ARGUMENTA OECONOMICA
No 2 (27) 2011
PL ISSN 1233-5835

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INTERNAL BANK FRAUD AS A CATEGORY OF OPERATIONAL RISK

Internal bank fraud is classified as one of the seven categories of operational risk. Even though the scale of these phenomena is marginal and their frequency incidental, internal frauds cannot be underestimated because if they emerge as an extreme event, they may cause an economic shock resulting in far-reaching financial consequences. Because of the short period of time since the implementation of the Capital Requirements Directive, Polish banks measure operational risk using simplified methods. This does not simplify or favour the disclosure of detailed information on operational risk incurred, including the disclosure of losses caused by internal fraud. The aim of this publication is to place the risk of internal fraud within the operational risk and to indicate the potential consequences of its threat. Accompanying illustrations based on examples explain mechanisms of the unlawful actions.

Keywords: bank crime, internal fraud, operational risk, creative accounting.
JEL: G32, G34.

INTRODUCTION

Over 20 years of economic transformations in Poland cannot be considered as a state of economic equilibrium. Currently, due to the ongoing global financial crisis, the threat of economic instability could increase, even though until now both the Polish economy and the financial system have effectively fought unfavourable external trends.

One of the necessary conditions for the proper functioning of the economic system, especially the financial market, is reliability coupled with a sense of security of its participants. A state of reduced economic and political stability and the frequent changes of laws favour the increase of crime, both the most primitive crime, such as theft and robbery, and refined crime, i.e. economic crime. The common goal of these activities is often similar. Namely, money. However, while in the case of ordinary crimes, identification and understanding of the course of events associated with the

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wrongdoing appear to be relatively simple, in the case of economic crimes this is no longer the case.

Internal fraud occurring at banks, insurance companies and stock markets is considered to be the most difficult to detect (Wójcik 2008). These acts are typically camouflaged and therefore invisible, and they are characterized by a long duration. The result of such crimes, committed by the so-called white-collar workers, is a disproportionately high volume of losses whose disclosure is very difficult to prove and assign to any specific persons (Sutherland 1940). "White collars" are usually very well educated people occupying positions of high responsibility. They are widely respected, enjoy widespread trust and often perform honourable functions in society. Another distinctive feature of bank fraud distinguishing it from any other crime is the fact that the primary evidence in those cases are not witnesses' testimonials but rather documentation which, apart from its paper version, appears to increasingly often take the electronic form. White-collar bank employees carry out their crimes individually or in small groups. Their actions accompany a great measure of "prudence" which explains the long period between committing the crime and the official declaration of fraud. The evidence gathered in the case of banking crimes, however, has a fundamental advantage. Namely, it is properly documented which allows for deep and detailed research and analysis, though for obvious reasons these are not subject to individual publications.

Yet another observation is concerned with the limited willingness of the victims to cooperate with the investigating units or the court of justice. However, from the point of view of the prevention of pathological phenomena, interpretation of banking secrecy in these terms stands against the concept of inevitable punishment which provokes an increase in economic crime.

Another important feature distinguishing bank fraud, not mentioning misappropriation of monetary value, is the difficulty faced by the judicial authorities to prove the perpetration of acts to specific individuals. This is particularly true in situations where risky investment decisions are taken at senior levels of management and are preceded by analysis which, as shown by experience, is often made in accordance with the expectations of the superiors. Even though this kind of situation makes a bank incur losses that threaten the continuation of its legal existence, those responsible for the crime are still not identified. Additionally, the situation is worsened by a very unclear organizational structure and vague ranges of competence at banks as well as banking risk that is specifically understood by offenders, which in a criminal trials is defined by them as a combination of adverse external events that force specific actions.

The author’s inspiration to write this article was dictated by the conclusions and observations arising from over ten years of author's extensive professional experience in banking and less than twenty years of experience in providing specialized expertise for the court of justice. Experience shows that the problem of internal fraud at banks is sometimes marginalized or neglected, even though from a formal point of view internal fraud victim banks have implemented internal regulations in accordance with the CRD and also a system of internal control and audit.

The issue of the risk of fraud is identified at banks as one of several factors influencing operational risk measurement, which is often confined to the basic method of measuring the ratio when calculating the total capital requirement. Existing security systems focus attention on preventing external attack and neglect the possibility of internal fraud which is facilitated by reducing costs, especially personnel costs.

As far as law enforcement and the judiciary is concerned, one may easily notice a lack of their specialization in the decision-making processes of complex economic crimes. Once initiated, the cases are being investigated for many years. In the meantime, financial institutions are subject to organizational changes, they merge or are taken over. This situation causes the impact and scale of crimes committed to blur especially when the take-over of the endangered bank is accompanied by external financial assistance and help from the Bank Guarantee Fund. As a consequence, the judges final order of guilt is often inadequate to the financial and social impact that these irregularities exerted.

Nevertheless, for expertise specialists and also from a scientific point of view, bank fraud is indeed a very interesting object of research and analysis, which indicates not only legal and economic gaps but also which may be a source of guidance to improve supervisory regulations. Among other things, this is the way to realize the postulate of linking the science and practice.

This work consists of an introduction, five sections and a conclusion. The first section is an attempt to place the risk of fraud within the operational risk. It also discusses this kind of threat as a legal category. In the absence of statistical data, the second section attempts to define the danger of the risk of internal fraud placing Poland on the crime map, including economic crime. In the third part, the author is referring to research completed by the Basel Committee on Banking Supervision, Bank of Japan and the reports from selected banks, places the risk of internal fraud within operational risk while indicating the need for measurement of all risk categories, irrespective of their current level. Section four highlights the transparency of bank information with reference to operational risk. This is because the issue of transparency and the level of detail of information is directly linked to both stability and capital investment. The article is also enriched by examples from the author's expertise practise and by the information from the press and literature while section five in addition discusses the example of internal fraud by showing the connection of this risk with individual credit risk. The purpose of this paper is to show a wider range of consequences of the risk of internal fraud which, from a formal point of view, can be classified under the concept of credit risk. The final part of this article summarizes its contents and contains conclusions and postulates whose primary goal is to draw attention to the important, though statistically low risk of internal fraud.

1. THE CRIME OF FRAUD AND THE RISK OF FRAUD AS A CATEGORY OF OPERATIONAL RISK

Banks, just like other businesses, operate in conditions of uncertainty. The uncertainty, which can be quantified, is described as risk, as in Knight (1921). Risk can therefore be considered as a measurement indicator of profits or losses before any decision is taken. From the perspective of the consequences of taking decisions, one can distinguish between two types of risk: negative and neutral, the latter being the one that can become either an opportunity or a threat (Jajuga 2007). In this article, risk is understood in negative terms, i.e. constituting a threat of deterioration when compared to the initial situation.

It can be generally stated that banking risk is risk of loss which may lead to insolvency. Loss can occur in two bank areas: financial and non-financial (Jaworski, Zawadzka 2005). The former area is referred to as a typical bank risk and relates to the risk caused by financial failure associated with the performance of banking processes. The latter area is operational risk, which refers to the technical and organizational performance of a bank.

The notion of operational risk emerged in Poland in 2004 as a legal and regulatory matter following approval of Recommendation M by the Commission for Banking Supervision[1], where this particular risk was defined as *"the risk of loss resulting from maladjustment or failure of*

[1] On 1 January 2008 the Commission for Banking Supervision was replaced by the Financial Supervision Authority.

internal processes, people and technical systems or external events” including legal risk and excluding reputation and strategic risk. These definitions are adjacent with the one included in the Capital Requirements Directive, CRD 2006/48, Art. 4 (22).

By implementing the CRD to the domestic legal order in 2007 the Commission for Banking Supervision adopted the seven categories of operational risk events:

1) Internal fraud,
2) External fraud,
3) Employment practices and workplace safety,
4) Clients, products & business practices,
5) Damage to physical assets,
6) Business disruption and system failures,
7) Execution, delivery & process management.

