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Cultural differences and cross-border investment project performance: an analysis of the Polish banking sector

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ABSTRACT

In recent decades, the Polish banking sector has experienced a large number of mergers and acquisitions (M&As) as well as the establishment of several new banks. The success of such investment projects can be influenced by numerous factors, including the cultural differences between the country of the bank initiating the transaction and Poland. The objective of this article is to assess the influence of these cultural differences on the performance of cross-border investment projects carried out in the Polish banking sector from 1994 to 2018. The results of this study confirm that cultural differences influence bank performance: the culturally closer the countries are, the better the banks perform. Specifically, the dimensions of power distance, individualism, uncertainty avoidance and masculinity are the most relevant to bank performance. Future research should be focused on determining the role that cultural differences exert on the cross-border consolidation of the European banking sector.

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1. Introduction

According to the literature (Kolaric & Schiereck, 2014; Ferretti et al., 2010; among others), investment projects – mergers and acquisitions (M&As) – mostly benefit the shareholders of the acquired banks, and the effect on the shareholders of the bank initiating or conducting the transaction is neutral at best. Despite this evidence, in the last twenty years, there has been an unprecedented increase in such operations. Although cross-border investment projects are not the main objective of banking operations, they help achieve more rapid development and a stronger competitive position in the market. For banking institutions, such projects are a path to achieving objectives, and they provide an important alternative for organic growth. Additionally, the skilful use of such projects can be a decisive factor in increasing strategic shareholder value. However, the success of such projects is influenced by several factors, including the

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cultural differences between the country of the bank initiating the transaction and the country in which the investment is made (Petrenko & Stolyarov, 2019).

Although some research has studied the influence of cultural differences on the success of these investment projects, the results are not definitive. Datta and Puia (1995) suggest that acquisitions characterized by a high cultural distance are accompanied by lower wealth effects on acquiring firm shareholders, whereas Morosini et al. (1998) find a positive association between national cultural distance and cross-border performance. More recently, Reus and Lamont (2009) conclude that cultural distance has a double impact.

The aim of this paper is to assess the influence of cultural differences on the performance of cross-border investment projects, including M&As and the founding of new banks. For this purpose, this paper studies the relationship between cultural distance and performance of all investment projects carried out in the Polish banking sector in the 1994–2010 period. Furthermore, this study analyses the influences of each cultural dimension on bank performance. To analyse the effects of such projects in the long term, complete historical data since the entrance of foreign capital up to 2018 are considered; hence, the sample constitutes an unbalanced panel covering a 25-year period.

The Polish banking sector is an especially relevant focus for this study because of the large number of M&As that have occurred and the large number of new banks that have been established in the country. In this respect, at the end of 2019, foreign investors controlled over 17 commercial banks and all foreign bank branches. Controlling interests were owned by investors from 18 countries, with a major role played by investors from Spain, Germany, France and Holland (KNF- Polish Financial Supervision Authority, 2020).

The privatization of the banking sector and the principles of foreign capital participation in the takeovers of national commercial banks have been some of the most controversial and politically charged issues in the Polish banking sector. In 2004, Poland had the largest banking sector in the European Union (Korzeb & Samaniego-Medina, 2019). The main issue discussed in connection with Poland's accession to the European Union was concern about a further increase in the share of foreign shareholders in the structure of the banking sector. In fact, it was not until June 2017 that the ownership structure of the sector changed because of the takeover of Bank Pekao SA by Polish capital. At that point, Polish investors' share of the assets of the sector outpaced that of foreign investors for the first time since 1999.

To achieve the aim of this study, this paper uses fixed effects models with panel data and robust standard errors (Wooldridge, 2010), which control for unobservable time-invariant individual-specific characteristics. The $\chi 2$ test statistics suggest that a unit-specific error component exists for each regression equation, and the Hausman test verifies the utilization of the individual fixed effects.

The results confirm that cultural differences influence bank performance. The culturally closer the countries are, the better the banks perform. Specifically, bank performance is significantly influenced by the dimensions of power distance, individualism, uncertainty avoidance, and masculinity.

This article contributes to the existing literature by providing a more extensive view of the relationship between shareholder performance and differences in national

culture. The findings of this study can be applied to the sector as a tool for supporting decision making in cases of new foreign investment and for evaluating existing transactions.

The remainder of this article is structured as follows. Section 2 reviews the most significant literature and establishes the hypotheses. Section 3 describes the data and methodology employed in the empirical research. Section 4 presents and discusses the results obtained. Section 5 summarizes and presents the main conclusions reached.

2. Literature review and testable hypotheses

2.1. Research on cultural diversity

Intercultural management did not emerge as a scientific discipline until the mid-20th century. The pioneering work in this area of research was performed by ethnologist Hall (1960) and Hall and Hall (1959), who described the cultural differences between countries. However, the seminal work on national cultural differences in international business was authored by Hofstede (1980). Hofstede defined culture as 'the collective programming of the mind which distinguishes the member of one group or category of people from another'. His research on the IBM corporation led him to identify four dimensions of national culture. i) The first is the power distance dimension, which indicates the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. ii) The second dimension is the individualism versus collectivism factor, where individualism applies to societies in which the ties between individuals are loose and everyone is expected to look after him- or herself and his or her immediate family, while collectivism, as the opposite of individualism, refers to societies in which people from birth onward are integrated into strong, cohesive in-groups that continue to protect them throughout their lifetime in exchange for unquestioning loyalty. iii) Uncertainty avoidance is the third dimension. It indicates the extent to which the members of a culture feel threatened by ambiguous or unknown situations. iv) The fourth dimension is the masculinity versus femininity factor, where masculinity is defined as a societal preference for achievement, heroism, assertiveness and material rewards for success, while femininity represents a preference for cooperation, modesty, caring for the weak and quality of life. Furthermore, Hofstede (1980) emphasized that the characteristics of national cultures are shaped over long periods of time in the context of historical, geographical and economic conditions.

In more recent research, Hofstede has identified fifth (Hofstede & Bond, 1988) and sixth dimensions (Hofstede et al., 2010): v) long-term versus short-term orientation, which is related to the choice of focus for people's efforts, the future or the present and the past; and vi) indulgence versus restraint, which is related to gratification versus control of basic human desires connected to the enjoyment of life.

Following this line of research, Trompenaars and Hampden-Turner (1997) indicate that every culture distinguishes itself from others by the specific solutions that it chooses for certain problems that reveal themselves as dilemmas. It is convenient to look at these problems under three headings: i) those that arise from relationships with other people; ii) those that come from the passage of time; and iii) those that

relate to the environment. In addition, House et al. (2004) surveyed 17,300 middle managers from 61 countries to develop the GLOBE project. GLOBE empirically establishes nine cultural dimensions that make it possible to capture the similarities and/or differences in norms, values, beliefs, and practices among societies (power distance, uncertainty avoidance, humane orientation, collectivism I (institutional), collectivism II (in-group), assertiveness, gender egalitarianism, future orientation, and performance orientation).

Finally, Schwartz (2006, 1994, 1992) introduces a new concept in relation to the cultural dimension. According to this author, human values are structured as a universal, motivational and circular continuum. Schwartz's main thesis concerns the structure (the circular continuum) and the contents of values (their motivational contents). Schwartz (1992) and Schwartz et al. (2012) characterize this continuum of values as circular, which means that the principle of the similarity of neighbouring values is supplemented by the principle of the opposition of the values located on the opposite sides of the circle.

