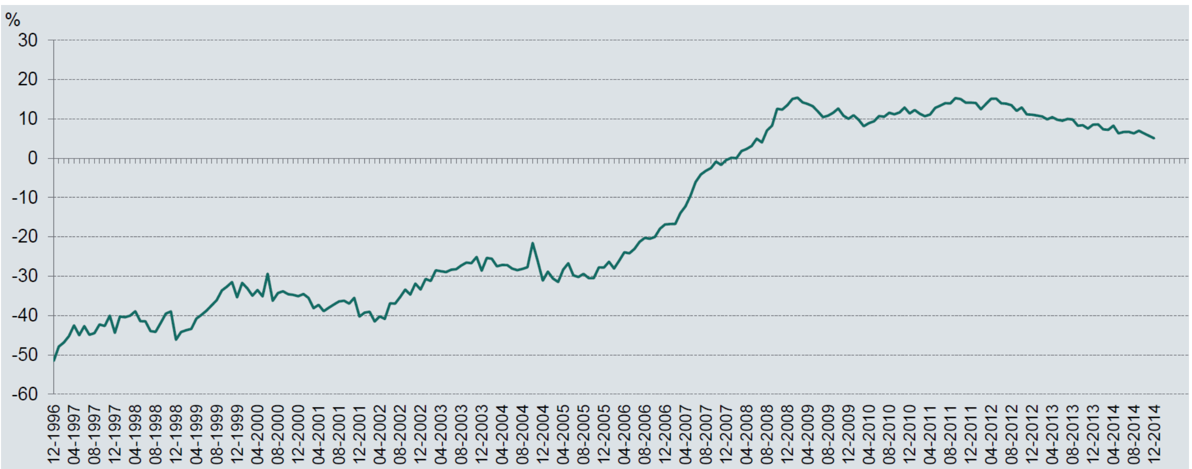
Data provided by banks reporting to the NBP, whose share in the personal loans market stands at ~95% (as at 30 September 2015).

Source: Own work based on (ZBP, 2009, 2015)

descriptive or model perspectives and do not propose a more comprehensive framework of systemic solutions divided into relationship and transaction banking. The evaluation the banks' lending policy, with the banks, naturally, striving for maximum financial efficiency (Cf. Jaworski, 2014), should take into consideration at least two elements: credit risk and costs (algorithmic modelling or scoring in the case of personal loans and individualised analysis in the case of corporate loans), while keeping in mind their social mission. The PBS faces the challenge of increasing the share of lending in the GDP as a means of encouraging economic growth. However, without innovative systemic solutions, this will be very difficult to achieve. This gives rise to obvious demand for co-operation between economists and financiers to develop a concept and programme of financial deepening in the economy.

Excessive growth in lending may pose risk to the customers themselves (the problem of over-indebtedness), as well as banks (increased credit risk), and in extreme cases it may lead to insolvency. We

Figure 12: The funding gap in the Polish banking sector in the years 1996-2014



Source: (NBP, 2015a)