Placing internal fraud as the first category of the operational risk mentioned above might assign the highest degree of importance to this particular threat, which is defined as *“the loss caused by purposeful act of embezzlement, misappropriation of assets, circumvention of regulations, laws or internal company policies and excluding losses caused by the diversity and discrimination of workers, which applies to at least one internal person”*, CRD 48/2006, p. 184. This empowers one to set a thesis that internal fraud requires the consecutive meeting of three conditions:

– the perpetrator must be an internal person, i.e. an employee or any other person who may not necessarily be employed at the bank but who has an impact on decision-making (for example members of supervisory boards) or who has even a limited access to the bank’s IT system (such as trainees or apprentices),

– offenders’ actions must be intentional (this does not mean deliberate),

– an action of the internal person must result in a loss.

Despite the narrowed criteria of fraud in the CRD, this event is rather broad and includes irregularities in recording operations (accounting), transactions, in accountancy (for example valuation of assets) and in the phenomena of corruption and theft.

Table 1

Examples of operational events in the internal fraud risk

Event type	Example of operational event at banks
Unauthorized activity	Unregistered actions. Unauthorized transactions. Incorrect evaluation of transactions.
Theft and fraud	Credit fraud. The adoption of a worthless deposit and assigning it a false value. Theft, defined as an illegal annexation of owner's property. Extortion, understood as an action which aims at making other persons manage their property unfavourably due to threat. Embezzlement[2], misappropriation of cash or other goods by others. Robbery, understood as the unlawful annexation of property of the rightful owner by force or blackmail. Misappropriation of assets entrusted to the bank. Malicious abuse of assets (bank). Fraud. Check kiting. Smuggling. Clients's account take-over. Tax non-compliance. Bribery. Corruption / kickbacks. Insider trading.

Source: own study based on the Recommendation M.

The risk of fraud for a bank is a threat of occurrence of unfavourable events such as those mentioned in Table 1. This means that the primary tool for decreasing the probability of fraud should be its prevention.

Seemingly the criminal code deals with a different kind of fraud, which is the criminal law of actions and not offenders, even though this is the offender who is criminally liable because only they could be the perpetrator of action. Action may take a form of a deed (e.g. theft of money by a bank cashier) or an omission (e.g. incompletion of internal bank procedures should serve to prevent giving loans to insolvent clients). From a formal point of view, the Polish penal code implements the Latin maxim *nullum crimen sine lege poena anteriori*[3] while its material principle is based on the

[2] Embezzlement is the inclusion of someone else's things or rights to own property and is not always associated with a theft. For example, something found and incorporated into own property is an usurpation, but it is not a theft.

[3] (eng.) There is no crime without a formally existent criminal act.

maxim *nullum crimen sine periculo sociali*[4]. This means that a threat which may be caused by the person to the legal system without them realizing the offense may not become a basis for criminal liability (for example, thinking about committing a fraud increases the risk but it is not a crime in itself).

Broadly speaking, the crime is a socially harmful act indicated in the penal code in force at the time when the crime is committed and resulting in imprisonment, confinement or a fine on the part of the offender. Guilt is a basis of criminal liability (Sygit 2007). An act, which cannot be held liable is not a crime but rather an offense.

The main difference between the risk of fraud and the crime of fraud is the one of the lack of existence of the facts proving the occurrence of events. The crime refers to events *ex post* while the risk is a kind of an informant indicating the possibility of such an event.

Example

On 27 July 2010, the Municipal Police Headquarters in Legnica reported the detention of two local bank employees (BZ WBK) in relation with the statement submitted by the director of this bank informing about the missing over 8.7 million PLN (i.e. over 2.17 million euros) from the bank deposit and also a shortage of cash in the amount of 90,000 PLN (i.e. more than 22,500 euros). The cashier admitted to have stolen the money and this criminal action had been lasting since 2003. This kind of actions can result in imprisonment up to 10 years (Legnica KP, 2010).

Based on this information one can conclude the occurrence of crimes of theft (cashier pleaded guilty) and misappropriation (based on substitution of banknotes in the bank cash reserve for parings of paper). The bank on the other hand, was borne with the risk of internal fraud during the whole period of its activity and the level of this risk was dependent primarily on the implementation of internal procedures, transparency and quality of the organizational structure and functioning of the internal audit. If the bank's operational risk management was correctly implemented, such a crime would not have taken place or its degree would be much smaller.

The Polish criminal code in its content does not use the term fraud, internal or external fraud even though this category of crime has been defined as an act of manipulating another person to unfavourably manage a

[4] (eng.) There is no crime without a social harm.

property by confusing them, or using the misunderstanding or incapacity of understanding for the purpose of a financial gain (K.k., Art. 286 § 1). Fraud is the so-called direct crime, which means that for it to occur it is not necessary for the offender to achieve a money profit from the crime but the mere fraudulent actions to obtain those profits are enough. Criminal provisions do not relate specifically to banks as financial institutions that are of particular importance for the economy. Regulations which may be related to banking practice concern criminal offenses in the following areas:

– Protection of information; here the subject of the offense may relate to IT data (e.g. destruction, removal, damage, disruption in transmission).
– The credibility of documents based on evidence.
– Property; includes both property and property rights.
– Economic circulation, including the proper exercise of managerial functions.
– Trading; money as payment method.

Example

On 29 June 2010 the Prosecutor's Office in Jelenia Gora, District IV of the Economic Crime discontinued the proceedings against, amongst others, the Director of BPS SA branch in Zgorzelec as a result of the dropping of the obligation to implement internal supervision of employees, resulting in the fact that one of the workers, through the falsification of signatures of bank customers, took their cash amounting to nearly PLN 2,000,000 (EUR 500,000). This incident lasted from January 2003 to 23 June 2008. In addition, despite the fact that the bank’s director was aware of this irregularities from 24 June 2008, he kept the employee guilty of fraud working for the bank and as a consequence, the amount of money stolen in the period from 24 June to 23 December 2008, when the bank resolved the contract of employment, increased by a further PLN 202,000 (i.e. over EUR 50,000). The basis for discontinuation of the proceedings against the director was explained through the lack of visible signs of the offense. The grounds of the prosecutor's position were that the director was not aware of the existence of those irregularities in the control and supervision. Furthermore, the failure to notify superiors of the illegal action of one of the workers and their further employment was not incompatible with the internal regulations of the bank, IA 06/07/2010.

Fraud understood within banking regulations does not have the same meaning as the one understood within the criminal law. The main differences between those two meanings are presented in Table 2.

Table 2

Internal fraud presented by the CRD versus fraud understood in the terms of criminal law

Element	Capital Requirements Directive	Criminal code
Offender	Internal person.	Any person.
Action	Intentional.	Intentional or unintentional. Awareness of actions taken.
Result	Occurrence of a loss in a bank.	Unfavourable property regulations for the victim.
Subject	Money and other assets, bank's property rights or property rights entrusted to the bank.	Real estate and movable properties as well as any property rights.
Time of occurrence	Risk – always present. Action – when the crime is revealed.	Risk – does not apply. Action – when the crime is revealed if this meets the conditions included in the criminal code.
Kind of risk / action	Specific category of operational risk.	Common offence.
Penalty	No obligation.	Action prosecuted on indictment (ex officio). Criminal liability.

Source: author's own

Similarly to the first example, the bank throughout the period of its activity was exposed to the risk of internal fraud, whose actual scale was revealed only after establishing the shortages. From the point of view of criminal law, the director was not considered guilty of abandoning the internal control and therefore did not commit the crime because guilt is a prerequisite for its occurrence. Criminal law, labour law and banking regulations do not prohibit the employment of people suspected of internal fraud which in these circumstances meant that the offense was not done (lack of awareness) even though the degree of threat coming from this particular risk was higher.

Selected examples from the banking practices show that the following two key though independent elements have a significant impact on minimizing the risk of internal fraud:

- Quality of internal procedures in banks and their observance,
- Quality criminal law and the subsequent inevitability of penalty.

The first factor depends on the banks, which should take into account the course of investigations for different extreme situations as a part of their internal regulations (contingency plans). The second is contingent upon the quality and efficiency of legislation (legal risks) and it has a preventive and deterrent effect.

