

*Supplementary information*

**LINKING FINANCIAL PERFORMANCE AND EFFICIENCY  
TO SUSTAINABILITY IN BANKING SECTOR:  
A LITERATURE SYNTHESIS**

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Bank-specific indicators used in the articles analyzed (source: compiled by authors, 2022)

Group of Indicators	Indicators	Literature
Bank risk indicators	Loan loss reserves to Gross loans	Gutiérrez-López and Abad-González (2020), Manta et al. (2020)
	Non-performing loans	Ioan et al. (2020), Forcadell et al. (2019), Shen et al. (2016)
	Non-performing loans to Gross loans	Gutiérrez-López and Abad-González (2020), Buallay et al. (2020b), Bhaskaran et al. (2021), Weber (2016)
	Net charge-offs to Gross loans	Gutiérrez-López and Abad-González (2020)
	Standard deviation of the ROE	Scholtens and van't Klooster (2019)
	Z-score : the sum of the return on average assets (ROAA) and the capital-asset-ratio (CAR) divided by the standard deviation of the return on assets over a pre-specified period	Scholtens and van't Klooster (2019)
	Risk (+/-):the difference between the risk perceived or declared and the amount of funds provisioned to cover the risks	San-Jose et al. (2018)
	The systemic risk contribution (SRISK): the expected capital shortfall during a period of distress	Scholtens and van't Klooster (2019)

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Capital adequacy indicators	Capital adequacy ratio	Bhaskaran et al. (2021), Bătae et al. (2021), Gutiérrez-López and Abad-González (2020)
	Stressed Tier 1 capital ratio	Gutiérrez-López and Abad-González (2020)
	Tier 1 capital	Valls Martínez et al. (2020), Gutiérrez-López and Abad-González (2020), Forcadell et al. (2019), Scholtens and van't Klooster (2019)
Liquidity indicators	Current assets to Current liabilities	Valls Martínez et al. (2020)
	Liquid assets to Assets	Tan and Tsionas (2022), Bhaskaran et al. (2021), Bătae et al. (2021)
Efficiency indicators	Costs to Income ratio	Gutiérrez-López and Abad-González (2020), Buallay et al. (2020a, 2020b), Korzeb and Samaniego-Medina (2019), Manta et al. (2020)
	Overhead costs to Income ratio	Shen et al. (2016)
	Non-interest income to Non-interest expense	Bhaskaran et al. (2021)
	Interest expense to Operating income	Bhaskaran et al. (2021)
Leverage indicators	Assets to Liabilities	Valls Martínez et al. (2020), Gutiérrez-López and Abad-González (2020)
	Assets to Equity	Nițescu and Cristea (2020)
	Liquid assets to Deposits and Short-term funding	Gutiérrez-López and Abad-González (2020)
	Equity to Assets	Valls Martínez et al. (2020), Gutiérrez-López and Abad-González (2020), Tan and Tsionas (2022), Buallay et al. (2020a), Platonova et al. (2018), Shen et al. (2016)
	Loans to Assets	Platonova et al. (2018)
	Fixed-income securities to Assets	Buallay (2018)
	Long-term debt to Assets	Platonova et al. (2018)
	Equity to Liabilities	Manta et al. (2020)
	Debt to Equity	Bătae et al. (2021), Valls Martínez et al. (2020)
	Non-current liabilities to Equity	Valls Martínez et al. (2020)
	Current liabilities to Equity	Valls Martínez et al. (2020)
	Loans to Deposits	Nițescu and Cristea (2020), Buallay et al. (2020b), Shen et al. (2016)
	Net loans to Deposits and Short-term funding	Gutiérrez-López and Abad-González (2020), Manta et al. (2020)

