

CORPORATE GOVERNANCE AND OPERATING PERFORMANCE IN ALBANIAN BANKS

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Abstract

The bank failures during the recent financial crisis of 2007- revealed serious deficiencies on know-how about bank defaults, shortcomings about risk management and early warning signals to prevent large numbers of banks from failing. This research on bank defaults declines from most studies, which deal with accounting variables, such as capital ratios, non-performing loan ratios, and similar. Our study investigates the relationship between ownership, corporate governance and operating performance in banks considering 4 banks in Albania as more representative. The most noteworthy results confirm the differences in the accounting variables between default and no default banks. The lower capital ratio and lower ROA for any bank the higher is the default probability of that bank. Ownership variables, corporate insiders, outside directors or chief officers, lower-level managers' variables show a persistently strong influence on the default probability and on time periods prior to default. If the bank is to a large extent owned by lower-level managers who in general are anonymous, but have direct influence on the bank's daily operations, the probability of bank default increases significantly. Our results therefore support the recent efforts of various bank regulations and regulators (Central Banks, Deposit Insurance Authorities) to supervise and propose stricter rules that relate the bank compensation systems with positive performance indicators.

Keywords: Corporate governance, Operating performance, Management structure, Bank failure

INTRODUCTION

The bank failures during the recent financial crisis of 2007- revealed serious deficiencies on know-how about bank defaults, shortcomings about risk management and early warning signals to prevent large numbers of banks from failing.

This research on bank defaults declines from most studies, which deal with accounting variables, such as capital ratios, non-performing loan ratios, and similar. Its focal issue is to find out the efficient sustainability on the roles and actions the managers and directors of a bank de facto undertake and de jure report. There is a gap, which uses some toxic bridges like creative accounting, futile dialogue between management and shareholders where the incurred but not reported (*IBNR*) risk items and events radiate high cost auditing risk.

Our study investigates the relationship between ownership, corporate governance and operating performance in banks considering 4 banks in Albania as more representative. There are some analogue studies carried out in other countries like Russia, Ukraine, etc., but all of them agree on the fact that there is not any economically significant relationship between governance and bank operating performance (Love, Rachinsky). Then we inspect the impact of all these drawbacks in the banking legislation, regulations and in the behavior of supervisory authorities like Central Bank.

Another crucial aspect is the exposure of each bank to operational risk events like fraud, tort, misappropriations, and other events of the same nature. These jeopardize the reputation of the banks and entails high costs for banks low quality of human resources (Parlour and Plantin, 2008, Purnanandam, 2010, Shleifer and Vishny, 2010). The behavior of central banks in emerging markets including Albania is motivated by the motto "don't supervise and don't intervene", because the central banks perceive that there are "too many to fail" and not 'too big to fail', but the CB is reluctant to intervene because of bank panic (see Fahri and Tirole, 2011)?!

By the other side the commercial banks behavior up to 2007 was facilitated by poor tax control, not appropriate supervision from Central Bank, and as a consequence the commercial banks inclined to severe hazard moral outcome, particularly with Greek banks which radiated some early signals for more and more transactions of "shadow banking" rather than standard banking.

Our hypothesis is that bank corporate governance in emerging markets is intensively dependent to both internal and external factors. The frictions and vulnerabilities on taxation policies generated fake opportunities, which induced the banks' behavior for inefficient risk taking, by lowering the lending quality, persistent increase of NPL and severe exposures to capital inadequacy and 'liquidity thrust'. The high level of risk undertaken by Albanian citizens collectively can be interpreted as the equilibrium outcome of imperfect taxation, close

dependence of business life cycle with the political cycles (Belle Air, Taci Oil, FloryHen, etc., flourished during 2005-2013 where Government was of right wing or Democratic Party, and bankrupted immediately in 2013 because of elections, which changed the Government into left wing or Socialist Party). The conflicts of political forces shake up businesses and the banks which have financed them. This political predilection increases the burden of businessmen because of inequality and financial fragility (see e.g. Rajan, 2010 and Krugman, 2010). This dichotomy of risks becomes the key driver for building-up the cost and severity of the financial risk.

The accounting policies and reporting preferences of the banks are far from being standard as defined by IFRS and the chronic light-motive is the tax avoidance, creative accounting, coverage of loopholes of fictive lending transactions up to predatory lending. The distribution of pre-tax income and wealth should in principle be irrelevant, unless redistribution is plagued by important frictions. Banks are operating under the terms of the endowment economy, which is an economy populated by agents with identical preferences. We have to do with an utilitarian welfare, which achieves its maximum when transfers equate consumption across agents.