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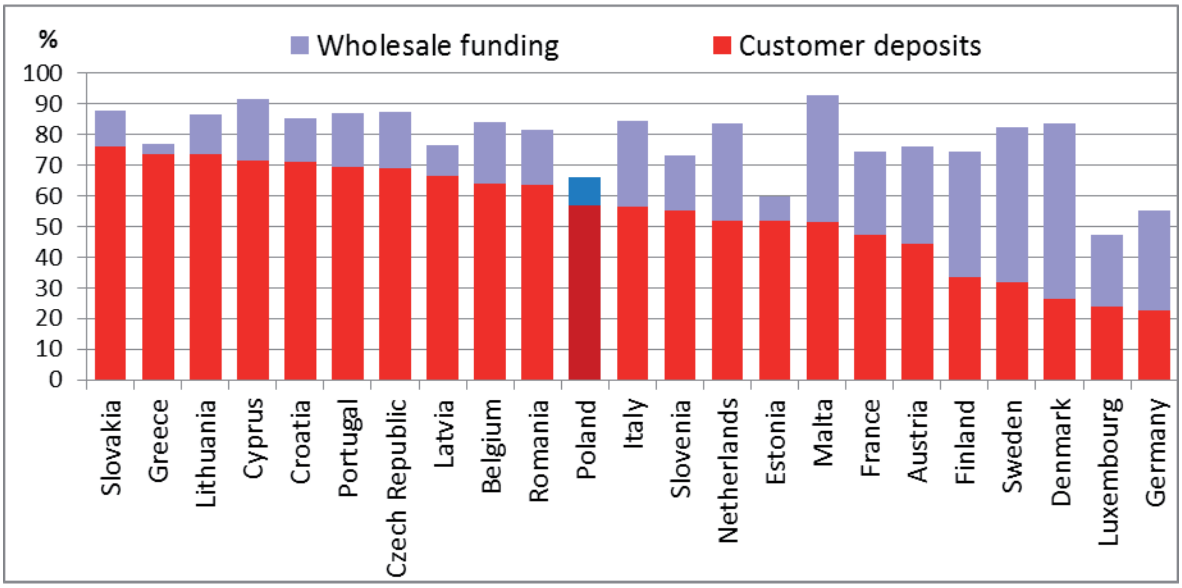
Figure 13: Share of customer deposits and wholesale funding in the balance sheet total of the banking sectors (as at the end of 2015)



Source: Own work based on ECB Statistical Data Warehouse

should also note the barriers to credit financing. As of 2008 the PBS has experienced a financing gap[37] (Figure 12). The predominant source of financing are customer deposits, while the share of wholesale funding is much lower than in other, more developed, banking sectors (Figure 13). The financing gap is a negative, potentially risky and costly phenomenon. If it is lasting in nature, it violates the principle of maturity and risk transformation in banking credit intermediation and brings banks down to the role of a broker only[38]. In this context the claims of insufficient financing of the economy by banks in Poland are controversial.

The issue of bank recapitalisation

Instances of banks collapsing, and banking crises in particular, serve as a reminder of the importance of equity for bank stability and solvency. The Global Financial Crises has resulted in the introduction of more stringent capital standards[39], with the focus shifting to effective banking supervision. The new regulations are the result of a compromise – they are slightly less strict than those originally planned and their full implementation has been spread out over a number of years[40].

The current capital ratios of Polish banks (Figure 14) are relatively high, although it needs to be stressed that they are at present much lower than in many other EU Member States (Figure 15), but are expected to increase further (due to, among other, the introduction of capital buffer regulations and potential imposition of additional requirements by the Polish Financial Supervision Authority on the banks that take greater risks). A positive development, from the viewpoint of capital adequacy, is the low leverage ratio[41].

The issue of co-operative banking transformation

At the core of cognitive and diagnostic controversies lies the question of post-1990 transformation in the co-operative banking sector, the evaluation of the condition of this subsection of the PBS, as well as the lack of scientific projections or operating models for the future[42].

37 The financing gap is the difference between the receivables due from the non-finance sector and the government and local government institutions sector and the liabilities towards those sectors (usually expressed as the percentage of those receivables).
38 J. Toporowski (2010) has put it aptly: "in the age of finance, finance finances mainly finance".
39 The international Basel III agreement and the EU CRD IV / CRR regulatory package have introduced a stricter definition of own funds, put in place additional capital ratios with respect to the highest quality funds, introduced additional capital buffers (capital conservation, countercyclical, systemic risk and buffer for institutions deemed to be systemically important), set a leverage limit and modified the manner in which capital requirements should be set with respect to certain types of risk. Furthermore, they introduced prudential standards with respect to liquidity (LCR, NSFR).
40 This was due to the fear of the banks limiting their lending (as threatened by many institutions) owing to potential difficulties in raising new capital within a short timeframe.
41 Financial leverage presents capital as a multiple of assets (assets to equity ratio).
42 From the viewpoint adopted by Ayadi et al. (2012), who, based on empirical studies, begin by identifying four fundamental business models of European banks that differ in terms of their risk profile and then suggest the relevant banking regulations to suit a given model.

