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Article

Effect of Ownership on the Performance of Licensed Commercial Banks in Sri Lanka

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Abstract

Despite the availability of many studies on the ownership-performance association, existing literature provides contradictory evidence on the effect of ownership on bank performance. Therefore, this study examines the effect of ownership on the performance of licensed commercial banks in Sri Lanka using annual data from 2012 to 2021. The data was collected from the published annual reports of 18 licensed commercial banks in Sri Lanka. Bank ownership was categorized as state, private, and foreign and included in the model using two dummy variables. Return on equity, net interest margin, and non-performing loans were used as bank performance indicators. Three random effects panel regression models were used to explore the effect of ownership on the three measures of bank performance while controlling for bank size, loan-to-deposit ratio, income diversification, and management inefficiency. The results suggest that state-owned banks outperform other banks in terms of return on equity. However, their performance in terms of net interest margin and non-performing loans was not significantly different from that of other banks. Therefore, the evidence in this study is inadequate to claim a straightforward association between ownership and bank performance. Nevertheless, this study provides recent evidence of the effect of ownership on bank performance in Sri Lanka. Further, the findings of this study will provide insights for the government, banks, and policymakers in formulating appropriate policies to improve the performance of the banking sector

Keywords: commercial banks, ownership, bank performance, Sri Lanka, banking system

1. Introduction

A banking system contributes to economic growth primarily by maintaining payment services, optimizing capital accumulation and allocation, and enforcing corporate control (Cheng & Degryse, 2010). Banks are the principal financial intermediaries, particularly in emerging economies (Ekanayake & Premerathne, 2016). Moreover, banks enhance the financial strength of small and medium-scale firms and households (Marcelin et al., 2021), especially when they cannot afford capital market financing. Concurrently, the geographical outreach of branches and ATMs fosters economic growth by offering savers and borrowers convenient access to the

financial system (Sharma, 2016) while encouraging consumer deposits and firms to use bank-based financing (Emara & El-Said, 2021). Therefore, a healthy banking system is essential for an economy.

The underlying arguments for the ownership-performance association mainly stem from three major theories: agency theory, public choice theory, and property rights theory. For example, due to undue political intervention, state-owned banks are expected to perform relatively poorly compared to privately owned banks. Thus, contracts with such state-owned banks are harder to enforce. This situation, for example, leads to increased non-performing loans (Lin & Zhang, 2009). Further, poor monitoring systems in state-owned banks hinder productivity, investments, and performance (Altunbas et al., 2001). In comparison, private banks perform better in terms of profitability and costs (Shaban & James, 2018) than state-owned banks due to low operating costs, effective monitoring, and better operational processes (Fernando & Nimal, 2014). Therefore, these theories generally favour privatization and deregulation since private ownership is associated with higher performance.

Moreover, foreign banks outperform their domestic counterparts in transitional and developing countries, partly because their business activities are concentrated in more profitable areas. Furthermore, they provide a wide range of high-quality and sophisticated financial services to their customers more efficiently because of advanced technology, better corporate governance, economies of scale, and greater financial strength from the parent (Berger et al., 2005; Figueira et al., 2006; Demirgüç-Kunt & Huizinga, 1999; Bonin et al., 2005). Further, foreign banks are typically more prudent, as foreign ownership is associated with a lower rate of non-performing loans (Shaban & James, 2018). Moreover, foreign banks outperform their domestic counterparts because their home countries are more developed than their hosts (Claessens & Horen, 2012).

This discussion reveals that the association between ownership and the performance of banks is still conflicting (Mishra & Ramana, 2018). Furthermore, the most available studies on this topic have been conducted in developed countries (Hasan & Marton, 2003). However, studies conducted to explore the effect of ownership on bank performance in Sri Lanka are limited (Ekanayake & Premerathne, 2016). Moreover, since the structure and conduct of banking systems constantly change, the ownership-performance association can also change over time. For example, the number of banks, the market share of different ownership groups, and the technological edge of state-owned banks have changed substantially recently. These factors might have altered the performance differences among different ownership types. Therefore, this study examines the effect of ownership on the performance of licensed commercial banks in Sri Lanka using the most recent annual data from 2012 to 2021.

