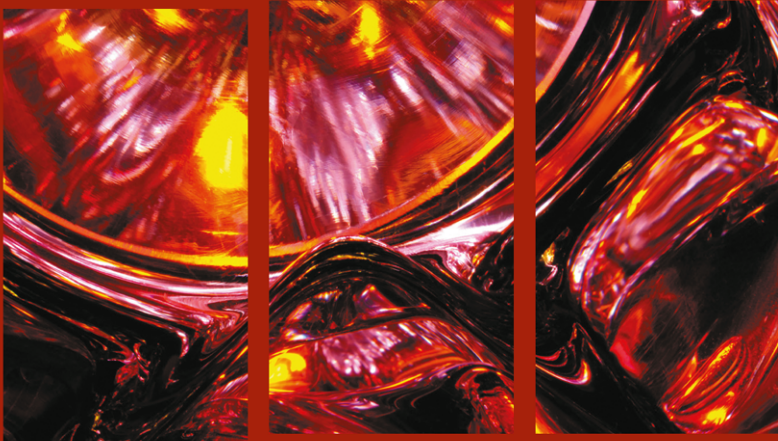


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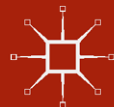
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Preface

This book, to the best of our knowledge, is the first extensive work on the restructuring of banks in EU countries during the recent global financial crisis and the consequences of restructuring on both the macro- and micro-economic levels. In studies that we conducted during the period 1999–2002, culminating in two publications in Polish (Iwanicz-Drozdowska, 2000; Iwanicz-Drozdowska ed., 2002), our analysis covered 22 countries, including several that were undergoing political and economic transformations. Readers may consider this book a continuation of that earlier work. However, a prerequisite for this book has been the serious breakdown in financial markets, which, compared to earlier crises, has affected highly developed countries much more than developing countries. Our analysis covers 95 banks from 17 EU member states and, in addition, five institutions created during the crisis to take charge, above all, of managing ‘bad’ assets.

The purpose of our study is to demonstrate the diversity of the restructuring instruments applied in EU countries and to offer a critical, institutionalized analysis of the financial support provided to banks. In particular, our interest has focused on estimating the cost of that support and evaluating its effects. We bring to these considerations an analysis of the pre-crisis situation and of the numerous changes implemented because of the crisis. Our aim is to present the reader with a full context for the recovery actions implemented in the banking sector.

The book comprises five chapters and an Appendix. Chapter 1 presents a historical outline, discusses causes of crises and offers an overview of the restructuring instruments and their use for crisis management before 2007. We also sketch the scope of the analysis that we have conducted. The following four chapters focus on the situation in the EU before the crisis outbreak (Chapter 2), the crisis ‘landscape’, comprising a comprehensive description of the rescue actions (Chapters 3 and 4) and the ‘landscape’ after the changes that were the consequences of the crisis events (Chapter 5). We avoid using the term ‘post-crisis landscape’ because there are insufficient grounds for arguing that the crisis finally has ended.

Chapter 2 analyses macroeconomic factors in EU economies before the start of the crisis. It describes major tendencies shaping the environments in which banks were operating, focusing on the condition of the economy and the nature of the economic policies, in particular monetary and budgetary policies. After defining the main tendencies, we evaluate the impact of the above-mentioned factors on the condition of the banking sector in the EU.

Chapter 3 presents actions undertaken during the global financial crisis. We start by characterizing the rules for granting state aid, which the European Commission approved on a large scale, and which were in many cases used to rescue banks undergoing financial difficulties. In addition to examining the forms and scale of the support, we present an analysis of determinants of costs of banks' restructuring on the macroeconomic level. Chapter 4 analyses costs of individual forms of restructuring on the microeconomic level. The analyses in Chapters 3 and 4 derive from the rich empirical material we collected during our study. We present these data in detail in the Appendix.

Chapter 5 details the most important changes in the financial safety net and regulations, and are presented after an assessment of the situation in the real economy and the EU banking sectors. We pay particular attention to the bank resolution regime and the banking union because of the hopes that these measures evoked. The introduction of systemic regulations, enabling the application of new tools for the liquidation of financial institutions, was an important response to the global financial crisis. The chapter indicates reasons for introducing the resolution regime into the EU financial safety net, discussing its key objectives and tasks. The creation of the banking union has begun relatively quickly, although it is not yet complete. As early as May 2012, the European Commission called for the creation of the banking union. A month later (Van Rompuy, 2012, and subsequent reports) a road map was drawn for strengthening the Economic and Monetary Union through closer integration in the financial sphere, involving, among other actions, integration of banking supervision (Single Supervisory Mechanism, or SSM), creation of a pan-European restructuring and bank resolution regime (Single Resolution Mechanism, or SRM) as well as a single Pan-European deposit guarantee scheme. This integration involves the transfer of competence in the indicated three spheres from the national to pan-European level.