Quasi all businesses mostly have devoted and still dedicate their professional energies and reputation into the tax avoidance technology by increasing returns to scale with three components (a) exhausting the legal tax avoidance, (b) then dealing with quasi-legal tax, and (c) finally penetrating to some non legal tax-avoidance. For example, besides unceasing tax avoidance, Albania for 8 years (2005-13) applied flat tax system, by changing it into progressive tax system (2013-), but the common feature despite the propaganda of politicians, consists in the fact that no optimal tax scheme is viable, because of inequality the Albanian taxation system is still evergreen regressive for the wealthiest and this creates a demand for inefficient risk taking. The managers of the bank act in a vulnerable environment for decision making. Because of high business and financial risk perception, the banks since 2013- have diverted their lending products from corporate and business lending into retail banking by restricting the amount of lending per unit borrower but increasing the risk. Societe Generale provides the so called “express loan” with the max. amount of Eur 7 000, for 7 years, and 4-6% interest rate in real terms, but in the loan agreement there are not requirement for collateral, life insurance, property insurance and no co-guarantors. The borrowing customer in Albania has a financial behavior profile that is to consume more than the resources he/she creates or generates. Other products with the same risk exposure the banks have wrongly served to this segments include overdraft accounts, auto-loans, and similar.

The relationship of above factors with bank governance is very consistent. Mostly 100% of the banks are possessed by non Albanian (foreign) shareholders and all the banks are steadily managed by foreign CEOs, and the average serving time per each CEO of any bank has not surpass 3-4 years. It is much less than the average maturity of the assets portfolio of the banks created during the CEOs management period. So the time horizon of bank products generated and sold at the beginning of CEO's job is beyond the CEO's responsible/job time. This hazard moral go also through bank departments' chief. These bank governance mechanisms have a very strong influence on bank performance in terms of risk taking (e.g., Saunders, Strock, and Travlos, 1990; Gorton and Rosen, 1995; Anderson and Fraser, 2000; Caprio, Laeven, and Levine, 2003; Laeven and Levine, 2009; Pathan, 2009, Fahlenbrach and Stulz, 2011, Beltratti and Stulz, 2012).

It is the risk relationship and casualty events between corporate governance and bank's appetite and know-how in risk taking, with the probability of bank default differentials amongst banks, explained by dissimilar and/or similar corporate governance structures to help to rank various banks per their efficient degree of performance. This paper attempts to fill this void.

BANK GOVERNANCE QUALITY AND IMPACT OF VULNERABLE BANKS

Bank governance quality has two possible negative effects. The first is internal, which means that mismanagement of the bank increases the bank's bankruptcy risk by creating a social irresponsibility where the effect is huge losses for the shareholders, life damage for the employees. The second is external because each bankruptcy aside the specific risk contributes to the systemic risk for all banking system and to losses of purchasing power of the depositors. The second group reflects the vulnerability of a mismanaged bank against the systemic risk.

In Albania it is a high expectation rate for at least five banks (from 16 banks altogether) to experience adverse shock to their equity capital. There are two choices to deal with adverse scenarios. One way the bank has to do to return to target leverage is to sell its assets. This instigates a price impact to other institutions with common exposures. This is called contagion, and the contagion is the prelude of systemic risk. The low quality profile of the governance for the bank X compel the bank X to borrow from other banks Y, Z, etc., and/or from the Central Bank (if the CB agrees to support as the last resort). The borrowing liquidities from banks evolves leverage distribution, but besides this it reflects the risk penetration from bank X to Y, Z, etc., contributing to systemic risk.

So far the bank X is leveraging on the cost of other banks sector-wide deleveraging. In these scenarios the managers start to evaluate policy proposals, such as caps on size or leverage, restriction criteria for more vigilance and meticulous operating of loan officers, lending

committees, risk management by interrelating the signaling (ex ante) risk with monitoring (ex post risk). Outside the bank, the supervisory institutions and especially the insurer of bank deposits, is supposed to start to design a merging project of good and bad banks, of equity injections and similar combinations. The challenge depends by the choice (a) *to undertake micro-prudential interventions*, which target the solvency of individual banks; (b) *to implement macro prudential policies*, which aim to minimize spillovers across banks. The majority of authors and studies admit that micro-prudential interventions have resulted quasi always less effective than macro prudential policies.

Here emerged the rationale to classify the banks in two groups. The first group includes the problematical banks or the *banks that can create or 'export' contagion*. The second one includes and other banks that import the effects of that contagion. Mapping the banks as contagion providers and contagion takers there are some dependencies faced. There are three traits the study sorted out:

(a) Direct financial contractual dependencies between two or more banks for liquidity exchange/transactions, loan syndication, project financing and other transactions to pass disbursing concerns. As per “*what if?*” scenarios the resulting negative shock to one bank (which is unable to honor the contract) maybe transmitted to the other bank, as soon as it is unable to honor the contract (e.g., Allen and Babus 2009, Gorton and Metrick 2010, Giglio, 2011).

