Should Deposit Insurance Agencies Have Extended Mandates over Commercial Bank Supervision? The Case of Former Soviet States

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Abstract

The paper compares some of the financial indicators of banking institutions from former Soviet States, those representing banking system where deposit insurers have both limited and extended authority to supervise member banks' performances. Financial indicators are selected to check the risk-taking behaviour of commercial banks. The comparison enables to speak of the efficiency of DIS model with extended mandates of deposit insurers in preserving the stability of banking system. Banking system stability in this case is considered to be preserved by the right and the ability of deposit insurance agencies to force member banks to choose risk-free strategies.

Keywords: Deposit Insurance Agencies, Deposit Insurance System, Former Soviet States, Mandates of Deposit Insurers
JEL: G21, G22

Introduction

Deposit Insurance System (DIS) in different countries is organized so that deposit insurers have different supervisory powers over performance of banking institutions. Some of the agencies have limited authorities, while others have extended mandates to control the level of risk member commercial banks face via the strategy they follow. Deposit Insurance Systems possessing different mandates of banking supervision provide deposit insurers with diverse degrees of power for imposing specific requirements, restrictions and limitations over banking institutions. Deposit insurance agencies through the restrictions above try to minimize the level of the risk commercial banks are allowed to face. The same function of banking supervision is fulfilled by central banks with all due care if the extended mandates are not given to the deposit insurers.

The paper aims at finding out whether deposit insurance agencies with different mandates and supervisory authorities over banking institutions result into different risk-taking behaviours by banking institutions or not. Another target of the paper is to find out whether central banks can realise the same goal of minimizing the level of banking risks with the same degree of success. Based on the literature review in the paper on mandates and powers of deposit insurers the following research questions were shaped:

1. Can deposit insurers with extended mandates guarantee risk minimization by commercial banks better than deposit insurers with limited power?

2. In case deposit insurers operate with limited power, can central banks guarantee safer banking strategies with the same degree of success?

The paper uses financial indicators, like Capital Adequacy Ratio, Bank Loans (as % of Bank Assets), Bank Loans (as % of Bank Deposits), Bank Tier 1 Ratio, Loan Loss Provisions (as % of Bank Loans), Non-Performing Loans (as % of Bank Equity), Total Provisions (as % of Non-Performing Loans) to check their performances and the level of risks they face under deposit insurance systems with different supervisory mandates.

The logical link between the level of the risk which banking institutions undertake and the model deposit insurers follow could be observed if financial indicators measuring the risk level are low for banking institutions supervised by deposit insurers with extended mandates and the opposite, if financial indicators are high for those banking institutions supervised by deposit insurers with limited authorities. The full supervisory power is possessed by other relevant regulatory authorities, central banks, if not by deposit insurers. If banking institutions under the deposit insurance systems with different supervisory authorities follow strategies with relatively the same level of risk

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then we can arrive to the conclusion that both deposit insurance agencies and central banks fulfil the supervisory function with the same degree of success.

In order to reinforce the conclusion about which of the regulatory authorities, central banks or deposit insurance agencies are more efficient in supervising commercial bank risk-taking behaviours, some factors independent from the despot insurance designs are also discussed in the paper.

Literature Review on Mandates and Powers of Deposit Insurers

International Association of Deposit Insurers (2011) describes the diversity of deposit insurance arrangements as follows: deposit insurance schemes worldwide can be roughly categorised into three separate models depending on the scope of their mandates. There is a risk-minimising deposit insurance system that provides deposit insurers with a broad array of powers including both supervisory oversight and resolution capacity. They possess an ability to manage its own risks. Another model is a paybox model with extended powers, deposit insurers obtain additional mandates usually including participation in the problem bank resolution process (International Association of Deposit Insurers, Eurasia Regional Committee, 2012). The paybox model, which provides the deposit insurer with more limited set of powers that facilitate the payment of claims to depositors and bank premium collection is a third model of deposit insurance (Bank for International Settlement, International Association of Deposit Insurers, 2011).