2. Literature Review

The current debate on the effect of ownership on bank performance stems from three major theories: agency theory, public choice theory, and property rights theory (Altunbas et al., 2001). According to agency theory, dispersed ownership of state-owned banks forces corporate power to shift from owners towards executives in state-owned banks (Berle & Means, 1932; Bendickson et al., 2016). Consequently, agency problems become serious since managers in state-owned banks have more opportunities to misuse owners' funds than private banks, given the poor monitoring mechanisms in state-owned firms. In this context, managers at state-owned banks lack incentives to pursue owners' interests. Weak regulatory oversight, sanctions regimes, and a lack of incentives for the board of directors can be detrimental to the performance of state-owned banks (Shleifer & Vishny, 1997; Uddin et al., 2022).

According to the public choice theory, state-owned enterprises underperform compared to their private counterparts (Lannotta et al., 2013) for many reasons. First, state-owned banks are subjected to substantial political influences and corruption. In this context, politicians have an undue influence on the financial market, banks' risk-taking behaviour, and, ultimately, the decisions made by state-owned banks (Buck, 2015). Thus, their lending strategies focus more on personal and political interests (Cornett et al., 2010). Second, bureaucrats have incentives to pursue their interests while maximizing their budgets instead of pursuing the interests of the general public (Berger et al., 2005). Third, accountability and transparency in the operations of state-owned firms are insufficient.

Moreover, state-owned banks are associated with higher operating costs due to the absence of incentives for controlling costs and inefficiencies. Further, state-owned firms spend more on capital equipment through ineffective public investment programs, have less productive employees, and pay higher salaries and wages when compared to private firms (Lawson, 1994). Consequently, state-owned banks perform poorly compared to their peers in the private sector due to credit misallocation, more non-performing loans, and political interference (Gupta et al., 2022). Accordingly, this theory favours privatizing state-owned banks while offering an exciting backdrop for exploring the political, economic, ethical, and social implications of government involvement in banking (Alexandropoulou & Triantafyllopoulos, 2006).

Furthermore, property rights are the right to employ an item of property in a specific manner, and that property can be used for several purposes (Demsetz, 1967). The property rights approach claims that state-owned banks are characterized by a poorly defined structure of property rights because these rights are dispersed among the public. As a result, any single owner of property rights will not have sufficient incentives to intervene in the decision-making process relating to that item of property. Thus, state-owned firms perform poorly due to the absence of a rational allocation of property rights (Furubotn, 1988). Also, state-owned firms operate in an environment with uncertain property rights. Insecure property rights make it harder for firms to determine whether they can keep the benefits of their labour (Cull & Xu, 2005). As a result, state-owned banks fail to manage property rights effectively (Bashir, 2002).

Furthermore, the inability of the general public to specialize, as indicated by the non-transferability of property rights in state-owned firms, provides weak incentives to monitor the performance of such firms. Moreover, as managers do not directly own property rights in state-owned firms, managers have poor incentives to invest in the long-term success of such firms. In this context, managers cannot increase their wealth by improving firms' wealth (De Alessi, 1969).

Despite state-owned banks being generally less efficient than their peers in the private sector, they perform better in certain circumstances. For instance, state-owned banks outperformed private banks during the Asian financial crisis from 1997 to 1998 in Malaysia, Indonesia, the Philippines, Thailand, and South Korea due to the effective restructuring strategies of the government on the insolvent institutions (Cornett et al., 2010). Meanwhile, Indian state-owned banks were more efficient than private banks from 1992 to 1995, mainly due to the financial reforms initiated in 1992 (Saha & Ravisankar, 2000). Moreover, state-owned banks outperformed private banks in Sri Lanka during 2005–2014 in terms of return on equity due to the greater efficiency and effective management of loan loss provisions (Ekanayake & Premerathne, 2016) and in Egypt during 1996–1999 (Omran, 2007), partly due to their strong market power (Pisedtasalasai & Edirisuriya, 2020). Nevertheless, private banks are more effective than state-owned banks in terms of their capacity to manage non-performing loans and net interest margins (Ekanayake & Premerathne, 2016). In contrast, however, Cornett et al. (2010) claim that non-performing loans were similar in state-owned and privately-owned banks throughout the 2001–2004 Post-Asian Financial Crisis era.