(a) Indirect financial contractual dependencies between two or more banks because of large non performing customers/borrowers. If the large borrower defaults to pay off the loan to bank X it conveys the default to bank Y, Z and other banks. The problem is that customer should be rated with the worst risk position and be reported in the credit bureau. This necessitates the establishment of bankers committee to diagnose class of risk the borrower is exposed –ex., as standard, past due, special mention, substandard, doubtful and default. If the large borrower in the bank X is substandard and in the other banks is reported as standard, its risk status should be adjusted and reported to all banks as substandard. The banker’s committee deal of incurred but not reported cases and in this way manages the default cost of bad borrowers (Duffie 2010, Kallestrup et al., 2011).

(c) The third propagation mechanism comes from resale spillovers. This relates to the fact when a bank is forced to sell illiquid assets (non performing loans) with depresses prices, in turn it can prompt financial trouble at other institutions holding these same assets. This creates liquidation spirals which works as an important vector of systemic risk even over the recent decades (Schwarcz, 2008).

A model is designed for bank governance by focusing in bank managers (CEOs and CFOs), by identifying and assessing the impact of their operations per bank internal and external concerns stated above. The model includes the following components:

1-The specific propensity each bank has to *Probability of Default (PD)*, *Loss Given Default (LGD)* and *Exposure at Default (EAD)*. By the PD, LGD and EAD we determine the separate impact of each individual bank's liquidation on the overall value of the banking industry. That is the propensity of specific risk of a bank to contribute into systemic risk for the banking industry.

2-The impact of the shock the specific bank experiences by resale's spillovers or the aggregate vulnerability.

3-The impact of shocks on each institution separately or the banks vulnerability clear out the distinctions among banks as financial intermediaries that are vulnerable or are hurt by deleveraging and other banks as also financial intermediaries that contribute to aggregate.

The explanatory variables in multivariate logit regression model of default include the impact of accounting variables to the levels of *PD*, *LGD* and *EAD*. For the aggregate vulnerability of a bank the model uses bank governance indicators for banks' ownership structure and management structure.

The prominent indicators of ownership structure include whether the bank or its holding company is publicly traded with the appropriate price or whether the holding company is itself in financial distress (Greek banks –*NBG, Alpha Bank, Tirana Bank*). The ownership structure of a bank is an important predictor of bank PD. It is argued that the shareholdings of corporate insiders (lower-level management, such as vice presidents) should carefully managed, because larger shareholdings of lower-level management significantly increase bank PD. Meanwhile, the shareholdings of outside directors (directors without other direct management executive functions within the bank) and the shareholdings of chief officers have no direct impact on a bank's default probability. The difference between inside and outside directors and managers determines the difference in their roles driven by the assumption of "perception of detection" within the information asymmetry and public visibility framework. It emerges an important finding. The outside directors and chief officers enjoy a higher public visibility and are more likely to be vilified in the event of a default. This finding is supported by principal-agency models which show that career and reputation concerns play a major role in the decision-making of management (e.g.; Holmstrom and Ricart i Costa, 1986; Hirshleifer and Thakor, 1992).

For management structure, the indicator used include number and average serving time of outside directors, of chief officers, of the board, and the staff flow indicators. For the purposes of this paper, we define "chief officers" as all bank managers with a "chief officer" position, such as the Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Lending Officer (CLO),

or Chief Risk Officer (CRO). The management structure and respective bank governance indicators have low importance to influence bank default probabilities, but high importance to influence on the groundwork of financial distress which in a time horizon of 2-3 years may be converted into default prerogatives. Bank risk taking emerges remarkably when the incentives of lower level management are aligned with chief officers, who are in charge of monitoring the bank's daily operations (e.g.; Holmstrom, 1999; Prendergast, 1999; Agarwal and Wang, 2009). The expectations from the model help to outline whether risk control is supported by full reporting efficiency either bottom-up or top-down or both. Such as for example whether the *Chief Risk Officer* (CRO) reports to the CEO or directly to the *Board of Directors*, or both. Reporting parallel to both has been proved to be associated with a better bank performance especially during the crisis periods or time interval. In some banks, like Procredit, BKT, Alpha, and Credins reporting becomes multidirectional especially when the banks experience the threat to high vulnerability, and where the bank performance becomes mandatorily to be measured e reported frequently and in detail. Many studies' results indicate that banks, in which the CRO directly reports to the board of directors and not to the CEO (or other corporate entities), exhibit significantly higher (i.e., less negative) stock returns, ROA, and ROE during the crisis. In contrast, standard corporate governance variables are mostly insignificantly or even negatively related to the banks' performance during the crisis (Vincent Aebia, Gabriele Sabatob, and Markus Schmid 2011).

