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Foreign ownership and bank performance Evidence from French market

Marc Kouzez
Brest Business School

Abstract

This article examines the impact of the ownership of French banks on the bank performance. We show that domestic banks have a better performance than foreign banks, whether this performance is measured by risk, profitability, or stability. Moreover, we examine some of the home country risks that potentially impact the performance of foreign banks in the host country. Using a unique dataset with detailed information on country risk, our findings show that the level of risks in the home country does matter when examining the performance of foreign banks in the host country. More specifically, foreign banks from countries with a low level of risks seem to have a better performance in the host country than banks from countries with a high level of risks. Our findings contribute to the literature on the bank performance and provide new insights into the determinants of the foreign banks' performance.

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Contact: Marc Kouzez - mkouzez@hotmail.com.
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1. Introduction

The global financial system has experienced substantial regulatory and structural changes since the 1980s. Financial liberalization has led to a strong flow of capital and development of financial systems. Even if the process of liberalization differs between countries, the main measures revolve around the suppression of regulation and the control on the prices of banking services, the privatization of public banks, and the entry of foreign actors into the domestic economy. Characterized by optimistic anticipation for growth of liquidity and by strong bank competition, the banking system has witnessed a tremendous increase in the number of foreign banks over the past three decades[2]. Given the current importance of foreign banks in the banking system in many countries, understanding their impact has been subject to abundant literature. Many studies have then tried to compare the performance of foreign banks relative to that of domestic banks (see, among others, Claessens et al. 2001; Berger et al. 2005; Dung 2019), Banks may have many advantages in terms of performance of being foreign. Since foreign banks are part of an international institution, they have better access to capital than domestically-owned banks, and therefore they might operate with very little financial capital as the parent organization may help to absorb risks (Barba-Navaretti et al. 2010). Foreign banks may also have superior ability to diversify risks allowing them to increase their profit and to improve their risk-adjusted profitability (Meslier et al. 2014). By being a part of an international banking organization, foreign banks have access to superior technologies and new financial instruments for collecting and assessing "hard" quantitative information (Berger et al. 2001). However, foreign banks have also some disadvantages when comparing their performance to that of domestic banks. For instance, foreign banks may have high overhead costs due to bad access to "soft" information on how to do business in the host country (Claessens et al. 2001)[3]. Foreign banks may also have problems related to the legal, regulatory or institutional environment in the host country, and be so exposed to unfair treatment comparing to their counterparts (Galindo et al. 2003; Buch and DeLong, 2004). In addition, geographical distance and cultural factors might negatively impact the relative performance of foreign banks (Correa, 2009; Claessens et al. 2014).

The performance of foreign banks compared to that of domestic banks remains a contentious topic. The findings of previous studies generally are contradictory, and do not lead to a decision on the question of performance in terms of bank ownership. Banking literature explains such contradictions in the findings by differences related to the bank characteristics, or to the host country conditions. However, many questions about the impact of the home country remain unanswered. In this study, we examine the link between banks' ownership and performance for French commercial banks, and shed light on some new factors related to the home country that impact a foreign bank's ability to operate in a host country.

Compared with the existing literature, our analysis differs mainly on two grounds. First, it extends the literature on the components of the performance of foreign banks by examining the impact of various risks related to the home country on the performance in the host country. To the best of our limited knowledge, this is the first study on the performance of foreign banks that looks into this risks aspect. Collected by the Economist Intelligence Unit database, our data covers many dimensions of country risk which enables us to better understand the impact of the home country conditions on the performance of foreign banks in

[2] Claessens and Van Horen (2014) document that the number of foreign-owned banks increased by 69% over the period of 1995-2009.

[3] However, DeYoung and Hasan (1998) show that foreign banks can overcome this informational disadvantage through "learning by lending".

the host country. Second, our sample on French market composed of 35 foreign banks out of the 99 banks provides an excellent setting for analyzing the impact of the bank ownership on the performance.

Our results reveal significant differences between foreign and domestic banks in terms of performance. Foreign-owned banks are distinguished by lower profitability, higher risk, and lower stability than domestic-owned banks. When examining the impact of home country conditions on the performance of foreign banks, we find that the performance of foreign banks depends on the level of some risks in the home country. Foreign banks from countries characterized by a low country risk will rather tend to have a better performance than others and *vice versa*. Thus, this study suggests that the risks level in the home country influences the relative performance of a foreign bank in the host country.

The article is organized as follows. Section 2 reviews the related theoretical framework on the relationship between bank ownership (foreign/domestic) and bank performance, and Section 3 introduces the dependent variables and the explanatory variables. Section 4 presents the methodology and discusses the empirical results. Section 5 concludes.