Moreover, foreign banks perform better in specific contexts than their domestic counterparts. For example, according to Bonin et al. (2005), foreign banks operate more efficiently since they deal with older, more transparent, and larger firms. Moreover, foreign banks deploy aggressive financial practices, which include large loan portfolios and higher leverage (Abraham, 2013). Further, foreign banks have access to better financial and logistical support due to their international linkages (Hasan & Marton, 2003) and account for lower personal costs than domestic banks (Bayyurt, 2013). Moreover, foreign banks have low non-performing loans since they follow effective credit policies (Shaban & James, 2018). Their access to modernized technology, especially for collecting and evaluating hard quantitative information, also places the foreign bank in a more advantageous position. This position is further strengthened due to their easier access to the capital market, ability to provide some services to global clients that domestic banks do not usually offer, and greater ability to diversify risks (Berger et al., 2004; Dages et al., 2000).

Even though foreign banks outperform domestic ones, as discussed in the previous paragraph, there are some instances where domestic banks outperform them. For example, foreign banks perform poorly than domestic banks, especially in developed countries (Lensink & Naaborg, 2007) and transitional countries (Yildirim & Philippatos, 2007). The narrower branch network of foreign banks compared to domestic banks (Sensarma, 2006), their less responsiveness to domestic credit deployment laws, and their informational disadvantage can be identified as the factors behind this poor performance.

This literature review reveals the inconsistency of the findings on the ownership-performance relationship in banks. Furthermore, the discussion highlights that this association depends on the contextual settings and the performance dimension. Therefore, the association between ownership and bank performance is worthy of reinvestigation in different contexts and different periods.

3. Methodology

This study investigates the effect of ownership on the performance of licensed commercial banks in Sri Lanka using annual data for the ten years from 2012 to 2021. Out of the 24 licensed commercial banks operating in Sri Lanka as of 30th September 2021, 18 LCBs were selected as the sample since data was unavailable on the remaining six banks. Only eight years of data were available for one of the 18 selected banks. Hence, the final dataset consists of an unbalanced panel with 178 bank-year observations. The data was collected from the published financial statements of the banks.

The ownership of the banks was classified as state, private, and foreign. Two dummy variables were used in the regression model to indicate these ownership categories. The first dummy variable, *StateD*, takes the value of one if the bank is state-owned and the value of zero for other banks. The second dummy variable, *PvtD*, takes the value of one if the bank is a domestic private bank and the value of zero for other banks. Finally, return on equity, net interest margin, and non-performing loans were used as bank performance indicators. Using three indicators enables comparing performance among different ownership types in three performance dimensions because the literature suggests that the performance difference is sensitive to the dimension used. As illustrated in Table 1, these indicators are frequently used to measure bank performance in the literature (Abraham, 2013; Atahau & Cronje, 2022; Cornett et al., 2010).

Moreover, the study used four bank-specific control variables: bank size, loan-to-deposit ratio, income diversification, and management inefficiency. The bank size was measured using total assets. The bank size was log-transformed following the approach adopted by Haddad et al. (2020), since it was not normally distributed. Management inefficiency reflects operating expenses as a percentage of total assets.

The random effects panel regression model illustrated in equation 1 was used to estimate the effect of ownership on the performance of the licensed commercial banks in Sri Lanka. The Breusch and Pagan Lagrangian multiplier test provided the basis for using the random effects model over pooled OLS regression. In addition, variance inflation factors were used to detect multicollinearity issues.

$$BP_{it} = \alpha + \beta_1 StateD_i + \beta_2 PvtD_i + \beta_3 L\_SIZE_{it} + \beta_4 LD_{it} + \beta_5 ID_{it} + \beta_6 MI_{it} + \varepsilon_{it} \text{ ---------- } (1)$$