Every CRM and CEO of a bank should be actively informed and should have the highest priority risk management topic the evaluation of the overall impact of the failure of the given bank where he/she works on each other banks of the banking system. Is there the risk/opportunity for restriction with size cap or for a forced bank mergers. Our study strongly supports the conclusion that optimal injections should not target banks that are directly exposed to vulnerability because of the shock, but banks whose liquidations have the largest impact on others high "systemicness" (Berger, Imbierowicz, Rauch 2012).

The other variable the model incorporates are measures of market competition. Per each unit of aggregate management structure various banks have different market power position. The interrelation amongst above mentioned indicators and bank's market power, are weighted against bank competition stability and bank competition fragility. For bank governance purposes we focus on the competition the banks experience in relation with human resources quality differentials, with staff compensation/motivation schemes the banks apply and with operational risk indicators. For example, the role of compensation-mechanisms the banks used has not been steady. Banks have changed compensation schemes according to their perception of financial risk exposures and loss propensity during the recent financial crisis.

Building on Holmstrom (1990), Agarwal and Ben-David (2012) show that revenue-rewarding payment schemes caused excessive risk-taking of bank employees. To the degree that the (often share-based) compensation of these payment schemes handed out to employees translates into shareholdings in the bank, our results might capture the effect of how wrong employee incentives can cause bank failure. Societe-General Albania has issued common shares of Soc. Gen. for all employees with the option to hold or sell.

During high crisis periods the banks shift their corporate governance-based on preventive mechanisms to control bank risk taking by applying restrictions on compensation of the staff. The attention in developed countries like USA was focused on disclosure of compensation and advisory votes of shareholders about executive compensation under Dodd-Frank act. A guidance for compensation such as deferred compensation, alignment of compensation with performance and risk, disclosure of compensation, etc., was designed and implemented by the G20.

All large amount job contracts for CEO, CRM, Chief Departments, and so on were reviewed by involving “claw-back” clauses for executive compensation in addition to guidance for deferred compensation in Dodd-Frank. Banks even started to implement voluntary “claw-back” clauses for bonus payments (such as Lloyds TSB) in addition to these mandatory clauses. Claw back is a contract provision that requires a party who has received a benefit to return that benefit due to specially arising conditions –ex., the bank has not the promised/expected performance.

Alternatively, they might (also) not have fully understood all the risks in their bank’s portfolios in the run-up to the recent financial crisis (as e.g. stated in the UBS Shareholder Report 2010 on the bank’s losses), and accordingly were rather unable to substantially influence the PD.

Several studies such as Saunders, Strock and Travlos (1990), Gorton and Rosen (1995), and Anderson and Fraser (2000) show that *shareholder composition*, contains substantial influence on banks’ overall stability. Banka Popullore bought from Soc. Gen had a shareholder composition, where the 40-50% was owned by CEO of insurance companies (Sigal, Sigma, Albsig) and the rest from industrial businessmen. Their influence to whom to lend and to whom they guarantee has cracked the loan decision making. Credit department and risk department decided to lend under a strong pressure of shareholders preferences. But at the same time the shareholders were guaranteeing without limits every borrower they were interested on. This exposed the bank under the risk of toxic assets and of capital inadequacy.

For the fact that every effect of ownership structure, management structure and market effects on the bank are moved on capital adequacy. For these reason an important taxonomy

which includes the additional concepts of capital (in addition to Economic Capital, Capital at Risk, etc.) is proposed as follows:

- The **productive capital** of the bank, which providing support for infrastructure development, green growth initiatives, SME finance etc., leading to sustainable growth;
- The **patient capital** allowing investors to access illiquidity premium, lowers turnover, encourages less pro-cyclical investment strategies and therefore higher net investment rate of returns and greater financial stability;
- The **engaged capital** which encourages active voting policies, leading to better corporate governance.

METHODOLOGY

To obtain the data set, the study referred to the report for banking system using the Bank of Albania and Albanian Banking Association Report data and financial information (balance sheet, income statement, and off-balance sheet data) for each bank. Note that none of these institutions failed during the crisis, but Alpha Bank and Tirana Bank (Pireaus Group) are with losses per three years consequently. According to Albanian law, every firm which results in losses for three consequent years should be declared bankrupt. This was not and is not applied for Alpha Bank and Tirana Bank (Pireaus Group). These data are augmented by two additional data sets containing general economic indicators like inflation, general prices on real estate (collateral price elasticity), economic growth, and complementary data from 'doing business as' (WB).

The second step was to organize data per segment of borrowers for each class of loans –for example, the total amount and volume of mortgage loans by year broken down by borrower characteristics. For example the volume of loans extended to borrowers with incomes less than 50% of median average (subprime loans), which represents the portfolio of high-risk borrowers. The ratio of high-risk borrowers' loans to total is analyzed under the risk concentration point of view by calculating *Herfindahl Hirschman Index (HHI)* of different banks in regional, local and country market concentration as measures of competition. The HHI is based on assets side (*loans*) and on liabilities side of each bank (*deposits*). The one bank's share of deposits by branch in each regional, local and country ratio is analyzed with weighted averages across markets for banks in multiple local markets using the proportions of total deposits as the weights.