2. Theoretical background

Table 1 provides a summary of the results from twenty studies on comparisons of bank performance in relation to the bank ownership. The findings of many studies in the banking literature show ambivalent results on the relative performance of foreign banks: some measures for foreign banks indicate better performance than domestic banks, while others show the opposite results. These results are explained in the banking literature by differences related to bank characteristics (size, business model, ownership structure…)[4], to country covered by the study[5], to time periods[6]. Given the specificity of each country, we focus in this study on the French market and try to better understand the components of bank performance according to bank ownership. Focusing on a single country enables us to analyze the effects of bank ownership on bank performance within a uniform environment. First, we examine if there is any significant difference between foreign banks and domestic banks in terms of performance which leads to the enunciation of our first hypothesis:

Hypothesis 1. The bank ownership will differently impact the bank performance.

Second, despite the rich body of research emphasizing the differences that might exist between foreign banks and domestic banks in terms of performance, many questions about the impact of home country' conditions on the performance of foreign banks remain unanswered. Since country risk refers to uncertainty within a given country, the greater the country risk the greater the uncertainty created in this country. This uncertainty could harm the overall health of the banking and financial sector. Valencia (2013) shows that higher uncertainty makes bank capital more valuable, and thus bank cuts lending to strengthen its balance sheet. We examine then the impact of many aspects of home country risk for foreign banks on their performance in the host country, and we assume that some risks like the banking sector risk in the home country could have an impact on the performance of foreign bank in the host country. Accordingly, we test the following hypothesis:

Hypothesis 2. The bank from a country characterized by a high level of country risks experiences a lower performance compared to their counterparts.

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[4] For instance, Meslier et al. (2014) indicate that income diversification and a shift toward non-interest income has a positive influence on the profitability and risk-adjusted profitability especially for foreign banks.

[5] For instance, Claessens et al. (2001) show that foreign banks outperform domestic banks in developing countries, and that these results are reversed in developed countries.

[6] For instance, Correa (2009) shows that the outperformance of domestic banks compared to that of foreign banks are observed only in a short run (the first two years after a cross-border acquisition).

Table I. Summary of the literature on performance depending on the bank's ownership

Sources	Countries studied	Period	Focus of the study	Findings
Berger et al. (2005)	Argentina	1993-1999	Profitability Risk	Foreign banks outperform both public and domestic banks.
Berger et al. (2009)	China	1994-2003	Risk Profitability	Foreign presence leads to better efficiency and better quality of credit portfolio.
Bouzagrou et al. (2018)	France	2000-2012	Profitability	Foreign banks offer better profitability during the crisis. These findings are mixed preceding the crisis.
Chantapong (2005)	Thailand	1995-2000	Profitability	Foreign banks offer better profitability compared to domestic banks (pre-tax profits and ROA).
Chou and Lin (2011)	Taiwan	2001-2006	Risk Stability	Higher credit risk and/or higher risk of default for foreign banks.
Claessens et al. (2001)	80 countries (developed and developing)	1988-1995	Profitability	Foreign banks outperform domestic banks in developing countries and underperform in developed countries (before tax profits/total assets).
Correa (2009)	179 Developing and developed countries	1994–2004	Profitability Cost to income ratio	No difference for ROA and ROE, but domestic banks outperform foreign according to cost to income ratio
Deyoung et al. (1996)	United States	1985-1990	Efficiency	Domestic banks are more efficient than foreign banks
Efthyvoulou et al. (2014)	16 countries from Central and Eastern Europe	2002-2010	Stability Risk	Before the crisis, difference is insignificant. During the crisis, domestic banks are more exposed to credit risk but are more solvent.
Havrylchyk et al. (2011)	Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia	1995-2003	Profitability	Profitability of foreign banks, as measured through ROA, is better than for domestic banks.
Lassoued et al. (2016)	MENA region	2006-2012	Stability Risk	Foreign banks are less exposed to credit risk and risk of failure.
Mian (2003)	100 emerging economies	1992-1999	Profitability	No difference in terms of profitability as measured by pre-tax profits.
Micco et al. (2007)	179 countries (developed and developing)	1995-2002	Profitability operational risk	Foreign banks outperform domestic banks in developing countries. However, no significant differences in developed countries.
Miller et al. (2002)	Belgium, Denmark, France, Germany Italy, The Netherlands, Portugal, Spain, England	1989-1996	Efficiency	Domestic banks offer better efficiency of profits compared to their foreign counterparts.
Peek et al. (1999)	United States	1984-1997	Profitability	Domestic banks are distinguished from foreign banks by better profitability as measured by ROA.
Sathye (2001)	Australia	1996	Efficiency	Domestic banks are more efficient than foreign banks.
Shaban et al. (2018)	Indonesia	2005-2012	Profitability Risk	Foreign banks have a tendency to be less exposed to risk and more performant than domestic banks (state and private).
Sturm et al. (2004)	Australia	1988-2001	Efficiency	Foreign banks outperform domestic banks
Weill (2006)	Poland and Czeck Republic	1997	Efficiency	Foreign-owned banks offer better efficiency than domestic banks.
Yildirim et al. (2007)	12 transition economies of Central and Eastern Europe	1993-2000	Efficiency	Domestic banks outperform foreign banks in profit efficiency