The authors have made every effort to collect data and information of the highest quality from a variety of sources, regarding the course of events, the standing of the banks undergoing financial distress and the amounts allocated to the various rescue actions. To the best of our knowledge, this is the first extensive work on the restructuring of banks in EU countries during the recent global financial crisis and its consequences on both the macro and microeconomic levels. It will be important to revisit the standing of the restructured banks in five to ten years, as well as the results of companies managing 'bad' assets and other entities involved in the crisis management. Such a timeframe will allow for evaluation of whether, for example, the restructuring actions have increased moral hazard in the banking sector and whether they have led in a longer perspective to gains or losses for state budgets.

A team of researchers and doctoral candidates conducted the research at the College of Management and Finance, Warsaw School of Economics (funding no. KZIF/S/14/14). I would like to thank all the members of the team most warmly for their research and organizational efforts.

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1

Banking Crises and Restructuring Tools

Małgorzata Iwanicz-Drozdowska

This chapter presents a brief history of banking crises and restructuring tools, with a particular focus on the recent global financial crisis (GFC). There always are questions about the causes of turmoil in the financial markets; therefore, the chapter explains how the current crisis is different from the previous ones. The conclusions from the research confirmed that the main causes remained the same all the time; however, the environment in which banks operate has been changing dynamically. A critical factor during the GFC was the contagion effect. In past crises, the most common restructuring tool, associated with government bailouts, was recapitalization (in addition to liquidity support), which allowed most banks to survive.

1.1 Short history and the scope of the analysis

Banks always have faced the threat of losing their safety and soundness because of the way they operate as entities that collect deposits and grant loans, risking the default of the debtor. According to G. Caprio and D. Klingebiel (1996), the first banking crisis occurred in Rome in 33 CE. Until the current global financial crisis, the Great Depression of the 1930s was the most severe breakdown in the banking (and financial) sector.

Political and academic analyses of the causes of the ongoing global financial crisis indicate irregularities in the banking sectors of many countries. One of the key irregularities was excessive lending and the corresponding inappropriate risk management, including risk assessment in the securitization process (Caprio jr. et al., 2008).

One may distinguish three waves of the global financial crisis. In May 2006, Merit Financial Inc. was the first US brokerage firm to go bankrupt, while in August 2006, default rates for subprime loans increased. Subsequent bankruptcies¹ of brokerage institutions began in early 2007. The failure of New Century Financial was particularly noteworthy. Because

of the American market's significant global role, the problems occurring in the United States began to spread to other countries and cause contagion. In July 2007, Bear Stearns announced that its two hedge funds investing on the subprime market had nearly lost their value. In July 2007 – beginning of the global financial crisis – financial institutions gradually started to reveal problems with their collateralized debt obligations, or CDOs. One of the first was Swiss UBS. The trouble started to spiral and other institutions declared significant profit falls (including Morgan Stanley, Goldman Sachs, Bear Stearns, Citigroup, Merrill Lynch, Bank of America, Barclays and HSBC) or serious financial problems (including IKB Deutsche Industrie Bank and Northern Rock). In March 2008, Bear Stearns lost access to short-term financing and ended up being taken over by JP Morgan in May that year.

In Europe, the first wave of the 2007 crisis did not wreak too much havoc on financial markets. But the second wave of the crisis, beginning with Lehman Brothers' failure, led to a slump in the banking sector and other segments of the financial markets because of losses from exposures to Lehman Brothers, but most of all, because of the loss of trust among the market players. The third phase of the crisis dates to the second quarter of 2010, when Greece's financial problems became evident. At that time, the banks started to suffer negative consequences of keeping in their portfolios securities issued by the governments of southern European countries.

Although the Great Depression and the current global financial crisis are historically the two greatest breakdowns in the banking sector, banking crises have occurred often. According to IMF statistics, there were 124 banking crises between 1970 and 2007². In order to specify the number of crises, excluding the ongoing global financial crisis, we would have to exclude two cases taken into account by the IMF economists – the United Kingdom and the US (2007). As a result, in the 1970–2007 period 122 banking crises were identified (Laeven and Valencia, 2008, p. 5). Before the outbreak of the current global financial crisis, banking crises occurred in 12 EU countries, including nine in Central and Eastern Europe during the 1990s. (These were the so-called transformation crises – Bulgaria, Croatia, the Czech Republic, Estonia, Lithuania, Latvia, Poland, Romania and Hungary). Banking crises occurred earlier in Finland, Spain and Sweden.

According to the data gathered by the IMF economists (Costa Navajas and Thegeya, 2013, p. 28) over the 2007–2011 period one may identify 11 systemic banking crises in EU countries and additional six crises in other countries (Iceland, Kazakhstan, Mongolia, Nigeria, Ukraine and the United States). This number should be increased by the cases of Cyprus (2012–2013), Portugal (a systemic crisis since 2012) and Slovenia (a systemic crisis since 2013)³. In total, there have been 14 systemic banking crises in EU member states since 2007.

