

**“IMPACT OF RISK MANAGEMENT ON
THE FINANCIAL PERFORMANCE OF BANKS IN INDIA” (A STUDY
ON SELECTED BANKS)**

Dr. A V N Murthy¹, Professor, School of Business, Koneru Lakshmaiah Education Foundation (KLEF), Deemed to be University, Vaddeswaram, Green fields, Guntur, Andhra Pradesh, India-522302.

Dr. N S V N RAJU², Assistant Professor, School of Business, Koneru Lakshmaiah Education Foundation (KLEF), Deemed to be University, Vaddeswaram, Green fields, Guntur, Andhra Pradesh, India -522302.

DOI : 10.48047/IJFANS/11/S6/022

ABSTRACT

Today the banking sector is facing many challenges and significant losses. The Reserve Bank of India has been forced to adopt a number of regulations to mitigate bank losses. Providing loans to low-income people without adequate collateral while still helping society is Banks main problem. As a result, risk management in Banks has gained significant importance. The primary goal of the researcher was to examine the various risk management techniques employed by Banks in India. The Study investigates the connection between risk management techniques and risk factors. As a sampling, six MFIs with Telangana state locations were taken which are in the control of The Reserve Bank of India. The researcher found that there is a positive correlation between effective risk management practices and the financial performance of Banks.

Keywords: Bank, Asset financing risk, credit rating, risk management, risk management practices.

Introduction:

Banks contribute significantly to the financial ecosystem by complementing traditional banking services, extending credit to underserved segments, and fostering economic growth. Their flexibility, specialized offerings, and focus on customer needs make them an important part of the financial landscape in many countries to become more structured and regulated, leading to the establishment of modern banking systems. In today's world, the banking industry encompasses a wider range of financial institutions, including commercial banks, investment banks, credit unions, and online banks. These institutions offer a variety of services, such as deposit accounts, loans, credit cards, investment and wealth management, foreign exchange, and payment processing. Banks act as custodians of deposits, allowing individuals and businesses to safely store their money.

The banking industry is subject to extensive regulation and oversight by governmental authorities to ensure financial stability, protect consumer interests, and prevent illicit activities like money laundering and fraud. Central banks, regulatory agencies, and international organizations play a crucial role in setting standards, enforcing regulations, and supervising banks to maintain the integrity and soundness of the banking system. In recent years, the banking industry has faced various challenges, including technological disruptions, changing customer expectations, and increased competition from non-traditional financial service providers, often referred to as fintech companies.

Risk management:

Risk management involves the systematic identification, assessment, and mitigation of risks to minimize their potential negative impact. It aims to increase the organization's ability to anticipate and respond to risk effectively, thereby enhancing its resilience and maximizing opportunities. By implementing risk management processes, organizations can make informed decisions, develop appropriate risk mitigation strategies, allocate resources

effectively, and ensure the overall sustainability and success of the business.

It is important for organizations to establish a risk management framework, define risk appetite, and continuously monitor and review risks to maintain proactive risk management practices. Risk is the possibility of experiencing harm, loss, or undesirable outcomes. It refers to the uncertainty and potential negative consequences associated with a particular action, decision, event, or situation. In various contexts, such as finance, business, and everyday life, risk is an inherent part. By understanding and effectively managing risk, individuals and organizations can make informed decisions, protect against potential harm or losses, and seize opportunities for growth and innovation.

Review of Literature

Srinivas K. T. (2013) is on identifying assets that fail to perform at Indian commercial Banks. This article identifies the different general causes that result in advances or assets becoming non-performing assets (NPA) and offers appropriate solutions to the issue at hand. Sikdar and Makkad's (2013) research sheds light on how NPAs fit into the risk frameworks of a few Indian commercial Banks and attempts to provide ways to assess credit risk based on current Bank NPA levels. Research further reveals important actions and processes used by important Indian commercial Banks in the public and private sectors to recover loans and advances that fall under the NPA category. According to a 2011 study by Hosmani and Hudagi, "Unearthing the Global Epidemic of Non Performance Accounts in Respect of the Banking Sector in India is a descriptive and empirical study that examines the size and trends of Private Service Bank in India. It reveals a minor improvement in asset quality, as evidenced by a drop in the diversified NPA percentage. Kumar and Sanjeev (2014) used secondary data from Indian old private sector Banks over the years 2007 to 2012 to apply the capital sufficiency, assets quality, management, earning, liquidity, systems, and controls (CAMELS) model. According to Kumar and Sanjeev (2016), the Reserve Bank of India recommended two supervisory rating models for Indian financial institutions: CAMELS and capital adequacy, assets quality, compliance, systems, and controls. Using a review of the literature and empirical research, each CAMELS system parameter was analysed in the study. Asgharian et al. (2018) in their paper investigated