2.2. Research on the effect of cultural differences on M&as

Numerous studies have attempted to explain the relationship between cultural distance and M&A performance. In this respect, several studies have found a negative relationship between the two concepts. Datta and Puia (1995) suggest that cross-border acquisitions, on average, do not create value for acquiring firm shareholders. The authors emphasize that acquisitions characterized by high cultural distance are accompanied by lower wealth effects for acquiring firm shareholders. The negative relationship between cultural distance and acquirer performance is caused by the high degree of integration challenges in distant cultures, which may result in high potential costs. Similar results are obtained by Beugelsdijk et al. (2018), who find that firms are less likely to expand to culturally distant locations. According to these authors, cultural distance has a strong negative effect on subsidiary performance but no effect on the performance of the whole multinational company. In addition, the authors find that the effects of cultural distance are not sensitive to time but are sensitive to the cultural framework used and the home country of the company.

However, other studies have obtained opposite results. For instance, Morosini et al. (1998) find a positive association between national cultural distance and cross-border performance using a multidimensional measure of national cultural distance. In the authors' opinion, the cross-border acquisitions that tend to perform better are those in which the routines and repertoires of the target's country of origin are, on average, more distant than those of the acquirer's country. Similarly, Chakrabarti et al. (2009) argue that cultural distance produces positive effects through its potential to present acquirers with access to cultures and practices with which they are not familiar. The authors find that cross-border acquisitions perform better in the long run if the acquirer and the target come from countries that are more culturally disparate.

Finally, there are studies that provide mixed findings. Reus and Lamont (2009) conclude that cultural distance has two-sided impacts. These authors indicate that

national cultural distance impedes clarity with regard to the key capabilities that need to be transferred and that it constrains communication between acquirers and their acquired units, thus having a negative indirect effect on acquisition performance. In contrast, Sarala (2010) suggests that organizational cultural differences and organizational cultural preservation increase conflict and that partner attractiveness decreases conflict, while national cultural differences have no influence on the level of conflict. Ahammad et al. (2016) indicate that national cultural distance shows no significant effect on knowledge transfer or cross-border acquisition success; however, organizational cultural differences have a significant impact on knowledge transfer and a strong effect on cross-border acquisition success. The authors' results support the view of Weber et al. (2011, 2009): national cultural distance and organizational cultural differences are dissimilar constructs that differently affect M&A success.

The aim of this study is to assess the influence of cultural differences on the performance of cross-border investment projects. As the nature of these relationships is not clear because previous studies present mixed findings, two opposing hypotheses are formulated:

Hypothesis 1a: The culturally closer the countries are, the better the banks perform.

Hypothesis 1b: The culturally further apart the countries are, the better the banks perform.

2.3. Research on the effect of cultural dimensions on the banking sector

Managing cultural differences across geographically dispersed locations is one of the central challenges for international research and practice in the banking sector. Previous studies (Boubakri et al., 2017; Bussoli, 2017; Ashraf et al., 2016; Kanagaretnam et al., 2011, 2014) find that uncertainty avoidance and individualism are the cultural dimensions that affect risk-taking banks. In this respect, Kanagaretnam et al. (2011) find, for a sample of international banks, that uncertainty avoidance is negatively related to bank risk taking, whereas individualism is positively associated with it. Bussoli (2017) confirms these findings using a sample of European banks. Ashraf et al. (2016) obtain a similar result; however, they find that the power distance dimension is likewise relevant to determine bank risk taking: the lower the power distance is, the higher the risk taking.

These cultural differences become more relevant in times of crisis. In this regard, Kanagaretnam et al. (2014) suggest that banks with low individualism and high uncertainty avoidance are less likely to fail or experience financial trouble during a crisis period. These findings are confirmed by Boubakri et al. (2017).

Finally, in a line of research similar to that of this study, Ashraf and Arshad (2017) find that the national culture of a parent bank's home country has a greater impact on the risk-taking behaviour of the foreign affiliates of multinational banks than the national culture of their host country. Specifically, foreign affiliates engage in more risk taking if the parent banks' home country's cultural values include a low power distance, low uncertainty avoidance and high individualism.

Accordingly, the empirical evidence shows that the dimensions of power distance, individualism and uncertainty avoidance have a greater influence on bank risk taking.

Therefore, these dimensions are considered to establish the following hypotheses in relation to bank performance:

Hypothesis 2: There is a relationship between the power distance dimension of the country of the main shareholder and Polish bank performance.

Hypothesis 3: There is a relationship between the individualism versus collectivism dimension of the country of the main shareholder and Polish bank performance.

Hypothesis 4: There is a relationship between the uncertainty avoidance dimension of the country of the main shareholder and Polish bank performance.

However, with respect to the other dimensions identified by Hofstede et al. (2010), there is no empirical evidence of their relevance to determining bank risk taking. Accordingly, the following hypotheses are formulated:

Hypothesis 5: There is no relationship between the masculinity versus femininity dimension of the country of the main shareholder and Polish bank performance.

Hypothesis 6: There is no relationship between the long-term versus short-term orientation dimension of the country of the main shareholder and Polish bank performance.

Hypothesis 7: There is no relationship between the indulgence versus restraint dimension of the country of the main shareholder and Polish bank performance.

3. Data and empirical methodology

3.1. Sample

The sample considers all the investment projects that took place in the Polish banking sector during the 1994-2010 period, including 83 projects, 55 M&As and 28 cases of the creation of new banks. These operations were conducted by 28 financial entities from 17 countries, comprising a sample of 780 observations. Table 1 shows the number of investment projects analysed by investor and by country.

To analyse the effects of the projects in the long term, the sample considers complete historical data since the entrance of foreign capital up to 2018, constituting an unbalanced panel covering a 25-year period (1994-2018). The data were mainly obtained from bank reports (annual financial reports, corporate financial statements, the National Court Register, publications in the 'Rzeczpospolita' daily and 'Gazeta Prawna', and announcements by the Polish Press Agency). Financial and accounting information on these firms was obtained from the Thomson Reuters Eikon database. Table 2 shows the total number of observations by country and by period.

3.2. Variables

This study selects variables to measure bank performance, cultural dimensions, cultural distance, and bank characteristics. As a dependent variable, a well-established measure of a company's profitability is used: return on equity (ROE) (Molyneux & Thornton, 1992; Bourke, 1989). It is calculated as the company's net income to shareholder equity and determines a company's capacity to generate value for its investors in comparison to its cost of capital.

Table 1. Investment projects analysed by investor and by country.