Table 1.1 The list of banking crises in EU countries from 2007 to 2013

Country	Outbreak of the crisis (IMF)	Outbreak of the systemic crisis (IMF)	The number of banks restructured and the name of the asset management company
Austria	2008	2008	7
Belgium	2008	2008	3
Cyprus	2012*	2013*	3
Denmark	2008	2009	12
Estonia			
France	2008		5
Greece	2008	2009	7
Spain	2008	2011	13+SAREB
The Netherlands	2008	2008	3
Ireland	2008	2009	6+NAMA
Lithuania	2013*		1
Luxemburg	2008	2008	–
Latvia	2008	2008	2
Germany	2008	2009	10+SocFin
Portugal	2008	2012*	7
Slovakia			–
Slovenia	2008	2013*	5 + BAMC
Sweden	2008		2
Hungary	2008		–
The United Kingdom	2007	2008	5 + UK Resolution
Italy	2008		4

Note: * According to our research (see Appendix).

Source: Based on Costa Navajas, Thegeya (2013, p. 28) and data collected by the authors.

In our analysis, we focus on the banks in EU countries (excluding Croatia, which, at the start of the financial crisis, was not a member state). Our study has covered 95 banks⁴ from 17 EU countries that suffered a systemic crisis or disturbances on a smaller scale that still required government interventions, including the state aid procedure. Additionally, we have analysed five institutions⁵ created during the crisis to manage bad assets⁶. Our analysis of the 14 systemic crises does not explicitly include Luxembourg. The issues of that country's banking sector resulted from 'importing' problems from Iceland and from cross-border operations of two banks from the Benelux states (Dexia and Fortis), whose restructuring was co-financed by the government of Luxembourg.

We also have identified cases of bank restructuring in countries that did not suffer systemic crises – France, Lithuania, Sweden and Italy – and we have included them in our analysis. We have not analysed the case of Hungary. The problems occurring there were mainly political and they affected all

banks that had granted loans in Swiss francs⁷. Our analysis has not addressed the consequences of the financial crisis in Iceland for banks and EU countries. Some of them (such as Belgium, the Netherlands, Luxembourg and the UK), through paying deposits to customers, were forced to allocate funds to resolve problems related to branches and/or subsidiaries of Icelandic banks. The major obstacle to analysis is the lack of financial data for those Icelandic institutions that contributed to the problems in EU countries.

1.2 Causes of banking crises – literature review

Over the ages, the main causes of bank failures have changed little. However, financial and organizational innovations undoubtedly make the same cause (for instance, a bad credit policy) have a different impact (usually stronger as the importance of financial operations is greater in the economy) and have a different scope (frequently global). Laeven and Valencia in 2008 described a systemic banking crisis as characterized by, a large number of defaults in the financial and corporate sectors. This results in the increase of non-performing loans and the exhaustion of all or most of the aggregate banking system capital. Massive financial problems on the microeconomic level generate a systemic problem. The decrease or, in extreme cases, exhaustion of banking system capital, requires public authorities to intervene to ‘repair’ the banking sector. There is a strong correlation between the causes of banking crises and the causes of bank defaults.

The tide of the global financial crisis recalled the financial instability hypothesis of H. Minsky (Minsky, 1992, pp. 6–7). Unlike other approaches, this hypothesis treats banking seriously as a profit-seeking activity, which is possible due to the introduction of innovation. H. Minsky distinguished three income-debt relations: hedge financing, speculative financing and Ponzi financing. (The last was named after the founder of the first financial pyramid scheme.) Hedge financing allows the borrowers to repay their debt out of their cash flows. In speculative financing, cash flows are not sufficient to repay the entire debt, but the borrowers may issue new debt or roll over their loans. Speculative borrowers show profits that stress their ability to repay their commitments. Ponzi borrowers do not generate sufficient cash flows to repay their debt or even the interest. Repayments may be made upon the sale of assets or by new borrowing, usually at a higher interest rate. H. Minsky used these three forms of financing to explain both economic stability and instability. When hedge financing dominates, the economy may be in balance. Otherwise, the balance is disturbed. Additionally, after a longer period of economic prosperity, hedge financing is given up, which causes instability⁸. Operations of banks are procyclical, which should be attributed to, among other things, managers’ approach to risk-taking. During

the periods of prosperity, managers concentrate on increasing credit (and investment) activity, especially when prior transactions had proven profitable. This frequently results in a too liberal risk-taking approach, including the loosening of standards of creditworthiness assessment. According to Minsky's terminology, this represents a move away from hedge financing. Prosperity ends at a 'certain' moment and then some customers may fail to fulfil their commitments, which generates losses for the banks. Afterwards, the bank managers apply more restrictive standards when assessing their customers' creditworthiness, which suppresses increases in lending and makes loans less available in the economy. After some time, the managers change their approach to taking risks and liberalise the rules set earlier. Bergel and Udell (2003) named this phenomenon 'institutional memory.' Further, extensive research is required to determine how much profit and loss drive managers' behaviours, as well as the role of behavioural factors.

Earlier analyses of causes of crises (Iwanicz-Drozowska ed., 2002; Lindgren et al., 1998; Ostalecka, 2009) pointed to such basic sources as:

- bad policies pursued by banks, mainly with regard to credit risk;
- gaps in regulations and supervision, which allowed for taking excessive risk;
- supervisors' delayed interventions;
- excessive optimism of market players.