the impact of EPU shock on US and UK stock market volatility. The findings demonstrated presence of EPU shock on US and UK stock market and also positive correlation between stock market volatility and EPU. Debata & Mahakud (2018) in their paper examined the relationship between economic policy uncertainty and stock market liquidity in an emerging stock market by applying vector autoregressive Granger-causality tests, impulse response functions and variance decomposition analysis. A moderate impact on the liquidity of stock market during normal conditions was found though there is a significant and greater influence during the presence of financial crisis. Benzid & Chebbi (2020) in their study applied GARCH(1,1) model to investigate the shock of COVID-19 on the US exchange rate volatility. It was found that an augmentation in the number of cases and the deaths (both in logs) in the US bears a positive shock on the USD/EUR, USD/Yuan. **Research Methodology:**

Research methodology is a way to find out the result of a given problem on a specific matter or that is also referred as research problem. In methodology, researcher

uses different criteria for solving searching the given research problem.

RESEARCH OBJECTIVES

1. Identify various types of risk arising out to measure the financial performances
2. To determine sources of risk and their cause
3. To know the impact of risk management on the financial performances of BANK
4. To determine the significant of impact on the financial performances on BANK

RESEARCH GAP

After making extensive review of literature, it is observed that there is lot of research work done on different aspects of financial performance of BANK. But very little studies have been undertaken till now towards impact of risk management connected to financial performance of banking sectors taking either credit recovery or credit control or determination of NPA'S.

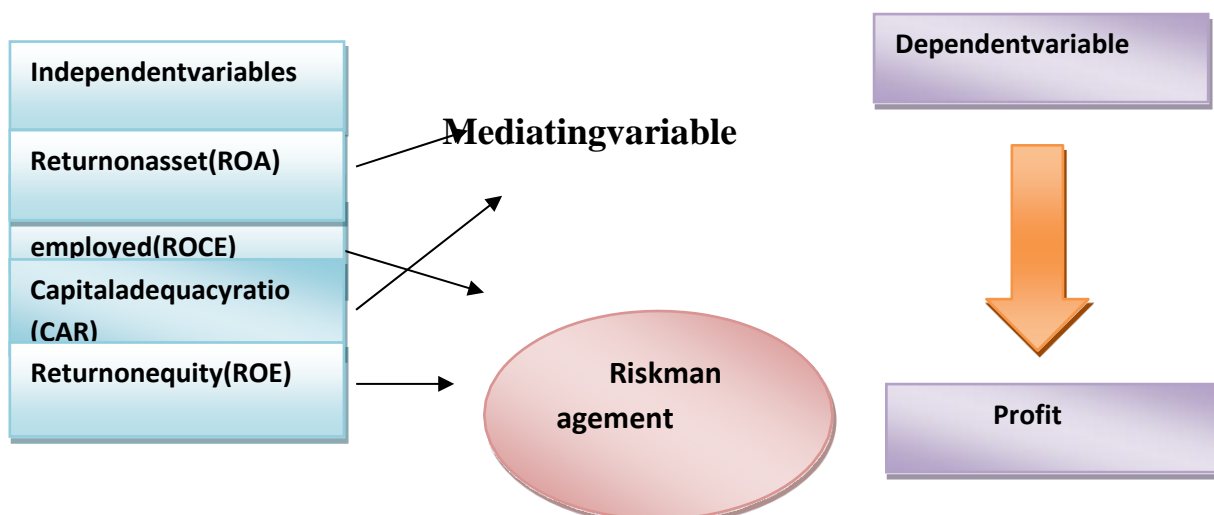
SAMPLE SIZE

The last 5 years data collected from money control, pro wessiq reports considered to be the sample size for testing data calculating the values arrives at the level of significant.

SOURCES OF DATA

The study is based on mainly on secondary sources of data relating to the study was obtained from the money control, pro wessiq goggle scholars, research journals and website, were also referred for designing methodology for the study.