2. THE DANGER AND POTENTIAL IMPACT OF THE FRAUD RISK

Heffernan (2007) reports that 66% of the bank failures in the U.S. in 1959-61 happened as a result of fraud and abuse, while in the years 1960 to 1974 this percentage was even higher and reached 88%. Among many bank scandals there are several cases especially worth mentioning as they contain clear evidence of embezzlement: Bank of Credit and Commerce International (1991, USD 10 billion), Barings (1995, USD 1.3 billion), Sumitomo (1998, USD 2.6 billion) Allfirst AIB (2002, USD 750 million), Amarath Advisors (2006, USD 6.6 billion), Societé Générale (2008, USD 7.1 billion), (Wójcik 2008). Recently, one of the highest profile financial scandals were the frauds committed by Bernard L. Madoff, who is said to have embezzled USD 65 billion, as reported by the Guardian (2009). According to Irving H. Pickard, Trustee for the Liquidation of Bernard L. Madoff Investment Securities LLC, the amount of allowed claims reached USD 5,578,441,408.93, (Madoff 2010).

One of the most well-known cases of bankruptcy of a Polish bank was the collapse of the Staropolski Bank S.A. in Poznań with losses reaching around EUR 140 million. The reason for its bankruptcy was *inter alia* internal fraud associated with foreign capital investment and unreliable accounting (KNB 2006).

The lack or a small number of cases of fraud at Polish banks, however, does not mean that they are not at risk or that they are not victims of internal fraud. In fact, the sole way to learn about those incidents is through press releases, which often have their source in the communications by police, prosecutors or the Central Anticorruption Bureau. These reports are usually very general but they remind us about the fact that the problem of bank internal fraud exists and the ingenuity of fraudsters is impenetrable. In addition, fraudsters themselves may also be occupying the highest positions at banks.

Example

From 4 January 2010 the head of the local cooperative bank together with a member of the audit committee have been facing legal proceedings in the District Court in Myszków (Silesian province). These individuals have been accused of, *inter alia*, approving of the payment of inflated and fictitious invoices for office supplies that were to be delivered to the bank by people associated with the company. In relation to the head of the bank the indictment also included the presentation of false documentation, which served as the basis for calculating retirement benefits. The total amount of the bank's loss reached more than PLN 1 million (EUR 250,000), www.gazetamyszkowska.pl.

Near Myszków, at Niegowa, a president of the local cooperative bank was faced with a chance of having been buying unlawful life insurances at the expense of the bank since 2000 and of payments of salaries to members of the Supervisory Board for a meeting which actually never took place. The Bank had lost its reputation in an environment in which it was functioning, as evidenced by the closure of the account settlement by the local government. In 2009, the Financial Supervision Commission decided to take the bank over by the Kraków Cooperative Bank (Sprawozdanie KNF 2009).

Police statistics do not specifically distinguish internal fraud at banks but rather they inform about the overall scale of the phenomenon of crime. In light of the above examples from the last few months of 2010 a question needs to be asked: Where Poland is situated on the map of crime trends when compared to other countries and are there any observed changes?

Table 3 presents the number of crimes committed in Poland and some European countries. These figures relate to all phenomena and therefore include both political and economic crimes, including banks' losses. Statistics show that Poland looks favourably both in the total number of identified crimes and the crimes committed *per capita*. The figures show also a positive trend of change, which shows a decreasing number of crimes. However, the statistical data presented by the police should be approached with caution. Wójcik (2008) described them as “creative police statistics which are a propaganda of success”.

Table 3

Number of crimes in Poland and selected EU countries in thousands

Country		Total number of crimes							Change 2007/2001
		2001	2002	2003	2004	2005	2006	2007	
Poland		1,390	1,404	1,467	1,461	1,380	1,288	1,153	-237
BENELUX		2,391	2,475	2,424	2,367	2,285	2,256	2,245	-146
Czech Republic		359	372	358	352	344	336	357	-2
Germany		6,364	6,507	6,572	6,633	6,392	6,304	6,285	-79
France		4,062	4,114	3,975	3,825	3,776	3,726	3,589	-473
Italy		2,164	2,232	2,457	2,418	2,579	2,771	2,993	+829
Spain		2,052	2,183	2,144	2,141	2,231	2,267	2,310	+258
Country	**Population in thousands**	**Number of crimes per one inhabitant, in percentage**							**Average 2007/2001**
Poland	38,183	3.6%	3.7%	3.8%	3.8%	3.6%	3.4%	3.0%	3.6%
BENELUX	27,658	8.7%	9.0%	8.8%	8.6%	8.3%	8.2%	8.1%	8.5%
Czech Republic	10,507	3.4%	3.5%	3.4%	3.3%	3.3%	3.2%	3.4%	3.4%
Germany	81,835	7.8%	8.0%	8.0%	7.1%	7.8%	7.7%	7.7%	7.9%
France	64,667	6.3%	6.4%	6.1%	5.9%	5.8%	5.8%	5.6%	6.0%
Italy	60,055	3.6%	3.7%	4.1%	4.0%	4.3%	4.6%	5.0%	4.2%
Spain	46,662	4.4%	4.7%	4.6%	4.6%	4.8%	4.9%	5.0%	4.7%

Source: own, based on Tavares, Thomas (2009)

Contrary to the observed positive trend of falling number of crimes in Poland, according to the present author one should set a thesis about the growing danger of crime in Poland. It should be pointed out that in the case of most developed countries of the European Union, their crime rate per capita is much higher than in Poland and has remained at the level of 6.0-7.9% (France and Germany). The Polish economy is trying to approach the most developed EU countries, which in addition to the positive developments can cause the country to be more vulnerable to crime, especially to economic crime, including external and internal fraud in banks. This conclusion is supported by Figure 1, showing an increase in the number of economic crimes versus the total number of crimes committed and the growing number of credit fraud which is treated by police statistics as a separate category of crime.

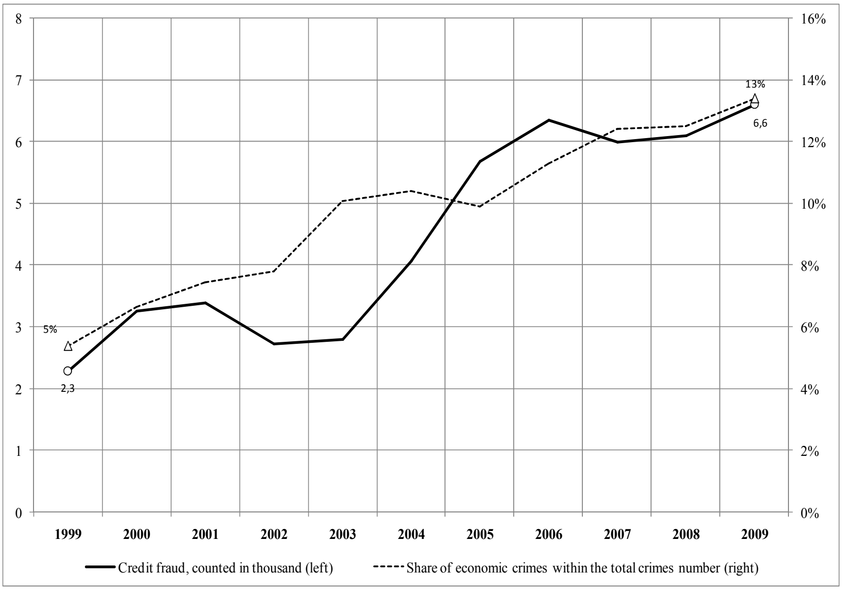

Figure 1. The share of economic crimes within the total crimes number and credit fraud in the period between 1999 and 2009

Source: author's own, based on reports from www.policja.pl, 30.07.2010

In 2009, the audit firm Price Waterhouse Coopers carried out a survey on economic crime in Poland and abroad investigating a total of 3,037 companies operating in 55 countries (PWC 2009). The PWC report shows that 30% of Polish enterprises in the period 2008 to 2009 were victims of at least one economic crime with the majority of respondents indicating that the biggest number of crimes was committed in the last 12 months, which confirms the positive correlation between the crisis and the scale of abuse. This ratio globally was higher than in Poland and reached 43%. Losses incurred by Polish companies, however, were individually higher than the average on a global scale. Half of the Polish companies surveyed indicated losses in excess of USD 500,000 while on average in the world, such losses were incurred by only 27% of all companies.