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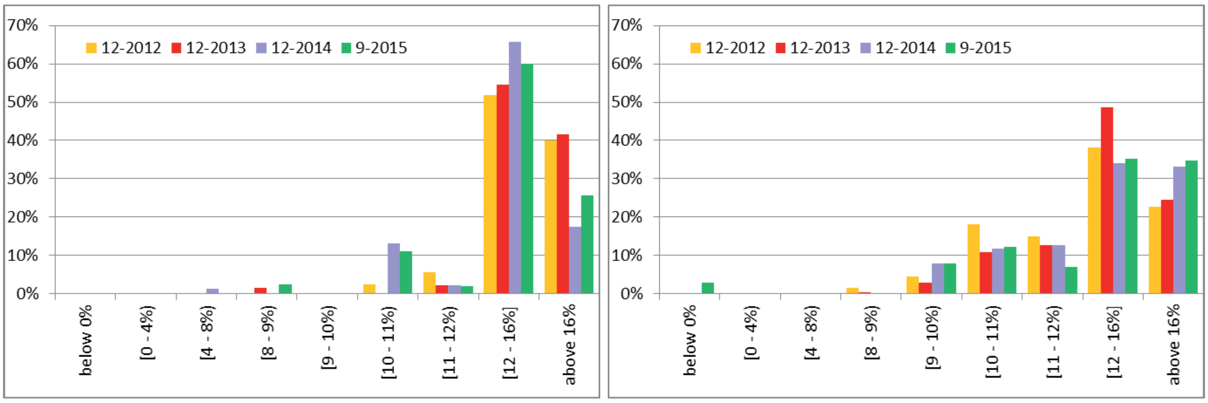
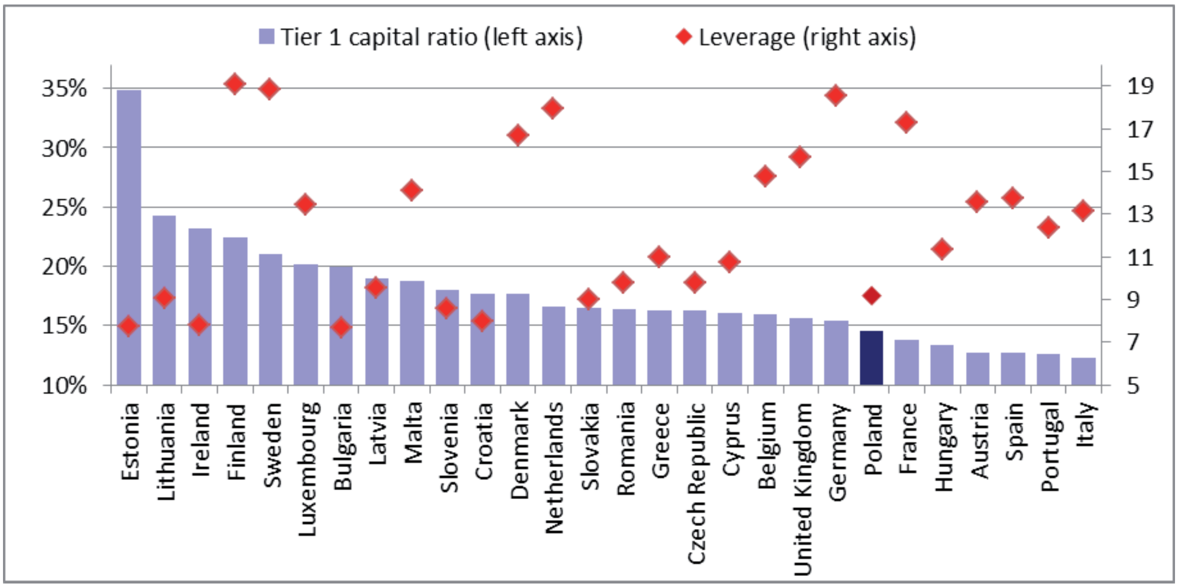
Figure 14: Distribution of assets of domestic commercial banks (left) and co-operative banks (right) according to total capital ratio



Source: Own work based on (NBP, 2014, 2015b)