CONCEPTUAL FRAMEWORK



TEST OF HYPOTHESIS

H₀: fixed effect model is not applicable then random effect model is insignificant.

H₁: Fixed effect model is applicable then random effect model is insignificant.

H₀: there is a significant impact of ROCE, ROE, ROA, CAR on profit.

H₂: there is no significant impact of ROCE, ROE, ROA, CAR on profit.

SIGNIFICANCE OF THE STUDY

This study deals with the impact of risk management on the financial performance of banking financial company.

STATISTICAL TOOL AND SOFTWARE USED FOR TESTING THE DATA

R program and MS-EXCEL were used to test the data.

LIMITATION OF THE STUDY

Only 6 years data were taken due to time constraints and availability of the data. This data is not enough to analyze the impact of risk management on the financial performance of Banks.

Data Analysis:

Ratios of the banks

Year	Company name	Dependent variable			Independent Variables	
		profit	ROCE	ROE	ROA	CAR
2014	HDFC Bank	17.3	3.18	19.5	1.72	16.07
2015	HDFC Bank	17.8	3.11	16.47	1.73	16.79
2016	HDFC Bank	17.3	3.17	16.91	1.73	15.53
2017	HDFC Bank	17.8	3.18	16.26	1.68	14.55
2018	HDFC Bank	18.3	3.2	16.45	1.64	14.82
2019	HDFC Bank	18.1	3.34	14.12	1.69	17.11
2020	HDFC Bank	19	3.33	15.35	1.71	18.52
2021	HDFC Bank	21.3	3.42	15.27	1.78	18.79
2022	HDFC Bank	23.5	3.22	15.39	1.78	18.9
2023	HDFC Bank	22.9	0.66	13.21	0.54	19.26

Year	Companyname	Dependentvariable		Independent variable		
		profit	ROCE	ROE	ROA	CAR
2014	Axis Bank	16.3	3.1	16.26	1.62	16.07
2015	Axis Bank	16.8	2.99	16.46	1.59	15.09
2016	Axis Bank	16.3	3.15	15.46	1.56	15.29
2017	Axis Bank	6.5	3.05	6.59	0.61	14.95
2018	Axis Bank	0.5	2.34	0.43	0.03	16.57
2019	Axis Bank	6.9	2.47	7.01	0.58	15.84
2020	Axis Bank	2.1	2.68	1.91	0.17	17.53
2021	Axis Bank	8.7	2.7	6.48	0.66	19.12
2022	Axis Bank	15.8	2.2	11.3	1.1	18.54
2023	Axis Bank	9.4	2.54	7.66	0.72	17.64

Year	Companyname	Dependentvariable		Independent variable		
		Profit	ROCE	ROE	ROA	CAR
2014	SBIBank	7	1.89	9.2	0.6	12.96
2015	SBIBank	7.5	2.06	10.2	0.63	12
2016	SBIBank	5.2	1.96	6.89	0.42	13.12
2017	SBIBank	5	1.99	6.69	0.38	13.11
2018	SBIBank	-2.4	1.81	-3.37	-0.18	12.6
2019	SBIBank	0.3	0	0.39	0.02	12.72
2020	SBIBank	4.8	1.79	6.95	0.36	13.13
2021	SBIBank	6.6	1.64	8.86	0.45	13.74
2022	SBIBank	10	1.42	12.33	0.63	13.85
2023	SBIBank	13.6	1.59	16.75	0.91	14.68

Year	Companyname	Dependentvariable		Independentvariable		
		Profit	ROCE	ROE	ROA	CAR
2014	kotakmahindraBank	14.8	3.05	12.23	1.71	18.83
2015	kotakmahindraBank	15.7	2.96	13.19	1.76	17.17
2016	kotakmahindraBank	11	2.2	8.72	1.08	16.34
2017	kotakmahindraBank	16.1	2.9	12.35	1.58	16.77
2018	kotakmahindraBank	17.2	2.8	10.89	1.54	18.22
2019	kotakmahindraBank	17	2.77	11.47	1.55	17.45
2020	kotakmahindraBank	18.4	2.86	12.25	1.65	17.89
2021	kotakmahindraBank	21.8	3.32	11.01	1.81	22.26
2022	kotakmahindraBank	25.3	2.93	11.9	1.99	22.69
2023	kotakmahindraBank	26.4	3.15	13.17	2.23	21.8