Group of Indicators	Indicators	Literature
	Net loans to Deposits and Borrowing	Gutiérrez-López and Abad-González (2020)
	Deposits to Liabilities	Scholtens and van't Klooster (2019), Bătae et al. (2021)
	Deposits to Loans	Bhaskaran et al. (2021)
	Loans to Deposits	Bătae et al. (2021)
Market value indicators	Tobin's Q: Market capitalization to Assets	Buallay (2018), Buallay et al. (2020a, 2020b), Manta et al. (2020), Bhaskaran et al. (2021), Bătae et al. (2021)
	Price to Earning (P/E)	Gutiérrez-López and Abad-González (2020), Bhaskaran et al. (2021)
	Market capitalization	Buallay et al. (2020b), Manta et al. (2020), Bhaskaran et al. (2021)
	Price to Book Ratio	Bhaskaran et al. (2021)
	Dividend Per Share	Bhaskaran et al. (2021)
	Dividend Payout	Gutiérrez-López and Abad-González (2020)
	Beta	Bhaskaran et al. (2021)
	Stock market returns	Bătae et al. (2021)
Profitability indicators	Return on Assets	Buallay (2018), Valls Martínez et al. (2020), Gutiérrez-López and Abad-González (2020), Buallay et al. (2020a, 2020b), Nițescu and Cristea (2020), Manta et al. (2020), Forcadell et al. (2019), San-Jose et al. (2018), Platonova et al. (2018), Shen et al. (2016), Bhaskaran et al. (2021), Bătae et al. (2021), Weber (2016), Shen et al. (2016)
	Return on Equity	Buallay (2018), Valls Martínez et al. (2020), Gutiérrez-López and Abad-González (2020), Buallay et al. (2020a, 2020b), Manta et al. (2020), Shen et al. (2016), Bhaskaran et al. (2021), Bătae et al. (2021), Weber (2016)
	Costs to Assets	Korzeb and Samaniego-Medina (2019)
	Other operating income to Assets	Gutiérrez-López and Abad-González (2020)
	Return on Risk	Aras et al. (2018)
	Net Profit Margin	Bhaskaran et al. (2021)
	Net interest margin	Manta et al. (2020), Bhaskaran et al. (2021)
	Noninterest expenses to Assets	Platonova et al. (2018)
	Profit per employee	Valls Martínez et al. (2020)
Earnings per share	Bhaskaran et al. (2021)	

Group of Indicators	Indicators	Literature
Balance sheet indicators	Total assets	Buallay (2018), Valls Martínez et al. (2020), Tan and Tsionas (2022), Manta et al. (2020), San-Jose et al. (2018), Scholtens and van't Klooster (2019), Shen et al. (2016), Weber (2016), Shah et al. (2019), Platonova et al. (2018), Bhaskaran et al. (2021)
	Total equity	Valls Martínez et al. (2020), San-Jose et al. (2018), Shah et al. (2019)
	Total deposits	Tan and Tsionas (2022), San-Jose et al. (2018), Shen et al. (2016)
	Total loans	Ioan et al. (2020), Forcadell et al. (2019), San-Jose et al. (2018), Shen et al. (2016)
	Fixed assets	Tan and Tsionas (2022)
	Volume of loans and deposits	Valls Martínez et al. (2020)
	Size	Bătae et al. (2021)
	Current assets	Valls Martínez et al. (2020)
	Non-current assets	Valls Martínez et al. (2020)
	Current liabilities	Valls Martínez et al. (2020)
	Non-current liabilities	Valls Martínez et al. (2020)
	Loan loss provisions	Tan and Tsionas (2022)
Short-term funding	Scholtens and van't Klooster (2019)	
Profit (loss) statement indicators	Expenses	Valls Martínez et al. (2020), Shah et al. (2019)
	Income	Valls Martínez et al. (2020), Shah et al. (2019)
	Net profit	Valls Martínez et al. (2020), San-Jose et al. (2018), Weber (2016), Shah et al. (2019)
	Net interest income	Tan and Tsionas (2022), Shen et al. (2016), Manta et al. (2020)
	Non-interest income	Tan and Tsionas (2022), Scholtens and van't Klooster (2019), Shen et al. (2016)
	Taxes	San-Jose et al. (2018)
	Operating income to cash assets	Bhaskaran et al. (2021)
Dummy indicators	Ethical bank dummy	Valls Martínez et al. (2020)
	Euro-area country dummy	Gutiérrez-López and Abad-González (2020)
	Capital adequacy dummy	Gutiérrez-López and Abad-González (2020)
	Globally Systematically important bank (GSIB) dummy	Bhaskaran et al. (2021)
	Global Bank dummy	Bhaskaran et al. (2021)
	Regional bank dummy	Bhaskaran et al. (2021)

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Other indicators	Number of employees	Valls Martínez et al. (2020), Tan and Tsionas (2022), San-Jose et al. (2018), Shah et al. (2019)
	Number of Board members	Nițescu and Cristea (2020)
	Tax rate	Buallay et al. (2020a)
	Total assets growth	Gutiérrez-López and Abad-González (2020)
	Technology gap ratio	Forcadell et al. (2019)
	Employee Productivity: Assets to Number of employees	Bhaskaran et al. (2021)