The third step in sample selection and formation is the information organized on each bank's shareholders, directors, and officers as well as on the other corporate insiders.

The last step refers to the bank failure happened. In Albania not bank failure was reported from Bank of Albania, but financial information reported is not consistent and the same with financial statements of each commercial bank reported from Bank of Albania and financial statements of each commercial bank reported from Albanian Bankers Association.

All the above organized information is processed with a tentative rating scheme we have previously processed for the banks, ranging from A (best) to D (default/worst). In this way we extract a short check list of banks with *material loss* or on the threshold of bankruptcy.

Our model endeavors on a structural level, to integrate these risks into one single message to senior executives by ceasing to exist the gap between risk diagnostics and risk reporting by including the interdependence to other risks (Miller, 1992). In addition, in many recent policy documents, comprehensive risk management frameworks are outlined in combination with recommended governance structures (e.g., BIS, 2008; FSA, 2008; IIF, 2007; Walker, 2009). One common recommendation is to “put risk high on the agenda” by creating respective structures. This involved many measures involving the creation of a dedicated risk committee or designating a CRO who over-see all relevant risks within the institution (e.g., Brancato, Tonello, Hexter, and New-man, 2006; Sabato, 2010).

Using samples in ‘What if scenarios’ the study first investigate the causes of hypothetical bank-failure on an anecdotal level. This is to ensure that our sample of bank failures is unbiased and derived by the presence of material loss, which clusters the bank-failures into six distinct groups “General Crisis Related,” “Liquidity Problems Only,” “Loan Losses Only,” joint “Liquidity Problems and Loan Losses,” “Fraud,” and “Other.”

We advance what the supervisory authority and deposit insurance authority will report the diagnosis of a supposed bankrupted bank. Bank of Albania and Agency for Deposit Insurance in their supposed reports on bank failures will not provide a specific failure reason, but instead would mention that the failure might be happened as a result of the general economic conditions, crisis, etc. In this case we are obliged to label the failure as “General Crisis Related.”

The paper find that quasi 100% of the banks-failure with highest expectation fall into this category, independently by the fact that the real cause of failure is motivated by liquidity problems, loan losses, or a combination of both.

Our study clusters the banks-failure according to real cause and not by the cause reported. Our report will improve and accelerate the appropriate behavior of Bank of Albania and Deposit Insurance Agency to start up the conservatorship of the bank as the result of failure because “Liquidity Problems Only,” “Loan Losses Only,” joint “Liquidity Problems and Loan Losses”.

In USA 70% percent of bank failures refer to 106 banks' failures triggered by loan losses only and 15% or 22 banks defaulted after the joint occurrence of both liquidity problems and loan losses. Finally, we find that 5 banks (3,2%) failed or were taken into FDIC conservatorship due to management fraud. For 20 banks, a specific failure reason could not be determined; we thus label their failure reason as "Other." These anecdotal results show that loan-induced losses played a dominant role for banks' stability during the recent financial crisis, as opposed to liquidity problems.

Contrary to developed countries where 14 of all bank failures came as a surprise and 86% are anticipated, in Albania is the totally diverse situation where quasi 100% of all bank failures came as a surprise. For the banks that by law should be declared bankrupt (Alpha Bank, Tirana Bank) because of 3 consecutive years with losses, the failures were neither anticipated by a rating agency nor by the supervisory authority. The problem becomes a question hazard moral, because their non anticipation of banks failure was neglected not because these were not in able to predict the severity of the crisis, but because of hazard prudence not to report it (mostly for political reasons).

Study has dedicated a special table to summarize the statistics of the ownership and management data of our sample banks broken down by default and no default banks. Respective factors are included in classes of bad risk management, banks subject to cease-and-desist orders prior to default, and of surprising versus non-surprising failures.

The management structure includes the "Outside/Independent Directors" (bank board members who do not perform any function), "Chief Officers" (all bank managers), "Other Bank-Corporate Insiders" (all bank employees holding lower-level management positions in the bank –f.e., vice presidents, treasurers, or department heads).

The ownership structure and management structure variables are normalized by the number of the bank's outstanding shares and the numbers of outside directors, chief officers and other employees are scaled by the board size.