Dependentvariable Independent variable

Year	Companyname	Profit	ROCE	ROE	ROA	CAR
2014	YesBank	13.8	2.61	22.71	1.48	14.4
2015	YesBank	14.7	2.51	17.16	1.47	15.6
2016	YesBank	15.6	2.73	18.41	1.53	16.5
2017	YesBank	16.2	2.86	15.09	1.54	17
2018	YesBank	16.6	2.57	16.4	1.35	18.4
2019	YesBank	5	2.24	6.39	0.45	16.5
2020	YesBank	-38.1	4.95	-75.56	-6.36	8.5
2021	YesBank	-14.2	1.91	-10.42	-1.26	17.5
2022	YesBank	4.8	0.96	3.15	0.33	17.4
2023	YesBank	2.7	0.94	1.76	0.2	17.9

Year	Companyname	Dependentvariable		Independentvariable		
		Profit	ROCE	ROE	ROA	CAR
2014	ICICIBankLTD	18	2.96	13.39	1.64	17.7
2015	ICICIBankLTD	18.2	3.2	13.89	1.72	17.02
2016	ICICIBankLTD	14.3	3.47	11.19	1.34	16.64
2017	ICICIBankLTD	13.3	3.59	10.11	1.26	17.39
2018	ICICIBankLTD	9.3	2.91	6.63	0.77	18.42
2019	ICICIBankLTD	4.3	2.52	3.19	0.34	16.89
2020	ICICIBankLTD	8.7	2.67	6.99	0.72	16.11
2021	ICICIBankLTD	16.5	3.1	11.21	1.31	19.12
2022	ICICIBankLTD	22.2	2.92	13.94	1.65	19.16
2023	ICICIBankLTD	24.7	3.27	15.89	2.01	18.34

AnalysisandInterpretationofResults

1. ROCE:

Estimate:0.162565 Std. Errors:0.054224

t-value:2.9980Pr(>|t|):0.004372

Interpretation: The estimate for ROCE is 0.162565. The standard errorrepresents the uncertainty associated with this estimate (0.054224). The t-valueindicates how significant the estimate is, with a higher absolute t-value suggestinggreater significance. In this case, the t-value is 2.9980. The Pr(>|t|) value representssthep-valueassociatedwiththet-value,whichindicatestheprobabilityofobservingsuch a t-value by chance. In this case, the p-value is 0.004372, which is below thecommonly used threshold of 0.05.The double asterisks(**) suggest that the estimateisstatisticallysignificant at the0.01 significancelevel.

2. ROE:

Estimate:0.098447 Std. Error:0.186395

t-value:0.5282 Pr(>|t|):0.599925

Interpretation: The estimate for ROE is 0.098447. However, the t-value

is only 0.5282, indicating that the estimate is not statistically significant. The $\Pr(>|t|)$ value of 0.599925 is above the 0.05 threshold, suggesting that the estimate is not significantly different from zero.

3. ROA:

Estimate: 0.824116 **Std. Error:** 0.204385

t-value: 4.0322 **Pr(>|t|):** 0.000206

Interpretation: The estimate for ROA is 0.824116. The t-value of 4.0322 indicates that the estimate is statistically significant. The $\Pr(>|t|)$ value of 0.000206 is well below 0.05, indicating high significance. The triple asterisks (***) denote strong statistical significance at the 0.001 level.

4. CAR:

Estimate: 0.021171 **Std. Error:** 0.068956

t-value: 0.3070 **Pr(>|t|):** 0.760208

Interpretation: The estimate for CAR is 0.021171. The t-value of 0.3070 suggests that the estimate is not statistically significant. The $\Pr(>|t|)$ value of 0.760208 is well above the 0.05 threshold, indicating that the estimate is not significantly different from zero. In summary, based on the provided results, only the variables ROCE and ROA appear to have statistically significant estimates, while ROE and CAR do not.

