Risk and Efficiency in European Banking - Does Corporate Governance Matter?

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This draft: 30 June 2014
- Preliminary draft. Please, do not quote -

Abstract

The challenges for banks from new detailed regulation of the 'management body', predict reduced bank risk at not very much expenses. Consequently, this paper test empirically whether the corporate governance of banks influences banking risk and banking efficiency. The preliminary results reveal that there is a link between efficiency and risk, which is proposed to arrive from differences in corporate governance. However, the corporate governance variables considered in this paper have vague impact. The implications of the results could be that regulation of governance will end up in a costly regulation with no benefit of reducing bank risk or in line with the statements suggesting that it does not cost much to regulate the corporate governance. (116 words)

Key words: Corporate Governance, Risk, Efficiency, Banking, Regulation, Europe

Introduction

In the banking industry, efforts to enhance regulation are particularly emphasized after the financial crisis in 2007 and 2008, although the trend started much earlier as part of the growing attention to the corporate governance and the introduction of governance codes of conduct. Basel III (BCBS 2010a; BCBS2010b) and complementary regulatory frameworks, for banks including their corporate governance are definitely steps towards more detailed regulatory efforts to manage banks more properly. For instance, the GL44 (EBA 2011) provide guidelines for internal control, which has a background in creating trust and stability in the financial system. The foundation of the guidelines is that "*... effective internal governance arrangements are fundamental if institutions, individually, and the banking system, are to operate well*" (EBA 2011, p 7). It relates to identified weak oversight by the "management body"[1] in a bank's supervisory function, which has contributed to failure to identify and constrain excessive risk taking, partly due to weak understanding of the complexity of the banking business and its risk.

Any new regulatory effort is made with good intentions and recent advances intend to reduce systemic risks in the financial sector. After the financial crisis, several regulatory initiatives are raised to reduce information asymmetries between owners and the bank, provide a stronger attention towards bank risk and bank risk management (especially in order to reduce risk of moral hazard in the bank's risk management) and to encourage good and responsible management for a sustainable financial sector (for instance Basel III and GL44). With arguments that it 'does not cost much to implement regulatory frameworks', that 'such efforts can never be wrong' and promotions of 'improved internal control' (c.f. EBA 2011 p. 49ff), there is a general consensus that the effect of regulation to efficiency is minor, but with significant consequences on the (reduction of) bank risk.

The existing literature evaluating issues of corporate governance, risk and efficiency is neither consistent nor integrated. Partly, this is due to that links between these aspects are analysed based on two completely different areas of research, the literature on the corporate governance (incorproating the impact of the board of directors) which has more and more started to emphasize on the link between corporate governance structures and performance (c.f. Wintoki et al., 2012) and the literature on banking efficiency studies is being part of a tradition of industrial organisation, which recently focus more on banking efficiency and risk (Fiordelisi et al, 2011), regulation and policy (Zhao, Casu & Ferarri, 2010) and competition (Chartareas, Girardone & Venouri, 2011). Less is written on the impact of the board on risk management and its consequences to efficiency, especially for banks, although there are several examples of board structure and performance (Andres & Vallelado, 2008), and board structure and bank riskiness (Ferrero-Ferrero, Fernández-Izquierdo and Muñoz-Torres, 2012)

While the existing literature, pay attention to these links separately, this study contributes to the existing literature by integrating the frameworks for analysing the impact of corporate governance, risk and efficiency. By doing so, we could extend the understanding of the policy implications of the upcoming regulatory efforts on corporate governance in banks. Furthermore, the upcoming banking regulation is based mainly on agency theoretical grounds. (capital, supervision and market discipline) treating a problem where information asymmetries are mostly relevant for regulation. There are several reasons for why this does not work. As forwarded by Berger & DeYoung (1997), reduced efficiency may be because of

[1] 'Management body' is, in GL44, used as a term to embrace all possible governance structures and has a functional purpose for setting out guidance and principles aimed at a particular outcome. The general definition carries out whether a specific task or responsibility and not whether a particular task is someone's responsibility. (EBA, 2011 p 10)

poor management, bad luck (generating additional resources to deal with), preference of short-term performance over long-term performance) or moral hazard (is not considered a link between risk and efficiency, but could often explain the level of problem loans). The traditional conflict in corporate governance, the one between owners and management described by the agency theory, is complemented by another conflict, the one between a company's owners and managers on one side and regulators and tax payers on the other side. Moreover, agency theory is contrasted by signalling theory and resource dependency theory in terms of board composition and its effect on the banking institutions' risk and efficiency.