Country	Name of investor	Number of analysed investment projects
Austria	Bank Austria Creditanstalt International AG	4
	Raiffeisen Zentralbank Österreich AG	
Belgium	Fortis Bank	3
	KBC Bank N.V.	
French-speaking Belgium	Dexia Kommunalkredit	1
Denmark	Den Danske Bank A/S	3
	Nykredit A/S	
	Inwestorzy zagraniczni związani z Unibank A/S	
France	BNP Paribas	7
	Cetelem Bank	
	Crédit Agricole	
	Crédit Lyonnais Global Banking	
	RCI Banque	
	Société Générale	
	Sygma Banque Société Anonyme	
Germany	Allianz SE	20
	Bankgesellschaft Berlin AG	
	Bayerische Hypotheken- und Wechsel-Bank (Hypo-Bank)	
	Bayerische Hypo- und Vereinsbank AG	
	Bayerische Vereinsbank AG	
	Vereinsbank Polska S.A.	
	Commerzbank AG	
	DaimlerChrysler Services (debis) AG	
	Deutsche Bank AG	
	DG Bank Deutsche Genossenschaftsbank AG	
	Dresdner Bank AG	
	RHEINHYP Rheinische Hypothekenbank AG	
	Volkswagen Financial Services AG	
	Westdeutsche Landesbank Girozentrale Düsseldorf (WestLB)	
Ireland	AIB European Investments Ltd.	3
Italy	FCA Bank S.p.A.	4
	UniCredito Italiano SpA	
Japan	The Bank of Tokyo-Mitsubishi UFJ, Ltd.	2
	Toyota Motor Corporation	
Netherlands	ABN Amro Bank N.V.	5
	ING Bank N.V.	
	Rabobank International Holding B.V.	
Norway	DnB NORD	1
Portugal	Banco Commercial Portugues	1
South Korea	LG Investment Holdings B.V.	1
Spain	Banco Santander Central Hispano	2
Sweden	Svenska Handelsbanken AB	4
	Nordea Bank Polska SA (Bank Komunalny SA)	
	Nordea Bank Polska SA	
	Nordbanken AB	
United Kingdom	HSBC Bank plc.	1
United States	AIG Consumer Finance Group	12
	Bank of America	
	Citibank Overseas Investment Corporation	
	Ford Motor Credit Company	
	General Electric Capital Corporation	
	General Motors Acceptance Corporation	
International shareholders based	Polish American Resources Corporation et al.	9
	Polsko-Amerykański Fundusz Przedsiębiorczości	
	polonijna Union-Credit im. św. Kazimierza i Stanisława z Toronto	
	Solidarność DT	
	Union Group	
	Innova Capital	
	Międzynarodowa grupa IBP	
	Alior LuxS.a r. l. & Co. S.C.A.	
	Abris Capital Partners	

Source: The authors.

Table 2. Number of observations by year and by the home country of the bank.

Country	1994–1998	1999–2003	2004–2008	2009–2013	2014–2018	Total
Austria	15	10	5	5	5	40
Belgium	0	10	10	8	1	29
Belgium-Fr.	0	0	4	3	0	7
Denmark	1	7	5	0	0	13
France	2	11	28	16	3	60
Germany	30	59	43	16	5	153
International shareholders	31	7	3	14	8	63
Ireland	3	7	5	5	5	25
Italy	2	10	13	10	8	43
Japan	0	7	10	5	0	22
Netherlands	12	15	8	5	5	45
Norway	0	0	3	5	3	11
Poland	42	12	10	15	24	103
Portugal	0	4	5	5	5	19
South Korea	3	4	0	0	0	7
Spain	0	2	5	5	5	17
Sweden	0	8	6	5	0	19
United Kingdom	0	1	5	3	0	9
United States	19	34	25	10	7	95
Total	160	208	193	135	84	780

Source: The authors.

With respect to the cultural dimension variables, following Hofstede (1980), Hofstede and Bond (1988) and Hofstede et al. (2010), six dimensions of national culture are used to analyse the role of cultural differences: power distance (PDI), individualism vs. collectivism (IDV), uncertainty avoidance (UAI), masculinity vs. femininity (MAS), long-term orientation vs. short-term orientation (LTO), and indulgence vs. restraint (IND)[1]. Hofstede's dimensions are a widely used tool for measuring cultural differences (Breuer et al., 2018; Kirkman et al., 2006), and they are especially relevant in the banking sector (Ahunov & Van Hove, 2020; Yunanda et al., 2019; Zhang et al., 2018; Ashraf et al., 2016; Baptista & Oliveira, 2015; Carretta et al., 2015).

PDI expresses the inequality tolerance of a society regarding power distribution. A high value in this dimension means that individuals accept their role in society regardless of whether it is justified. IDV refers to the role that people play in groups and how they integrate into society; a high value indicates unstable or unstructured societies, while a low value means the opposite: stable societies. UAI expresses the degree to which the members of a society feel uncomfortable when they are in situations of uncertainty. A high value expresses intolerance regarding beliefs and greater comfort with regulatory limits; a low value indicates open-minded societies in which people easily trust one another. Regarding MAS, a high value indicates a more aggressive and competitive society than a feminine society (low value), where cooperation and consensus are the most important values. With respect to LTO, a high LTO represents societies with a pragmatic focus that values education and saving; in contrast, low-LTO societies prioritize immediate results and adopt a normative focus. Finally, IND indicates the degrees of tolerance and liberty. A high score means indulgence regarding human impulses and freedom of expression, while a low value expresses more restrictive cultures.

To measure the cultural distance in Hofstede's dimensions between the country of the main shareholder and Polish banks, this study calculates two measures: the cultural distance index (CDI) and Pearson's correlation (PEARSON).

Following Kogut and Singh (1988), this study calculates the CDI between Poland and the j^{th} country based on the following equation:

$$\mathrm{CDI} = \frac{\sum_{i=1}^{6} \frac{(I_{ij} - I_{iPL})^2}{V_i}}{6} \tag{1}$$

where I_{ij} is the index for the i^{th} cultural dimension and j^{th} country, I_{iPL} denotes Poland's score on the i^{th} cultural dimension, and V_i represents the variance in the index of the i^{th} dimension. The CDI denotes the composite of Kogut and Singh's cultural distance index (Kogut & Singh, 1998) based on the deviation from the Polish ranking along each of Hofstede's cultural value dimensions for each country. The lowest (highest) CDI values indicate the smallest (greatest) cultural distance between the country of the acquiring bank and Poland.

Although the first natural measure of differences between countries is the CDI (Kogut & Singh, 1998), Pearson's correlation is used as an alternative method to determine the interdependence of the cultural dimensions between both countries (Abraham, 2019; Buszko, 2018; Bernardi, 2006). The closer the correlation is to 1, the culturally closer the countries are.

Finally, this study uses 5 accounting variables as bank characteristics for i) capital structure, ii) credit risk, iii) debt quality, iv) long-term solvency and v) firm size. To analyse the effect of capital structure on companies' performance, the debt-to-equity (DE) ratio is used. This measure is a leverage ratio that compares a company's total liabilities with its total shareholders' equity (Ghosh & Moon, 2010; Hurdle, 1974). It is widely used in the literature regarding the determinants of banks' profitability (Trujillo-Ponce et al., 2013). With respect to credit risk, this study selects the Z score measure (ZSCORE), which describes a bank's capital level in relation to volatility in its return on assets (ROA). This accounting-based variable explains the capability of a bank to absorb variability in its ROA (Li et al., 2017; Khan et al., 2013), and it is generally used as a proxy of individual risk for the banking sector (Khan et al., 2017; Baselga-Pascual et al., 2015; Chiaramonte et al., 2015; Laeven & Levine, 2009; among others). The Z score is defined as follows:

$$Z\ score = \frac{ROA + Capital\ to\ asset\ ratio}{Standard\ deviation\ of\ ROA} \tag{2}$$

where ROA is return on assets. Concisely, the Z score measures the distance to default in terms of the number of standard deviations of the ROA (using a three-year rolling window). High Z score values signal a lower probability of default (Shim, 2017), and vice versa.

In relation to debt quality, the ratio of total deposits to total debt (T_DEPOSD) is considered (Valipour & Moradbeygi, 2011; García-Teruel & Martínez-Solano, 2007). Total deposits represent the sum of non-interest-bearing deposits, interest-bearing deposits and other deposits (amounts due to financial institutions, customers and the public sector). Long-term solvency is measured through the debt-to-total assets ratio

Table 3. Variable definitions.