1. Intercept:

Estimate: -7.6510e17 **Std. Error:** 5.4871e-02

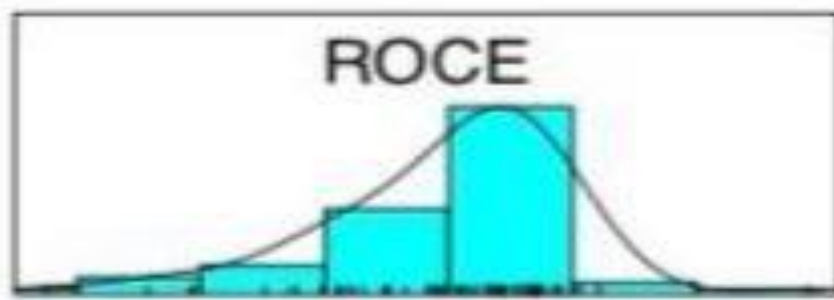
Z-value: 0.0000 **Pr(>|Z|):** 1.0000000

Interpretation: The intercept term in the model does not appear to have a statistically significant estimate. The Z-value is 0.0000, indicating that the estimate is not significantly different from zero. The $\Pr(>|Z|)$ value of 1.0000000 confirms this, as it is well above the commonly used threshold of 0.05.

2. ROCE:

Estimate: 1.1418e-01 **Std. Error:** 5.2198e-02

Z-value: 2.1875 **Pr(>|Z|):** 0.028708



Interpretation: The estimate for ROCE is 1.1418e-01. The Z-value of 2.1875 suggests that the estimate is statistically significant. The $\Pr(>|Z|)$ value of 0.0287084 is below 0.05, indicating significance at the

0.05 level . The single asterisk (*) denotes statistical significance at the 0.05 level.

3. ROE:

Estimate: 9.86302 **Std. Error:** 1.8774e-01

Z-value: 0.5254 **Pr(>|Z|):** 0.5993195



Interpretation: The estimate for ROE is 9.8637e-02. However, the Z-value is 0.5254, indicating that the estimate is not statistically significant. The Pr(>|Z|) value of 0.5993195 is above the 0.05 threshold, suggesting that the estimate is not significantly different from zero.

4. ROA:

Estimate: 7.80311 **Std. Error:** 2.0336e-01

Z-value: 3.8371 **Pr(>|Z|):** 0.0001245

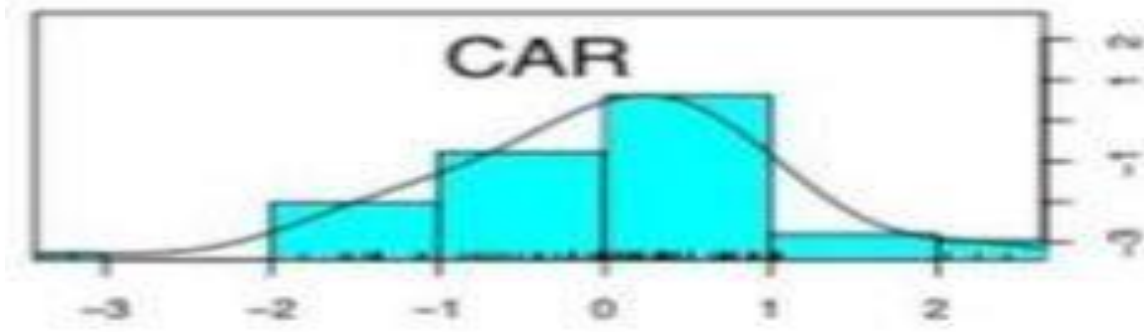


Interpretation: The estimate for ROA is 7.8031e-01. The Z-value of 3.8371 indicates that the estimate is statistically significant. The Pr(>|Z|) value of 0.0001245 is well below 0.05, indicating high significance. The triple asterisks (***) denote strong statistical significance at the 0.001 level.

5. CAR:

Estimate: 1.0186e-01 **Std. Error:** 6.0238e-02

Z-value: 1.6910 **Pr(>|Z|):** 0.0908324



Interpretation: The estimate for CAR is 1.0186×10^{-1} . The Z-value of 1.6910 suggests that the estimate is not statistically significant at the conventional 0.05 level. The $\Pr(>|Z|)$ value of 0.0908324 is slightly above 0.05, indicating marginal significance. The dot (.) denotes marginal statistical significance.

In summary, based on the provided results, the variables ROCE and ROA have statistically significant estimates.

