Risk governance and customer trust in the banks of OECD

Muddassar Malik [a] and Peter Green [b]

Presenter: Muddassar Malik

11th Annual Conference on Risk Governance
Risk Governance in Transformation
19./20. October 2023
University of Siegen, Siegen, Germany

[a] Doctoral Researcher of D.Sc. Economics and Business Administration, University of Turku, Finland
[b] Professor of Accountancy, Queensland University of Technology, Brisbane, Australia

AACSB ACCREDITED

UNIVERSITY OF TURKU

Thursday, 19.10.2023

Outlines

1. Abstract Highlights

2. Introduction

3. Literature review and hypothesis development

4. Research Design

5. Results

6. Conclusion

UNIVERSITY OF TURKU

Abstract Highlights

- **Objective**: Investigate the relationship between risk governance and customer trust in banks.
- **Data**: 17,242 bank-director years, 1,287 distinct banks, 29 OECD countries.
- **Methodology**: PCA & regression models.
- **Key Findings**:
  - Significant positive correlation between risk governance and total customer deposits.
  - Importance of robust risk governance in fostering trust.
- **Implications**: Enhancing risk governance can increase customer trust and deposits, contributing to bank stability and success.

UNIVERSITY OF TURKU

2. Introduction (1/2)

Introduction & Research Objective

- **Banking's Role**: Catalyst for economic growth; trust tested by financial crises.
- **Risk Governance**: Key to managing risks & building trust.
- **Objective**: Investigate risk governance & trust in OECD banks (2001-2019, 29 countries, 17,242 bank-director years).
- **Research Question**: How does risk governance impact trust in OECD public commercial banks?

UNIVERSITY OF TURKU

1. Introduction (2/2)

Theoretical Foundation & Paper Structure

- **Trust Theory**: Trust is a function of competence, benevolence, and integrity.
- **Study's Contribution**: Empirical evidence on risk governance enhancing bank's perceived competence & integrity.
- **Paper Flow**: Literature review, research design, results, conclusion.

2. Literature review and hypothesis development (1/2)
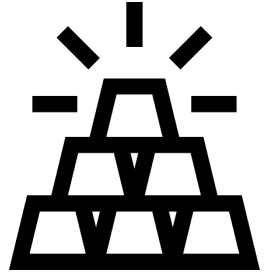
Trust Theory & Risk Governance

- **Trust Theory (Mayer et al., 1995)**:
  - Trust = Perceived competence + benevolence + integrity.
  - In banking:
    - Competence: Ability to manage risks.
    - Benevolence: Acting in customers' best interests.
    - Integrity: Adherence to ethics & regulations.
- **Risk Governance**:
  - Reflects bank's competence & integrity.
  - Structures & processes to manage risks.
 - Associated with higher customer trust.

UNIVERSITY
OF TURKU

2. Literature review and hypothesis development (2/2)
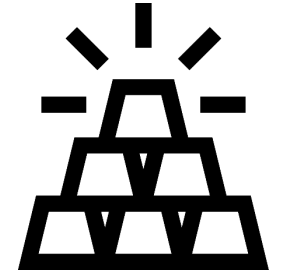
Hypothesis & Research Focus

- **Research Question**: Is there a relationship between risk governance and customer trust in OECD banks?
- **Hypothesis**: Risk governance positively influences customer trust in OECD banks.
- **Risk Governance Index (RGI)**:
  - Components: RC, CRO, CFO, BI, TITLE, SENIOR.
  - Signifies commitment to risk management & customer well-being.
- **Contextual Factors**: Regulatory environment, economic conditions, cultural norms.

UNIVERSITY OF TURKU

3. Research Design (1/4)
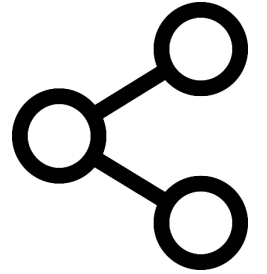
Research Design & Data Collection

- **Dataset Overview**:
  - 17,242 bank-director years (2001-2019).
  - 1287 unique banks across 29 OECD countries.
  - 17,026 director-year observations.
- **Data Sources**:
  - Financial data: BankFocus database.
  - Directors' info: BoardEx database.
- **Variables**:
  - Dependent: TCD, DD, SD.
  - Independent: RGI (RC, CRO, CFO, TITLE, SENIOR, BI).
  - Control: CEOAD, BS, SIZE.