Consequently, this paper contributes to testing hypotheses regarding the relevance of these theories, generating a multi-theory approach to the governance problem related to risk and efficiency.

The remaining of the paper is outlined as follows: Section two discusses the banking related literature of banking efficiency and risk, as well as corporate governance and performance. Section three emphasise the methodological framework and present the data. Section four presents and discusses preliminary empirical results. Finally, Section five concludes our preliminary results.

Literature review

The literature paying attention to banking efficiency does so because of a variety of reasons and consequently takes risk into consideration of a variety of reasons. One of the first studies paying attention to risk in a study of banking efficiency was Mester (1996) who brought risk into the cost frontier in order to control for risk preferences from managers. The efficiency results control for risk in two ways, the probability of failure by level of financial capital to bank size and asset quality by nonperforming loans to bank size. The motivations behind these adjustments are with consideration of risk and quality to avoid miscalculating a bank's level of inefficiency derived from the production of risky loans or derived from less resource spending to ensure that loans are of high quality. Berger and DeYoung (1997) develops theoretical motivations for studying risk (problem loans), and efficiency. Poor management is one explanation, but the underlying driver between efficiency and risk could also be explained by bad luck (external events) that require additional resources from the bank for managing problem loans which result in lower efficiency, skimping (preference to short-term performance over long term performance) and moral hazard (is not considered a link between risk and efficiency, but could often explain the level of problem loans). In summarizing Berger & DeYoung's (1997) reasons for operating efficiency due to bad luck or bad management, the managerial effort is either on resources spent or on attention for solving operational problems, and apply for both day-to-day operations and loan portfolio management. The study, on US banks, is replicated by Williams (2004) on European banks who moreover extend the discussion on managerial differences to include also principal agency theoretical (expense preference behaviour) aspects in order to find evidence for management behaviour to efficiency. Empirically, one difference is to control for size, which could relate to differences in management.

Among others, Kwan & Eisenbach (1997) reveal that there is a link between the capital, risk and efficiency, which partly lead to paying additional attention to risk measures other than capital. One motive for their study is that moral hazard may explain contradicting risk results for capital positions. Moreover, there is a recent extension of the literature, especially after the financial crisis, suggesting that bank risk is not only depending on its capital structure (Tan &

Floros, 2013). Consequently, later studies (Altunbas et al 2007; Fiordelisi et al (2011); Ferrero-Ferrero, 2012) deviate between the riskiness of a bank and capital structure. Several examples of bank risk include standard deviation of return (Berger & Mester, 1997), Loan loss provisions (Altunbas et al 2000; Altunbas et al 2007) Ratio of nonperforming loans to total bank loans (Fiordelisi et al 2011), Z-score (Chortareas et al (2012) and expected default frequency (Fiordelisi et al (2011)

Recent developments in the efficiency literature control for a variety of governance structures, including bank type (where mutual banks tend to be more efficient) (Girardone, et al, 2009) and prudential regulation as being part of a regulatory structure imposes riskiness to the banks (Färe et al 2004; Zhao et. al 2010; Deng et. al. 2014). As a majority of these studies suggest that deregulation have negative impact on bank efficiency, a comparison to the regulatory reforms on corporate governance will be assumed to also have negative impact on banks' efficiency. This may also lead to managerial responses to compensate reduced efficiency from regulatory burden by taking on riskier operation. However, as pointed out by Färe et al. (2004) it depends on the type of regulation and, as pointed out by Barth et al. (2004), encouragement of private monitoring may improve bank performance.