Variable	Notation	Definition
Dependent variable		
Bank performance	ROE	The ratio of net income to total equity
Global cultural distances		
Cultural distance index	CDI	The cultural distance index between Poland and the home country of the acquiror
Pearson's correlation	PEARSON	Pearson's correlation between Poland and the home country of the acquiror
Hofstede culture variables[1]		
Power distance	PDI	The degree of acceptance of the unequal distribution of power
Individualism vs. collectivism	IDV	The degree of individualism as opposed to the integration into strong and cohesive groups
Uncertainty avoidance	UAI	The extent to which the members of a culture feel threatened by ambiguous or unknown situations
Masculinity vs. femininity	MAS	The degree of preference for achievement, heroism, assertiveness, and material rewards
Long term orientation	LTO	The choice of focus of people's efforts
Indulgence vs. restraint	IND	Gratification vs. control of basic human desires regarding the enjoyment of life
Control variables		
Capital structure	DE	The ratio of debt to equity
Credit risk	ZSCORE	The distance to default
Debt quality	T_DEPOSD	The ratio of total deposits to total debt
Long-term solvency	DTA	The book value of total debt divided by the book value of total assets
Bank size	Ln_TA	The Neperian logarithm of total assets
Year dummies	yeardummy	Annual dummies for macro-level events

[1]All the Hofstede variables range between 0 and 100.
Source: The authors.

(DTA), that is, the book value of total debt divided by the book value of total assets (Valipour & Moradbeygi, 2011; Ghosh & Moon, 2010; Cai et al., 2008).

Finally, the Neperian logarithm of bank total assets (Ln_TA) is calculated to linearize the effect of size on firm performance (di Pietro et al., 2019; Girález-Puig & Berenguer, 2018; Gerhardt & Vennet, 2017). Table 3 presents the variables and their definitions.

3.3. Methodology

This paper estimates two models to study both the relationship between cultural distance and bank performance and the influence of the individual cultural dimensions on bank performance. Model 1 measures the effect of the CDI and cultural dimension variables on ROE. Therefore, the model is as follows:

$$ROE_{it} = \alpha + \beta_1 \times CDI + \beta_2 \times PDI + \beta_3 \times IDV + \beta_4 \times UAI + \beta_5 \times MAS + \beta_6 \times LTO + \beta_7 \times IND + \sum_{i=8}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \quad (3)$$

where *ROE* is the measure of banks' performance and *CDI* is the cultural distance index. *PDI, IDV, UAI, MAS, LTIO* and *IND* correspond to each of the measures of

the cultural dimensions. X_{it} includes bank characteristics (capital structure, credit risk, debt quality, long-term solvency and firm size) lagged by one year to lessen the endogeneity issues potentially arising from simultaneity concerns. The subscript i represents firms (i = 1, …, n), and the subscript t represents time in years (t = 1, …, t). *yeardummy* is a set of year dummy variables; μ_i is the firm's effect; and ε_{it} is the error term.

The second model reinforces the results of the first model, measuring the effect of Pearson's correlation and the cultural dimension variables on ROE. Thus, model 2 is as follows:

$$ROE_{it} = \alpha + \beta_1 \times PEARSON + \beta_2 \times PDI + \beta_3 \times IDV + \beta_4 \times UAI + \beta_5 \times MAS + \beta_6 \times LTO + \beta_7 \times IND + \sum_{i=8}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \quad (4)$$

where *Pearson* is Pearson's correlation and the other variables are the same as those in equation (3).

With the aim of testing the relevance of the differences between every individual dimension for the main shareholder and the performance of Polish banks, this study employs the distances between the cultural dimensions of both countries, in absolute differences, as variables in models 3 to 8. Thus, the models are as follows:

$$ROE_{it} = \alpha + \beta_1 \times Cultural_i + \sum_{i=2}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \quad (5)$$

where $Cultural_i$ represents every cultural dimension value in absolute differences from Poland and the rest of the variables are the same as those in equation (3). Negative values of the coefficients indicate that the shorter the distances between the home country and Poland are, the better the project performs, and vice versa.

Individual effects that commonly arise in panel data models are considered fixed effects after applying the Hausman test. To avoid potential heteroskedasticity, this study uses robust standard errors following Wooldridge (Wooldridge, 2010).

4. Results and discussion

4.1. Descriptive statistics

Table 4 presents Hofstede's cultural dimension values of the countries included in the sample.

Poland has high scores on the power distance (PDI) and uncertainty avoidance (UAI) dimensions. With respect to PDI, along with France, Poland presents the highest score (68) out of all the countries in the sample, showing that individuals within enterprises expect the establishment of an organizational hierarchy based on relationships with each employee. Regarding UAI, Poland has one of the highest scores (93) in this dimension, just below Portugal (99) and Belgium (94), revealing a relatively

Table 4. Hofstede's cultural value dimensions of the countries included in the sample.

Country	Power Distance	Individualism vs. Collectivism	Uncertainty Avoidance	Masculinity vs. Femininity	Long-Term vs. Short-Term	Indulgence vs. Restraint
Poland	68	60	93	64	38	29
United States	40	91	46	62	26	68
United Kingdom	35	89	35	66	51	69
Ireland	28	70	35	68	24	65
Germany	35	67	65	66	83	40
Netherlands	38	80	53	14	67	68
Belgium	65	75	94	54	82	57
France	68	71	86	43	63	48
Austria	11	55	70	79	60	63
Belgium Fr.	66.5	73	90	48.5	72.5	52.5
Spain	57	51	86	42	48	44
Italy	50	76	75	70	61	30
Portugal	63	27	99	31	28	33
Sweden	31	71	29	5	53	78
Norway	31	69	50	8	35	55
Denmark	18	74	23	16	35	70
South Korea	60	18	85	39	100	29
Japan	54	46	92	95	88	42
International shareholders			Not applicable			
Average	**44.1**	**64.9**	**65.5**	**47.4**	**57.4**	**53.6**

Source: The authors with data from https://www.hofstede-insights.com/product/compare-countries/ (04/09/2021).

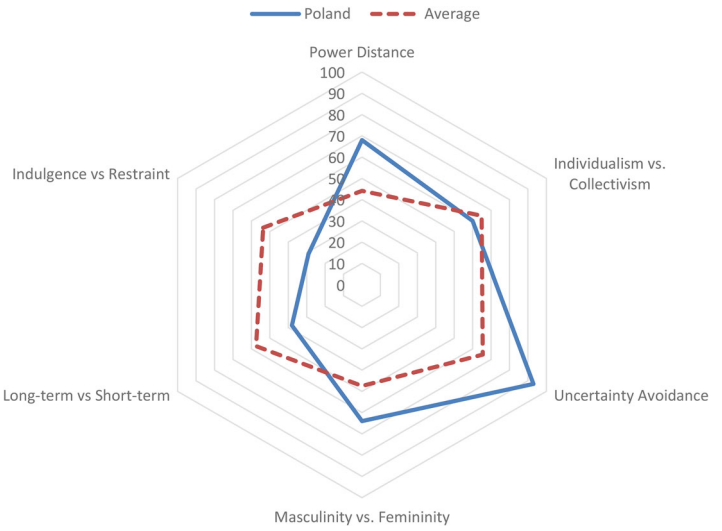

Figure 1. Hofstede's cultural variables for Poland.
Source: The authors with data from https://www.hofstede-insights.com/product/compare-countries/ (04/09/2021).

high preference among Poles for avoiding uncertainty. Poles are generally very busy with their duties; however, they are willing to accept performing difficult and time-consuming tasks in return for job security. At the same time, they like transparent situations, truthfulness, and clearly established rules and regulations of conduct[2]. Figure 1 displays Poland's values in comparison to the average values of the investor countries.