UNIVERSITY OF TURKU

3. Research Design (2/4)
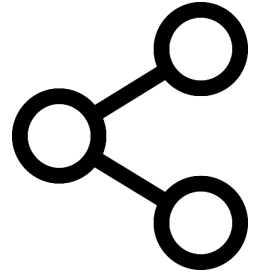
Research Methodology

- **Risk Governance Index (RGI)**:
  - Comprehensive view of risk governance.
  - Factors: RC, CRO, CFO, TITLE, SENIOR, BI.
- **Econometric Models**:
  - *Model 1:* $LNTCD_{bt} = \beta_0 + \beta_1 * RGI_{bt} + \beta_2 * CEOAD_{bt} + \beta_3 * BS_{bt} + \beta_4 * SIZE_{bt} + \alpha_c + \delta_t + \varepsilon_{bt}$
  - Sensitivity Models: *Model 2 ($LNDD_{bt}$) & Model 3 ($LNSD_{bt}$).*
- **Bootstrap Technique**:
  - 100 replications for robustness.
  - Applied to main and sensitivity models.

UNIVERSITY
OF TURKU

3. Research Design (3/4)

| Research Variables	Measurements
Dependent Variables:	
TCD	Total Customer Deposits (in 1000 EUR)
DD	Demand Deposits (in 1000 EUR)
SD	Demand Deposits (in 1000 EUR)
Independent Variables:	
RGI	Risk governance index = RC, CRO, CFO, TITLE, AGE, BI
RC	if bank has Risk Committee (1) and if not (0)
CRO	if bank has Chief Risk Officer (1) and if not (0)
CFO	if bank has Chief Financial Officer (1) and if not (0)
TITLE	if director holds PhD degree (1) and if not (0)
SENIOR	if director's age is between 66-75 (1) and if not (0)
BI	if Director is independent (1) and if not (0)
Control Variables:	
CEOAD	if Chief Executive Officer has an additional position (1) and if not (0)
BS	Total number of directors on board
SIZE	Total Assets (in 1000 EUR)
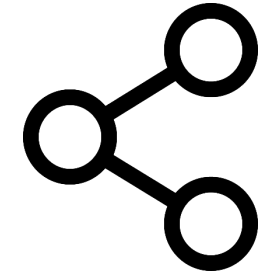
Table 1 – Variables' description

UNIVERSITY OF TURKU
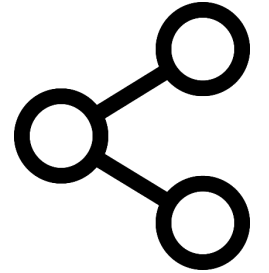
3. Research Design (4/4)

Table 2 – Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LNTCD	17,201	17.8478	2.7048	1.5638	28.0042
LNDD	14,551	16.4917	2.5946	0.8377	27.1873
LNSD	6,722	15.4204	2.8047	9.0510	24.4808
RC	17,242	0.1872	0.3901	0	1
CRO	17,242	0.0063	0.0789	0	1
CFO	17,242	0.0271	0.1623	0	1
TITLE	17,242	0.1320	0.3385	0	1
SENIOR	17,242	0.2952	0.4561	0	1
BI	17,242	0.5027	0.5000	0	1
CEOAD	17,242	0.0740	0.2618	0	1
BS	17,241	15.4013	5.8182	5	34
SIZE	17,201	9,080,000 €	70,000,000 €	0 €	1,680,000,000 €

size (in million euro)

UNIVERSITY OF TURKU

5. Results (1/7)

Descriptive Analysis & Correlation Analysis

Descriptive Analysis - Key Insights
- **LNTCD** (Natural log of Total Customer Deposits): Mean = 17.85
  - Indicates significant customer trust in sampled banks.
- **Risk Governance Elements**:
  - **RC**: 18.72% of bank-director years.
  - **CRO**: 0.63% of bank-director years.
  - **CFO**: 2.71% of bank-director years.
- **Director Characteristics**:
  - **Ph.D. Holders**: 13.20%
  - **SENIOR (Aged 66-75)**: 29.52%
  - **Independent Directors (BI)**: 50.27%

Correlation Analysis
- Strong positive correlations between **TCD** and risk governance characteristics.
- Larger banks tend to have higher levels of customer deposits.