3. Data

The data used in our study are collected by using many sources. First, accounting data and ownership information on French commercial banks are mainly collected from the Orbis database and from annual bank reports available through their respective websites. We consider only the commercial banks in our study to minimize any possible bias caused by the different nature and business scope of banks. Since banks have different objectives, they may conduct their businesses in different specializations. Second, macroeconomic data, such as inflation and GDP growth rates, are obtained from the World Bank's World Development Indicators (WDI). Third, countries' risks data are collected from the Economist Intelligence Unit database (EIU). Our sample is outlier-free, and is established by retaining commercial banks that were active during the 2011-2017 analysis period. The sample is thus composed of 99 institutions of which 35 are foreign.

In regards to the dependent variables, there is a consensus in the banking literature that profitability is somehow the most comprehensive reduced form measure of a bank's performance. However, we opt for a straightforward way to proxy bank performance by using various accounting-based indicators: risk, profitability, and stability. Following prior literature (Meslier et al. 2014; Alraheb and Tarazi, 2018), and to account for bank risk measure, we consider the risk-adjusted profitability (RAP). To measure the profitability of the banking

institutions in our sample, we use the return on assets ratio (ROA). Finally, as for the measure of bank stability, and since the data on the regulatory capital ratios are unavailable for most of the banks in our sample, the analysis is limited to the default risk. Following the model of Boyd and Graham (1986), we use the Z-score measure (Z) which reflects a bank's probability of insolvency (e.g., Čihák et al. 2012; Lepetit and Strobel, 2013). It is calculated as follows:

$$Z\text{-}score = (ROA + Equity)/S.D.\ (ROA)$$

Where ROA is average annual return on end-year assets; Equity is the ratio of total equity to total assets; S.D.(ROA) is the standard deviation of the return on assets. A high Z-score value corresponds to a weak probability of default and *vice versa*.

In regards to the explanatory variables, the first one constitutes the core of our analysis. It refers to the ownership of banking institutions (FB). We use the definition generally applied in the literature on foreign banking and consider a bank to be foreign if shareholders own a majority of outstanding shares, or that a foreign company is the first shareholder (e.g., Weill, 2006). In this respect, it should be noted that none of the banks switched from domestic to foreign property during the analysis period and that all of the banks defined as foreign remain so until the end of the analysis period. Accordingly, we construct an ownership dummy variable FB. A series of control variables related to bank characteristics are considered and defined in Table 2. To capture the effects related to economic conditions, we retain two indicators widely used in the banking literature: the lag of growth rate of gross domestic products (GDP), and the inflation rate (Inflation). Finally, our data includes various measures of country risk defined by the Economist Intelligence Unit (EIU). All risks are quantified on a scale of 0-100, with 0 indicating very little risk and 100 indicating very high risk.

Table II. All variables' definition and the data source

	Definition	Source
Panel A : Dependent variables		
RAP	The risk-adjusted profitability is the ratio of the return on assets to its standard deviation	Orbis and author' calculations
ROA	The ratio of net profit to total assets	Orbis and author' calculations
Z	The Z-score measure reflects a bank's probability of insolvency	Orbis and author' calculations
Panel B : Banking control variables		
BE	A dummy that is equal to 1 if the is owned by foreign	Author's collection
O.O.I	The ratio of revenue from all other operating activities to total assets	Orbis and author' calculations
Loans	The ratio of gross loans to total bank assets	Orbis and author' calculations
Deposits	The ratio of total deposits and short term funding in total assets	Orbis and author' calculations
Equity	the ratio of equity to total bank assets	Orbis and author' calculations
Size	The natural logarithm of total bank assets	Orbis and author' calculations
FA	The ratio of fixed assets to total bank assets	Orbis and author' calculations
Panel C : Macroeconomic control variables		
GDP	The lagged value of GDP growth rate	WDI
Inflation	The inflation rate	WDI
Panel D : Country risk variables		
Currency risk	It assesses the risk of maxi-devaluation against the reference currency over the next 12-month period	EIU
Sovereign risk	It measures the risk of a build-up in arrears of principal and/or interest on foreign- and/or local-currency debt that is the direct obligation of the sovereign or guaranteed by the sovereign	EIU
Banking sector risk	It gauges the risk of a systemic crisis whereby bank(s) holding 10% or more of total bank assets become insolvent and unable to discharge their obligations to depositors and/or creditors	EIU
Political risk	It evaluates a range of political factors relating to political stability and effectiveness that could affect a country's ability and/or commitment to service its debt obligations and/or cause turbulence in the foreign exchange market	EIU
Economic structure risk	It encompasses a series of macroeconomic variables of a structural rather than a cyclical nature	EIU
Overall country risk	it derived by taking an average of the scores for sovereign risk, currency risk, and banking sector risk	EIU