ANALYSIS AND FINDINGS

Empirical Findings for Default Banks (*Developed Economies*)

The analogue studies in developed economies support the thesis that in terms of ownership structures, on average, default banks have higher shareholdings of outside directors and chief officers, and much higher shareholdings of other corporate insiders, as compared to no default banks. In terms of management structures, on average default banks have smaller boards, fewer outside directors and more chief officers relative to their board size, much larger shareholdings of lower level management, and the Chairman is less often also the CEO than in

no default banks. The scaling with the board size does not imply that the sum of the three variables adds up to one because other corporate insiders are not members of the board while also chief officers are not always members of the board.

Empirical Findings for No Default Banks (*Developed Economies*)

In no default banks, fewer shares are held by chief officers, who are responsible for the continuation of bank's operations in the long term, or by outside directors, who are responsible for the oversight of these operations. Moreover, outside directors and chief officers are publicly known figureheads of the banks. This might imply that their personal reputation is connected to the bank's performance and survival.

This explanation is supported by research on principal-agency theory, showing that career and reputation concerns play a major role in the decision-making of management (e.g. Holmstrom and Ricart & Costa, 1986, or Hirshleifer & Thakor, 1992). In contrast, lower-level management, such as vice-presidents or treasurers; hold more than 50% of all shares in default banks. This group is neither publicly known nor held responsible in public for the failure of the bank, even though they may exert a tremendous amount of direct influence on the actual risk taking of the bank in its daily operations.

The position of lower level management is equivalent to equity holders in the classic Merton (1977) firm value model which states that shareholders of insured banks have a moral hazard incentive to increase variance of returns, since the assets of the bank can be put to the FDIC in the event of default. This incentive may be less for the outside directors and chief officers who are publicly known and vilified in the event of default as compared to opaque lower level management.

Empirical Findings for Default and Non Default Banks (*Emerging Economies*)

Our sample selection and statistics are based on Albania case as representative of common feature faced in emerging economies.

In terms of ownership structures, on average, higher propensity to default is found in banks dependent by default exposures of their mother banks (*Greek banks, Arab banks*) with higher shareholdings of outside directors and chief officers (foreign personnel). In terms of management structures, the trend is to have smaller boards, short servicing time for outside directors and chief officers. Servicing time of directors and chief officers is more than 2,3 times shorter than servicing time of lower level management. Generally within a business time period of 8 years, Tirana Bank (Piraeus Group) has changed 3 times the CEO, Alpha Bank (Atika

Group) has changed 3 times, NBG has changed also 3 times, UBA (Arab Bank) within a business time period of 7 years has changed 3 times the CEO, and so on.

Besides the size of the board it is very dominant the quality members of the board. The scaling with the board size does not converge with objective and professional decision making. Many other corporate insiders are not members of the board while also chief officers are not always members of the board. BKT is the case that the same shareholding group possesses other business (Alba Telecom, Eagle, American Hospital) and often an advertising message of one business is mixed with that of the bank BKT.

Another separate but very important factor is the high dependence of the banks to largest depositors like insurance companies and other large and successful businesses (mobile phone companies). The banks with high cash/liquidity dependency from these companies generate tied contracts on insurance products of the borrowers. For example insurance contracts of Credins Bank are covered only by Sicred (insurance company), Raiffeisen by SIGAL Uniqa Group, BKT by Atlantik, and similar. So the insurance industry is operating only with agents and not with brokers. This is because of the tied insurance contracts with the banks.

Lower propensity to default refers to ownership structures, where chief officers have no or have minimum amount of shares. This serves to going concern and makes chief officers more responsible for the continuation of bank's operations in the long term. Similar is the logic for outside directors, who are responsible for the oversight of these operations. This policy interrelates more functionally the personal reputation of senior staff to the bank's performance and survival.

Summarized Rationale on Findings

Based on statistics of data elaborated in other studies, it shows that default banks differ strongly from no default banks, especially in terms of general characteristics, business focus, and overall stability. Generally speaking in US and other countries, default banks are on average smaller than no default banks as measured by asset size. The default banks are smaller because they resulted with *lower capital ratio*, *lower loan volume relative to their assets*, *stronger loan growth as well as weaker loan diversification* as measured by the loan-concentration HHI.

On the funding/deposit side, default banks rely more on *brokered deposits* and less on *retail deposits* than no default banks. Not surprising, *default banks also perform worse in terms of overall stability* than no default banks. The default banks have a *negative return on assets* and a much *higher non-performing loan ratio*. Interestingly, default banks have a *lower exposure to mortgage-backed securities* (MBS) than no default banks. Note that default banks do not have any off-balance sheet derivative exposure (not shown in the table), which is why we

exclude this factor in our regression analyses. We investigate these results in more detail in the section of multivariate analysis.