In one of the first papers to analyse the current global financial crisis, the authors enumerate the following main causes (Dell'Ariccia et al., 2008, p. 8):

- more liberal requirements for borrowers due to the dynamic growth of the credits;
- significant, mainly speculative, growth of real estate prices;
- banks' growing interest in the sale of receivables and securitization, which in consequence led to the easing of the lending policy;
- easing of the monetary policy conditions and keeping low interest rates for long periods.

Here follows a brief review of the literature on the causes of crises and the contagion effect. The contagion effect has been treated as a separate issue because of the important role it has played in the ongoing global financial crisis.

Klomp (2010, pp. 72–87) analysed causes of banking crises and pointed to differences in comparison with prior studies. His literature review comprised, among other things, the variables applied in the studies and the methods

and the scope of the analysed cases, as presented in Table 1.2. Klomp conducted research on the period preceding the current crisis, 1970 to 2007, and on 110 countries (with 130 crises). The major differences compared to earlier studies involved application of different estimation techniques, and addition of independent variables that took into account such differences between the countries as the quality of the institutional environment, the financial regulations, independence of the central bank, history of democracy, instability of the government and instability of the regime. Klomp also introduced additional macroeconomic variables. In his conclusions, Klomp argued that the causes of banking crises are different, although one may identify frequently occurring variables, such as increased lending activity, GDP growth and real interest rates. However, none of these variables was significant in more than 60 per cent of crises covered by the analysis. The probability of crisis increased with the growing globalization and the growing ratio of M2 to foreign currency reserves. Klomp also identified differences in the impact of individual variables depending on the level of the economic development and differentiated between a systemic crisis and an 'ordinary' crisis. The three most important variables – the growth of lending activity, the GDP growth and the real interest rates – point to the contribution of loans flowing into the economy into generation of the crisis. The lending boom boosting the GDP and the rising real interest rates support H. Minsky's concept of moving away from hedge to Ponzi financing.

Sayek and Taskin (2014, pp. 447–493) have analysed two issues. First, they examined whether the factors that evoke financial crises have changed over time. The authors concluded that they had not and that there were no differences between highly developed and developing countries. The key factors that affected the probability of crisis were the GDP growth rate, current account changes, the stability of public finances, the level of loans to the private sector and the debt of the public sector. The factors that had a different influence were inflation and interest rates. Second, the authors examined how the experiences of individual countries differed from the average ones being observed. The authors demonstrated that the crisis in GIIPS⁹ countries was different from a typical crisis.

Similar questions have also been asked by Claessens et al. (2010a, pp. 247–264), who also added the problem of costs related to the recession caused by the crises. The ongoing global financial crisis has revealed four features common to previous crises: a significant growth of asset prices before the crisis; a lending boom preceding the crisis; major expansion on the credit market, including mortgage loans, and regulations and supervision that lagged behind the market changes. The major four differences in comparison with the previous crises were a wide use of financial instruments, growing interrelations among financial markets, high leverage of financial

Table 1.2 Variables for the analysis of the banking crises

Authors	Period covered	Countries	Method	Variables statistically significant at the 10% level and their impact (– or +)
Demirgüç-Kunt, Detragiache (1997)	1980–1994	Industrialized countries and emerging markets	Probit	real GDP growth rate (–), real interest rate (+), inflation (+), M2 to reserves (+), private credit to GDP (+), credit growth rate (+), real GDP per capita (–), deposit guarantees (–), law and order (–)
Beck et al. (2006)	1980–1997	Industrialized countries and emerging markets	Logit	real GDP growth rate (–), real interest rate (+), M2 to reserves (+), credit growth rate (+), real GDP per capita (–)
García Herrero, De la Rio (2003)	1970–1999	Industrialized countries and emerging markets (79 countries)	Logit	real GDP growth rate (–), bank reserves to assets (–), real GDP per capita (–)
Cihák (2007)	1980–2003	Industrialized countries and emerging markets (48 countries)	Logit	depreciation (–), real interest rate (+), credit growth rate (+)
Demirgüç-Kunt, Detragiache (1997)	1980–1995	Industrialized countries and emerging markets (53 countries)	Logit	real GDP growth rate (–), changes in terms of trade (–), real interest rate (+), inflation (+), M2 to reserves (+), credit growth rate (+), real GDP per capita (–)
Glick, Hutchison (2000)	1975–1995	Industrialized countries and emerging markets (90 countries)	Probit	real GDP growth rate (–)
Eichengreen, Arteta (2002)	1975–1995	Industrialized countries and emerging markets	Probit	government budget deficit (+), M2 to reserves (+), credit growth rate (+)
Domac, Martínez-Peria (2003)	1980–1997	Industrialized countries and emerging markets	Logit	credit growth rate (+), real GDP per capita (–)
Komulainen, Lukkari (2003)	1980–2001	Emerging markets (31 countries)	Logit	depreciation (+), inflation (–), government budget deficit (+), M2 to reserves (+), private credit to GDP (–), bank reserves to assets (–), real GDP per capita (–)
Tanveer, De Haan (2008)	1981–2002	Emerging markets (33 countries)	Probit	real GDP growth rate (–), depreciation (+), real interest rate (+), M2 to reserves (–), real GDP per capita (–)

Note: Based on Klomp, 2010 (p. 3).

institutions and the role of households, mainly with regard to debt levels (evaluated through, among other things, Dtl¹⁰). As for the recession costs, the ongoing financial crisis pulled the economies downwards to a greater extent than before.