$$H_0: \quad \beta_i = 0;$$
$$H_1: \quad \beta_i \neq 0$$

Table 1: Variables and Measurements

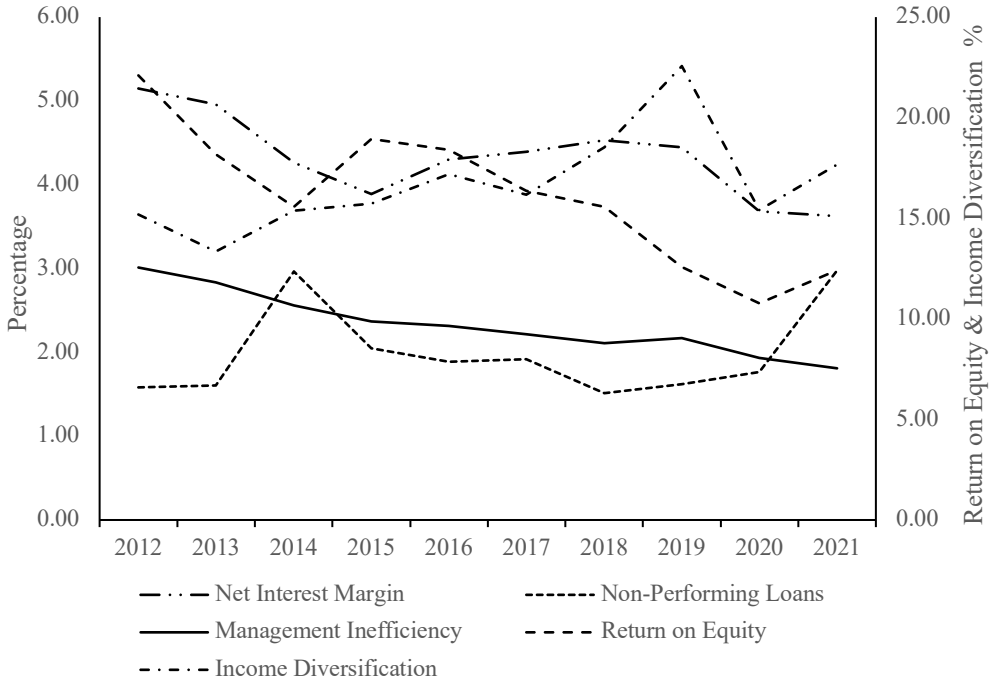
Dimension	Indicator	Measurement	Literature
Ownership	Two dummy variables were used to indicate ownership	StateD takes 1 if a bank is *state-owned* and 0 otherwise. PvtD takes 1 if a bank is a domestic *private* bank and 0 otherwise.	
Bank Performance	Return on Equity	(Profit Before Taxes/Total Equity) ×100	Lafuente et al. (2019) and Alshammari (2021)
	Net Interest Margin	(Net Interest Income/Average Assets) ×100	Sun et al. (2016)
	Non-Performing Loans	Non-performing loans/Loans	Cornett et al. (2010) and Lafuente et al. (2019)
Control Variables	Log Bank Size	Natural Logarithm of Total Assets	Haddad et al. (2020)
	Loan to Deposit	(Total Loans/ Total Deposits) ×100	Cornett et al. (2010)
	Income Diversification	(Non-Interest Income/Operating Income) ×100	Githaiga (2021)
	Management Inefficiency	(Operating Expenses/ Total Assets) ×100	Roman and Şargu (2013)

In equation 1, BP denotes the vector of bank performance measures, namely return on equity, net interest margin, and non-performing loans. Therefore, three models, namely, model 1, model 2, and model 3, were estimated, taking each performance measure as the dependent variable. StateD and PvtD denote the two ownership dummies. Moreover, L_SIZE denotes the natural logarithm of bank size, and LD denotes the loan-to-deposit ratio. Further, ID denotes income diversification, and MI denotes management inefficiency. Moreover, *i* denotes individual firms, and *t* denotes time. Finally, intercept, regression coefficients, and random error are denoted by α, β, and ε, respectively.

4. Results and Discussion

According to Figure 1, substantially higher non-performing loans can be observed in 2014 and 2021. Further, the rate of non-performing loans has increased drastically since 2018 in the Sri Lankan banking sector (CBSL, 2020). The return on equity has been gradually declining since 2015. Nevertheless, this ratio increased by 3.1 per cent in 2021, indicating a reverse in the trend (CBSL, 2022). The net interest margin declined considerably in 2020 and remained more or less the same in 2021 due to the ceilings imposed on lending rates in the banking sector (CBSL, 2020). It could be noted that the net interest margin and non-performing loans show an inverse relationship. For example, the net interest margin remained relatively high when the non-performing loans were relatively low from 2015 to 2020. Even though income diversification

slightly increased in 2019, it has fallen back to its usual range in 2020. Overall, a slight reduction in the performance of the banking system has been observed recently. This performance reduction can be possibly attributed to the effects of the Easter Sunday Attacks in 2019 and the COVID-19 outbreak in Sri Lanka in 2020. Nevertheless, a gradual decrease in management inefficiency can be observed during the sample period. Table 2 shows the descriptive statistics for the selected variables. As indicated in Table 2, most of the variables were relatively more dispersed, indicating higher volatility prevailed in the banking system during the study period. Variance inflation factors (uncentered) suggested no severe multicollinearity among the variables except in the natural logarithm of bank size. Nevertheless, the stationarity of the variables was not tested. Moreover, the Wooldridge test for autocorrelation in panel data indicated the presence of autocorrelation in all three models.