UNIVERSITY OF TURKU
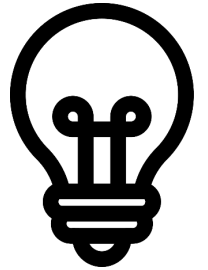
5. Results (2/7)

Table V Correlation

	LNTCD	LNDD	LNSD	RC	CRO	CFO
LNTCD	1					
LNDD	0.95***	1				
LNSD	0.83***	0.73***	1			
RC	0.07***	0.10***	0.07***	1		
CRO	0.02	0.02*	0.02	-0.04**	1	
CFO	0.02	0.03**	0.04**	-0.03**	0.01	1
TITLE	0.07***	0.09***	0.04***	0.07***	0.05***	0.05***
SENIOR	0.14***	0.14***	0.11***	-0.09***	0.05***	0.02
BI	-0.22***	-0.22***	-0.09***	0.10***	-0.07***	0.05***
CEOAD	-0.04**	-0.05***	0.02	-0.10***	-0.02	-0.04***
BS	0.32***	0.45***	0.27***	0.05***	0.08***	0.05***
SIZE	0.62***	0.44***	0.49***	-0.09***	0.01	-0.03*

	TITLE	SENIOR	BI	CEOAD	BS	SIZE
TITLE	1					
SENIOR	-0.05***	1				
BI	0.08***	-0.13***	1			
CEOAD	0.01	-0.06***	-0.09***	1		
BS	0.12***	0.06***	-0.16***	-0.03*	1	
SIZE	-0.08***	0.12***	-0.12***	-0.01	-0.15***	1

The asterisks denote the significance level of the correlation, with * indicating $p<0.05$, ** indicating $p<0.01$, and *** indicating $p<0.001$.

UNIVERSITY OF TURKU
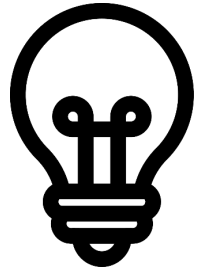
Principal Component Analysis & Regression Analysis
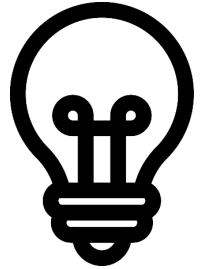
Principal Component Analysis (PCA) – Overview

- **Comp1** explains 22% of the total variance.
- **Comp1** chosen for regression analysis as a representative variable for risk governance.

Regression Analysis - Main Findings

- **RGI (Risk Governance Index)**: Positive and significant relationship with **TCD**.
- **CEOAD** and **BS**: Positive coefficients indicate increased customer trust.
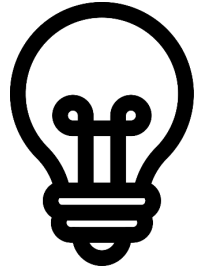- Findings consistent in bootstrapped model.

UNIVERSITY OF TURKU

5. Results (4/7)

Table VI-a PCA Eigenvalues

Component	Eigenvalue	Difference	Proportion	Cumulative
COMP1	1.30237	0.261364	0.2171	0.2171
COMP2	1.04101	0.0312363	0.1735	0.3906
COMP3	1.00977	0.0522224	0.1683	0.5589
COMP4	0.957551	0.0262926	0.1596	0.7185
COMP5	0.931258	0.173224	0.1552	0.8737
COMP6	0.758034	.	0.1263	1

Table VI-c PCA Scores

Scoring coefficients
sum of squares(column-loading) = 1

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6
RC_STD	0.5937	0.0354	-0.1159	0.4811	-0.0329	0.6327
CRO_STD	-0.2403	-0.4971	0.4268	0.5907	-0.3811	-0.1375
CFO_STD	-0.0379	0.5694	0.7345	-0.1555	-0.2255	0.2447
TITLE_STD	0.2531	-0.4829	0.4974	-0.238	0.6244	0.0941
SENIOR_STD	-0.3499	0.3836	0.0261	0.5577	0.6423	-0.079
BI_STD	0.6339	0.217	0.13	0.1669	-0.0218	-0.7112