Figure 15: Tier I capital ratio and leverage in EU banking sectors as at the end of 2015



Source: Own work based on ECB Statistical Data Warehouse

An important question arises: is the business model applied by the co-operative banking sector[43] suited to the contemporary market conditions? This also concerns the secular tradition of co-operative banking in Poland, which has been used to legitimise the present role of co-operative banks. We are witnessing the change of co-operative banks business models. The shift towards the models used mainly by commercial banks results with the worsening of loan portfolio (Figure 16), which leads to decreasing effectiveness. By entering into the stronger competition with other financial institutions co-operative banks tend to lose one of their fundamental competitive advantages (good knowledge of customers, customer proximity).

It should be noted here that the assessments of the financial standing and market prospects of co-operative banks differ widely depending on whether they are prepared by safety net institutions or co-operative bank managers and domestic researchers with close ties to co-operative banks. The financial condition of SKOK credit unions raises even more controversy and varied opinions. The issue that remains in need of research is the extent to which the deposits attracted by co-operative banks result from the security offered by the Bank Guarantee Fund or rather the confidence of the local community. There is also a shortage of research into the involvement of local communities in the operation of local banks in the context of the collective interest of the local socio-economic

43 In short, there are excess deposits attracted by co-operative banks and transferred onto the market by affiliating banks with relatively high C/I ratios.

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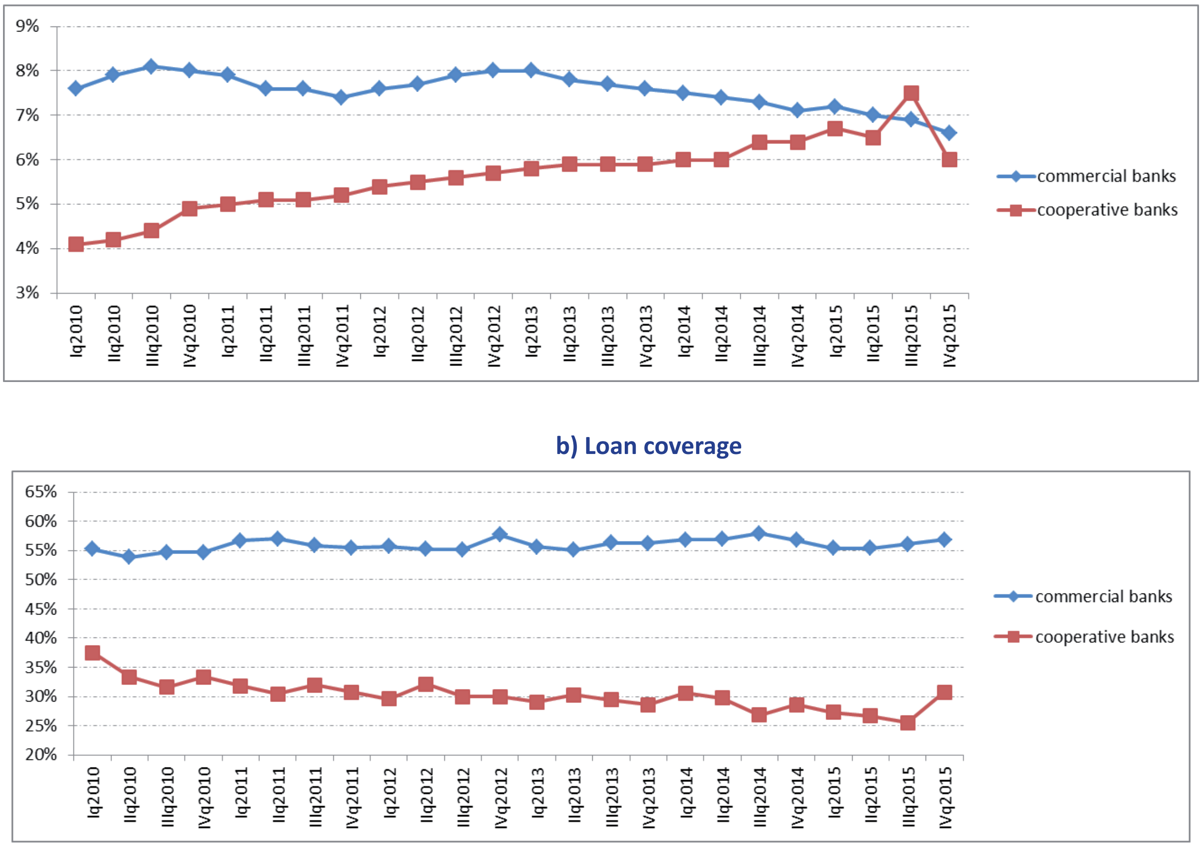
Figure 16: Loan quality and coverage ratios of Polish banks