Similar conclusions have been drawn by Claessens et al. (2011, pp. 5–7), who pointed to the following differences:

- previously, the crises primarily touched emerging markets and developing countries, while in the current crisis, they mainly affect the highly developed countries;
- the financial systems were bigger in relation to the GDP and were more concentrated; financial institutions had more complex organizational structures, which reduced supervision capabilities;
- the growth of credit and asset prices was stronger than before; in some cases this was accompanied by external imbalance;
- the leverage was higher both for financial institutions and for households (correlated with the growth of real estate prices);
- interrelations among financial institutions became stronger, which resulted from applying innovations and the growing role of non-banking institutions (the so-called shadow banking).

Caprio et al. (2014, pp. 114–129) have conducted research on factors determining the financial crisis in 2008 for 83 countries. They used data from the 1998–2006 period and they applied the probit model. According to the results of their study, the probability of the crisis was higher in banking sectors with a high loan-to-deposit ratio (which is evidence for unstable financing of the lending activity) but was lower for countries with a high interest margin, high concentration in the banking sector, significant constraints in the banking activity and strong private monitoring. The conclusions have proven correct also for the analysis conducted on the level of individual banks. The authors have distinguished two business models in banking – the originate-to-hold model, or OTH, and the ‘new’ originate-to-distribute model, or OTD. The traditional model allowed for generating a higher interest margin and demonstrated greater stability in the time of crisis. Further, the authors noticed that additional capital adequacy requirements for the banks following the traditional model would contribute to higher costs of loans and reduce lending. They also pointed to concerns regarding the banks’ turning to new, riskier areas of operations.

Poghosyan and Čihak (2011, pp. 163–184) have conducted research on 25 EU countries, using Bankscope data for the 1996–2007 period, combining them with data regarding financial distress in banking sectors. The authors have identified 79 interventions in the 1997–2008 period (for example,

government guarantees, forced merger, financial support and liquidity support) for 54 banks out of 5,708 entities from the EU. One of their conclusions was that the EU integration policy had led to the convergence of risks in EU countries, which requires a centralized approach to regulation. The authors identified the contagion effect in the EU banking sector. Taking into account the concentration level, the research indicated that the banks operating in more concentrated banking sectors were more exposed to financial distress than banks operating in less concentrated banking sectors. The factor that contributed to financial distress was also the share of 'wholesale' financing.

Vallascas and Keasey (2011, pp. 37–68) have studied the monthly historical volatility of bank indexes (in 15 EU countries, Norway and Switzerland) from January 1988 through December 2010. Though they could not identify changes in the long-term volatility, they did identify a change in the factors that evoke the volatility. The significance of international and European non-financial factors increased, particularly in the case of large banking systems because of cross-border integration. However, this did not result from introducing the euro as a single currency. This resulted in a greater vulnerability of EU banking systems to external shock in the last part of the research period.

The ongoing crisis has spread rapidly on a global scale because of the contagion effect¹¹: a situation in which there is a significant increase in cross-market connections after a shock occurs in one market (Longstaff, 2010, p. 348). 'Shock' is an important element and its nature may be either 'micro' or 'macro'. Having reviewed the literature, Longstaff (2010, p. 348) identified three channels that may propagate the contagion effect:

- the information channel,
- the liquidity channel,
- the risk-premium channel.

These channels are interrelated. Emergence of negative information may translate into limited liquidity of an instrument or a market, and into higher risk-premium.

The contagion transmission channels have also been indicated by Pritsker (2000), who identified linkage channels in:

- the real sector,
- the financial markets,
- the financial institutions,
- and the interaction between the financial markets and financial institutions.

The literature review performed by Hasman (2012) has identified two research streams and their diverse conclusions. First, in the theoretical stream there have been contradictory results. According to Hasman (2012, pp. 980–983), some authors say that stronger linkages among banks (defined as ‘a complete banking structure’) increase the probability of the contagion effect (this has been proven by: Brusco and Castiglionesi, 2007; Hasman and Samartin, 2008), while others argue that ‘incomplete banking structures’ contribute to a higher risk of contagion (proven by: Allen and Gale, 2000; Babus, 2006).

Second, the network theory and the event studies have been applied in the empirical research. The major difference between these two approaches is that network theory uses simulations while the event studies use actual bank problems. The literature on the event studies identifies pure contagion and information-induced contagion. The pure contagion effect occurs when deposits are withdrawn from an institution with good financial standing, while the information-induced contagion occurs when funds flow out from institutions in financial distress before the ‘official’ start of the crisis. The empirical studies indicate that depositors are able to differentiate banks in good condition from banks in distress and that the contagion effects are mainly induced by information. However, financial innovations increase the risk of ‘pure’ contagion. Additionally, the central bank’s role as the lender of last resort makes it more difficult to use the event studies. Studies that have used the network theory show that the contagion effect may occur but it is not so obvious. The probability of contagion depends, e.g., on the size of the bank and the directions and types of the connections. Interdependencies analysis is performed at a specific moment, without any possibility to assess changes occurring over time. It also is based on the assumption that the linkages are spread among the banks and not on the actual data, as they are not available (Hasman, 2012, pp. 985–988).