Table 4

Selected groups of economic crimes reported in 2009

Type of crime	Poland	Central and Western Europe	World
Accountancy fraud	5%	20%	15%
Capital raising	11%	22%	12%
Credit fraud	17%	22%	17%
Misappropriation of assets	53%	59%	68%
Corruption and bribery	42%	43%	28%

Source: PWC, 2009

In Poland, like in other parts of the world, the most common type of crime is asset misappropriation, corruption and bribery. Among the five categories of crimes listed above in as many as four cases Poland shows a lower global interest. Poland is presented negatively when it comes to corruption and bribery. The report also indicates a very low assessment of the effectiveness of regulatory authorities and law enforcement. Namely, as many as 75% of companies surveyed indicated the ineffectiveness of these bodies. This empowers and further supports the case for the need to improve and enforce legislation and standards of business management.

Considerations described in this section do not relate directly to internal fraud at banks but draw attention to the existing problem of economic crimes. Poland does not differ much in this respect from other countries but the lack of stability in financial markets prompts the need of improvement of regulatory and internal procedures in order to reduce the negative impact of the observed phenomena.

3. THE IMPORTANCE OF OPERATIONAL RISK MEASUREMENT METHODS

The main reason for the lack of information about the scale of internal fraud in Polish banks lies in the currently used methods of measurement of the capital requirement for operational risk used to determine the solvency ratio. Capital Requirements Directive allows for the calculation of this requirement in one of the following ways:

1) Basic Indicator Appoach (BIA)
2) The Standardised Approach (TSA)
3) Advanced Measurement Approaches (AMA).

The essence of the first two methods refers to the arithmetic mean of a non-negative financial profit of a bank during the last three years of its existence in the market and calculated according to the algorithm given by the supervisory body. The share of the capital requirement for operational risk in profit using the BIA method is 15%, whereas for the method of TSA ratio is between 12% to 18% depending on the type of one of the eight business lines. Even though in both cases the banks are obliged to monitor operational risk, including records of events associated with the risk of fraud, their very specific model for calculating capital requirement does not reflect the actual value of the operational loss that has occurred. BIA and TSA methods are used by most of all commercial banks[5] and cooperative banks (Wiszniowski 2009).

AMA method is directed to banks that meet the high standards of qualitative and quantitative risk management methods. Qualitative methods apply to operational risk measurement and its reporting. These processes are subject to separate evaluation conducted by the Polish Financial Supervision Authority (here referred to as KNF, i.e. Komisja Nadzoru Finansowego) and they require a permission in order to be applied. The quantitative standards include standards of operational processes, internal and external data, scenario analysis, factors of economic environment and internal control (Marcinkowska 2009). The result of applying AMA methods is primarily the actual scale of the threat of operational risk, including internal fraud. By the end of 2009, the KNF issued one positive opinion for the bank allowing it to use the AMA method (Sprawozdanie KNF 2009).

Banks should be aiming towards using advanced methods of measuring the operational risk because only then will they be able to determine the actual potential risks of their organization as well as the need and the price of risk transfer, e.g. by insurance.

In 2008, the Basel Committee on Banking Supervision carried out a study to determine the operating losses among 121 banks from around the world. 119 of those banks fully responded to the survey questions related to operating losses as reported in BIS (2009). Globally, 35% of banks used the AMA method, 42% the TSA method, 17% the BIA method while 7% of banks did not meet criteria for any of the above mentioned methods. Of the

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[5] For example: PKO BP S.A., Pekao S.A., BZWBK S.A., BPS S.A., Getin Bank S.A., Allianz Bank Polska S.A., BPH S.A.

total number of 60 European banks surveyed, 20 used the AMA method and the remaining 40 used the TSA / BIA methods (BIS 2009).

Table 5

Number of internal losses and total loss amount reported by 2008 LDCE[6] participants

Region (number of participants)	**All losses**		**Losses ≥ EUR 20,000**		**Average per institution**	
	Number	EUR million	Number	EUR million	Number	EUR million
Australia (11)	27,621	1,092	3,347	1,005	304	91
Europe (60)	1,674,456	20,799	76,079	19,768	1,268	329
Japan (18)	324,623	953	2,502	804	139	45
North America (21)	6,141,939	33,291	64,635	30,209	3,078	1,439
Brazil/India (9)	2,426,679	3,465	25,319	1,917	2,813	213
All (119)	10,595,318	59,600	171,882	53,703	1,444	451

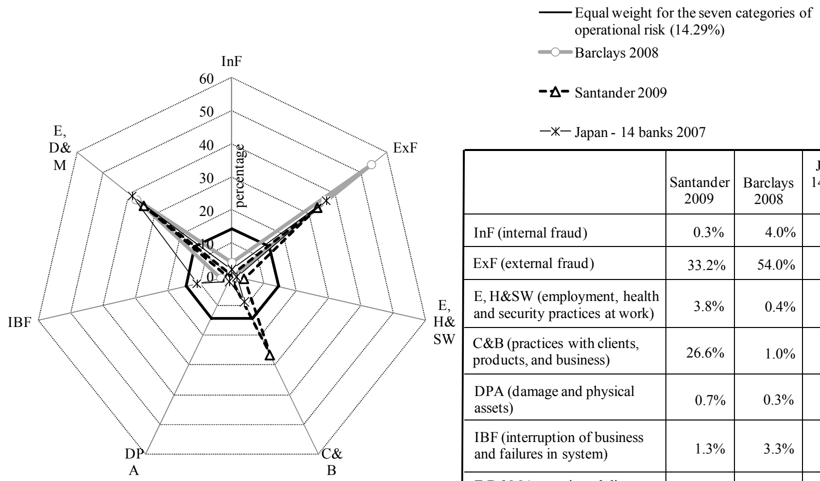
Source: BIS (2009)

The report presented in Table 5 does not specify the basic economic parameters of banks tested, both globally and for individual regions, which prevents making a connection between the underlying operational losses and the basic degrees of reporting which could be transposed to Polish conditions. However, the results indicate that American banks seem to be most vulnerable against operational losses, with an average annual loss of EUR 1,439 million. The average loss in European banks was around EUR 329 million while Japanese banks were least affected with a loss of EUR 45 million. The share of the losses, which arose as a result of internal fraud within the operational loss ranges from 4.2% to 6.1%. This means that in the case of European banks, each operational activity generated an average loss equal to EUR 12,421 including the internal fraud loss in the range from EUR 522 to 758.

The discussions of the previous section show that the scale of general crime and economic crime in Poland does not differ from the global or continental average. This empowers to say that the scale of internal fraud at Polish banks does not differ from the average demonstrated by banks from other geographical locations. The figures below present the internal structure of operational losses at Santander and Barclays as well as the results of the analysis of 14 Japanese banks conducted by the Bank of Japan[7].

[6] Loss Data Collection Exercise.

[7] In the case of Japanese banks, the ratio refers to the net amounts defined as the difference between the loss incurred (gross) and the amount recovered.



	Santander 2009	Barclays 2008	Japan - 14 banks 2007
InF (internal fraud)	0.3%	4.0%	1.9%
ExF (external fraud)	33.2%	54.0%	36.5%
E, H&SW (employment, health and security practices at work)	3.8%	0.4%	1.5%
C&B (practices with clients, products, and business)	26.6%	1.0%	8.8%
DPA (damage and physical assets)	0.7%	0.3%	1.9%
IBF (interruption of business and failures in system)	1.3%	3.3%	10.8%
E,D&M (execution, delivery and management of process)	34.1%	37.0%	38.6%
Total:	100.0%	100.0%	100.0%

Figure 2. Internal structure of operating losses
Source: Santander, Barclays, Bank of Japan

Supposing that the losses from operational risk are subject to equal distribution according to seven categories of risk, the share of each risk category of operational losses would amount to approximately 14.29%. In fact, the structure of operational losses is concentrated around three categories: external fraud, employment and processes management with the highest share of losses relating to external fraud. Internal fraud accounted for just 0.3% to 4.0% of all losses borne which is consistent with the results presented by the Basel Committee.