Table 5 shows the cultural differences between Poland and the country of the acquiring bank, specifically the CDI and Pearson's correlation variables. Mediterranean countries, which include shareholders from Spain, Italy and Portugal,

Table 5. Cultural differences between Poland and the country of the acquiring bank.

Country	CDI	Pearson's correlation
Spain	0.4353	0.7982
Italy	0.5744	0.6731
France	0.6492	0.6590
Portugal	0.8778	0.7982
Belgium Fr.	0.9322	0.5848
Belgium	13.353	0.4758
Japan	14.191	0.4140
Germany	15.944	0.0470
South Korea	23.615	0.2119
United States	25.793	−0.0570
Norway	25.85	−0.0879
Ireland	27.884	−0.2057
Austria	29.309	−0.0400
United Kingdom	30.63	−0.4552
Netherlands	31.11	−0.3811
Denmark	45.492	−0.5552
Sweden	45.681	−0.6303

Source: Results calculated based on data from https://www.hofstede-insights.com/product/compare-countries/ (04/09/2021).

Table 6. Descriptive statistics.

Variable	Notation	Mean	St. Deviation	Minimum	Maximum
Bank profitability	ROE	2.065	87.19	−1836.728	360.804
Capital structure	DE	860.081	2083.388	−7234.610	53284.120
Distance to default	ZSCORE	7.771	23.397	−28.283	428.186
Debt quality	T_DEPOSD	84.711	19.790	0.000	189.102
Long-term solvency	DTA	83.457	15.930	0.761	106.902
Firm size	Ln_TA	22.036	2.128	16.371	26.504

Source: The authors.

have the strongest relationship between the cultural dimensions of the country of the main shareholder and Poland, with CDIs of 0.4353, 0.5744 and 0.8778, respectively. Likewise, the culture of French and French-speaking Belgian banking corporations is close to that of Poland and is similar to that of Mediterranean countries (CDI 0.6492 and 0.9322). These results contradict the results obtained by Trompenaars and Hampden-Turner (1997) and Schwartz (2004), who assume that these countries, French and French-speaking parts of Belgium, are more similar to Western European countries. All these countries present a CDI of less than 1. However, Scandinavian countries, such as Sweden and Denmark, present major cultural distances, with CDIs larger than 45. These results are confirmed by Pearson's correlations.

Table 6 shows the descriptive statistics of the variables used. ROE presents an average value of 2.065, with a wide range of dispersion (standard deviation 87.19). Regarding capital structure, the mean value shows a high debt ratio with a very wide dispersion; the mean values of the distance to default, debt quality and long-term solvency are 7.77, 84.71 and 83.45, respectively. Finally, the mean value of Ln_TA is explained by the medium-small size of the firms in this sector.

4.2. Results of the baseline model

Table 7 reports the results of models 1 and 2. The first model studies the effect of the CDI and every cultural dimension on ROE. This paper finds that the CDI is negative

Table 7. Results of the fixed effects analysis of cultural distance (measured as the cultural distance index and Pearson's correlation) and ROE.

Variable	Model 1	Model 2
CDI	−53.469***	–
PEARSON	–	26.973***
PDI	5.676***	3.168***
IDV	−4.608***	−3.104***
UAI	9.443***	5.198***
MAS	1.101***	0.937***
LTO	0.000	0.000
IND	0.000	0.000
DE_{T-1}	0.003	−0.016***
$ZSCORE_{t-1}$	0.193*	0.135**
T_DEPOSD_{t-1}	0.053	0.036
DTA_{t-1}	−0.068	0.046
Ln_TA_{t-1}	8.355***	9.118***
rho	0.969	0.932
N. obs.	410	407
N. groups	48	48
Wald chi^2	2.69***	197.14***

(1) Wald chi^2 is a test for the validity of the joint variables. The estimations include year dummies.
(2) *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: The authors.

and significant (β=-53.469, $p < 0.01$), meaning that the lower the cultural distance between the two countries is, the better the performance is. These results confirm Hypothesis 1a and are in line with Beugelsdijk et al. (2018) and Datta and Puia (1995), indicating that cultural distance could impose integration costs on M&As or direct investments in the Polish bank sector.

With respect to the role of cultural dimensions, of the six dimensions analysed, four are significant. The power distance (PDI; $\beta = 5.676$, $p < 0.01$), individualism versus collectivism (IDV; $\beta = -4.608$, $p < 0.01$) and uncertainty avoidance (UAI; $\beta = 9.443$, $p < 0.01$) dimensions are relevant, confirming Hypotheses 2, 3 and 4. Surprisingly, the masculinity versus femininity dimension (MAS; $\beta = 1.101$, $p < 0.01$) is also significant; therefore, Hypothesis 5 is not confirmed. The long-term versus short-term (LTO) and indulgence versus restraint (IDV) dimensions are nonsignificant, confirming Hypotheses 6 and 7.

The positive signs of PDI and UAI show that the higher the score of these variables in the home country is, the better the project performs. Therefore, the more acceptable the unequal distribution of power is and the higher the level of regulation is, the better the performance is. Conversely, IDV presents a negative sign, showing a negative influence of a high score on this variable on ROE. Thus, nonindividualistic and tolerant societies generate better results in Polish banks. With respect to MAS, which shows a positive sign, the results confirm that competitive societies obtain better results in terms of ROE.

Concerning the bank-level variables, credit risk (ZSCORE; $\beta = 0.193$, $p < 0.1$) is positive and significant, suggesting that the larger the distance to default is, the better the bank's performance. Additionally, larger banks (Ln_TA; $\beta = 8.355$, $p < 0.01$) show a positive relationship with ROE.

The second model analyses the relationship between Pearson's correlation and bank performance. Pearson's correlation is positive and significant ($\beta = 26.973$, $p < 0.01$), suggesting that the closer the distance between two countries is, the better

Table 8. Results of the fixed effects analysis of the absolute values of the distances of Hofstede's six cultural dimensions for Poland and ROE.

Distance	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
PDI	−0.003**	–	–	–	–	–
IDV	–	−0.000	–	–	–	–
UAI	–	–	−0.009*	–	–	–
MAS	–	–	–	−0.001	–	–
LTO	–	–	–	–	−0.002	–
IND	–	–	–	–	–	−0.002
DE_{t-1}	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***
$ZSCORE_{t-1}$	0.001	0.002	0.002	0.002	0.002	0.002
T_DEPOSD_{t-1}	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
DTA_{t-1}	0.002	0.002	0.002	0.002	0.002	0.002
Ln_TA_{t-1}	0.101***	0.102***	0.099***	0.103***	0.102***	0.098***
rho	0.475	0.457	0.468	0.462	0.470	0.469
N. obs.	621	621	621	621	621	621
N. groups	63	63	63	63	63	63
Wald chi²	2.77***	2.73***	2.76***	2.72***	2.76***	2.75***

(1) Wald chi² is a test for the validity of the joint variables. The estimations include year dummies.
(2) *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: The authors.

the bank's performance. This result is similar to that of the first model, reinforcing the confirmation of Hypothesis 1a.