Hausman Test

`data:profit~ROCE+ ROE+ ROA+CAR`

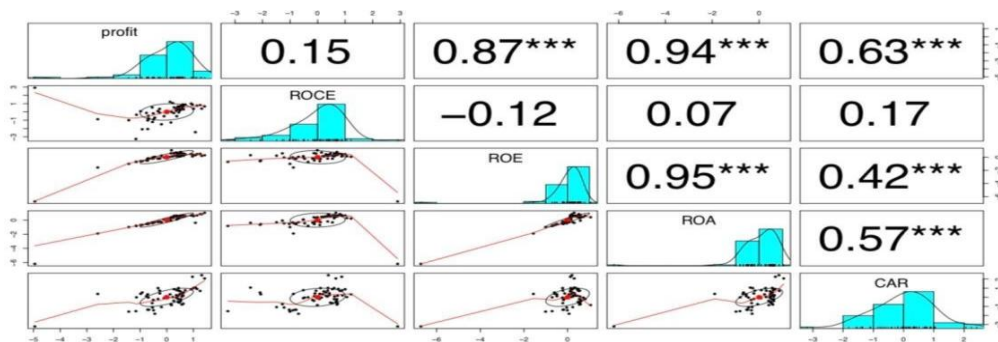
`chisq= 0.80708, df=4, p-value = 0.9375 alternative`

`hypothesis: onemodelisinconsistent`

`>#correlationmatrix`

`>pairs.panels(dts)`

`>pairs.panels(dts,stars=T)`



The information you provided suggests that you performed a chi-squared test of model inconsistency for a model that predicts profits based on the variables ROCE, ROE, ROA, and CAR. The test result indicates that the chi-squared statistic is 0.80708 with 4 degrees of freedom, and the corresponding p-value is 0.9375.

Based on the p-value of 0.9375, which is greater than the typical significance level of 0.05, there is insufficient evidence to reject the null hypothesis. The null hypothesis in this context would typically be that the model is consistent, meaning that the variables ROCE, ROE, ROA, and CAR are collectively not inconsistent with predicting profits.

Therefore, the test results suggest that there is no significant evidence to conclude that the model is inconsistent. In other words, the variables in the model are not contradicting each other in their ability to predict profits.

CONCLUSION:

The study underscores the importance of effective risk management practices for the financial performance of Banks. It highlights the need for strategies such as diversification, credit assessment, NPAs management, liquidity management, governance, and compliance to mitigate risks and enhance profitability. The findings emphasize the role of regulatory compliance in ensuring sound risk management practices and positive financial outcomes for Banks. These insights can guide Banks in developing and implementing effective risk management strategies to improve their financial performance.

References:

1. Srinivas K. T. (2013): The focus of this study is on identifying assets that fail to perform at Indian commercial Banks.
2. Makkar, A. and Singh, S. (2013) Analysis of the Financial Performance of Indian Commercial Banks: A Comparative Study. *Indian Journal of Finance*, 7, 41-49.
3. Hosmani and Hudagi, Unearthing The Epidemic Of Non-Performing Assets -A Study With Reference To Public Sector Banks In India *International Journal of Multidisciplinary Research* Vol.1 Issue 8, December 2011, ISSN 2231 5780
4. Kumar and Sanjeev (2014) An Empirical Analysis of Capital Adequacy in the Indian Private Sector Banks *American Journal of Research Communication*.
5. Afroze Nazneen Sanjeev Dhawan (2018): This referenced discusses the historical use of a system of financial mediation dominated by Banks, DFIs, and Banks in India.
6. **Debata & Mahakud (2018)** Investor sentiment and emerging stock market liquidity *Finance Research Letters* Volume 26, September 2018, Pages 15-31
7. **Benzid & Chebbi (2020)** Impact of Covid-19 Virus on Exchange Rate Volatility: Evidence Through GARCH Model SSRN: <https://ssrn.com/abstract=3612141> or <http://dx.doi.org/10.2139/ssrn.3612141>
8. World Intellectual Property Organization (2019). *Artificial Intelligence and Intellectual Property: An Interview with Francis Gurry*. WIPO Magazine.
9. Cohen, Julie E. (2019). *Between Truth and Power: The Legal Constructions of Informational Capitalism*. Oxford University Press.
10. Perzanowski, Aaron & Schultz, Jason (2016). *The End of Ownership: Personal Property in the Digital Economy*. MIT Press.
11. Malcolm, Jeremy (2018). *Artificial Intelligence: Governance and Intellectual Property*. Electronic Frontier Foundation.
12. Levendowski, Amanda (2018). How Copyright Law Can Fix Artificial Intelligence's Implicit Bias Problem. *Washington Law Review*, 93, 579-608.