More specific description of functions of deposit insurers under three main arrangements of the system states that Paybox Deposit Insurance System which pays off depositors of failed banking institutions, has authority to decide the way the system funds itself by determining the terms and conditions of premiums and levies. It carries the responsibility of liquidation and receivership, keeps direct or indirect access to information of member banks. Most deposit insurers under paybox systems obtain member banks information though supervisory authority rather than from member institution. Deposit insurers under the system have no ability of providing financial assistance for failure resolution and intervention. Under Paybox Deposit Insurance System with Extended Powers deposit insurers play direct role in risk assessment and monitoring, however, possess no intervention power or authority to provide financial assistance to troubled banks. Authority over deciding viability or resolution method of troubled banks belongs to supervisors or central banks. Deposit insurers under Risk Minimizing Deposit Insurance System retain extensive intervention and supervisory power. Agencies hold authority of determining their sources of funds, borrowing limits and the level of premiums. They even possess the power of terminating the licence or the insured status of any member institution. Deposit insurers under this system carry the responsibility of resolution of bank failures and decide resolution method of troubled banking institution (International Association of Deposit Insurers, 2006).

According to the Principle 4 of Core Principles for Effective Deposit Insurance Systems that refers to the power of deposit insurers, the institution should have all necessary power to fulfil its mandate and these powers should be formally specified. In accordance with the same principle all deposit insurers require the power to finance reimbursements, enter into contracts, set internal operating budget and procedures and access timely and accurate information to ensure that they can promptly meet their obligations to depositors (Basel Committee on Banking Supervision, International Association of Deposit Insurers, 2009).

Kahn and Santos (2005) states that different mandates of regulatory agencies are likely to be in conflict. For example, the assignment of the authority to close banks to an agency other than deposit insurers may lead to excessive forbearance because that agency does not bear the full costs of delaying closure. These costs will fall on the deposit insurance fund. According to him it is always useful to couple the deposit insurance function with bank supervisory power.

Extensive supervisory power of deposit insurers, as described above, considers their right of imposing requirements, restrictions or limitations over banking institution to minimize their risk-taking behaviours. There are different requirements by deposit insurers that may force commercial banks to follow less risky strategies. However, according to Bank for International Settlements and IADI (2011) deposit insurers should support strong capital buffers and low leverage as key protections for depositors.

Other than regulatory restrictions there are some external factors that determine risk-taking behavior of commercial banks. Due to these factors banking institutions follow safer or risk-free strategies on their own free will. These are different motivating aspects inspiring commercial banks to face lower risks. Many researchers define factors affecting risk-taking behavior of commercial banks. According to Rahman, Uddin, Moudud-Ul-Huq (2015) bank size is considered as an important determinant of bank risk-taking behaviour, in addition, credit risk choices of banks may be affected by the growth in GDP for changing the structure or the volume of loan demand. Chen, Hwang and Liu (2012) discuss bank charter value as an important determinant of risk-taking in banking. According to them since bank owners have much to lose if the bank becomes insolvent, a bank with high charter value may have an incentive to avoid risky business strategies.

Research Methods and Sample Selection

The paper employs secondary data analysis. Data for observation are collected from post-soviet states. Countries under the study are: Azerbaijan, Armenia, Russia, Ukraine, Belarus, Kazakhstan, Uzbekistan, Moldova, Tajikistan and Kyrgyzstan. Countries were selected to enable observation over financial indicators and conscuently, over the level of the risk comercial banks are facing under deposit insurance system with both limited authority and extended supervisory power.

Eight countries under the study out of ten operate with paybox deposit insurance system and deposit insurance system in two of the countries under the study, Kazakhstan and Russia, provide deposit insurers with extended mandates.

Descriptive data or financial indicators presented in the paper enable to evaluate the level of risk commercial banks are facing in countries under the study. In other words, they describe the level of risk banking institutions are required to keep by regulators, either by central banks or deposit insurance agencies. Financial indicators are selected to analyse

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and check whether commercial banks under the supervision of deposit insurers with extended power are managing their risks more effectively rather than those under the paybox deposit insurance system. For this purpose financial indicators of commercial banks under both paybox system and deposit insurance system with extended power are collected.

Financial indicators used for observations measure the level of substantial banking risks, like credit risk, liquidity risk, and the risk of insolvency or the degree of sufficiency of bank capital to cope with probable losses faced by commercial banks due to following risky strategies.