With respect to the role of cultural dimensions, the results corroborate those previously obtained. The same four variables are significant and maintain the same sign: PDI ($\beta = 26.973$, $p < 0.01$), IDV (β=-3.104, $p < 0.01$), UAI ($\beta = 5.198$, $p < 0.01$) and MAS ($\beta = 0.937$, $p < 0.01$). Again, these results confirm Hypotheses 2, 3, 4, 6 and 7 and do not confirm Hypothesis 5.

Regarding the bank-level variables, credit risk (ZSCORE; $\beta = 0.135$, $p < 0.05$) and firm size (Ln_TA; $\beta = 9.118$, $p < 0.01$) are significant and positive, whereas capital structure (DE; $\beta = -0.016$, $p < 0.01$) is significant and negative. Long-term solvency (DTA) and debt quality (T_DEPOSD) are nonsignificant.

This study develops models 3 to 8 (Table 8) to check the influence of the absolute values of the distances of every cultural dimension between the home country of the investor bank and Poland. Thus, a negative sign means that the closer the distance is, the better the ROE. In contrast, a positive sign indicates the opposite. The betas are consistently negative for every cultural dimension, with significant values for PDI (β=-0.03, $p < 0.05$) and UAI (β=-0.09, $p < 0.1$). These dimensions are precisely those for which Poland has the highest values in relation to the average (see Figure 1). These results suggest that cultural proximity in each of the dimensions contributes to bank profitability and that this effect is more relevant in the extremes.

4.3. Robustness checks

This study conducts a number of robustness checks to confirm the previous findings. First, it tests the relationship between cultural differences and a different proxy of bank performance only for listed firms. In this respect, models 9 and 10 evaluate the effect of cultural distance on Tobin's q (TOBINSQ), which is a market-related variable. Defined as the market value of equity plus the book value of debt over the book value of assets, Tobin's q is a well-established measure of the profitability of a firm

Table 9. Robustness checks using Tobin's q for listed firms.

Variable	Model 9	Model 10
CDI	−0.003***	–
PEARSON	–	0.007***
DE	0.000	0.000
ZSCORE	−0.001*	−0.001*
T_DEPOSD	0.000*	0.000*
DTA	0.007***	0.007***
Ln_TA	0.001	0.001
rho	0.758	0.094
N. obs.	304	321
N. groups	24	25
Wald chi²	549.68***	561.58***

(1) Wald chi² is a test for the validity of the joint variables. The estimations include year dummies.
(2) *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: The authors.

(Bernile et al., 2018 Guerrero-Villegas et al., 2018; Bebchuk et al., 2009; Bhagat & Bolton, 2008). The models are as follows:

$$\mathrm{TOBINSQ}_{it} = \alpha + \beta_1 \times CDI + \sum_{i=2}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \tag{6}$$

$$\mathrm{TOBINSQ}_{\mathrm{it}} = \alpha + \beta_1 \times Pearson + \sum_{i=2}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \tag{7}$$

where *TOBINSQ* is a market-related variable for value creation and the rest of the variables are defined as in equation (3).

Based on the estimation results reported in Table 9, the estimations do not change the previous findings. There is a positive association between cultural proximity and performance, as measured by Tobin's q.

Second, following Triandis (1995), this study triangulates its findings with a different cultural framework by using the GLOBE dimensions (House et al., 2004). GLOBE identifies nine cultural characteristics, and this study selects five that correspond to Hofstede's dimensions (House et al., 2004; House et al., 2002): power distance (PD), institutional collectivism I (COLL) as the inverse of IDV, uncertainty avoidance (UA) as UAI, assertiveness (ASSERT) as MAS, and future orientation (FO) as LTO. The model studies the relationship between cultural distance, as measured across the GLOBE dimensions, and Polish bank performance as follows:

$$ROE_{it} = \alpha + \beta_1 \times globe_{distance}index + \sum_{i=2}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \tag{8}$$

where globe_distance_index represents the CDI and PEARSON calculated with the five GLOBE dimensions and the rest of the variables are that same as those in equation (3).

Models 11 and 12 present the results. The beta coefficients for the CDI ($\beta = -0.029$, $p < 0.05$) and PEARSON ($\beta = 0.073$, $p < 0.05$) are significant and maintain the same sign as the first and second models, which is consistent with the main findings of this study. The results of the estimations are reported in Table 10.

Table 10. Robustness checks using GLOBE distances and ROE.

Variable	Model 11	Model 12
CDI	−0.029**	–
PEARSON	–	0.073**
DE_{T-1}	0.000	0.000
$ZSCORE_{t-1}$	0.001*	0.001*
T_DEPOSD_{t-1}	0.001	0.001
DTA_{t-1}	−0.000	−0.000
Ln_TA_{t-1}	0.060***	0.062***
rho	0.333	0.342
N. obs.	535	540
N. groups	55	56
Wald chi^2	153.57***	159.88***

(1) Wald chi^2 is a test for the validity of the joint variables. The estimations include year dummies.
(2) *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: The authors.

Table 11. Robustness check using the distances (in absolute values) of Hofstede's cultural dimensions for Poland and ROE.

Variable	Model 13	Model 14	Model 15	Model 16	Model 17
PDI	−0.273***	–	–	–	–
COLL	–	−0.347*	–	–	–
UA	–	–	−0.185**	–	–
ASSERT	–	–	–	−0.434**	–
FO	–	–	–	–	−0.213**
DE_{t-1}	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***
$ZSCORE_{t-1}$	0.005*	0.006*	0.007***	0.007**	0.007**
T_DEPOSD_{t-1}	−0.000	−0.000	0.000	0.000	0.000
DTA_{t-1}	0.002**	0.002	0.002	0.001*	0.002
Ln_TA_{t-1}	0.101***	0.108***	0.116***	0.102***	0.100***
rho	0.499	0.525	0.529	0.509	0.519
N. obs.	620	620	620	620	620
N. groups	64	64	64	64	64
Wald chi^2	3.03***	3.10***	2.85***	2.80***	3.14***

(1) Wald chi^2 is a test for the validity of the joint variables. The estimations include year dummies.
(2) *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: The authors.

Finally, this study individually tests every GLOBE dimension in absolute distances. Models 13 to 17 examine these variables as follows:

$$ROE_{it} = \alpha + \beta_1 \times GCultural_i + \sum_{i=2}^{n} \beta_i \times X_{it-1} + yeardummy + (\mu_i + \varepsilon_{it}) \qquad (9)$$

where $GCultural_i$ represents every GLOBE cultural value in absolute differences from Poland and the rest of the variables are defined as in equation (3).

The estimations show that all the dimensions analysed are significant and have negative signs. These results, which are reported in Table 11, confirm a positive relationship between cultural proximity and bank performance.

5. Summary and conclusions

Commercial banks operating in Poland are presently among the most valuable assets in the capital groups and investment portfolios of their strategic shareholders. Poland's good economic situation, favourable macroeconomic indicators and

prospects for further development mean that the Polish banking sector continues to be viewed as an attractive investment market and a destination for capital allocation.

The purpose of this study is to determine the influence of cultural differences on the performance of cross-border investment projects carried out in Polish banking from 1994 to 2010 considering complete historical data since the entrance of foreign capital up to 2018. This paper uses fixed effects models with robust standard errors.

The results confirm that cultural differences influence bank performance: the culturally closer the countries are, the better the performance. Specifically, Polish bank performance is influenced by the dimensions of power distance, individualism, uncertainty avoidance and masculinity. Finally, different robustness checks confirm these findings.