Note: Return on equity and income diversification are indicated on the right-hand side axis

Figure 1: Bank performance during 2012-2021

A random effects panel regression model specified in equation 1 was used to estimate the effect of ownership on the performance of the licensed commercial banks in Sri Lanka using annual data on 18 banks during the ten years from 2012 to 2021. Since bank performance is measured using three different indicators, a total of three regression models, namely, model 1, model 2, and model 3, were estimated, taking each performance measure as the dependent variable. The regression results are illustrated in Table 3.

Table 2: Descriptive Statistics

Variables	Symbol	Min	Max	Mean	SD	CV%	SK	KU
Return on Equity	ROE	-15.97	52.22	14.81	11.00	74.22	.19	.23
Net Interest Margin	NIM	1.17	52.22	4.32	1.38	31.94	1.43	2.61
Non-Performing Loans	NPL	.53	24.14	2.00	2.22	111.00	.51	-.33
Log Bank Size	L_SIZE	9.70	12.58	11.21	.74	6.60	-.31	-.99
Loans to Deposits	LD	9.42	387.30	105.74	58.69	55.50	2.79	9.28
Income Diversification	ID	1.55	78.31	16.75	12.76	76.18	2.60	8.51
Management Inefficiency	MQ	.01	5.92	2.33	1.29	55.36	-.34	-.15

Note: SD indicates the standard deviation, CV stands for the coefficient of variation, SK indicates skewness, and KU indicates kurtosis

Table 3: Results of the random effects panel regression models

Variable	Description	Model 1: ROE	Model 2: NIM	Model 3: NPL
α	Constant	-41.099	12.588***	1.965
		(-1.620)	(3.730)	(.360)
StateD	Ownership	14.711***	.083	.522
		(2.730)	(.110)	(.470)
PvtD	Ownership	5.470*	-.057	1.709***
		(1.720)	(-.130)	(2.590)
L_SIZE	Log of Bank Size	4.188*	-.804***	.138
		(1.870)	(-2.710)	(.290)
LD	Loan to Deposit	-.003	.004***	-.006**
		(-.240)	(2.580)	(-2.050)
ID	Income Diversification	-.030	.000	.001
		(-.550)	(.020)	(.110)
MI	Management Inefficiency	2.173***	.124	-.207
		(2.590)	(1.130)	(-1.140)
R^2		.407***	.389***	.226***
Wald χ^2		28.790	40.920	24.030
		$p < .001$	$p < .001$	$p < .001$

Note: ***, ** and * indicate statistical significance at 1 percent, 5 percent and 10 percent levels, respectively. *t* statistics are shown within parentheses

All three models were statistically significant in predicting the respective performance measures, as indicated by the Wald χ^2. As depicted in Table 3, the results of random effect panel regression models suggest that 40.7 per cent of the variation in return on equity, 38.9 per cent of the variation in net interest margin, and 22.6 per cent of the variation in non-performing loans can be attributed to the explanatory variables included in the model 1, model 2 and model 3, respectively. Further, as indicated by StateD in model 1, state-owned banks outperform other banks in terms of return on equity ($\beta = 14.711$, $p = .006$). The extensive branch networks, higher market power, and robust loan growth of these banks compared to other banks might

have contributed to their higher performance in terms of return on equity. Saha and Ravisankar (2000) have also found that state-owned banks are more efficient in India due mainly to the financial reforms initiated in 1992 and strong market power (Pisedtasalasai & Edirisuriya, 2020). Nevertheless, as suggested by models 2 and 3, their performance in terms of net interest margin (β = .083, *p* = .909) and non-performing loans (β = .522, *p* = .641) was not significantly different from other banks.

Even though private ownership (PvtD) does not have a statistically significant effect on net interest margin (β = -.057, *p* = .894), private banks outperform other banks in terms of return on equity (β = 5.470, *p* = .085). The two dummy variables, StateD and PvtD, collectively indicate that the foreign banks perform poorly compared to their domestic counterparts in terms of return on equity. Concurrently, the private banks account for higher non-performing loans than other banks (β = 1.709, *p* = .010), as depicted in model 3. A substantial increase in economic instability during the Covid-19 pandemic might have contributed to the rise in non-performing loans in private banks even though the central bank introduced a debt moratorium. Nevertheless, Ekanayake and Premerathne (2016) claim that domestic private banks outperformed other banks in terms of non-performing loans during 2005-2014. These results suggest that performance differences vary depending on the performance dimension used.