One general explanation to differences among banks in regard to efficiency and risk could be poor management. However, there is not much literature going into detail of what bad management really is and how it affects efficiency and risk. This does not mean there is no literature in the area of corporate governance that emphasise bank performance.

Several studies in the area of corporate governance tend to explain the impact of the management together with influence by external factors and -- as a proxy of asset quality -- to external rating. Consequently, the underlying driver of the relationship between problem loans, goes beyond that of moral hazard, skimping and bad luck. A small number of studies deals with the relationship between corporate governance and banking performance, but - compared to the overall literature in corporate governance, the scope of these studies are limited. Recent empirical studies suggest that ownership structure appear to be neutral in terms of changes in productivity and efficiency. Different ownership reacts with different speeds to the change of regulatory environment (Zhao et al 2010) and domestic private banks often perform better than government owned banks (Girardone et al 2009) but there are differences depending on the level of development in the country.

The vast majority of literature about corporate governance in banks has not taken all the knowledge from the more general corporate governance literature into consideration for explaining efficiency or differences in efficiency among banks. Such studies include investor protection, stake holder interest, performance and risk. This is off course problematic when presenting the new regulatory reforms assuming good governance, low risk and at minor cost. However, there are some literature looking at a limited corporate governance variables, suggesting that board structure and board independence (One general impression on board size is a U-shaped/convex and nonlinear relationship on board size to performance) can affect both bank performance (The performance variables are then not efficiency, but income, ROAA or ROAE) and bank risk (Erkens et al 2012; Pathan & Faff 2013). The board independence variable is of particular interest with regard to the regulatory framework development, as theoretical reasoning assumes that board independence is a positive influence to performance, but empirical findings suggest the opposite. Board independence decrease performance, which is explained by that independent directors in banks are chosen more for regulatory compliance purposes and that the market for high performing bank directors could

be limited (Pathan & Faff 2013). Additionally, Andres & Vallelado (2008) take the board activity (number of board meetings) into consideration, which has a positive impact on performance (measured by Tobin's Q, ROAA and Shareholder's market return), which is interpreted as boards frequency play a proactive role responding to improve value.

Methodological approach

The main thesis of this paper is that there is a link between risk and the structure of corporate governance. If the results indicate other, the current regulatory effort is just producing extra cost, not reducing risk, contrary to what is motivated by regulation. We cannot yet study the results of the implementation of the new and coming regulatory efforts, so the methodological and empirical aim of this study is to find whether there is relevance in paying attention to the corporate governance to the bank's performance (measured by efficiency) and risk, then relying on past experience. An empirical sub-aim is to find whether any results in a relationship between corporate governance variables and banking efficiency and banking risk is consistent for different type of banks and corporate attributes, but is left outside this version. The methodological approach of this study is mainly targeting the link between corporate governance variables, risk and efficiency. Because the number of studies paying attention to banking efficiency is extensive, the main target of the study is naturally on the risk and the corporate governance, how to relate these two together and together with efficiency. The endogeneity concerns, that it is impossible to tell whether corporate governance affect company performance, or reverse, a company's performance influence its corporate governance (c.f. Wintoki et al 2012; Bhagat & Bolton, 2013), are to some extent taken into consideration both in prior studies of banking efficiency and in studies of corporate governance. However, the application of econometric models has evolved lately, which also suggest that studies using OLS-regression will result in estimation bias (Bota-Avram, 2013). Yet, this study's preliminary results uses OLS-regressions.

The data is generated by two partly overlapping data bases provided by Bureau van Dijk, the Bankscope and Orbis data bases. In terms of banking, the Bankscope data base generate bank accounting data for a large number of banks, while Orbis generate accounting and information on the management of many companies, including a limited number of banks. However, the Orbis data base does not generate any bank specific accounting data, which makes it difficult to analyse the particular way of earning revenue in terms of interest rate margin as well as balance sheet ratios other than related to debt and equity and assets. Therefore, by merging the two, we can obtain a data set taking both corporate governance variables and banking specific accounting into consideration.