a) Loan quality



Source: Own work based on (BFG 2012, 2016)

sphere. In view of the strong market position in the PBS of commercial banks with a foreign capital stake, it is puzzling to see that the market share held by co-operative banks has remained relatively low over the past 25 years following the transformation.

The issue of the safety net

In view of the radical changes to the depositor protection system introduced after 2008 following the Global Financial Crisis, and taking into account the inclusion of the credit union (SKOK) sector under the supervision of the Polish Financial Supervision Authority in 2013, an interesting research question arises as to the behaviour of the customers and the credit unions themselves on the banking market. An analysis of the relationship and interdependencies between the guarantee principles and the behaviour of customers and credit institutions offers the opportunity to investigate in empirical terms the concept of "moral hazard" or the "free rider" hypothesis. This concerns more than just empirical generalisations, rather, first and foremost, practical conclusions with respect to the principle of a depositor's participation or the so-called co-insurance as a means of limiting moral hazard.

Polish research literature pays little attention to the so-called institutional protection schemes – IPS. These schemes have been introduced into EU legislation with a view to securing financial liquidity of groups of credit institutions and meeting the requirements imposed by CRD IV/CRR. This concerns, in particular, the opposing views as to the importance of this solution. On the one hand, the optimists hail the protection these schemes offer to the stability of co-operative banks participating in the IPS. Pessimists, in turn, argue that in a more severe crisis IPS would fail to guarantee the stability to affiliating banks, nor would they aid the reorganisation of system participants[44].

In view of a large body of foreign literature on the

44 Consequently, apart from incidental reports based on first-hand experience of practitioners acting as members of special committees, who derive their know-how mainly from the so-called study visits, this niche is filled primarily by consulting companies which use more or less superficial reports prepared by their branches in the countries where such systems operate. However, despite the ease of access to publications, the voice of Polish academics is practically non-existent.

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subject, concerning:

1) prudential regulations (with a focus on academic debate and model projections of CRD IV implications),

2) new supervisory architecture (banking union variants, overview of the strengths and weaknesses of individual models),

3) discussions of the prerogatives and organisational structure of the European Banking Authority and their impact on domestic credit institutions,

4) the safety net, especially the deposit guarantee systems, with a post-crisis expansion of their functions, beginning with the improved "pay-box" model[45] through to the highly-developed "risk-minimizer" model – with the right to recapitalisation and structured liquidation of credit institutions at risk of insolvency, with the intent to limit the fiscal costs of financial system stabilisation (Zygierewicz, 2012),

5) controversies surrounding the bail-in concept (NBP, 2013b, pp. 22-23).

the body of Polish academic literature in the areas listed above is rather modest, with the question of legislative and organisational solutions left almost entirely to be determined by state institutions and agencies without the reflection and criticism of the academic community.