An important issue from the point of view of the operational risk management is not only the awareness of the degree of losses caused by the various categories of operational activities, but also the relation of the level or frequency of occurrence of these losses with areas of banks business activity (i.e. Business Lines). Analyses of this kind may be performed by those banks which make use of the TSA or the AMA methods, and the results established can be expressed in terms of operational risk maps. Research conducted by the Basel Committee on Banking Supervision in 2008 show that the area most affected by possible risk of internal fraud is Trading & Sales, which proved to have an increase of 23.1% in fraud occurrence. In addition, Trading & Sales, when compared to Asset Management, Agency Services, Commercial Banking and Corporate Finance, have approximately twice higher incidence rate of internal fraud, and the least exposed are Retail Brokerage and Payment & Settlement areas.

Table 6

Annual scenario frequencies. average distribution across event types

Business Line	Event Type								
	Internal Fraud	External Fraud	Employment Practices & Workplace Safety	Clients, Products & Business Practices	Damage to Physical Assets	Business Disruption & System Failures	Execution, Delivery & Process Management	Unallocated	Total Frequency
Corporate Finance	11.8%	5.7%	2.1%	26.6%	1.3%	3.0%	38.4%	11.1%	39
Trading & Sales	23.1%	1.5%	0.1%	17.1%	0.1%	15.8%	42.4%	0.0%	5,846
Retail Banking	10.2%	28.4%	1.9%	18.3%	6.8%	9.9%	24.6%	0.0%	1,032,739
Commercial Banking	12.7%	21.3%	7.8%	22.5%	5.7%	4.4%	25.5%	0.0%	9,726
Payment & Settlement	3.8%	28.9%	0.0%	11.1%	0.0%	21.1%	35.1%	0.0%	262,166
Agency Services	13.0%	0.0%	3.9%	19.9%	1.1%	9.5%	52.2%	0.4%	1,642
Asset Management	18.0%	1.6%	0.4%	22.8%	0.6%	1.1%	55.6%	0.0%	3,105
Retail Brokerage	9.2%	3.5%	13.0%	44.6%	0.5%	5.1%	21.2%	3.0%	1,852
Unallocated	8.4%	5.7%	15.3%	12.7%	19.1%	5.1%	29.1%	4.5%	23,584
Total Frequency	26,830	750,263	2,719	157,112	34,073	5,963	363,734	.	.

Source: BIS (2009)

Within the structure of individual business lines the risk of internal fraud can be approximated to range between 10 and 23.1%. This might lead to a conclusion that this category is a risk not significant enough for banks. However, the main characteristic of operational risk should not be forgotten, and in particularly the risk of fraud. This is namely: "low frequency – high impact", which should prompt the search for sources of its creation. For the purpose of this search, banks should construct dimensional risk maps, which describe not only the types of operational activity and business lines, but also their components and group of activities.

Table 7

Example of risk map for the category of internal fraud risk and business line of Trading & Sales

Event Type Internal Fraud (annual scenario frequencies, severity – (e.g. EUR million))		
Trading & Sales	Sales	Fixed income, equity, foreign exchanges, commodities, credit, funding, own position securities, lending and repos, brokerage, debt, prime brokerage
	Market Making	
	Proprietary Positions	
	Treasury	

Source: CRD 2006/48

The primary disadvantage of operational risk measurement is its time-consuming nature. However, this kind of studies allows to determine the actual impact of operational activity on the capital adequacy of banks. This is of particular importance in the case when supervisory conversion rates of individual business lines inhibit the credit activity because of the necessity of maintaining a minimum solvency ratio. Accuracy operational risk measurement may therefore constitute a tool to stimulate the level of capital adequacy or, for the established solvency ratio, it can enable an increase in credit risk, causing an increase in bank profitability.

Given that the level of the risk of internal fraud in operational losses is low one might wonder whether the risk of internal fraud is irrelevant to the banks.

The currently binding model for calculating the solvency ratio conditions its level depending on three groups of variables: equity, short-term capital[8] and capital requirements for specific types of risk. This dependence can be presented as follows:

[8] At the end of 2009 the share of short-term capital in total equity for calculating the capital adequacy ratio was 0.33%, KNF (2010).

$$SR = \frac{C + STC}{12.5 \cdot CRInF + RWA + 12.5 \cdot \sum_{i=1}^{n} OR_i} \geq 8\% \qquad (1)$$

where:
SR – solvency ratio,
C – bank's equity,
STC – short-term capital,
CRInF – capital requirement due to the risk of internal fraud,
RWA – risk-weighted assets,
OR_i – capital requirements for other risks[9], including market risk and operational risk, with the exception of *CRInF*.

If we assume that the value of all (n) capital requirements to cover bank risk would have been unimportant when compared to the risk of fraud, and so when $CRInF \to \infty$, then the value of $SR \to 0$. This means that even in situations where the results indicate a low status of certain types of risk these categories should not be underestimated because they may quickly grow in significance reaching a level which will make them become a decisive element as to further functioning of banks. Results from the exclusive study of the structure of the total capital requirement of banks can therefore be misleading.

Table 8

Total capital requirement for the Polish banking sector at the end of 2009

Specification	**EUR million[10]**	**Structure**
1. Credit risk	11,814.9	87.2%
2. Operational risk	1,489.3	11.0%
3. Equity and debt securities price risk, commodities and currency risk	69.1	0.5%
4. Interest rate risk	144.5	1.1%
5. Excess of large exposure limit	15.3	0.1%
6. Excess of capital concentration limit	0.1	0.0%
7. Other	9.1	0.1%
Total capital requirement	13,542.1	100.0%

Source: KNF (2010)

[9] According to the risk classes map published by the Polish Financial Supervision Authority in 2011, KNF (2011).
[10] Data according to exchange rate: EUR 1 = PLN 4.00.

The major type of risk at Polish banks at the end of 2009 was credit risk. Operational risk constituted 11.0% and the remaining risks only 1.8% of total capital requirement. Such a structure, knowing that the risk of internal fraud is one of the categories of operational risk, may suggest little importance of internal fraud. Such a conclusion may be further supported by the fact that the risk is incidental and all Polish banks' employees are checked for criminal records and banks' board members are also subject to verification by the KNF. People working at banks need to be by definition, trustworthy. If this is the case one might ask if further internal fraud risk testing is still necessary. An attempt to clarify this issue has been taken in Figure 3.

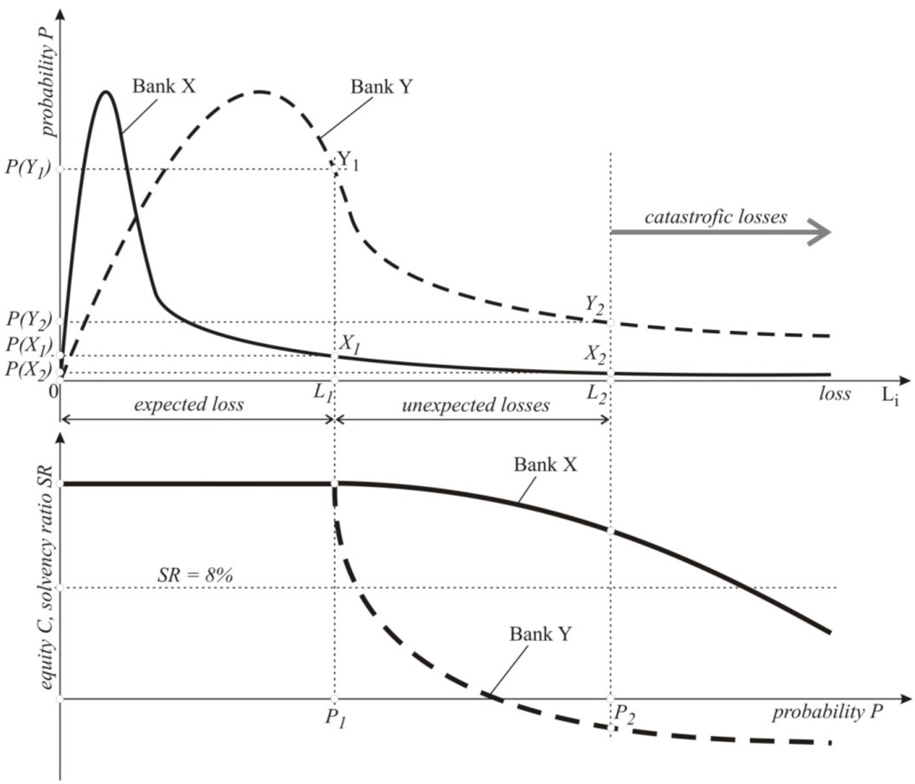


Figure 3. Influence of the quality of operational risk audit on the solvency of banks

Source: own, based on Jajuga (2007)

Suppose that we are dealing with two banks: bank X which successfully manages operational risks, including the risk of internal fraud, and bank Y which does not expect in internal fraud activities because it has full confidence in their employees. Hypothetical distributions of losses in banks are represented by curves at the top of the figure. These losses can be divided into three categories: expected losses, unexpected losses and catastrophic losses (Jajuga 2007). In addition, it is assumed that the banks hold the same equity and their expected losses are included in the range from 0 to L_1 and can be absorbed by current profits. Both banks have also set up their financial plans to include the unexpected loss in the range from L_1 to L_2 which should be absorbed by shareholders' equity to a level at which a solvency ratio of SR does not exceed the lower limit of 8%, while losses in excess of L_2 are defined as catastrophic, when the solvency ratio takes a value lower than 8%.