4. Methodology and empirical results

4.1. Descriptive statistics

Table 3 presents descriptive statistics and univariate comparisons between domestic ownership and foreign ownership of our sample. We find the following results: First, foreign banks have a risk which exceeds, in average, that of domestic banks; Second, the profitability of domestic banks (0.58) surpasses in average that of foreign banks (0.35); Third, the lower performance of foreign banks is confirmed since their level of stability is inferior to that of domestic banks. By using the p-value of a two-sided test enables us to confirm these results.

Table III. Descriptive statistics

Panel A : Dependent variables																
	All banks					65 Domestic banks					35 Foreign banks					
	Mean	S.D.	p25	p50	p75	Mean	S.D.	p25	p50	p75	Mean	S.D.	p25	p50	p75	t-test*
RAP	5.42	11.52	0.57	3.07	6.24	6.61	13.08	1.25	3.99	7.33	2.48	5.11	-0.15	1.28	3.40	0.0000
ROA	0.52	0.99	0.14	0.45	0.76	0.58	1.02	0.22	0.46	0.78	0.35	0.88	-0.04	0.33	0.73	0.0080
Z	3.66	1.346	2.90	3.841	4.429	3.781	1.347	3.262	3.945	4.520	3.372	1.304	2.386	3.628	4.254	0.0005
Panel B : Banking control variables																
	All banks					65 Domestic banks					35 Foreign banks					
	Mean	S.D.	p25	p50	p75	Mean	S.D.	p25	p50	p75	Mean	S.D.	p25	p50	p75	t-test*
O.O.I	2.31	6.33	0.54	1.18	2.02	1.35	1.75	0.68	1.21	1.88	4.67	11.15	0.37	1.04	4.75	0.0002
Loans	0.61	0.29	0.35	0.70	0.84	0.65	0.27	0.45	0.75	0.84	0.50	0.29	0.25	0.47	0.75	0.0000
Deposits	0.76	0.23	0.67	0.86	0.91	0.77	0.23	0.72	0.87	0.92	0.72	0.23	0.61	0.82	0.88	0.0223
Equity	9.64	10.45	3.96	6.60	11.28	8.12	9.37	3.74	5.21	9.58	13.38	11.96	6.49	10.19	15.78	0.0000
Size	14.93	2.39	13.34	14.41	16.05	15.32	2.42	13.63	14.74	16.76	13.96	2.03	12.62	13.60	14.63	0.0000
FA	0.85	2.23	0.08	0.41	0.78	0.57	0.64	0.12	0.49	0.79	1.52	3.89	0.04	0.18	0.66	0.0031

* The value reported of t-test is that two sided *p-value* allows for the variance to be different between two groups.

Panel C : Macroeconomic control variables					
	Mean	S.D.	p25	p50	p75
GDP	1.16	0.67	0.57	1.09	1.9
Inflation	0.95	0.81	0.18	0.86	1.95

Table 4 presents the correlation matrix for all variables used in our study. The results indicate strong and significant correlations among all the implied country risk measures. To further test whether including all country risk measures simultaneously in the regression is viable, we run the Variance Inflation Factor (VIF) test proposed by Belsley et al. (1980). The VIF test shows values higher than 5, which suggests that simultaneously including all country risk measures is not viable. Thus, the country risk variables for all foreign banks are included separately when running the regressions.

Table IV. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1) O.O.I	1											
2) Deposits	-0.288***	1										
3) Loans	-0.291***	0.353***	1									
4) Equity	0.423***	-0.457***	-0.206***	1								
5) Size	-0.273***	-0.267***	-0.114*	-0.42***	1							
6) FA	0.468***	-0.064	-0.203***	0.141**	-0.151***	1						
7) Currency risk	-0.016	0.069	-0.0007	0.114*	-0.118**	0.038	1					
8) Sovereign Debt risk	-0.038	0.093*	0.004	0.043	-0.081	0.028	0.962***	1				
9) Banking sector risk	-0.041	0.061	-0.013	0.102*	-0.113*	0.031	0.974***	0.936***	1			
10) Political risk	0.009	0.057	-0.074	0.172***	-0.172***	0.063	0.896***	0.867***	0.865***	1		
11) Economic structure risk	0.004	0.089*	-0.023	0.112*	-0.118**	0.082	0.942***	0.931***	0.935***	0.860***	1	
12) Overall country risk	-0.034	0.078	-0.001	0.083	-0.104*	0.033	0.992***	0.982***	0.982***	0.885***	0.945***	1

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

4.2. Regressions results

Table 5 presents univariate comparisons between foreign banks and domestic banks on bank performance. Here, we compare domestic ownership and foreign ownership, while only controlling for year specific effects. Our results suggest that domestic banks have lower risk, higher profitability, and higher stability than foreign banks.