Multivariate Analysis

In this study a multivariate logistic regression framework is used. The potential factors for bank failure are coordinated with an indicator variable for bank failure in the default quarter as *dependent variable* and a number of predictor variables. Our model pattern refers to a standard procedure found in many authors (e.g., Campbell, Hilscher, and Szilagyi, 2008). For banks it was pioneered by Martin (1977). There is total of five sets of independent/explanatory variables which we have previously explained in detail:

1-Accounting variables | 2-Bank governance variables | 3-Market competition measures | 4-Macroeconomic indicators | 5-Bank regulator (Central Bank) variables.

These sets of variables are processed to test eleven different model specifications. Each specification is comprised of either a different set of variables or a different subsample. The sample of 6 banks with high propensity to default (3 years with losses and more than 30% NPL) and 10 no default banks. The bank governance data are taken per ownership and management structures. Then the explanatory power of the model of bank default is tested for three different time periods, *the year immediately preceding the default, as well as two years prior to default*. By testing the time component, we follow a known body of research (e.g., Cole and Gunther, 1998; Cole and White, 2012) which shows that the predictive power of binary regression models in the context of bank defaults varies over time. Additional regression models are included by using variables from 2009 Q4. This is for measurement of the effects with variables not having been influenced yet by any impact of the financial crisis. Three basic questions guide the rationale of the analysis:

First, how do the different sets of variables and combinations thereof contribute to the overall explanatory power of the regression?

Second, which variables are statistically significant in explaining bank failures?

Finally, at what point in time prior to the actual default date do sets of variables or individual variables have the largest explanatory power in predicting bank defaults?

The accounting variables have significant explanatory power in predicting bank default. A large number of articles on bank default support this thesis (e.g.; Lane, Looney, and Wansley, 1986; Whalen and Thomson, 1988; Espahbodi, 1991; Logan, 1991; Thomson, 1991; Cole and Gunther, 1995, 1998; Kolari et al., 2002; Schaeck, 2008; Cole and White, 2012). By including the *log of total assets* (ratio of equity to assets, and the ROA) we follow the logic of Cole and

Gunther (1995, 1998), Molina (2002) and others who show that these variables serve as valid indicators for *size*, *capitalization*, and *profitability*.

To measure the composition and stability of the bank's loan portfolio, we include five accounting variables ($\Sigma\text{Loans}/\Sigma\text{Assets}$, $\Sigma\text{Construct.}\&\text{Develop. Loans}/\Sigma\text{Assets}$), which have strong explanatory power in predicting bank defaults especially in the recent financial crisis; another accounting variables include *loan concentration index*, and $\text{NPL}/\Sigma\text{Loans}$ are included in the regressions to account for concentration risk and credit risk. Short-term funding and illiquidity risks are measured by the ratios of short-term deposits to assets and brokered deposits to assets, respectively. To end with, the ratio of unused commitments to assets is included as a measure for off-balance sheet risks (*contingent assets with contingent liabilities*). Finally, at what point in time prior to the actual default date do sets of variables or individual variables have the largest explanatory power in predicting bank defaults?

The results remain unchanged if we replace the multibank holding company (BHC) dummy with a dummy variable indicating whether or not the bank is part of any BHC structure, either single-bank or multibank. Also by standardizing the number of outside directors, chief officers, and other corporate insiders variables by the asset size of the bank the results remain unchanged. Both are for robustness check.

HHI

In the traditional “competition-fragility” view, higher market power increases profit margins and results in greater franchise value with banks reducing risk taking to protect this value (e.g., Marcus, 1984; Keeley, 1990; Demsetz, Saldenberg, and Strahan, 1996; Hellmann, Murdock, and Stiglitz, 2000; Carletti and Hartmann, 2003; Jiménez, Lopez, and Saurina, 2007). We include HHI, because a higher HHI may result in a lower probability of failure. In contrast, in the “competition-stability” view, more market power in the loan market may result in higher bank risk and a higher probability of failure as the higher interest rates charged to loan customers make it harder to repay loans and exacerbate moral hazard and adverse selection problems; this effect may be non-monotonic (e.g., Boyd and De Nicoló, 2005; Boyd, De Nicoló, and Jalal, 2006; De Nicoló and Loukoianova, 2007; Schaeck, Cihák, and Wolfe, 2009). Martinez-Miera and Repullo (2010) furthermore suggest to control for this possibility by incorporating the squared value of local market power. Berger, Klapper, and Turk-Ariss (2009) argue that the effects of both views may be in place – banks with more market power may have riskier loan portfolios but less overall risk due to higher capital ratios or other risk-mitigating techniques – and find empirical evidence of these predictions.

The paper includes the ratio of originated subprime mortgage loans to total mortgage loans originated to account for the particularities of the recent financial crisis. The excessive origination of mortgages to borrowers with subprime creditworthiness led to high losses for banks in the recent financial crisis. The average subprime mortgage loan ratio in a bank's census of customers per area measures the subprime risk exposure of the bank's local competitors. Stronger subprime exposure of a bank's competitors could increase the competitors' risk structures and therefore also their default risk.