Assuming the same profitability of the two banks as far as the expected losses are concerned, the equity value will be the same but with different probability of occurrence of these losses. Bank X, which thoroughly examines the operational risks, including the risk of internal fraud, is able to react quickly to any threat eliminating the future occurrence of similar losses. Such action may, for example, constitute a change in the internal procedures or reduction in the level of competence of employees' individual decision-making. For this reason the curve of the bank X in the initial phase of its course is steep, because the likelihood of identifying adverse events causing any operational loss is high. This organizational system is secure. In the next phase the course of the curve is smooth and it is asymptotically approaching zero because the probability of high losses, particularly unexpected or catastrophic losses, is small. The result of proper management of operational risk by bank X is a slow decline in equity (the lower part of the figure).

The situation presented in the case of bank Y is quite different. As a result of the bank's improper or non-existent operational risk management with the same degree of losses as in the other bank, the probability of occurrence of a loss is high: the same loss of L_1 or L_2, but $P(X_1) \ll P(Y_1)$ and $P(X_2) < P(Y_2)$. Decrease in equity of bank Y is rapid causing a sharp decline in the solvency ratio.

Aiming at accurate measurement of operational risk, including the risk of internal fraud, is therefore in the banks' best interest as they are able to react quickly with little loss thereby reducing the risk of catastrophic loss.

4. DISCLOSURE AND ACCURACY OF INFORMATION

One of the main dilemmas of modern banking and accounting is the problem of accuracy and disclosure of financial data. On one hand, in conditions of harsh competition banks avoid publicity[11] but on the other hand, they are required to present their achievements. The collapse of Enron in 2001 and the course of events following the global financial crisis show that the quality of information is crucial not only for the owners but for all the lenders, especially depositors who are the dominant group financing banks.

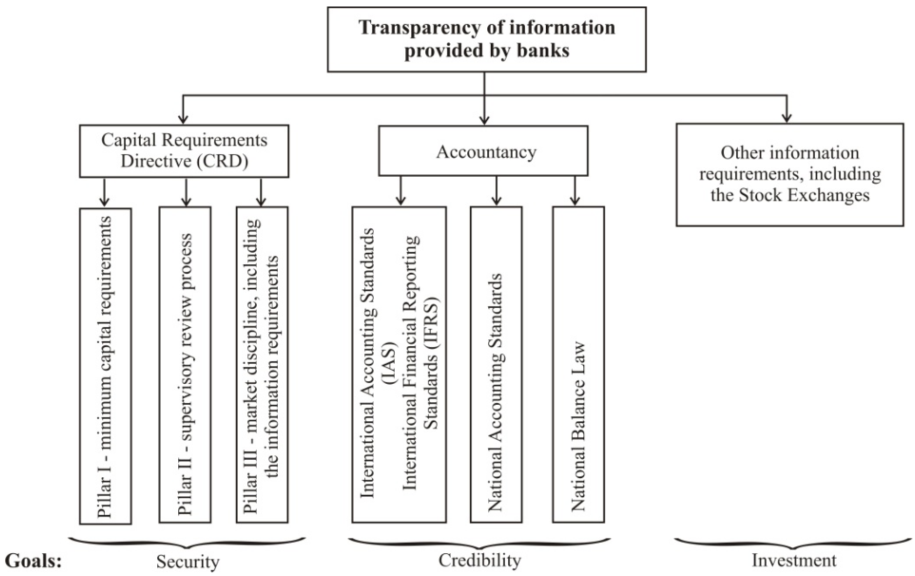


Figure 4. The main regulators determining the transparency of information provided by banks

Source: author's own

In the case of banks, information on their current, but also the expected financial position and security, is located in two main sources: financial reporting, which is a part of the accounting information system, and the

[11] Unless they succeed.

reports on the risk and capital adequacy, which result from the implementation of the CRD. Annual disclosure of the above data is the responsibility of all banks in Poland, while the place of publication of the financial statement are the so-called Polish Monitors. In addition, the method of disclosure and presentation of such risk reports were made by the CRD to be the responsibility of banks' management body (usually via web pages).

Banks operating as joint-stock companies listed on the Warsaw Stock Exchange (GPW) are also required to disclose data about their current financial situation (interim report) and to inform about events important for investors. This is the third source of information. However, it should be noted that the listed banks prepare their financial statements according to IAS / IFRS, while other banks have the right to choose between the national law of the balance sheet (supplemented with GAAP) and international standards. Over 625 banks were functioning at the end of 2009 of which 49 were joint-stock companies, including 15 listed on the GWP, and 576 co-operative banks (KNF 2010).

The main objective of the implementation of the Capital Requirements Directive was to strengthen the banking sector stability accompanied by the desire to focus on three areas, called pillars. From the point of view of the purpose of this study the third area is of main importance as it concerns market discipline, which is an element of the transparency of information[12]. Market discipline is concerned with a situation in which the stakeholders of the bank are aware of the risk of financial losses, which the bank may incur. Addressees of the third CRD pillar are not only owners but also stakeholder groups such as lenders, bondholders or depositors. According to Marcinkowska (2009) market discipline is often associated with the supervision exercised by the creditors and owners because their activities are intended to mitigate the risk. It should be noted, however, that the primary expectation of the owners is to maximize the profit, which is often achieved at the expense of an increased risk. However, the main expectation of the other stakeholders, including depositors, is the security of the institution, which involves the expectation of high return of invested or entrusted capital. In addition, owners, by the use of banks' internal organs, form the organization of the bank and its risk appetite while the only effective weapon of other stakeholders is located in the banks capital that they may withdraw.

[12] Clear, honest, sincere, responsible and timely disclosure of relevant information (Marcinkowska 2009).

Under the present conditions of uncertainty, equity investments are not based on a superficial confidence towards the presented results. Only fair, comprehensive and detailed disclosure of economic information can be a source of confidence.

As a result of implementing the CRD into the Polish law of operational risk, banks have been obliged to publish information on their methods of calculating capital requirement and in the case of banks using more sophisticated methods (AMA) the banks were in addition asked to provide the description of the methodology (KNF 385/2008). So far, however, the published reports of national banks and reports on capital adequacy constitute only the assurances of the implemented procedures for the management of operational risk and the presentation (sometimes only visualization) of positions influencing the value of the solvency ratio. None of the banks whose report has been reviewed by the author included quantitative information on operational activities[13]. It is certainly a result of the previously mentioned simplified methods for measuring operational risk and the so far applicable general informing obligations.

Note, however, that in light of current research reliability and stock exchange value of companies, including banks, increases with the degree of quality and detail of reporting (Świderska 2010). Therefore, banks should be interested in the transfer of fuller information about its activities. Moreover, the Basel Committee on Banking Supervision sees the disclosure and publication of bank's information as a further aid in supervising banks and their activity indicating it as one of the tools of sound risk management and dissemination of good practices (BCBS 1998).