UNIVERSITY OF TURKU

5. Results (5/7)

Table VII Regression (main results)

VARIABLES	(1) TCD	(2) TCD-Bootstrapped
RGI	0.0982**	0.0982***
	(0.0390)	(0.0377)
CEOAD	0.2346***	0.2346***
	(0.0750)	(0.0762)
BS	0.0961***	0.0961***
	(0.0244)	(0.0308)
SIZE	0.0000***	0.0000
	(0.0000)	(0.0000)
CONSTANT	16.3300***	16.3300***
	(0.3767)	(0.5247)
Observations	17,200	17,200
Adjusted R-squared	0.8538	0.8538
Country FE	YES	YES
Year FE	YES	YES
Clusters	Bank	Bank

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

UNIVERSITY OF TURKU
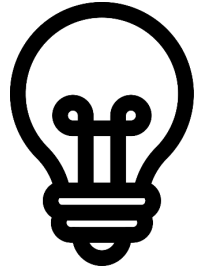
5. Results (6/7)

Sensitivity Analysis

Sensitivity Analysis - Robustness Check

- Positive relationship between risk governance and customer trust consistent across:
    - **Demand Deposits (DD)**
    - **Savings Deposits (SD)**

UNIVERSITY OF TURKU
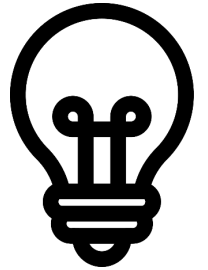
5. Results (7/7)

Table VIII Sensitivity Analysis

VARIABLES	(1) DD	(2) DD-Bootstrapped	(3) SD	(4) SD-Bootstrapped
RGI	0.1100**	0.1100**	0.1505*	0.1505**
	(0.0466)	(0.0463)	(0.0757)	(0.0763)
CEOAD	0.2174**	0.2174***	0.4123**	0.4123***
	(0.0893)	(0.0828)	(0.1598)	(0.1556)
BS	0.1024***	0.1024***	0.0420	0.0420
	(0.0293)	(0.0397)	(0.1133)	(0.1010)
SIZE	0.0000***	0.0000	0.0000*	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
CONSTANT	14.8768***	14.8768***	14.5149***	14.5149***
	(0.4637)	(0.6120)	(1.7046)	(1.5427)
Observations	14,550	14,550	6,722	6,722
Adjusted R-squared	0.8078	0.8078	0.6503	0.6503
Country FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Clusters	Bank	Bank	Bank	Bank

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

UNIVERSITY OF TURKU

5. Conclusion (1/2)

Key Findings and Implications

Conclusion: Risk Governance & Customer Trust

1.Overview:
   1. Study span: 2001-2019
   2. Data: 17,242 bank-director years, 1,287 banks, 29 countries.
2.Key Findings:
   1. Positive association between risk governance and customer trust.
   2. Effective risk governance fosters greater customer trust.
   3. Regression and PCA confirm the positive relationship.
3.Implications:
   1. Trust comprises competence, integrity, and benevolence.
   2. Strong risk governance enhances bank's competence and integrity.
   3. Banks with robust risk governance gain customer trust and confidence.

UNIVERSITY OF TURKU

5. Conclusion (2/2)

Future Directions and Final Thoughts

Looking Ahead: Future Research & Study Limitations

1.Future Research:
1. Explore how specific risk governance practices impact benevolence.
2. Investigate the nuanced connections between risk governance, trust components, and banking outcomes.
3. Employ experimental or longitudinal designs for causality.

2.Study Limitations:
1. Observational nature restricts definitive causality establishment.
2. Emphasize the need for caution in interpreting causality.

3.Final Thoughts:
1. Trust remains a cornerstone in banking.
2. Effective risk governance is pivotal for long-term success and stability.
3. Continued research essential to strengthen the banking sector.

UNIVERSITY OF TURKU