Variables and Data

Because of endogeniety problem and data limitation we are limited in our econometric possibilities to cross section analysis. We thereby control for the different cross-relationships between the variables.

$$Efficiency = f(Governance,Risk,Control)$$
$$RISK = f(Governance,Efficiency,Control)$$
$$Governance = f(Efficiency,Risk,Control)$$

The efficiency variable aim at estimating banking performance, producing banking services with respect to inputs, which we derive from a stochastic cost frontier intermediate approach (Translog) with three inputs (cost of labour, physical assets and capital) and three outputs

(deposits, loans and other earning assets) holding input variables constant to its mean values. This is equivalent to the intermediate approach, commonly used by banking, based on the work by Sealey & Lindley (1977).

In several studies of banking efficiency, risk is an important component. It was introduced mainly as a factor of controlling for managerial risk preferences that lead to biased efficiency scores (Mester 1996). The logic behind is that the efficiency scores of a bank can vary depending on the effort the management spend on credit evaluation and monitoring of loans. However, as a consequence of capital regulation and attention to risk, both wider definitions of risk and more precise use of risk in the analyses of efficiency have been used in recent evolvements. Basically, two approaches are considered; One to include risk and other control variables in the frontier model, and one to consider risk as an explanatory variable for efficiency, an approach used for both stochastic and non-stochastic frontiers.

The riskiness of a bank is widely discussed in both regulatory contexts and academics. Four different risks are under consideration for the new capital requirement directive CRD IV (Basel III); credit-, market-, operational- and liquidity risk. The regulation of the management body from the GL44 could influence all these risks by changing market positions or indirectly to encourage less (or perhaps more) risky operations. From a regulatory perspective, the bank's probability of failure is the most important target. Our data set is spread out between variety of bank types, whereby the overall riskiness can only be compared by accounting data. For this purpose, the Z-score (in logs) is a commonly used accounting based measure. The measure is complemented by a beta, which define the relative risk to market risk.

The capital risk is estimated separately, by the generally used debt to equity ratio, but also in consideration of the riskiness of asset through the own funds ratio (OFR), measuring the equity capital related to a banks regulatory capital and provide an indication of how well capitalised the bank is. The capital risk is an unsolved question in the literature, where some previous studies suggest that more capital reduces riskiness, although some claim risk to be higher due to moral hazard. Lindblom and Willesson (2012) and Haq & Heaney (2012) found that riskiness of banks was u-shaped in European banks during the financial crisis, consequently imposing higher risk than average for both, when studying the financial crisis. Consequently we control these results by dividing the sample into four parts depending on the banks' capitalization. Furthermore, we use two different accounting return measures, ROIF and ROFL as proxy for risks on the assets and liability side of the balance sheet. The interpretation of these measures includes liquidity risk and credit risk (ROIF) and interest risk and capital risk (ROFL). Most European banks generate their return associated with ROFL (Lindblom & Willesson, 2012), hence the banks take mainly capital risk and/or interest related risk for higher return. Finally, we develop a ratio of nonperforming loans to total loans ratio, as a proxy for credit risk. All mentioned measures are generated by own calculations, with three exceptions (Beta and the two capital ratios)

The efficiency literature suggest that competition, regulatory reforms could have impact to efficiency. For the latter reason, we delimit our study to banks under the same regulatory framework, European banks within the Basel framework, accounting for IFRS. The two regulatory frameworks have been introduced simultaneously and cannot be adjusted for. However, we state a dummy variable for accounting tradition (common law v.s. civil law). Size is controlled for by the log of total assets. Other controls are competition, where both economic theory and empirical studies promote incentives for efficiency, inflation and market listing.

Table 1 Variables under consideration for studying efficiency, risk and corporate governance in European banking.