The main regulator influencing the shape and contents of the banks' reports remains to be accountancy whose reporting requirements are focused on ensuring a faithful and accurate picture of the economic development. The financial statements refer to past events, which were verified by the auditors for accuracy of records and compliance with the applicable accounting rules. The purpose of auditing is therefore not to seek criminal irregularities, even though if such are noticed by the experts who are obliged to report this fact to the banking supervision, which may notify the appropriate law enforcement authorities.

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[13] Reports for 2008 and 2009 were analyzed. Those included 15 of the largest commercial banks and 10 cooperative banks.

The concept of operational risk in accountancy, including the IAS/IFRS is not the same as the one referred to in the CRD. This applies to office operations, and its analysis covers, for example, study of the structure and quality of assets in order to determine the concentration of operations, operational efficiency or the degree of modernity of the permanent assets possessed (MSR/MSSF 2008). Formally IAS / IFRS require the reporting obligation in the event of financial risk[14]. Operational risk in accounting, as defined by the CRD, has its place in risk management[15] and is associated with control and internal audit while the obligation of its disclosure is associated with the principle of relevance, as presented for instance in Karmańska (2008). Accounting standards are universal standards directed not only at banks but also at all enterprises. From the point of view of bank's security these standards should be considered as an important prevention tool used to reduce operational risk (management) including the risk of internal fraud.

Information communication requirements of banks whose shares are listed on the Warsaw Stock Exchange combine the requirements of accounting with strategic and operational information (e.g. investment, business development) from the perspective of potential investors. The pursuit of achieving transparency of public companies serves to maintain the security of the economic rotation and to provide an alternative place for investment in relation to the guaranteed financial instruments.

Discussions and considerations concerning the disclosure of operational risk faced by banks allow to conclude that the implementation of the third pillar of the CRD has fulfilled an important information gap in banks' business activity but the postulate of more detailed presentation of data in their reports is certainly justified here too. Both international and domestic accountancy rules do not prohibit the banks to disclose specific information about operational risk and its structure. Such information could be well included into a report on the capital adequacy or as an additional piece of information. Degree, type and complexity of banking operations are growing rapidly and this without doubt additionally increases the level of operational risk. It seems that in this situation the request for the harmonization of accounting regulations and the CRD with reference to the disclosure of risk reports is justified.

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[14] It concerns for example, determining whether operating activities of a certain unit do not cause unnecessary immobilization of assets through investment in fixed assets. For banks this is not the case since financial assets constitute on average 85-90% of all assets.

[15] IFRS 7 characterizes: credit risk, liquidity risk and market risk.

It may be assumed that once the banks gather a sufficient amount of historical data concerned with operational risk[16], advanced methods of its measurement will be implemented, leading to better transparency of reporting and increased confidence in banks.

5. COHESION IN BANKING RISK AS AN EXAMPLE OF THE EXPERTISE PRACTICE

Monitoring of operational risk may take place in real time or periodically, using time intervals of different lengths. An example of real-time monitoring is a control of IT systems that is measuring their resistance to external attacks, unauthorized activities, susceptibility to system breakdowns, disruption in the power supply, etc. Majority of the categories of operational risk are examined and reported periodically and this is performed separately from examining financial risk. A large number of banks have separate departments for financial risk management and operational risk. This situation results from two kinds of sources underlying the measurement. The source of measuring operational risk, including internal fraud, is based on real-time events while the source of the analysis of financial risk constitutes banks' legal accountancy books. Of course, the books should also be a mirror of the reality, and in fact of all banking operations. However, in contrast to operational events, the mirror can give a distorted picture because the incorrect records of economic events can cause a false image. In this case, the cause of the financial risk increase is the operational event, which is human error irrespective of whether the event was intentional or not. There is one banking risk. Hence, the separation of operational and financial risk should be treated conventionally because it is rare for a single type or a category of risk to occur spontaneously. As a rule, an increase of one type of a risk provokes an increase of a risk in another area of banking activity. For example, the initially erroneous credit decision which may subsequently develop into a need for provisioning associated with an increased credit risk, can turn into internal fraud based on the falsification of financial reports, which is a category of operational risk.

The example presented below proves this relationship and confirms that internal fraud is one of the most serious risk categories, taking the form of "creative" accounting in the negative sense of this term.

[16] The CRD mentions the period of 5 years.

Example

Suppose that the bank decided to award a certain subject "A" a loan No. 1 (line 1 in Figure 5). In the moment of credit granting decision the subject's financial and economic situation was characterized as difficult but not hopeless. The granting of credit No. 1 in an informal way was subject to repurchase by the borrower of the lost debt that the bank held against another subject faced with bankruptcy ("X"). The cause of subsequent events was therefore associated with an excessive individual credit risk incurred which was caused by X. However the intention of hiding the debt of the bank combined both credit risk and operational risk because already at the time of the decision to grant the loan, internal fraud was committed.

Although subject A in the credit application declared to use loan No. 1 for the purpose of developing a personal business, this credit was used in one part to pay for bank's debt towards X and in the other part to pay borrower's due debts which were mainly tax liabilities and social insurance. The idea of the development of a business activity was hence out of the question. In the short period of time it turned out that subject A completely lost its liquidity and was unable to regulate even the current interests on the loan. The bank initially prolonged the time limits for the repayment of instalments and interest rates on the credit (there were twelve annexes to the credit agreement) but the approaching end of the fiscal year forced it to take more "radical" steps and suggested the debtor A to apply for another loan which was once again granted (see credit No. 2, line 2). The amount of this loan was higher than the first loan by the amount necessary to cover the unpaid interest on the first loan and any subsequent tax arrears that the applicant incurred.

As already mentioned, the first loan was repaid in full by the second loan (line 3). This pattern was repeated for the next two years which meant that the debt of subject A in the bank tripled (lines 4, 5, 6, 7).

At the same time the bank had similar problems with one very large company (subject B), which was granted three guarantees for duty liabilities (line 8). These guarantees were in no way secured and after their execution by the customs office they became the bank's balance sheet receivables. As a result, the bank granted company B a loan in the amount of the total debt arising from the guarantees (line 9). As legal collateral for the repayment of debt the bank adopted a cession of claims which subject B owned to subject C (line 10). Shortly after signing the loan agreement, subject B asked the commercial court to settle an agreement which forced the bank to create complete purpose reserves for debt of subject B.