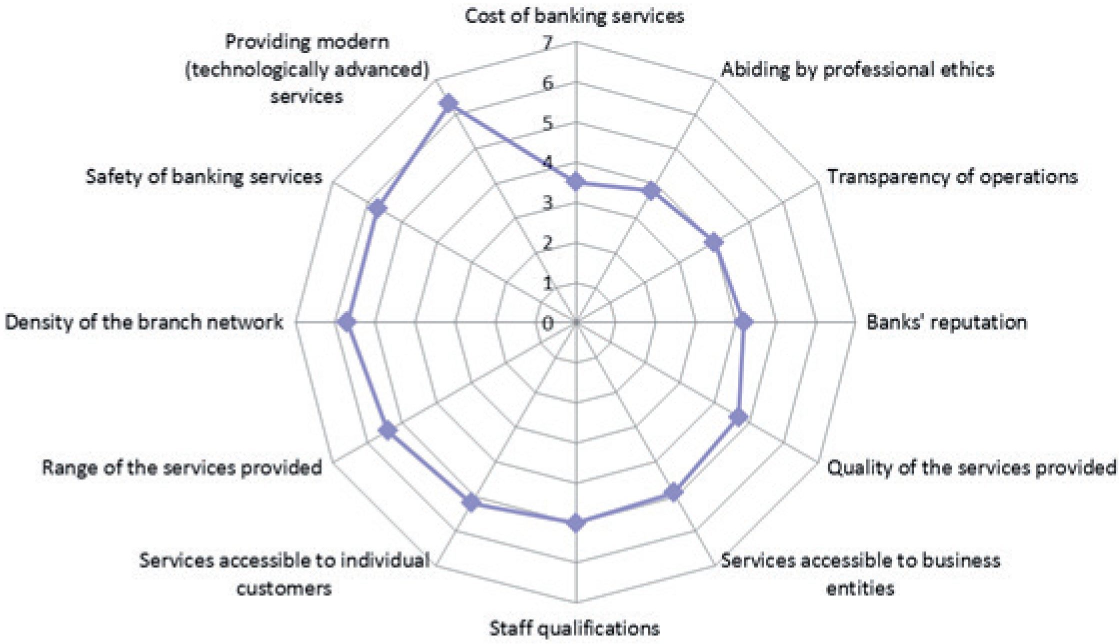
In view of a certain "conspiracy of silence" among academics on the issues raised above, the issue of Poland's accession to the Eurozone is a notable exception, but even here the opinions range from one to the other end of the spectrum, from unwavering support to absolute rejection.

The general issue of bank functioning – multidimensional assessment

The findings of studies conducted by Alterum and Pro Publicum (2015) paint an interesting picture of the Polish banking sector. On the one hand, it is perceived as safe, available and modern. On the other hand, there is a striking lack of respect for professional ethics, coupled with high prices, low transparency of operations and reputational problems. Thus there emerges a picture of relatively efficient and stable organisations, which are,

45 With a harmonized deposit guarantee scheme in EU Member States, including guaranteed deposits up to the equivalent of EUR 100,000, the payout period of up to 20 days from the date of deposit unavailability, to be eventually shortened to 7 days, minimum ex ante capitalisation, the abolishment of the so-called "positive difference" rule (payout of the guaranteed amount calculated as the difference between the receivables and liabilities towards the bank) etc.

Figure 17: Multidimensional assessment of banks operating in Poland



average rating on a scale from 1 (very poor) to 7 (very good)

Source: (Alterum & Pro Publicum, 2015).

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however, focused on short-term economic goals, rather than building long-term relationships and serving the society and the economy (Figure 17).

Radical difference of opinion – summary of the discussion concerning the present condition of the PBS

Owing to the differing expectations and objectives of stakeholders, assessments of banks may vary widely within the individual criteria. Table 3 presents the examples of polarised views of the PBS. This hinders both a theoretical (scientific), as well as a practical synthetic assessment. However, treating the banking system holistically and considering it a public good, it is important to ensure that subjective assessments do not serve as the basis for potentially damaging actions by governmental bodies. Such risk could be limited by wider dissemination of the relevant data and information to which researchers are finding it difficult to gain access, and which could assist them in formulating objective assessments and raising awareness among stakeholders that banking operations form a vital component of the socio-economic system.