Data Analysis

Financial indicator analysed primarily in the paper in order to check the level of banking risks in countries under the study is capital adequacy ratio. The ratio is a key measure of sufficiency of bank capital and the risk level commercial banks undertake. As mentioned above strong capital buffer is highly recommended and supported by relevant authorities. The ratio measures insolvency risk of banking institutions or their capability to face the loss and stay solvent. This is the financial indicator measuring the capital as percentage of risk-weighted assets. Therefore, it shows the amount of capital relative to the amount of assets imposing high risk to banking institutions. In other words, risk-weighted assets measure the amount of those assets that are at high market or credit risks with the probability of loss and capital adequacy ratio measures what percentage of risk-weighted assets can be covered by bank capital and stay solvent. Higher is the ratio, less is the risk faced by commercial banks and the opposite. The data provided by Table 1 below do not show any logical link between risk-taking of banking institutions and the extended or limited authorities of deposit insurers. In other words, financial indicators from commercial banks of Russia and Kazakhstan, where despot insurance agencies are possessing extended mandates do not demonstrate that banks are more effectively regulated there so that they are forced to fol-low safer strategies of keeping stronger capital buffer.

The same sufficiency of capital is assessed by tier 1 ratio. This financial indicator is believed to be a better measure of capital adequacy as only so called high quality, 1st class or tier I capital takes part in calculations. Accordingly, it measures the tier I capital as percentage of risk-weighted assets. The same disconnection between risk-taking behaviors of commercial banks and strong mandates of deposit insurers supervising these banks is observed through tier 1 ratio provided by Table 2 below. Banking institutions in Kazakhstan and Russia supervised by deposit insurance agencies with extended powers do not produce better capital adequacy measures.

Bank loans are assumed to carry high risk in contrast with other bank assets. Therefore, the share of loans in assets in percentage measures the level of credit risk banking institutions undertake. Higher is the ratio of bank loans to bank assets; higher is the risk of default faced by commercial banks. No financial indicator provided through Table 3 proves any connection between the degree of power owned by deposit insurers and the level of risk commercial banks are choosing to follow. Banking institutions in Kazakhstan and Russia do not again produce the lower results of the ratio or the lower level of risk.

The ratio of bank loans to bank deposits is a liquidity measure. In other words, it demonstrates what percentage of bank loans are financed by bank deposits. The higher the result of this fraction the higher the probability is that commercial banks may face funding liquidity risk, or the risk that depositors withdrawal requirements may not be funded by banking institutions on time. The financial indicators in Table 4 do not provide an evidence of better regulatory abilities of deposit insurers in Russia or Kazakhstan compared to the supervisory abilities of deposit insurance agencies or central banks of other countries under the study. Commercial banks in Kazakhstan and Russia do not produce better liquidity measures.

Effective credit policy of a commercial bank, their level of the risk of default or the probable loss can be assessed by the value of loan loss provision. However, the value alone cannot give sufficient information about quality of bank loan portfolio. Risk coefficients required by central banks for reserving different category of loans is levied to all category loans, among them 2 % (0.2 risk coefficient) is posed to loans classified as standard, or non-past-due loans imposing no risk of default to banking institutions at all. Due to this reason increased value of loan loss provision does not always mean that the quality of loan portfolio of a commercial bank has deteriorated. It can simply be a result of expanded loan portfolio. For better assessment of the effectiveness of credit policy or for better assessment of the probable loss of a commercial bank, loan loss provision has to be measured relative to the total value of bank loans. The higher the ratio of loan loss provision to bank loans the higher the probability of loss is. The results of the ratio from commercial banks of Kazakhstan and Russia do not again prove possession of better quality loan portfolios, or lower probability of loss (Table 5). Therefore, data presenting the results of the fractions above do not show any connection between the level of risk undertaken by commercial banks and the degree of authority used by deposit insurers for their supervision.

Having provisions does mean that commercial banks are ready to cover the loss that is expected to be faced as sufficient amount of loan is reserved. Consequently, on the one hand high results of the fraction may be considered as lower insolvency risk; on the other hand, it is still bad signal indicating weak or deficient credit policy resulting into bad quality loan portfolios that finally will cause reduction of a bank capital. Moreover, if it carries a regular character bank will be facing a serious insolvency or capital risk.