Longstaff (2010, pp. 436–450) has examined the contagion effect using CDOs based on subprime loans. The author used the ABX indices from January 2006 through December 2008. The analysis shows that when the subprime crisis began, the interdependencies between the ABX indices and the profitability of US treasury bonds, corporate bond spreads, stock market returns and VIX indices grew stronger, which indicates that the contagion effect has occurred.

As regards the current crisis, the issue of problem propagation was analysed in a different manner by Frank et al. (2008), who concentrated on whether the loss of liquidity SIVs¹² could have led to solvency problems of financial institutions. During a crisis, the liquidity shock propagation may be intensified and create a systemic risk. Problems may be transmitted through direct exposures among financial institutions and through asset prices. The leverage applied by financial institutions may intensify the phenomenon by

increasing procyclicality. The authors have analysed only the US market and the 2007 situation, which limits the possibility to generalize conclusions. The authors have identified the contagion effect between various financial market segments in the US. A later study confirmed the presence of greater interdependencies between the US market and the emerging markets (Frank and Hesse, 2009).

Undoubtedly, the contagion effect is the factor that has emerged, with extraordinary force, during the ongoing global financial crisis. It is essential to continue research not only on the contagion effect but also on the causes of crises, which – although reoccurring for years – may break out with different intensities or in different forms. However, accomplishing this goal depends upon improvements in the quality and scope of the data published by banks and of the data available only to the financial safety net institutions. Special attention must be paid to the channel of exposures on the interbank market, which contributes to the contagion effect, and to the involvement in the same type of financial instruments, which stimulates the growth of systemic risk.

1.3 Types of financial support – historical perspective

When a financial crisis occurs, public authorities intervene to improve the situation and recover the banking sector. The following factors are essential to a comprehensive view of the tools that improve the banking sector's standing:

- the systemic or selective use of the tools,
- the tools allowing the bank (in whole or in part) to stay on the market,
- the tools separating bad assets.

Liquidity support may be deemed a systemic support instrument. Such actions undertaken by the central bank allow the banks to access liquid funds upon presenting collateral (for instance, government securities). With an outbreak of panic and the loss of trust on the interbank market, the banks do not want to lend funds to one another. This was the case, for instance, after the failure of Lehman Brothers. Central banks took actions that preserved liquidity of the banking sector, not only by granting collateralized liquidity loans, in compliance with W. Bagehot's central banking principles, but also by using non-standard tools, other than those used when the financial market does not suffer any problems. We are not focusing on central banks' actions as it would, in fact, require further comprehensive research.

Actions performed as programs or packages (like in France and Denmark in the ongoing crisis) are a similar type of support. The government announces

that it may (in the EU, upon the European Commission's approval) grant financial support, and the banks that are interested in it and fulfil the specified criteria are entitled to join the programs.

Selective instruments are all kinds of rescue operations aimed at resolving problems of a specific entity, such as recapitalization or nationalization.

A bank's continuation of market operations is possible when its restructuring is justified economically (and/or politically). This applies mainly to large banks on a given market whose bankruptcies could not be handled by the deposit guarantee institution (payment of funds to depositors) or the state treasury. Instruments allowing continuation of market operations include: recapitalization (or nationalization), guarantees for bond issue, open bank assistance (guarantees on assets and/or liabilities, loans), separation of bad assets from the bank (balance sheet 'cleaning'), sale of specific business units to improve the financial standing and limiting the range of operations of a given institution as well as covering losses not only out of equity but also out of money of a specific group of creditors (bail-in).

Resolution of a bank, in addition to the bankruptcy procedure, must be associated with such instruments as liquidation conducted by the bank itself or by a dedicated resolution authority. The resolution is accompanied by the sale of selected asset items, for example, a network of branches along with the customer accounts and the loan portfolio. Another instrument is a takeover of a bank in distress by a bank in a good financial position or setting up of a 'hospital' for banks by merging several banks in distress and granting support to the new institution.

Separation of bad assets usually takes one of two forms:

- the transfer of the loan portfolio to a dedicated institution, which will manage it (asset management company, or AMC); it is necessary to provide capital support and ensure financing of the AMC¹³ so it could effectively operate on the market. Such a solution proved very successful during the crisis in Sweden in the 1990s;
- division of the bank into two parts: 'good' and 'bad'¹⁴; the 'good' part – most often upon obtaining financial support – continues to operate on the market and actions are undertaken to sell it, while for the 'bad' part, liquidation or bankruptcy is planned; the 'good' bank takes over liabilities, including the guaranteed deposits and the liabilities which are to be rescued, as well as the good assets. The 'bad' bank takes over the remaining liabilities and the bad assets.