Moreover, as indicated by L_SIZE in model 1, the bank size (β = 4.188, *p* = .061) has a statistically significant positive effect on return on equity. This positive effect suggests that larger banks are more profitable, as Hirtle (2007) also claimed. Nevertheless, the largest two banks in the Sri Lankan banking system are state-owned. Therefore, this positive effect of bank size may also reflect the higher profitability of state-owned banks. Moreover, as suggested in Model 2, the bank size has a negative effect on the net interest margin (β = -.804, *p* = .007). This negative effect implies that larger banks tend to have narrower interest margins. However, the bank size does not have a statistically significant effect on non-performing loans (β = .138, *p* = .771), as shown in model 3, even though studies like Salas and Saurina (2002) claim that larger banks account for fewer non-performing loans.

Moreover, management inefficiency in Model 1 has a statistically significant positive effect on return on equity (β = 2.173, *p* = .010). This indicates that banks with relatively higher operating expenses account for a higher return on equity. Even though this is a controversial finding, it could also show the higher profitability of state-owned banks with relatively higher operating expenses. Nevertheless, management inefficiency does not have a statistically significant effect on net interest margin (β = .124, *p* = .259) and non-performing loans (β = -.207, *p* = .252), as suggested by models 2 and 3, respectively.

Even though the loan-to-deposit ratio (β = -.003, *p* = .809) does not have a statistically significant effect on return on equity as indicated in Model 1, it seems to positively affect net interest margin (β = .004, *p* = .010) as shown in Model 2. This positive effect implies that banks

with higher lending relative to their deposits can maintain higher interest margins. Interestingly, the loan-to-deposit ratio is negatively associated with non-performing loans (β = -.006, p = .041), suggesting that banks with higher lending relative to their deposits have been able to reduce non-performing loans. This reduction in non-performing loans could be due to their effective credit policies. Nevertheless, income diversification does not significantly affect any of the performance measures as depicted in all three models.

The findings of this study contradict with Wanniarachchige and Suzuki (2011) and Abraham (2013), which claim that foreign banks are the most efficient given factors such as technological backwardness, poor infrastructure, weaker financial policies, and lower leverage of domestic banks. Nevertheless, this contradiction can indicate changes in performance dynamics in different contexts and periods.

5. Conclusions

This study examined the effect of ownership on bank performance using data on 18 licensed commercial banks in Sri Lanka for ten years. A slight reduction in the performance of the banking system can be observed recently, possibly due to the effects of the Easter Sunday Attacks that occurred in 2019 and the Covid-19 outbreak that started in Sri Lanka in 2020. However, the banking system shows a slight recovery towards 2021. The results of the panel regressions suggest that state-owned banks outperform other banks in terms of return on equity. However, their performance in terms of net interest margin and non-performing loans was not significantly different from that of other banks. Therefore, the results of this study do not provide strong evidence to claim that ownership has a significant effect on bank performance. Instead, the findings imply that the effect of ownership varies on different indicators of bank performance due to the types of ownership in terms of state-owned, domestic private, and foreign banks, which are numerously associated with various performance measures as aforementioned. The results of this study are consistent with those of Ekanayake and Premerathne (2016), who also claim that state-owned banks outperform their private counterparts in terms of return on equity due to the higher efficiency in Sri Lanka.

Nevertheless, in a previous study, Wanniarachchige and Uddin (2011) claim that foreign banks outperform their domestic counterparts in Sri Lanka based on data from 2000 to 2007. This contradiction can result from two main reasons. First, their approach to measuring bank performance differs noticeably from this study. More specifically, they have used Data Envelopment Analysis to measure the performance in terms of revenue efficiency. Second, performance differences that existed earlier might have been dissipated owing to the substantial improvements that have taken place in terms of technological edge in domestic banks.

The contribution of this study is twofold. First, this study provides recent evidence on the effect of ownership on bank performance in Sri Lanka. Second, the findings of this study will provide insights for the government, banks, and policymakers in formulating appropriate policies to improve the performance of the banking sector. However, notwithstanding the

abovementioned contributions, this study is limited to Sri Lankan commercial banks. Further, the study focuses only on the bank performance in terms of return on equity, net interest margin, and non-performing loans. Therefore, further studies are needed to investigate this association on a continuous basis during different periods using other performance indicators and covering specialized banks.

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