Fraction no less substantial to measure the capital risk is non-performing loans to bank equity. The ratio enables to measure what part of commercial bank capital is imposed to high probability of loss due to non-performing loans. The non-performing loans refer to the sum of the value of loans, those classified as substandard, doubtful or bad loans and therefore, representing high risk of default for commercial banks. The higher the ratio the bigger the risk of probable loss is. Data showing this particular risk level in commercial banks of countries under the study do not again detect any connection between the level of risk commercial banks face and the degree of authority despot insurance agencies possess (Table 6). The data collected from Russia and Kazakhstan do not show lower results compared to other countries under the study.

The ratio of total provision to non-performing loans enables to speak of what part of non-performing loans is provisioned. The more of the non-performing loans are provisioned

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Table1. *Bank Capital Adequacy Ratio (%)*

Countries	Unit	2008	2009	2010	2011	2012
Armenia	%	27.5	28.4309	22.2391	18.2804	16.7599
Azerbaijan	%		17.74	16.9	14.67	16.83
Belarus	%	21.8	19.8	20.4509	24.7011	20.8052
Kazakhstan	%	14.8619	9.51927	17.3116	17.5511	17.4732
Kyrgyzstan	%	32.6	33.5	31	30.3	28.3
Moldova	%	32.2	32.1	30.1382	30.4167	24.3003
Russia	%	16.8	20.8651	18.0867	14.6595	13.6936
Tajikistan	%	29.2106	29.8606	26.5914	24.4176	25.8959
Ukraine	%	14	18.0822	20.8329	18.8956	18.0557
Uzbekistan	%	23.2	23.4	23.43	24.2252	24.2625

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

Table2. *Bank Tier 1 Ratio*

Countries	Unit	2008	2009	2010	2011
Armenia	%	26.9077	26.6937	20.2316	16.6593
Azerbaijan	%				13.1
Belarus	%	16.94	14.41	14.87	
Kazakhstan	%	11.6366	9.30789	13.7059	13.1553
Kyrgyzstan	%	26.3484	28.5113	26.0407	24.6287
Moldova	%	32.0586	31.6353	29.5073	30.2316
Russia	%	11.6278	14.6896	13.1901	11.1099
Ukraine	%	11.1507	14.2315	15.1059	13.9948

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

Table3. *Bank Loans (as % of Bank Assets)*

Countries	Unit	2008	2009	2010	2011	2012
Armenia	%	61.9357	56.5289	60.8238	61.3914	64.9907
Azerbaijan	%	68.3019	70.556	67.5008	68.0178	75.0073
Belarus	%	74.3286	79.715	72.8217	60.6803	62.8652
Kazakhstan	%	66.2107	71.8774	75.2479	81.5263	83.9048
Kyrgyzstan	%	46.6224	34.1966	43.3469	46.2219	45.8633
Moldova	%	59.2096	54.7836	57.5668	62.4918	59.9989
Russia	%	56.9455	54.7588	53.6841	55.8914	55.9659
Tajikistan	%			54.5636	52.9997	51.4843
Ukraine	%	78.3527	80.0236	75.4869	73.684	70.3616
Uzbekistan	%	42.203	43.719	39.4368	40.8325	

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

the safer is the strategy commercial bank follows. The value of total provisions is determined by the requirements from regulators plus the amount commercial bank management decides to have on its own. Requirements are imposed to minimize the risk of insolvency. The same risk minimizing function is fulfilled by the bank management through provisioning. Thus, the ratio of non-performing loans to total provisions can be used to check both, firmness of the regulators' requirements and the degree of safety of the strategy bank follows. The higher the ratio the lower the risk of insolvency is. Data provided by Table 7 do not always show safer risk positions of commercial banks in those countries (Kazakhstan and Russia) having deposit insurance agencies with extended mandates. Therefore, absence of any connection between the level of risk commercial banks face and the degree of supervisory power deposit insurers pos-sess can be once again revealed.

The literature review discussed GDP growth as one of the factors determining different risk level of commercial banks due to the changes in the structure or the volume of loan demand.