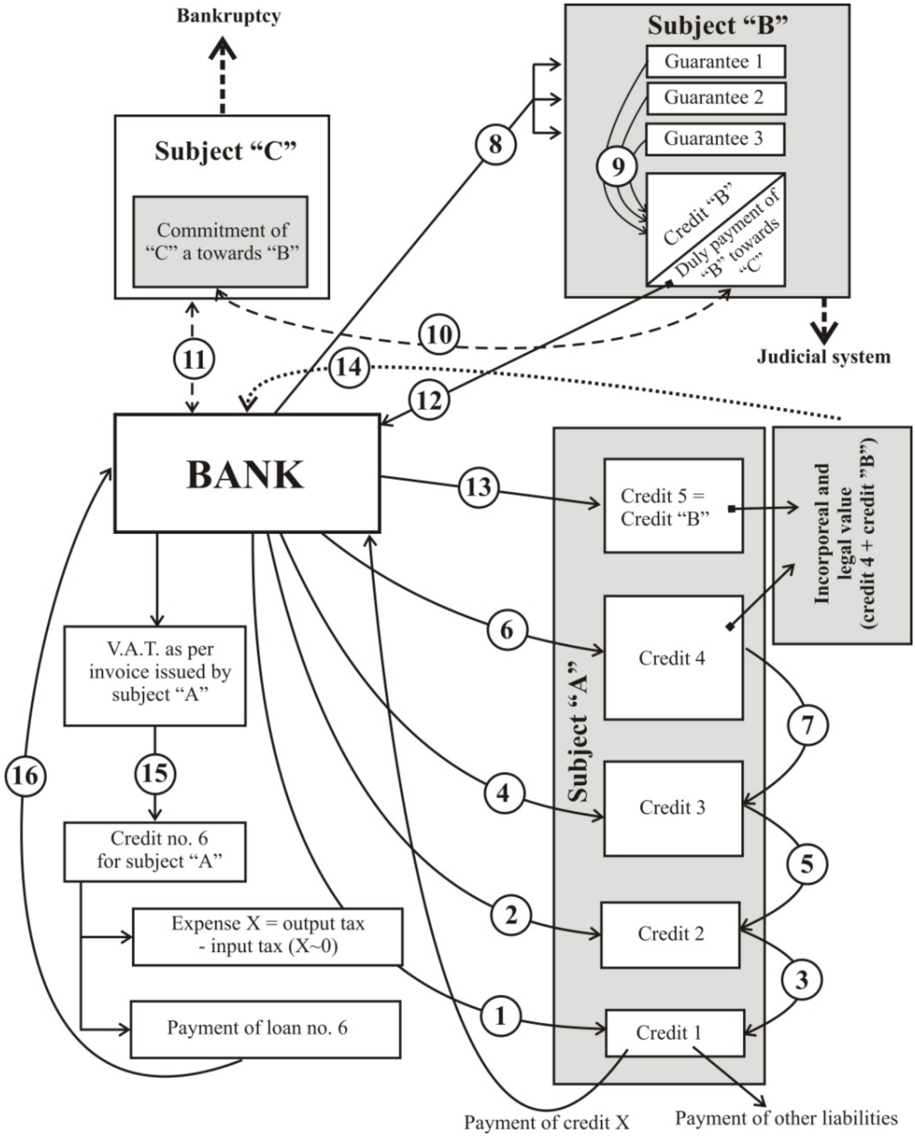

Figure 5. Example of internal fraud scheme

Source: author's own

To avoid revealing the losses in the monthly report of the bank supervision, the bank bought the loan of subject C from subject B in a way that allowed it to announce its credit as paid, making itself a direct creditor of subject C. The nominal value of purchased receivables were indeed by half higher than the purchase price but their fair value and repayment were conditional on economic and financial situation of subject C. This situation, however, was disastrous because shortly after taking over the charge of B towards C, the latter subject declared bankruptcy. It would seem that in this case there was no more way out as both subject A and C revealed their insolvency. However, subject A was not yet declared bankrupt and hence decisions in its case could have continued to be taken by the bank's board and not the bankruptcy court.

In view of the fact that the subject A no longer processed any assets that may have served as a safeguard to the bank and it basically ceased its business, the bank's board noticed that subject A was a broker of hire-purchase and owned a full base of information about its clients. Nowadays, information constitutes a particular value and therefore, it was necessary to estimate the value of this database. The amount of the estimate was determined to be the sum of the debt of A and C to the bank (co-operation of the expert).

The bank acquired the database to compensate for the existing debt by that value of intangible assets. Previously, information base was not in the records of company A but it has been created for the purpose of debt repayment. The remaining problem was to pay the value added tax (VAT) which appeared in the fictitious transactions. To solve this problem, the bank granted another loan to company “A” in the amount of tax obligation arising from the invoice and this compensated the input tax with the output tax while stopping almost entirely all funds derived from the loan. These measures were used to repay the loan No. 6 and the acquired information base was placed on the records of the bank’s assets as an ongoing investment which was for the time being (period of one year) neutral to the financial outcome, and then this component has been adopted for use on general principles. Of course, the information base was completely useless for the bank's business.

The purpose of the actions of managers and directors of the bank was to disguise the losses incurred in connection with the erroneous credit policy. Originally, these errors were related to credit risk but due to the actions described above the bank experienced internal fraud-related activities for the benefit of its own (Table 1) which were achieved by forging documents. In this case, the concept of acting in one's own favour should be understood as a strong urge of the management body to maintain their prestigious jobs and high salaries. This was achieved through the adoption of credit documents containing false information on the economic and financial situation of debtor A, who actively participated in its writing. As a result of these actions the economic and financial situation of the bank has been falsified and the banking supervision was presented with false information.

Considering the incident shown in the example one should point to the problem of limited confidence in the presentation of value of the solvency ratio and of the factors influencing it. Legislation about the creation of purpose reserves relate to credit risk. The impact of this risk when calculating the solvency ratio will be visible in the bank's equity in the event of a loss. The total capital requirement will be disclosed through a decrease in risk-weighted assets. The capital requirement for operational risk remains unchanged, though its component, i.e. the risk of internal fraud, had occurred without doubt. Therefore, if one assumed that the bank would perform an operational risk analysis using advanced methods, the report on capital adequacy would not take into account the effects of the risk of fraud. This condition will not influence the degree of the solvency ratio but the actual categories of events in the report on capital adequacy will not be included. It should be argued that such recognition of risk is the reason for the statistically low impact of internal fraud risk on the capital adequacy ratio.

Internal fraud, particularly within banking regulations and accounting standards, is very difficult to determine and even more difficult to prove (the definition of a crime). For if we look at Figure 5, without knowing all the circumstances of the actions undertaken by the bank, it can be concluded that the subject A was a reliable customer of the bank because it repaid its obligations. Theoretically, the bank has repeatedly earned on each transactions because both the guarantees given to the subject B as well as all loans, including the appendices to these credits and the takeover of a debt of B towards C were accompanied by numerous fees and commissions while their interest rate was high. This may lead to a conclusion that the bank's executives acted in its interest and gave it considerable income. This revenue was not, however, turned into money which consequently led to a loss of liquidity by the financial institution and its takeover by another bank, with the takeover being accompanied by financial assistance amounting to several hundred million PLN.

CONCLUSIONS

Instability in global financial markets does not favour a reduction of economic crime in Poland, which on the world or European map of crime, does not differ from the average rate for other countries. Membership of the European Union and the country's desire to reach a higher economic level has many positive effects but it can also cause an increase in the risk of economic crime, including internal fraud in banks, which is one of the categories of operational risk. This situation should serve as a warning signal to banks, which as a result of CRD implementation into national law, are now required to, amongst other obligations, manage operational risk.

In the period from 2008 to 2009 operational risk measurement was performed using a simplified method where banks had no obligation of publishing detailed results of the operational risk management process. Reports from the capital adequacy of banks do not contain information on the amount or structure of the losses incurred in connection with operational risk. The capital requirement for this risk is a historical function of financial results calculated using the supervisory algorithm. This condition provokes the situation in which the current value of the solvency ratio is influenced by the performance of banks from previous years when higher historical values of this coefficient were formed at a lower level. Empirically determined average values of indices to calculate the capital requirement for operational risk methods of the BIA and TSA may also be questionable because the exposure of individual banks to the risk is different. Banks should strive to estimate the operational risk using advanced methods, which necessitate not only separation of results into business lines but also into operational events, including consideration of the risk of internal fraud. The measurable effect of these actions will be a reduction of the capital requirement for operational risk and the increase of the value of the solvency ratio that in turn could translate into credit growth and increasing profitability of banks. From the perspective of transparency and detail of information, the use of more sophisticated methods will contribute to a better assessment of banks as potential targets to invest capital and to perform secure commercial transactions.

Both the surveillance testing as well as reports from the capital adequacy of banks do not provide a basis for the claim that internal risk of fraud is a dominating risk of the operational risk. However, this state might only seem as apparent as studies and reports are based on the principles adopted by banks which aim to record operating events into separate categories. The risk of internal fraud tends to be detected very late in comparison to other crimes and its effects do not necessarily need to be placed within operational risk. For example, in the case of misappropriation of funds by a dishonest employee losses incurred are due to an incident of internal fraud. In the case when the losses are a result of falsified loan documents, such an event is included in the capital requirement for credit risk. This causes a distortion in the relation and reduction in the importance rank of other kinds of risks, including operational risk and internal fraud.

In pursuit of economic truth one must allow for the possibility of considering the concept of credit risk in terms of at least two categories from the point of view of causes of this risk: "pure" credit risk and credit risk caused by internal fraud. An example that distinguishes the "specific" credit risk from the "general" credit risk is the risk of the excess of large exposure limit. The proposed classification can become more complicated due to the subjectivity of assessment of the existence of fraud from the point of view of a bank. On one hand, internal fraud must be attributed to a particular individual and this act of attribution needs to be done by the court of justice but on the other hand, for the purposes of risk assessment, and with the use of definitions from banks' internal regulations, indication of the guilty individuals should not pose too much difficulty.

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Received: August 2010, revised: May 2011