Variable	Definition	Interpreted as	Proxy for..
Efficiency	Technical Efficiency score generated by a stochastic frontier (Translog) cost function	A higher measure indicate lower efficiency	Bank performance
Z-Score	(ROAA+E/TA) / σROAA, three year rolling.	A higher measure indicate a lower probability of default	Overall bank risk
Stdevreturn	Variability of return; σROAA		
Beta	Standard deviation of stock/covariance to market	A higher beta gives higher risk	Overall bank risk
D/E	Debt / Equity	Higher D/E means higher capital risk.	Capital risk
OFR	Own Funds / Funds Required	A higher OFR means lower capital risk.	Capital risk
NPL	Nonperforming loans / total loans	Higher measures means higher credit risks.	Credit risk
Growth of loans			
ROIF	Return on Invested Funds	A higher measure means higher liquidity or credit risk.	Liquidity risk and/or credit risk
ROFL	Return on Funds Levered	A higher measure means higher capital or interest rate risk	Capital risk and/or interest rate risk
Board size	the number of members of the board	Higher number means more members.	
Independence	Ratio of the total number of board members owning shares in the company, to total number of board members.	A higher measure interprets as a lower number of independent board members.	
BoardExperience1	The average age of the board of director.		Life experience of board
BoardExperience2	The number of years at the position.		Experience of the bank.
Boarddiversification1	Std of board	A larger measure	Age diversification

	experience	imply a larger age spread among board members.	
Boarddiversification2	Measure of deviation from a 50%/50% gender diversification	A larger number imply a larger share of a gender versus the other (either male or female)	Gender diversification
Legal	Common law or civil law	0 = common law 1 = civil law	Country's governance structure
Size	Log of Total assets	A larger measure for larger banks.	Bank size
Competition			Competition
Inflation			Inflation
Market listing		0 = non-listed 1 = listed	Market listing

The corporate governance variables are limited by data access. Firstly, because Orbis does not provide historical information which limits us assume that the corporate governance variables are time invariant or to make cross-sectional analysis. Secondly, the data provided is itself limited and makes it difficult to estimate proxies for the regulatory efforts. However, there are possibilities to generate a number of variables of relevance to study both regarding usually considered board size and board independence, but also for experience of the board and diversification. Although we cannot get information on board activity, the experience measure gives an indication of the board's capability of collected wisdom both for the own company and in business.

The sample of banks is, after merging the two data sets, 694 banks, selected from EU28 countries. Not all of these banks provide all information in the analysis, but is treated as an unbalanced data set.

Results

The primary objective of regulation is risk, which we have four different measures to test for. We test the two other categories alone and together. That is, for risk we test for efficiency and governance variables separately and all together, although the variables are alterned. Overall conclusions imply that we identify similar relationship between efficiency and risk as previous studies do, but that the corporate governance variables have vague influence on these relationships. Table 2 provide summary statistics over the riks and efficiency variables.

Table 2: Summary statistics of Efficiency (TE) and Risk variables

Variable	Obs	Mean	Std. Dev.	Min	Max
TE2013	349	1.93596	1.281282	1.043015	14.0092
TE2012	491	2.182293	1.973987	1.092572	19.39335
ZSCORE_13	209	98.13233	74.52417	6.039953	387.8123

ZSCORE_12	285	100.3099	133.3069	7.089529	1541.92
DebtEquit~13	349	14.58882	14.94073	.2231405	159.1834
DebtEquit~12	488	17.78111	81.03653	.2185629	1764.517
TOTRegCap~13	252	16.98175	13.12124	2.07	204.6
TOTRegCap~12	285	100.3099	133.3069	7.089529	1541.92
Refinde~r_13	159	.8476101	1.366574	-.38	16.47
Refinde~r_12	174	.7996552	1.319281	-.38	16.47
Re~3years_13	158	.7753165	.6141429	-.09	3.11
Re~3years_12	174	.0707471	8.68424	-113.54	3.11
Re~5years_13	156	.3566667	3.096189	-29.96	2.33
Re~5years_12	172	-.0931977	9.228711	-109.16	33.78
std3yROAA_13	209	.0020298	.0030686	.0001795	.0237342
std3yROAA_12	285	.0022245	.0035916	.0000357	.0413827
GrowthofG~13	349	1.053238	16.32907	-87.39	78.74
GrowthofG~12	489	5.53683	39.44325	-94.74	658.62

The regression results are preliminary in the sense that they are not considering all our risk or corporate governance variables, does not controll for bank characteristics or country specific variables and does not not consider endogeneity aspects when using regular OLS-regressions. However, as a comment to the latter, we test our dependent variables by lagging indpendent variables for efficiency and risk (governance variables are time invariant).