Table V. Bank performance by ownership type

	RAP	ROA	Z
FB	-6.715***	-0.535***	-0.418***
	(4.16)	(4.65)	(3.30)
Constant	6.471***	0.572***	3.675***
	(3.97)	(4.90)	(13.68)
Observations	555	555	555

*, **, *** designate the statistical significance of the coefficients at the 10%, 5% and 1% levels, respectively.

Treating banks as homogeneous entities is most likely a strong restriction. Even though univariate comparisons show significant differences between foreign and domestic banks in terms of performance, these differences could be driven by bank characteristics, by home/host country conditions. To extend our analysis and gain insight into the divergent performance of

domestic and foreign banks, we consider the banking control variables as well as the macroeconomic control variables in our regressions. We assume that all unobservable factors that influence bank performance can be considered by a fixed or random error term. Regarding the fixed effect model, we drop this option for two reasons: First, since our panel contains many banks relative to years, so many degrees of freedom would be lost. Second and most importantly, when using fixed effect model, our variable of interest FB are omitted from all regressions because this variable show no change over time. Accordingly, to test our first hypothesis defined above, we estimate the random effects model using the following specifications:

$$Bank_{it} = \alpha + \beta_1 FB_i + \beta_2 Control_{it} + \beta_3 Y_t + \mu_i + \varepsilon_{it} \quad (1)$$

Where $Bank_{it}$ is a measure of bank performance (risk, profitability, and stability) for bank i in year t; α is the intercept term; β_1, β_2, β_3 and β_4 are the coefficients (or coefficient vectors); FB_i is a dummy variable taking the value of one for foreign banks; $Control_{it}$ is a matrix of banking control variables and macroeconomic control variables; Y_t are year fixed effects; μ_i is the unobserved panel-level random effect, $\mu_i \sim IID\ (0, \sigma_\mu^2)$; ε_{it} is the idiosyncratic error, $\mu_i \sim IID\ (0, \sigma_\varepsilon^2)$.

To test our second hypothesis, we examine the impact of various risks related to the home country of foreign banks on their performance in the host country. To do this, we add to the equation 1 an interaction term between the FB variable and all country risk measures defined above:

$$Bank_{it} = \alpha + \beta_1 FB_i + \beta_2 Control_{it} + \beta_3 FB_i * CountryR_t + \beta_4 Y_t + \mu_i + \varepsilon_{it} \quad (2)$$

Where $FB_i * CountryR_t$ is an interaction term between foreign banks and all country risk measures of bank i in year t. The application of the random effects model does not eliminate the possible presence of an endogeneity problem in our regressions. The decision to invest in banking markets in other countries is often conditioned, on one hand, by the state of the local market (quality of regulation and supervision, economic momentum, judicial framework, political stability, etc.) and, on the other hand, by the specific characteristics of the target bank (performance, quality of the portfolio, solvency, etc.). A selection bias may thus exist with the presence of foreign ownership. To ensure the reliability of the obtained results, we proceed with additional models with the goal of detecting a possible endogeneity bias. To do that, we use an instrumental variable (IV) approach to address any concerns of endogeneity. The models are so reproduced while introducing two instrumental variables which must be strongly correlated with the FB variable and uncorrelated with the residuals. The first variable is regulatory quality (RQ). This indicator, on a scale from -2.5 to 2.5, assesses the actions taken by state authorities targeting the development of the private sector. In the same analysis framework, we consider the second variable named government effectiveness (GE). On a scale from -2.5 to 2.5, this variable allows for the assessment of the quality of public services and the credibility of the government in regards to its engagements. The values of these two variables are extracted from the Worldwide Governance Indicators database. We use these variables to capture the institutional environments that play a key role in the investment decision. Moreover, we argue that it is less likely that changes in the World Governance Index would have a direct effect on bank performance. Furthermore, these variables are considered in the banking literature as an exogenous in regards to the analysis of the characteristics of banking institutions (e.g., Barth et al. 2009; Bitar et al. 2018). We reproduce then all models in our main regression by using a two-stage least square regression model (2SLS). We use both the Sargan (1958) and Basmann (1960) tests for over-identifying restrictions for the 2SLS estimator to check the validity of the instrumental variables. After our 2SLS estimations, we use Durbin (1954) test and Wu-Hausman test (Wu 1974; Hausman 1978) to detect the possible presence of an endogeneity problem.