The key objective of applying these instruments is to maximize income from the bad assets, 'to clean up' the bank's balance sheet and, to give 'another life' to the bank.

Taking into account the historical experiences before the ongoing global financial crisis, one can show not only the tools applied but also the frequency of their use. Laeven and Valencia (2008), who analysed 42 crises from the 1970–2007 period, have performed such a review. In addition to banking crises, they have considered currency crises and sovereign debt crises. Following the work of Honohan and Laeven (ed., 2005) and of Hoelscher and Quintyn (2003), Laeven and Valencia (2008, pp. 7–16 and 18–24) continued to distinguish between the tools used during the containment of the crisis and those used during its resolution. During the containment phase, the public authority uses instruments such as suspension of deposit payments, regulatory forbearance, liquidity support and government guarantees for the depositors. It must be stressed that the instruments are systemic. The resolution phase, whose purpose is to recover the banking system and restore its operations, may use (usually selectively) the following tools : conditional, backed by the government but decentralized management of non-performing loans, waiving of debts, creation of companies to manage non-performing loans, government-supported sale of the bank (to a foreign investor, for instance) and government capital support¹⁵. Capital support could be granted to banks in cash, in government bonds, as subordinated loans, through the acquisition of preferred or ordinary shares, by purchasing non-performing loans, by taking over the bank's liabilities, by opening a credit line or through other instruments.

Laeven and Valencia's analysis of 42 crises revealed a different range of individual tools. During the crisis containment stage, the most used tools were liquidity support (71 per cent of cases) and regulatory forbearance (67 per cent). The less frequently used instruments included unlimited government guarantees (29 per cent) with an average period of about four and a half years, and the least frequently used – freezing of deposits (12 per cent) and bank holidays¹⁶ (9 per cent). During the crisis resolution stage, government intervened on a large scale in 86 per cent of cases. The most frequently used instruments included recapitalization (76 per cent), mergers (61 per cent) and nationalization (57 per cent). These instruments were not used one at a time, but in specific configurations. Banks were sold to foreign capital less often (51 per cent); however, such operations involved banks from the emerging markets, and not the developed economies. The companies in charge of managing bad assets were created in nearly 60 per cent of cases, while companies managing bank restructuring, in 48 per cent of cases.

One of the first attempts to diagnose the use of the restructuring tools in the ongoing global financial crisis were made by Claessens et al. (2011). Their analysis, however, ended in 2009 and covered 12 countries. Figure 1.1 presents the differences identified by Claessens et al.

Compared to the events before 2007, additional government guarantees (including guarantees on assets) and the increase of deposit guarantees became more important. Recapitalization and nationalization remained significant. However, the analysis is incomplete and covers only a short period.

According to Claessens et al. (2010, pp. 13–14), the typical intervention tools used during an ongoing financial crisis are:

- supporting liquidity through collateralized lending and other instruments (in the current crisis over ten per cent of GDP of the developed countries along with two tools specified below),
 - supporting short-term wholesale markets,
 - increasing guarantees for retail and other creditors,
- purchasing or exchanging non-performing or non-liquid assets (in the current crisis approximately 3.5 per cent of GDP),
- recapitalization of banks (in the current crisis approximately two per cent of GDP).

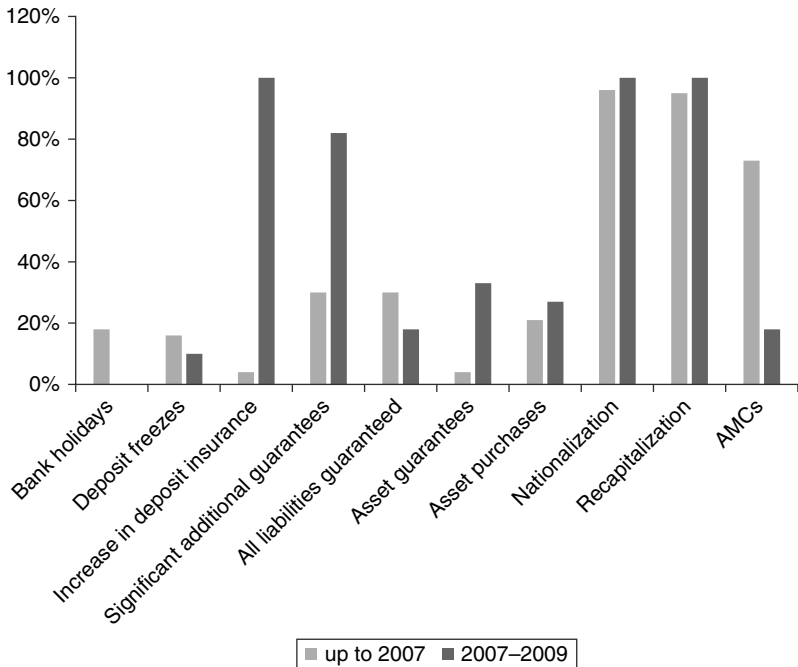


Figure 1.1 Restructuring tools applied before 2007 vs. tools used during the crisis in 2007–2009

Note: Based on Claessens et al., 2011 (p. 8).