Banking risk

The overall results concerning banking risk show a link between efficiency and risk and that corporate governance influences are vague but existing (Table 3). The ZSCORE tests the overall risk and we find that, according to our initial analyses, there is a negative relation ZSCORE. Because a higher efficiency score means lower efficiency and a higher ZSCORE means lower risk, these results imply that banks with higher efficiency have lower risk, which both makes sense and is consistent with previous studies of both risk and efficiency. Controlling these results for capital measures just increases the relationship between efficiency and the bank's overall risk. DE has a negative impact on the ZSCORE, consequently increasing risk when DE increases. However, the adjusted R2 is just 17.5%. There is a higher determination (21%) from efficiency to the standard deviation of returns, generating a result of less varyating return from more efficient banks.

The other risk measures have no relationship from efficiency. The capital ratios are not affected by efficiency, which may be partly affected by capital controls or because a mixture of theoretical reasons for holding excess capial (i.e. some high risk bank require more capital and less efficient banks are so because of higher capital). The Beta is not either affected by efficiency.

Does governance matter? Including the governance variables to the measurement imply that the bank's overall risk (ZSCORE) is only affected (negative sign) by independence. The negative sign imply that a higher independence measure (indicating lower degree of independence) result in lower ZSCORE. In other words, a more independent board leads to

lower risk. The capital ratios and standard deviation of returns do not seem to have any effect from the governance factors either, but beta is influenced by both board size and independence.

Table 3: OLS results of governance, risk and efficiency; risk as dependent variable

	(1) logZSCORE_13 B	(2) logZSCORE_13 B	(3) std3yROAA_13 b	(4) std3yROAA_13 b	(5) DebtEquity_13 b	(6) DebtEquity_13 b	(7) Refindex1Beta1year_13 b	(8) Refindex1Beta1year_13 b
TE_12	-0.195***	-0.137**	0.001***	0.001***	-0.314	-0.446	-0.127	-0.132
Boardsize		0.009		-0.000		0.005		0.020
AverageBoardAGE		-0.006		-0.000		-0.062		0.012
genderDeviation		0.607		0.001		2.194		0.739
INDEPENDENCE		-1.176**		0.002		5.166		0.344
Constant	4.704***	4.710***	-0.001	0.003	15.269***	17.239*	1.110***	-0.104
R-sqr	0.096	0.119	0.265	0.240	0.001	0.006	0.010	0.026
AdjR-sqr	0.092	0.085	0.261	0.210	-0.002	-0.015	0.004	-0.019
dfres	207	129	207	129	346	238	157	108
p	0.000	0.005	0.000	0.000	0.634	0.931	0.208	0.717
f	22.091	3.491	74.622	8.130	0.227	0.267	1.601	0.577

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Banking efficiency

Considering efficiency as a dependent variable, we find the similar relationship between the lagged efficiency variable and the bank overall risk, a negative sign of ZSCORE to Efficiency, implying a lower efficiency when risk is lower. Consideration of the DE ratio increases this relationship. However, the standard deviation of return as a separate measure (included as part of the ZSCORE) is influenced more clearly by efficiency. That is, a lower efficiency score (higher efficiency) yields a lower standard deviation of return.

Does governance matter? Controlling the efficiency results by governance factors we find no relationship from any of these. Furthermore, the risk measure relevance dissappears from previous generated results with risk as independent variable for efficiency.

Table 4: OLS results of governance, risk and efficiency; efficiency as dependent variable.