Table 6 reports the regression results from equation 1. Consistent with hypothesis 1, the results indicate that foreign banks have a higher risk, a lower profitability, and a lower stability than their counterparts. Turning to the control variables, the coefficients of the O.O.I. variable are significant and indicate a positive relationship with the RAP variable, with the ROA variable, and a negative relationship with the Z variable. Consistent with the findings of De Jonghe (2010) and of Meslier et al. (2014), a greater involvement in the non-interest activities seems to be an important factor to increase profitability, and to improve risk-adjusted profitability, but it is also associated with lower bank stability. Moreover, our results show a significant and positive effect of the bank equity on the risk-adjusted profitability (RAP) and the stability (Z). In line with the findings of Meslier et al. (2014), better capitalized banks seem to be less vulnerable and more stable. The results also indicate that small banks in French banking market are more profitable (higher ROA) than large banks in accordance with the results obtained by Bouzgarrou et al. (2018). However, the bank size seems to have no significant impact on risk or on stability for banks in our sample. Finally, even though the results show that the annual growth rate of the gross domestic product is positively related to the bank risk, macroeconomic control variables seem to have no impact on bank performance whether it is assessed by the profitability measure (ROA) or by the stability measure (Z). To control for endogeneity concerns, our results indicate that both Sargan and Basmann tests statistics are not significant at the 5% test level, which means that our instruments are valid. At the same time, the results of both Durbin and Wu-Hausman tests confirm the absence of an endogenous effect of bank ownership on our bank performance measures[7].

Table VI. The impact of foreign ownership on bank performance- main regression

	RAP	ROA	Z
FB	-6.538***	-0.552***	-0.794***
	(13.66)	(3.36)	(6.66)
O.O.I.	0.259***	0.312***	-0.029***
	(4.27)	(6.72)	(3.95)
Loans	2.821**	0.177	0.471**
	(2.42)	(0.65)	(2.18)
Deposits	-0.921	-0.471**	0.169
	(0.80)	(2.01)	(0.68)
Equity	0.026***	0.009	0.045***
	(2.83)	(1.43)	(11.95)
Size	-0.202	-0.077***	-0.128
	(0.94)	(5.50)	(1.28)
FA	0.080	-0.059	0.010
	(0.50)	(1.41)	(0.39)
GDP	-0.213**	-0.036	0.002
	(2.21)	(1.11)	(0.23)
Inflation	-0.004	0.006	0.000
	(0.22)	(0.93)	(0.20)
Intercept	9.418***	2.393***	4.704***
	(2.58)	(4.57)	(3.17)
Observations	510	510	510
Number of banks	99	99	99
Sargan test – *p*	0.8333	0.1957	0.800
Basmann test – *p*	0.8377	0.2072	0.8052
Durbin test – *p*	0.7618	0.1357	0.9606
Wu-Hausman – *p*	0.7681	0.1463	0.9616

*, **, *** designate the statistical significance of the coefficients at the 10%, 5% and 1% levels, respectively.

We test then our second hypothesis. The results for all measures of bank performance (RAP, ROA and Z) are reported in Table 7, Table 8, and Table 9 respectively. The results presented in Table 7 show that the home country risk covered by sovereign debt risk, banking sector risk and overall country risk matter for the foreign banks' risk in the host country. Precisely, the results reported in Table 7 show a significant and negative relationship between RAP variable and sovereign debt risk, between RAP variable and banking sector risk, but also

[7] We use also two other methods: limited information maximum likelihood (LIML) and the generalized method of moments (GMM) to mitigate concerns of endogeneity. The results, which are not reported here but are available upon request, provide additional support for our findings and suggest that our results are not driven by endogeneity.

between RAP variable and overall country risk. Consistent with hypothesis 2, the higher risks in the home country partly explain the higher risk of foreign banks in the host country.