These results can have various applications. First, they can be used by supervisory institutions to evaluate existing transactions in banking and to draw conclusions on the success or failure of such transactions. Second, they may serve as a tool to support decision making by potential investors in regard to carrying out M&As or establishing new banks, providing additional knowledge about the phenomena occurring during the transaction. This knowledge could constitute one of the determinants of allocating funds for stock exchange investors – both individuals and institutions. Finally, these results could serve to establish personnel policies, adapting them to the cultural characteristics of the country in which the investment is made.

According to the European Central Bank (2019), cross-border consolidation could support greater risk diversification and contribute to financial market integration. Moreover, it could play an important role in removing excess capacity, enhancing cost efficiency, and promoting more focused and credible business models. Future research should be focused on determining the role that cultural differences play in achieving these objectives, both in Poland and extending to a larger range of European countries.

Notes

1. These cultural dimensions are the score for every home country in Hofstede's scale.
2. Hofstede: https://www.hofstede-insights.com/country/poland (04/09/2021).

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References

Abraham, J. (2019). National culture as a correlate of research impact and productivity. *F1000Research*, *8*, 237. https://doi.org/10.12688/f1000research.18283.3

Ahammad, M. F., Tarba, S. Y., Liu, Y., & Glaister, K. W. (2016). Knowledge transfer and cross-border acquisition performance: The impact of cultural distance and employee retention. *International Business Review*, *25*(1), 66–75. https://doi.org/10.1016/j.ibusrev.2014.06.015

Ahunov, M., & Van Hove, L. (2020). National culture and (dis)trust in banks: Cross-country evidence. *Economic Notes*, *49*(3), 1–22. https://doi.org/10.1111/ecno.12165

Ashraf, B. N., & Arshad, S. (2017). Foreign bank subsidiariess risk-taking behavior: Impact of home and host country national culture. *Research in International Business and Finance*, *41*, 318–335. https://doi.org/10.1016/j.ribaf.2017.04.039

Ashraf, B. N., Zheng, C., & Arshad, S. (2016). Effects of national culture on bank risk-taking behavior. *Research in International Business and Finance*, *37*, 309–326. https://doi.org/10.1016/j.ribaf.2016.01.015

Baptista, G., & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior*, *50*, 418–430. https://doi.org/10.1016/j.chb.2015.04.024

Baselga-Pascual, L., Trujillo-Ponce, A., & Cardone-Riportella, C. (2015). Factors influencing bank risk in Europe: Evidence from the financial crisis. *The North American Journal of Economics and Finance*, *34*, 138–166. https://doi.org/10.1016/j.najef.2015.08.004

Bebchuk, L., Cohen, A., & Ferrell, A. (2009). What matters in corporate governance? *Review of Financial Studies*, *22*(2), 783–827. https://doi.org/10.1093/rfs/hhn099

Bernardi, R. A. (2006). Associations between Hofstede's cultural constructs and social desirability response bias. *Journal of Business Ethics*, *65*(1), 43–53. https://doi.org/10.1007/s10551-005-5353-0

Bernile, G., Bhagwat, V., & Yonker, S. (2018). Board diversity, firm risk, and corporate policies. *Journal of Financial Economics*, *127*(3), 588–612. https://doi.org/10.1016/j.jfineco.2017.12.009

Beugelsdijk, S., Kostova, T., Kunst, V. E., Spadafora, E., & van Essen, M. (2018). Cultural distance and firm internationalization: A meta-analytical review and theoretical implications. *Journal of Management*, *44*(1), 89–130. https://doi.org/10.1177/0149206317729027

Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, *14*(3), 257–273. https://doi.org/10.1016/j.jcorpfin.2008.03.006

Boubakri, N., Mirzaei, A., & Samet, A. (2017). National culture and bank performance: Evidence from the recent financial crisis. *Journal of Financial Stability*, *29*, 36–56. https://doi.org/10.1016/j.jfs.2017.02.003

Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking & Finance*, *13*(1), 65–79. https://doi.org/10.1016/0378-4266(89)90020-4

Breuer, W., Ghufran, B., & Salzmann, A. J. (2018). National culture, managerial preferences and takeover performance. *International Business Review*, *27*(6), 1270–1289. https://doi.org/10.1016/j.ibusrev.2018.05.008

Bussoli, C. (2017). Influence of national culture on bank risk-taking in the European system. In A. Caretta, F. Fiordelisi, & P. Schwizer (Eds.), Risk Culture in Banking (pp. 215–239). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-57592-6_10

Buszko, A. T. (2018). Cultural implications for the shadow economy. *Engineering Economics*, *29*(1), 46–52. https://doi.org/10.5755/j01.ee.29.1.18069

Cai, K., Fairchild, R., & Guney, Y. (2008). Debt maturity structure of Chinese companies. *Pacific-Basin Finance Journal*, *16*(3), 268–297. https://doi.org/10.1016/j.pacfin.2007.06.001

Carretta, A., Farina, V., Fiordelisi, F., Schwizer, P., Saverio, F., & Lopes, S. (2015). Don't stand so close to me: The role of supervisory style in banking stability. *Journal of Banking & Finance*, *52*, 180–188. https://doi.org/10.1016/j.jbankfin.2014.09.015

Chakrabarti, R., Gupta-Mukherjee, S., & Jayaraman, N. (2009). Mars–Venus marriages: Culture and cross-border M&A. *Journal of International Business Studies*, *40*(2), 216–236. https://doi.org/10.1057/jibs.2008.58

Chiaramonte, L., Croci, E., & Poli, F. (2015). Should we trust the Z-score? Evidence from the European Banking Industry. *Global Finance Journal*, *28*, 111–131. https://doi.org/10.1016/j.gfj.2015.02.002

Datta, D. K., & Puia, G. (1995). Cross-border acquisitions: An examination of the influence of relatedness and cultural fit on shareholder value creation in U.S. acquiring firms. *Management International Review*, *35*(4), 337–359. www.jstor.org/stable/40228285

di Pietro, F., Bontempi, M. E., Palacín-Sánchez, M. J., & Samaniego-Medina, R. (2019). Capital structure across Italian regions: The role of financial and economic differences. *Sustainability*, *11*(16), 4474. https://doi.org/10.3390/su11164474

European Central Bank. (2019). *What is the ECB's role in bank mergers and acquisitions?* https://www.bankingsupervision.europa.eu/about/ssmexplained/html/bank_mergers_acquisitions.en.html

Ferretti, R., Pattarin, F., & Venturelli, V. (2010). *M&As and equity risk in the EMU financial sector*. Palgrave Macmillan. https://doi.org/10.1057/9780230275027_4

García-Teruel, P. J., & Martínez-Solano, P. (2007). Short-term debt in Spanish SMEs. *International Small Business Journal: Researching Entrepreneurship*, *25*(6), 579–602. https://doi.org/10.1177/0266242607082523

Gerhardt, M., & Vennet, R. V. (2017). Bank bailouts in Europe and bank performance. *Finance Research Letters*, *22*, 74–80. https://doi.org/10.1016/j.frl.2016.12.028

Ghosh, A., & Moon, D. (2010). Corporate debt financing and earnings quality. *Journal of Business Finance & Accounting*, *37*(5-6), 538–559. https://doi.org/10.1111/j.1468-5957.2010.02194.x

Giraldez-Puig, P., & Berenguer, E. (2018). Family female executives and firm financial performance. *Sustainability*, *10*(11), 4163. https://doi.org/10.3390/su10114163

Guerrero-Villegas, J., Pérez-Calero, L., Hurtado-González, J., & Giráldez-Puig, P. (2018). Board attributes and corporate social responsibility disclosure: A meta-analysis. *Sustainability*, *10*(12), 4808. https://doi.org/10.3390/su10124808

Hall, E. T. (1960). The silent language in overseas business. *Harvard Business Review*, *38*(3), 87–96.