The most noteworthy results include the following items:

1-Accounting Variables (Capital Ratio, ROA, NPL Ratio, Funding, Construction & Development Loan): Multivariate analysis strongly confirms the differences in the accounting variables between default and no default banks. The lower *capital ratio* and lower ROA for any bank the higher is the default probability of that bank. They serve also as ingredients in a functional expression of the bank's distance to default (e.g., Laeven and Levine, 2009; Houston et al., 2010). The NPL ratio reveals a significantly positive influence on the default probability. Our descriptive statistics shows that default banks rely to a larger extent on wholesale funding in terms of brokered deposits as compared to no default banks. It has no significant effect on PD, however, short-term deposits exhibits significantly negative coefficients, which implies that more short-term deposits reduce bank default probability. C&D loans have substantial effect on the probability of bank failure. A higher exposure to C&D loans increases a bank's default probability. We do not find asset size, loan exposure, loan portfolio concentration, or the amount of MBS to have any consistent or strong influence on a bank's default probability.

2-Bank Governance Variables (ownership variables, corporate insiders, outside directors or chief officers, lower-level managers): The six ownership variables show a persistently strong influence on the default probability and on time periods prior to default. Shares held by other corporate insiders have significant and positive influence on bank's probability to fail. Higher stakes of corporate insiders' higher probability of default, lower stakes of corporate insiders lower probability of default of the bank. The outside directors or chief officers have a high public visibility with their personal reputation at risk, especially in case of a bank default. The challenge is their knowhow and expertise capacities. If the bank is to a large extent owned by lower-level managers who in general are anonymous, but have direct influence on the bank's daily operations, the probability of bank default increases significantly. It is very shocking to articulate that lower-level management has a moral hazard incentive to increase the risk of the bank. If it assumes high risks which prove to be successful, the value of the bank strongly increases and

thereby also the personal wealth of lower-level management due to its high positions in the bank's stock. If, on the other hand, the high risks result in large losses, lower-level managers may lose their jobs. But they have high chances to quickly find another comparable employment. This implies that they have unlimited upside but only limited downside risk. All the banks should discourage lower-level management from holding large stakes in the bank. Per conclusion of findings, the corporate governance management variables do not have substantial explanatory power for bank defaults. The model informs that up to now, the management structure of a given bank is not decisive for its overall stability.

3-Bank Competition and Market Power (local market power, macroeconomic indicators): The local market power of the bank seems to have weakly positive influence on bank stability. High exposures of the bank's competitors to subprime mortgage loans have positive effects for the bank under analysis. This is because bank's competitors to subprime mortgage loans located in the same census area might suffer from high loan default rates due to a high subprime exposure and compete less aggressively in the market. Finally, macroeconomic indicators, seem to influence bank default probability at least to some degree. These results suggest that declining real estate prices and negative GDP growth increase the chances for a bank to default.

CONCLUSIONS

The model in the future should be expanded by incorporating all banks irrespective of corporate governance information to observe the consistency of variables between samples. Heckman Selection model of bank default using a two-stage probit regression setup should be included to validate the results of the regular logit regression model by accounting for possible selection biases due to different availability of corporate governance data. By including this model, we follow Cole, McKenzie, and White (1995), who show that it can serve as a valid control tool for binary regression models testing bank defaults.

The main concern for Albanian banking industry is reporting drawbacks. Only specific types of banks with specific ownership and management structures report their corporate governance data, so that our analysis would suffer from a non-random subsample of banks. We account for this possibility by including a number of instrumental variables in the selection equation of the model. These are the size of the bank and its squared value to account for nonlinearities in size because very large banks may have a much higher probability to publish corporate governance data.

RECOMMENDATIONS

In the terms of bank governance we strongly recommend the banks to keep in mind these postulates:

1-The higher the shareholdings of lower level management the higher bank's probability of default. This effect on bank risk taking is especially pronounced when the incentives of lower level management are aligned with chief officers, who are in charge of monitoring the bank's daily operations (e.g.; Holmstrom, 1999; Prendergast, 1999; Agarwal and Wang, 2009). Low Incentive Alignment is a dummy variable which is 1 when the shareholdings of chief officers are below the threshold and High Incentive Alignment is a dummy variable which is 1 when the shareholdings of chief officers are above the threshold.

2-The results show that the overall explanatory power of regressions used to explain bank defaults can be strongly increased by including ownership indicators in addition to usual accounting indicators. Our findings also illustrate that a bank's ownership structure plays a substantial role in explaining default likelihood: banks are more likely to default if they have more shareholdings of other corporate insiders.

3-Our results therefore support the recent efforts of various bank regulations and regulators (Central Banks, Deposit Insurance Authorities) to supervise and propose stricter rules that relate the bank compensation systems with positive performance indicators.

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