Table VII. The impact of foreign ownership on bank risk

	-1	-2	-3	-4	-5	-6
FB	-2.833	-0.711	-2.970	-6.441	-8.353	-2.220
	(0.95)	(0.20)	(1.14)	(3.71)**	(2.34)*	(0.77)
Currency risk	0.118					
	(1.50)					
FB * Currency risk	-0.125					
	(1.48)					
Sovereign debt risk		0.185*				
		(1.73)				
FB * Sovereign debt risk		-0.197*				
		(1.80)				
Banking sector risk			0.104			
			(1.64)			
FB* Banking sector risk			-0.116*			
			(1.79)			
Political risk				-0.060*		
				(1.83)		
FB * Political risk				0.045		
				(0.99)		
Economic structure risk					0.082	
					(1.21)	
FB * Economic structure risk					-0.007	
					(0.09)	
Overall country risk						0.132*
						(1.72)
FB * Overall country risk						-0.143*
						(1.78)
O.O.I.	0.271***	0.272***	0.275***	0.271***	0.269***	0.275***
	(3.86)	(3.92)	(3.84)	(3.99)	(3.93)	(3.83)
Loans	2.790**	2.782**	2.772**	2.804**	2.879**	2.779**
	(2.39)	(2.38)	(2.36)	(2.41)	(2.53)	(2.37)
Deposits	-0.730	-0.647	-0.599	-0.496	-0.603	-0.640
	(0.57)	(0.49)	(0.44)	(0.34)	(0.43)	(0.48)
Equity	0.028***	0.030***	0.030***	0.032***	0.031***	0.030***
	(2.82)	(2.70)	(2.66)	(2.48)	(2.51)	(2.73)
Size	-0.132	-0.132	-0.113	-0.114	-0.149	-0.121
	(0.52)	(0.53)	(0.43)	(0.43)	(0.60)	(0.47)
FA	0.084	0.090	0.087	0.109	0.104	0.087
	(0.60)	(0.64)	(0.61)	(0.78)	(0.71)	(0.62)
GDP	-0.207**	-0.223**	-0.215**	-0.188**	-0.154*	-0.212**
	(2.15)	(2.31)	(2.36)	(2.18)	(1.72)	(2.24)
Inflation	-0.012	-0.004	-0.005	0.001	-0.007	-0.008
	(0.86)	(0.29)	(0.36)	(0.04)	(0.85)	(0.58)
Intercept	4.919	2.892	4.693	8.316	5.752	4.169
	(0.83)	(0.44)	(0.80)	(1.87)	(1.00)	(0.68)
Observations	506	506	506	506	506	506
Number of banks	99	99	99	99	99	99

*, **, *** designate the statistical significance of the coefficients at the 10%, 5% and 1% levels, respectively.

In Table 8, we test whether the home country risk of foreign bank affects their profitability in the host country. The results show that the coefficients of our interaction terms (BE * Currency risk), (BE* Sovereign debt risk), (BE * Banking sector risk), and (BE * Overall country risk) are all significant and negative when the dependent variable is ROA. This suggests that the higher profitability of foreign banks in the host country is associated with lower currency risk, with lower sovereign debt risk, with lower banking sector risk, or with lower country risk in the home country. In other words, being bank from a country with low country risk in the home country seems to positively affect the profitability in the host country.

Table VIII. The impact of foreign ownership on bank profitability

	-1	-2	-3	-4	-5	-6
FB	1.347	1.633	0.874	-1.172	-2.812*	1.242
	(1.45)	(1.45)	(0.96)	(1.13)	(1.69)	(1.44)
Currency risk	0.046**					
	(1.99)					
FB * Currency risk	-0.059**					
	(2.47)					
Sovereign debt risk		0.081				
		(1.56)				
FB * Sovereign debt risk		-0.080**				
		(1.96)				

Banking sector risk			0.035			
			(1.09)			
FB* Banking sector risk			-0.044*			
			(1.83)			
Political risk				-0.008		
				(0.44)		
BE * Political risk				0.016		
				(0.60)		
Economic structure risk					-0.008	
					(0.21)	
BE * Economic structure risk					0.045	
					(1.08)	
Overall country risk						0.050
						(1.56)
BE * Overall country risk						-0.059**
						(2.41)
O.O.I.	0.314***	0.314***	0.314***	0.312***	0.313***	0.314***
	(6.61)	(6.65)	(6.65)	(6.51)	(6.72)	(6.63)
Loans	0.177	0.172	0.171	0.176	0.192	0.173
	(0.66)	(0.64)	(0.64)	(0.66)	(0.74)	(0.65)
Deposits	-0.440**	-0.437*	-0.435	-0.448*	-0.476**	-0.434*
	(1.72)	(1.70)	(1.65)	(1.74)	(1.97)	(1.67)
Equity	0.009	0.009	0.009	0.009	0.009	0.009
	(1.47)	(1.45)	(1.44)	(1.40)	(1.40)	(1.46)
Size	-0.074***	-0.074***	-0.074***	-0.075***	-0.077***	-0.074***
	(5.16)	(4.93)	(4.71)	(4.58)	(4.86)	(4.88)
FA	-0.061	-0.059	-0.060	-0.060	-0.057	-0.060
	(1.46)	(1.44)	(1.44)	(1.44)	(1.36)	(1.46)
GDP	-0.042	-0.034	-0.042	-0.027	-0.016	-0.040
	(1.05)	(0.90)	(1.03)	(0.68)	(0.41)	(0.97)
Inflation	0.004	0.006	0.006	0.005	0.003	0.005
	(0.83)	(1.12)	(1.18)	(0.66)	(0.89)	(0.94)
Intercept	1.070	0.030	1.297	2.412***	2.607	0.901
	(1.16)	(0.02)	(0.91)	(4.88)	(1.63)	(0.68)
Observations	506	506	506	506	506	506
Number of banks	99	99	99	99	99	99

*, **, *** designate the statistical significance of the coefficients at the 10%, 5% and 1% levels, respectively.