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Table4. *Bank Loans (as % of Bank Deposits)*

Countries	Unit	2008	2009	2010	2011	2012
Armenia	%	127.859	116.7	124.64	124.013	132.466
Azerbaijan	%	147.416	176.848	164.643	140.004	156.632
Belarus	%	183.19	208.155	224.605	165.986	146.76
Kazakhstan	%	186.699	150.843	145.023	144.633	149.641
Kyrgyzstan	%	86.5813	63.6103	77.3669	80.6313	79.0993
Moldova	%	100.79	95.8889	94.4931	91.3625	87.9586
Russia	%	134.56	117.9	106.733	110.542	116.078
Tajikistan	%	255.677	211.203	117.573	112.093	112.615
Ukraine	%	214.331	226.4	180.58	166.68	145.375
Uzbekistan	%	110.444	98.3349	87.1787	90.1986	89.3498

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

Table5. *Loan Loss Provisions (as % of Bank Loans)*

Countries	Unit	2008	2009	2010	2011	2012
Armenia	%	1.02611	3.04031	1.16597		
Azerbaijan	%	3.6671	1.74271	2.13953	4.79106	1.44566
Belarus	%					
Kazakhstan	%	7.57163	38.0431	0.798918	2.33907	
Kyrgyzstan	%	1.86789	1.47405	2.63944	0.34906	0.041397
Moldova	%	2.07387	4.89574	4.29653	3.55109	1.83196
Russia	%	2.90431	6.47353	1.3621	0.524965	
Ukraine	%	3.78283	8.45978	5.31092	4.14331	2.77258

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

Table6. *Non-Performing Loans (as % of Bank Equity)*

Countries	Unit	2008	2009	2010	2011	2012
Armenia	%	11.828	13.0483	8.97773	12.2767	
Azerbaijan	%	10.7126	17.2551	25.9818	33.6002	
Belarus	%	2.37824	4.29754	19.2612	19.1994	
Kazakhstan	%	38.4218	383.781	161.227	187.161	
Kyrgyzstan	%	12.1667	14.3614	35.2441	23.0795	17.9111
Moldova	%	20.7942	52.9324	46.825	39.2635	
Russia	%	26.5654	54.4322	46.3863	38.7536	20.9009
Ukraine	%	25.7736	91.6253	87.4163	81.2291	

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

If the low risk-taking behaviour of commercial banks in eight countries under the study, (Ukraine, Azerbaijan, Armenia, Tajikistan, Uzbekistan, Belarus, Moldova, and Kyrgyzstan) where deposit insurers do not possess extended supervisory power is not a result of central bank effort but the result of GDP variation then the observations should show lower GDP growth in these countries. Figure 1 below provides the data about GDP growth in percentages in those eight countries under the study, where deposit insurance agencies operate with limited mandates. The data about GDP growth rate correspond to the same time period (2008 – 2012) used for other observations about financial indicators in the study.

No logical order of data was observed to speak of one way effect of GDP growth over risk level of commercial banks in Kazakhstan and Russia and the risk level of banking institutions in the rest eight countries under the study. Therefore, the GDP growth can also be ignored as a factor determining risk levels of commercial banks under the given conditions.

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Table7. *Total Provisions (as % of Non-Performing Loans)*

Countries	Unit	2008	2009	2010	2011	2012
Armenia	%	15.096	46.7	22.5795	25.3279	25.248
Azerbaijan	%		83	104	140	131
Belarus	%	70	44.9	35.25	37.1561	33.8106
Kazakhstan	%	136.615	103.298	94.9604	91.6849	56.9575
Kyrgyzstan	%	51.972	85.3814	85.8777	82.2063	97.032
Moldova	%	94.2	42.64	41.9756	38.2572	55.1595
Russia	%	118.4	70.9496	75.6721	74.0916	72.1721
Tajikistan	%	57.1256	65.8897	82.919	87.5583	83.2125
Ukraine	%	64.4456	65.113	66.6323	68.2936	64.8774
Uzbekistan	%	15	17	59.2699	58.9567	58.4677

Source: table is constructed based on the data provided through http://www.helgilibrary.com/indicators