	(1) TE_13 b	(2) TE_13 b	(3) TE_13 b	(4) TE_13 b	(5) TE_13 b	(6) TE_13 b	(7) TE_13 b	(8) TE_13 b
logZSCORE_12	-0.367**	-0.220						
Boardsize		0.002		0.008		0.007		-0.025
AverageBoardAGE		-0.027		-0.021		-0.014		-0.005
genderDeviation		1.331		0.985		0.929		0.577
INDEPENDENCE		0.965		0.676		0.229		1.019
std3yROAA_12			144.839***	180.084***				
DebtEquity_12					0.001	0.001		
Refindex1Beta1year_12							-0.080	-0.055
Constant	3.373***	3.798**	1.520***	2.250*	1.905***	2.267**	2.011***	2.295*
R-sqr	0.052	0.041	0.173	0.125	0.005	0.018	0.009	0.052
AdjR-sqr	0.047	0.004	0.168	0.091	0.002	-0.003	0.003	0.008
dfres	195	129	195	129	343	235	157	108
p	0.001	0.355	0.000	0.004	0.196	0.522	0.226	0.319
f	10.718	1.116	40.711	3.693	1.679	0.841	1.476	1.190

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Banking Governance

The final result section emphasise the governance variables, as they may be influenced by efficiency and risk. (Table 4 displays the results for ZSCORE and standard deviation of return as risk variables). Efficiency and ZSCORE plays only a small, but significant role for independence when run separately in regressions, but not together. The other corporate governance variables are unexplained by efficiency and risk measures, although independence, board size and board age is influenced by bank size.

Table 4: OLS results of governance, risk and efficiency; Corporate Governance as dependent variable

	(1) Boardsize b	(2) Boardsize b	(3) AverageBoardAGE b	(4) AverageBoardAGE b	(5) genderDeviation b	(6) genderDeviation b	(7) INDEPENDENCE b	(8) INDEPENDENCE b
TE_12	-0.078	0.148	0.085	0.073	0.004	0.002	0.005	0.005
logZSCORE_12	-0.204		-0.492		0.010		-0.020	
std3yROAA_12		-219.031		38.785		0.926		1.517
Constant	8.433**	7.595***	61.814***	59.689***	0.324***	0.370***	0.132*	0.041**
R-sqr	0.001	0.008	0.004	0.001	0.008	0.003	0.017	0.007
AdjR-sqr	-0.007	0.000	-0.008	-0.010	0.001	-0.004	0.010	-0.000
dfres	282	282	175	175	282	282	282	282
p	0.924	0.346	0.724	0.904	0.304	0.617	0.096	0.371
f	0.079	1.067	0.323	0.101	1.196	0.484	2.367	0.995

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusions

This paper aim at finding explanation from corporate governance from related to risk and efficiency in banks. We manage to generate results consistant with previous relationship between efficiency and risk and vice versa. Although our results are preliminary, we can conclude that the corporate governance variables under consideration do not explain much of risk or banking efficiency. From our results, there is a small relationship to riskiness only from board size and board independence.

As we find that corporate governance variables reduces the influence on risk from efficiency, we observe that there is room for more attention to governance variables and, to some extent, even pay attention to these variables rather than on efficiency.

So on the one hand, the literature is not to be blamed for not considering more corporate governance variables for either efficiency or for risk management. The measures deviate from the upcoming regulatory efforts, whereby there is still a gap between the regulation and the research frontier. If the current research is on the edge and have possibilities to lead proofs between risk efficiency and corporate governance properly, then the regulatory effort will lead to less efficient banks only because the riskiness of banks is related to different measures. On the other hand, there is room for more studies of both these results and for consideration of additional corporate governance variables to avoid expensive regulation and, in the long run, standardised solutions to problems that will not result in any impact. However, as there is no significant impact from the corporate governance to efficiency, there may be room for arguing the opposite, that the regulatory efforts on corporate governance have low impact on banking efficiency and therefore can be regulated without any significant costs to the banks.

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