Hall, E. T., & Hall, T. (1959). *The silent language* (Vol. 948). Anchor books.

Hofstede, G. (1980). *Culture's consequences. International differences in work-related values*. Sage.

Hofstede, G., & Bond, M. H. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, *16*(4), 5–21. https://doi.org/10.1016/0090-2616(88)90009-5

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Sofware of the mind* (3rd ed.). McGraw-Hill.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations. The GLOBE study of 62 societes*. Sage Publications.

House, R., Javidan, M., Hanges, P., & Dorfman, P. (2002). Understanding cultures and implicit leadership theories across the globe: An introduction to project GLOBE. *Journal of World Business*, *37*(1), 3–10. https://doi.org/10.1016/S1090-9516(01)00069-4

Hurdle, G. J. (1974). Leverage, risk, market structure and profitability. *The Review of Economics and Statistics*, *56*(4), 478–485. https://doi.org/10.2307/1924463

Kanagaretnam, K., Lim, C. Y., & Lobo, G. J. (2011). Effects of national culture on earnings quality of banks. *Journal of International Business Studies*, *42*(6), 853–874. https://doi.org/10.1057/jibs.2011.26

Kanagaretnam, K., Lim, C. Y., & Lobo, G. J. (2014). Influence of national culture on accounting conservatism and risk-taking in the banking industry. *The Accounting Review*, *89*(3), 1115–1149. https://doi.org/10.2308/accr-50682

Khan, A., Muttakin, M. B., & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: Evidence from an emerging economy. *Journal of Business Ethics*, *114*(2), 207–223. https://doi.org/10.1007/s10551-012-1336-0

Khan, M. S., Scheule, H., & Wu, E. (2017). Funding liquidity and bank risk taking. *Journal of Banking & Finance*, *82*, 203–216. https://doi.org/10.1016/j.jbankfin.2016.09.005

Kirkman, B. L., Lowe, K. B., & Gibson, C. B. (2006). A quarter century of Culture's Consequences: A review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies*, *37*(3), 285–320. http://dx.doi.org/10.1057/palgrave.jibs.8400202

KNF- Polish Financial Supervision Authority. (2020). *Raport o sytuacji banków w 2019 r.* Retrieved on January 21, 2021, from https://www.knf.gov.pl/knf/pl/komponenty/img/Informacja_na_temat_sytuacji_sektora_bankowego_w_2019_r.pdf

Kogut, B., & Singh, H. (1988). The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, *19*(3), 411–432. https://doi.org/10.1057/palgrave.jibs.8490394

Kolaric, S., & Schiereck, D. (2014). Performance of bank mergers and acquisitions: A review of the recent empirical evidence. *Management Review Quarterly*, *64*(1), 39–71. https://doi.org/10.1007/s11301-014-0099-3

Korzeb, Z., & Samaniego-Medina, R. (2019). Sustainability performance: A comparative analysis in the Polish banking sector. *Sustainability*, *11*(3), 653. https://doi.org/10.3390/su11030653

Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics*, *93*(2), 259–275. https://doi.org/10.1016/j.jfineco.2008.09.003

Li, X., Tripe, D. W. L., & Malone, C. B. (2017). Measuring bank risk: An exploration of Z-Score. *SSRN Electronic Journal*, Retrieved January 14, 2021, from https://doi.org/10.2139/ssrn.2823946

Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal of Banking & Finance*, *16*(6), 1173–1178. https://doi.org/10.1016/0378-4266(92)90065-8

Morosini, P., Shane, S., & Singh, H. (1998). National cultural distance and cross-border acquisition performance. *Journal of International Business Studies*, *29*(1), 137–158. https://doi.org/10.1057/palgrave.jibs.8490029

Petrenko, Y., & Stolyarov, N. O. (2019). Features of the management of international projects, taking into account intercultural differences of the partners. *Entrepreneurship and Sustainability Issues*, *6*(4), 2037–2051. https://doi.org/10.9770/JESI.2019.6.4%2834%29 https://doi.org/10.9770/jesi.2019.6.4(34)

Reus, T. H., & Lamont, B. T. (2009). The double-edged sword of cultural distance in international acquisitions. *Journal of International Business Studies*, *40*(8), 1298–1316. https://doi.org/10.1057/jibs.2009.25

Sarala, R. M. (2010). The impact of cultural differences and acculturation factors on post-acquisition conflict. *Scandinavian Journal of Management*, *26*(1), 38–56. https://doi.org/10.1016/j.scaman.2009.07.001

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*, 1–65. https://doi.org/10.1016/S0065-2601(08)60281-6

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, *50*(4), 19–45. https://doi.org/10.1111/j.1540-4560.1994.tb01196.x

Schwartz, S. H. (2004). Mapping and interpreting cultural differences around the world. In H. Vinken, J. Soeters, & P. Ester (Eds.), *Comparing cultures, dimensions of culture in a comparative perspective* (pp. 43–73). Brill.

Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative Sociology*, *5*(2–3), 137–182. https://doi.org/10.1163/156913306778667357

Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J.-E., Demirutku, K., Dirilen-Gumus, O., & Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, *103*(4), 663–688. https://doi.org/10.1037/a0029393

Shim, J. (2017). An Investigation of Market Concentration and Financial Stability in Property–Liability Insurance Industry. *Journal of Risk and Insurance*, *84*(2), 567–597. https://doi.org/10.1111/jori.12091

Triandis, H. C. (1995). *Individualism and collectivism*. Westview.

Trompenaars, F., & Hampden-Turner, C. (1997). *Riding the waves of culture: Understanding cultural diversity in business*. Nicholas Brealey Publishing.

Trujillo-Ponce, A., Samaniego-Medina, R., & Cardone-Riportella, C. (2013). Examining what best explains corporate credit risk: Accounting-based versus market-based models. *Journal of Business Economics and Management*, *15*(2), 253–276. https://doi.org/10.3846/16111699.2012.720598

Valipour, H., & Moradbeygi, M. (2011). Corporate debt financing and earnings quality. *Journal of Applied Finance and Banking*, *1*(3), 139–157.

Weber, Y., Tarba, S. Y., & Bachar, Z R. (2011). Mergers and acquisitions performance paradox: The mediating role of integration approach. *European J. of International Management*, *5*(4), 373–393. https://doi.org/10.1504/EJIM.2011.040911

Weber, Y., Tarba, S. Y., & Reichel, A. (2009). International mergers and acquisitions performance revisited: The role of cultural distance and post-acquisition integration approach. *Advances in Mergers and Acquisitions*, *8*, 1–17. https://doi.org/10.1108/S1479-361X(2009)0000008003

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. The MIT Press.

Yunanda, R. A., Tareq, M. A., Mahdzir, A. M., & Rahman, F. K. (2019). National culture and transparency: Evidence from Islamic banks. *Journal on Innovation and Sustainability RISUS*, *10*(1), 101–109. https://doi.org/10.24212/2179-3565.2019v10i1p101-109

Zhang, Y., Weng, Q. D., & Zhu, N. (2018). The relationships between electronic banking adoption and its antecedents: A meta-analytic study of the role of national culture. *International Journal of Information Management*, *40*, 76–87. https://doi.org/10.1016/j.ijinfomgt.2018.01.015