Table 3: Examples of polarized views on the Polish banking system

Criterion	Rating scale*	
	1-----2-----3-----4-----5-----6-----7-----8-----9-----10	
Size of the banking system	The banking system size is limited in relation to the size of the economy, which lowers systemic risk and limits the potential for financialization and excessive indebtedness of the economy, enterprises and households	The banking system is underdeveloped and hinders the growth of the economy, enterprises and households
Privatisation in the Polish banking system	Inevitable in the context of the crisis in the Polish banking system in the 1990s	Selling out assets for next to nothing and surrendering control over the Polish banking system
Foreign capital in the domestic banking system	Diversification of risk and independence of banks' operations from the influence of domestic politicians	Discrimination against Polish borrowers, risk of deposit transfer and economic intelligence
Resistance to the global financial crisis	Restrictive supervision, prudence of bank managers and adequate banking procedures	Small balance scale of the banking system making it impossible to trade the latest financial instruments on the global market
Efficiency during the GFC	A decline in ROE caused by the creation of a financial reserves buffer	A decline in ROE caused by the GFC
Economic surplus	Maximising market value (profit)	Serving the stakeholders
Owner benefits	High dividend (ROE)	Bank capitalization
Management benefits	Very high pay and benefits	Results-based pay
Employment	A function of the scale and banking technologies	Buffer for banking efficiency reserves
Equal treatment of credit institutions	Market discipline and efficiency	Proportionality principle and preference for domestic institutions
Uniform prudential and supervisory regulations	Harmonization of national legislative provisions with EU law	Varied regulations depending on the degree of banking sector development
Supervisory paradigm	Optimum efficiency and security	Maximizing security
Equality of entities principle	Tax equality of credit institutions	Preferential treatment of local banks operating in high unemployment areas
Equal contribution to financing the economy and solidarity in income redistribution	Banks contribute adequately to the state budget and foster economic growth	Income redistribution is unfair and the banks' contribution to the state budget is unreasonably low

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Independence of local credit institutions	The need for consolidation and centralised systemic solutions	Dispersed structure suited to the needs of the local market
Safety net capitalization	Accumulation, taking into account countercyclical factors	Minimizing burdens to strengthen, in capital terms, entities operating in the system
Participation in safety net capitalization	A premium based on the scale of operations and risk	A premium based on the scale and systemic solidarity
Competition and competitiveness	The banking sector is consolidated only to a small extent, which has a positive impact on competition between the banks and competitiveness of the services offered; the systemic risk is lower	The banking sector is overly consolidated, which limits the need for banks to compete for customers; the systemic risk is higher
Key focus on sales	Transactional banking (focus on selling banking products)	Relationship banking (focus on building long-lasting relationship with the customers)
Image	Stereotypes deeply rooted in history as a means of legitimising a private business	Meeting the financial needs of customers who co-own a co-operative credit institution founded upon close personal ties

*- depending on the nature of a criterion, a rating of 1 could be desirable and 10 undesirable or the other way around

Source: Own work

This paper has outlined selected strands of discourse concerning the Polish banking sector. The limitations hereof do not permit a more exhaustive analysis of issues where the state of the art in finance requires a redefinition, cognitive activities or even a paradigm shift.

In view of the discussion presented above a question arises as to whether finance as a sub-genre of economic studies and socio-economic practice holds a paradigm that would prove adequate in terms of the level of development of such practice, i.e. the so-called disciplinary matrix, involving symbolic generalisations (i.e. theories, e.g. informational efficiency of financial markets hypothesis), methodological assumptions (reflecting the cognitive structure of the phenomena, processes or structures researched) or, finally, models for resolving scientific problems (handbooks, monographs, research reports, practical experience, e.g. methods of arbitration valuation, estimating the risk premium).

Or perhaps, as G. Kołodko would put it, the finance paradigm is really based on the fact that "things happen the way they do, because many things are happening all at once". It cannot be ruled out that what finance needs is a change similar to the economics of complexity, defined by A. Wojtyna as the incorporation of behavioural analysis (reconstructing the homo oeconomicus concept) and challenging the traditional understanding of economic system equilibrium and dynamics.

It is also worth considering whether the triad of finance categories (money, risk, time) is not lacking a fourth component, namely trust, essential for financial stability and the balance between finance capital and social capital, serving as the basis for efficient financial intermediation (including the development of an unselfish advisory function, especially with regard to financial products securing the customers' day-to-day existence in the post-employment period)[46].

46 More on this issue in: (Szambelańczyk, 2009, 2010; Marcinkowska, 2013).

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