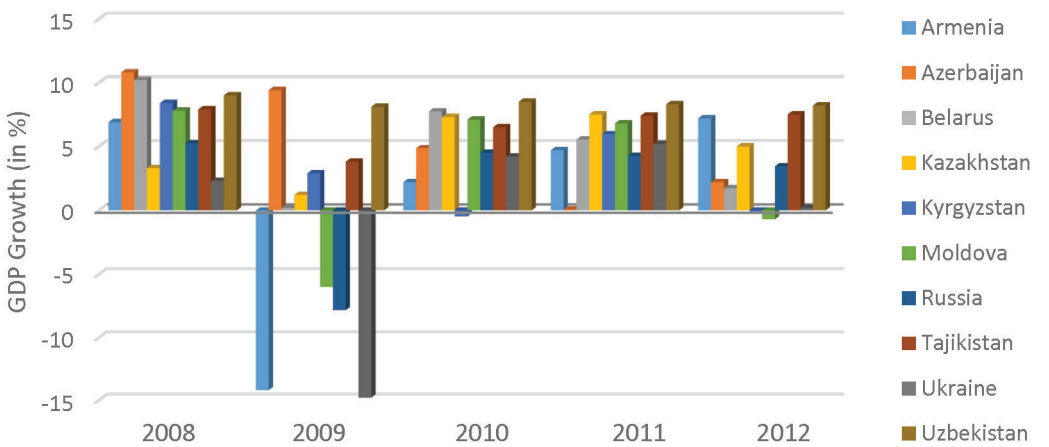

Figure 1. GDP Growth (in %)
Source: figure is constructed based on the data provided through http://www.helgilibrary.com/indicators

Conclusion

Observations on financial indicators provided above and data analysis enable to give an answer to research questions shaped in the paper and to form following conclusions and recommendations:

1. The logical connection between risk-taking behaviour of commercial banks and the degree of supervisory power of deposit insurance agencies could not be observed. Financial indicators could not demonstrate low level of risk faced by commercial banks in countries where deposit insurance agencies operate with extended mandates. And the opposite, data could not show higher risk-taking behaviours of commercial banks in countries where deposit insurance agencies possess limited supervisory authorities. In other words, financial indicators do not show lower level of banking risks in Russia and Kazakhstan where deposit insurers supervise commercial banks with extended mandates.

2. Central banks in countries, where deposit insurers operate with limited power, proved to carry the same responsibility of supervision with all due care. They showed to minimize risk-taking behaviors of banking institutions with no less success. The function can be assumed to be successfully fulfilled if commercial banks in countries, where deposit insurers possess limited power, are supervised so that their behaviours prove to be safe or risk-free. In eight of the countries under the study (Ukraine, Azerbaijan, Armenia, Tajikistan, Uzbekistan, Belarus, Moldova, Kyrgyzstan) deposit insurance agencies operate with limited authority. The function of commercial bank supervision and the full responsibility of ensuring safe banking strategies are fulfilled by central banks in these countries. As far as commercial banks do not produce data that demonstrate riskier strategies, or financial indicators of commercial banks in these eight countries do not show higher level of liquidity, credit or insolvency risks, we can conclude that central banks fulfil the bank supervision and risk-minimizing function with the same degree of success.

3. To reinforce the conclusions above about successful fulfilment of banking supervision by central banks, factors resulting into voluntary low risk-taking behaviours of commercial banks need to be considered. Literature review discussed the factors like size of the bank, bank charter value and GDP growth as determinants of risk-taking behaviours. As far as all

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the data above is presented through percentage indicators, the factors like size of the country and the number of banks in countries under the study, the size of bank itself or the size of assets in general, total value of bank loans or bank capital alone that may affect the presented results can be ignored. As for the charter value of commercial banks, financial indicators represent the general picture of banking system in countries under the study and not the risk-taking behaviour of an individual bank. Therefore, the charter value, as a factor determining the owner's decision of a specific commercial bank due to the fear of losing much, can be again ignored. GDP growth was considered as another factor determining risk levels of banking institutions. Based on the analysis above concerning this factor we can arrive to the conclusion that GDP growth can be ignored as a factor determining low risk levels in countries where deposit insurers operate with limited power. In other words, no logical connection could be found between level of risks commercial banks undertake in countries under the study and GDP growth rates there. Therefore, we can once again verify the conclusion that commercial banks in all countries under the study with deposit insurers possessing either limited or extended supervisory powers produce equally reasonable financial indicators that show acceptable level of risks.

Thus, deposit insurance agencies do not necessarily have to carry out the full responsibility of commercial bank supervision through extended mandates. Risk-taking behaviours of banking institutions can be fulfilled by central banks with no less success.

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