In Table 9, we investigate whether the home country risks affect the relationship between foreign ownership and bank stability. Our results show no significant impact on stability measure (Z) for mostly all country risk measures for foreign banks. However, the coefficients of the banking sector risk and the overall country risk are significant at 10% level and negative which suggests that these risks have an impact on the stability of foreign banks in the host country.

Table IX. The impact of foreign ownership on bank stability

	-1	-2	-3	-4	-5	-6
FB	-0.116	0.293	0.233	-0.270	-0.154	0.185
	(0.25)	(0.45)	(0.46)	(0.50)	(0.34)	(0.37)
Currency risk	0.015					
	(1.34)					
FB * Currency risk	-0.020					
	(1.46)					
Sovereign debt risk		0.033				
		(1.38)				
FB * Sovereign debt risk		-0.036				
		(1.48)				
Banking sector risk			0.023			
			(1.31)			
FB * Banking sector risk			-0.030*			
			(1.67)			
Political risk				-0.015		
				(1.81)		
FB * Political risk				0.003		
				(0.38)		
Economic structure risk					0.031	
					(1.72)	
FB * Economic structure risk					-0.027	
					(1.65)	
Overall Country risk						0.024
						(1.46)
FB * Overall country risk						-0.030*
						(1.70)
O.O.I.	-0.027***	-0.026***	-0.024***	-0.024***	-0.026***	-0.025***
	(3.58)	(3.43)	(2.76)	(2.68)	(3.23)	(3.13)
Loans	0.466**	0.460**	0.457**	0.464**	0.459**	0.460**
	(2.15)	(2.20)	(2.26)	(2.12)	(2.17)	(2.19)
Deposits	0.204	0.223	0.253	0.273	0.271	0.229
	(0.86)	(1.03)	(1.30)	(1.55)	(1.46)	(1.07)
Equity	0.045***	0.045***	0.046***	0.046***	0.046***	0.045***
	(12.14)	(12.64)	(13.60)	(13.80)	(14.65)	(12.80)

Size	-0.120	-0.119	-0.111	-0.117	-0.115	-0.117
	(1.23)	(1.26)	(1.25)	(1.28)	(1.28)	(1.25)
FA	0.011	0.012	0.011	0.021	0.014	0.011
	(0.38)	(0.41)	(0.36)	(0.63)	(0.50)	(0.37)
GDP	-0.000	-0.001	-0.003	0.003	0.010	-0.002
	(0.04)	(0.11)	(0.24)	(0.22)	(0.74)	(0.15)
Inflation	-0.000	0.001	0.000	0.003	0.001	0.000
	(0.14)	(0.30)	(0.26)	(1.10)	(0.63)	(0.01)
Constant	4.141***	3.598***	3.697***	4.609***	3.491***	3.806***
	(2.71)	(2.81)	(3.45)	(3.46)	(3.16)	(3.02)
Observations	506	506	506	506	506	506
Number of banks	99	99	99	99	99	99

*, **, *** designate the statistical significance of the coefficients at the 10%, 5% and 1% levels, respectively.

Consistent with our conjecture, our findings suggest that the performance of foreign banks depends on the level of some of the home country risks whether this performance is assessed by risk measure, by profitability measure, or by stability measure.

5. Conclusion

This study analyzes the impact of bank ownership on the bank performance in the French market, and shed light on some new key factors related to home country that impact a foreign bank's ability to operate in a host country. Our results document lower performance for foreign banks compared to domestic-owned banks. In addition, our findings show that the lower performance of foreign banks is associated with high risk in the home country whether this performance is assessed by risk measure, profitability measure, or stability measure. Thus, this study proposes an additional provides new insights on the determinants of the performance of foreign banks to policymakers, investors, and academics in the French market. First, from a policy perspective, according to our results, foreign banks from countries with a low level of risks are more stable and are therefore expected to be safer for the host banking system than banks from countries with a high level of risks. Banks' supervisors and regulators should then consider the effect of ownership origin to enhance the stability of the banking system. Second, by studying how country risk influences the bank profitability, our study contributes to the growing literature on the factors influencing the investment decisions (e.g., Buch, 2003). Finally, our results suggest that when studying performance, foreign banks should not be considered as a homogeneous group and help then reconcile some contradictory results found in the literature. Future research may extend this study by examining the channels by which home country risks could potentially affect the performance of foreign banks.

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