In addition to the range of the tools used, attention should be given to the consequence of using the tools – fiscal consequences, related to the burden on public finances, and non-fiscal consequences, referring to moral hazard and risk attitudes of banks. Hryckiewicz performed a quantitative analysis of the consequences of rescuing banks during pre-2007 crises (2014, pp. 246–265). Her analysis covered 92 banks from 23 countries for crises in the 1991–2001 period. The author distinguished five recovery tools: guarantees, liquidity support, nationalization, mergers and asset management companies. The analysis focused on the attitude towards risk-taking over several years upon application of the recovery instrument in the banks covered by intervention against other banks. The author noted that the government intervention contributed to a higher risk during the period following the intervention, which may be attributed, for example, to poor market discipline, unsuitable management and/or lack of actual restructuring of the bank. The risk was particularly stimulated by unlimited guarantees, nationalization and use of ‘bad asset’ management companies. Hryckiewicz’s is the first discussion of consequences to refer to the evaluation of individual banks. These conclusions, though valuable, are of a historical nature and have little application to EU countries. From the perspective of our research, it must be pointed out that Hryckiewicz’s study covered six EU countries (four countries undergoing political and economic transformation and two Scandinavian countries), while the other cases are Asian and Latin American. One must not assume that her conclusions would prove accurate for the banks and the period that we have studied. This is not only because of a different economic situation and different regulatory solutions but also because the ongoing global financial crisis has affected mainly the highly developed countries, and government intervention was accompanied by significant changes to the financial regulations. The regulators were not lenient – just the opposite: they imposed stricter requirements on the banks.

Taking into account moral hazard, Claessens et al. (2011, p. 26) assessed four recovery instruments: liquidation, division into the ‘good’ and ‘bad’ banks, recapitalization by the government along with nationalization and open bank assistance¹⁷. Liquidation does not stimulate moral hazard and costs are incurred by the owners, the creditors not covered by guarantees and the deposit guarantee institution (in fact, by the entire banking sector, which pays contributions). Dividing banks into ‘good’ and ‘bad’ generates costs that are revealed upon liquidation, and which may additionally require public funds if non-guaranteed deposits are rescued. The increased moral hazard may be noticed only when rescuing non-guaranteed deposits. In the case of recapitalization and nationalization, the shareholders and public authorities incur the costs, while the creditors are usually protected from loss. This restructuring method may increase moral hazard in the case of

creditors not covered by guarantees. The result would have been similar if the shareholders had been granted compensation or if their shares only had been diluted. Open bank assistance long has been regarded as an instrument that contributes most to moral hazard. Its main feature is to maintain the current ownership structure, which means the absence of 'penalty' for those stakeholders who are responsible for a bank's bad financial standing.

In Chapters 3 and 4 and in the Appendix, we present instruments that were used to restructure banks in EU countries in the 2007–2013 period. We have also attempted to evaluate effects associated with those instruments, although currently we may analyse only the costs of the restructuring tools. We cannot yet evaluate long-term consequences of application of individual restructuring instruments (like A. Hryckiewicz) as longer timeframes are required for that purpose.

Notes

1. The term 'bankruptcy' is a simplification. The most frequently performed action was using protection from creditors (the so-called Chapter 11 in the USA).
2. We apply the following IMF definition of a systemic banking crisis: a country's corporate and financial sectors experience a large number of defaults and face great difficulties repaying contracts on time. As a result, non-performing loans increase sharply and all or most of the aggregate banking system capital is exhausted. This situation may be accompanied by depressed asset prices (such as equity and real estate prices) on the heels of run-ups before the crisis, sharp increases in real interest rates and a reversal in capital flows. In some cases, depositor runs on banks trigger the crisis, though in most cases it is a general realization that systemically important financial institutions are in distress (Laeven and Valencia, 2008, p. 5). Note that the definitions of crises, including systemic crises, in the IMF reports have been evolving. The same applies to the statistics (number) of crises.
3. It is worth pointing out the bankruptcy of Bulgarian KBT bank, whose licence was revoked on 4 November 2014.
4. This number includes 11 banks analysed within the framework of Danish packages: the bank package and the consolidation and exit package. The analysis of the restructuring effects and econometric modelling will cover fewer of them because of the lack of financial data from annual reports (the Danish banks covered by the packages as well as the banks that ceased their operations in other countries).
5. As regards the case of Danish Finansiel Stabilitet, we describe operations when discussing the bank rescue packages applied in that country. For the Portuguese institution of resolution and for the Austrian company managing the government's shares, we present a synthetic description in the introductory remarks in the Appendix, without an in-depth analysis.
6. They comprise companies that manage bad assets in Ireland, Spain, Slovenia and Great Britain, and a German company that is directly involved in managing bad assets.
7. The banking sector in Hungary suffered liquidity problems (necessity to renew CHF financing) and a small capital support of state aid was required (0.29 per cent of GDP in 2009). Events in that country resulted from political decisions. The Hungarian government introduced solutions to relieve households in repaying CHF loans (EEAG, 2012, p. 126–127).