

Did Islamic Banking Perform Better During the Financial Crisis? Evidence from the UAE

Hela Miniaoui*
Gaston Gohou†

Abstract

This paper examines the performance (on profitability and productivity) of the main Islamic financial instruments after the recent financial crisis at two levels. Using balance sheet data for 25 national banks of the United Arab Emirates (UAE) and a compensating differential framework, the performance gap between the conventional and Islamic banking systems is assessed. Unconditional and conditional performance differences show that, unlike other Gulf Cooperation Council (GCC) countries, in the UAE, the conventional banking system is performing better than the Islamic one. However, after the crisis, Islamic banks seem to close the difference for most of these performance indicators.

Keywords: Islamic banks, Conventional banks, Financial crisis, UAE

JEL: G01, G21

I. INTRODUCTION

Islamic financial institutions (IFIs) have experienced a steady growth during the last decade, thanks to strong economic development in their host countries. The basic principles of IFIs have protected them from the global financial crisis. Even if the sizes of IFIs are relatively small compared to international standards, it has to be noted that the prospects for growth and expansion in non-Muslim countries are strong.

Several papers have analysed the performance of banking systems in various countries. The results from many of the previous studies comparing the performance of Islamic and conventional banks are unsatisfactory for several reasons. In particular, the significance of the differences in performance between the two types of banking is often not tested. This paper takes a different stand by examining the performance (on profitability, credit and asset growth, and external ratings) of the main Islamic financial instruments during the recent financial crisis at two levels.

* Dr. Hela Miniaoui, University of Wollongong in Dubai, Knowledge Village, Block 15, 20183, Dubai, UAE. Email: helaminiaoui@uowdubai.ac.ae. Ph. +971-4-3900469. Fax. +971-4 367-2755

† Dr. Gaston Gohou, CESS Institute, 225-3055 Blvd Wilfrid-Hamel, Quebec city, G1P4C6, Qc, Canada. Email: ggohou@cessinstitute.org. Ph. +1 418-914-2120. Fax. +1 418-914-3530

Using balance sheet data for 25 banks of the UAE and a compensating differential framework, we assess the performance gap between the conventional and Islamic banking systems. Unconditional and conditional performance differences show that, unlike other GCC countries, the conventional banking in the UAE is performing better than the Islamic one. However, after the crisis, the Islamic banks seem to close the differences for most of these performance indicators.

The main objective of this study is to assess the performance indicators between conventional banks (CBs) and Islamic banks (IBs) in the UAE. In this paper, we will assess this gap using two methods: the unconditional and the conditional performance indicator differences between the banking systems. In addition, by focusing on one country, we will remove the bias of economy of scale that occurs when doing a study across countries.

The rest of the paper is structured as follows: section 2 presents an overview of the Islamic banking system, while section 3 introduces the UAE banking system. The literature review of banking system comparisons is presented in section 4. The data and sample population are described in section 5, and section 6 analyses the performance indicators of both systems. Finally, Section 7 offers concluding remarks.

II. ISLAMIC BANKING SYSTEM REVIEW

An Islamic bank is a financial institution which identifies itself with the spirit of the Islamic legal code (*Shari'a*), as laid down by the Holy Quran and Sunnah, as regards its objectives, principles, practices and operations.

As shown in Figure 1, IBs adopt various financial instruments in operating their businesses. The other banks are known as conventional with an Islamic windowing; that is, they provide services to Muslims in accordance with *Shari'a* principles.

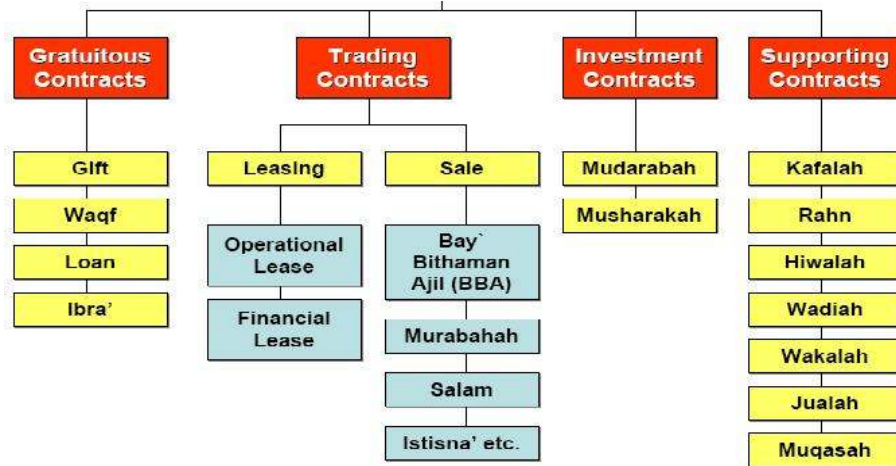


Figure 1. Main *Shari'a* contracts applied in Islamic banking.

The past two decades have witnessed a substantial increase in the number of IBs, financial institutions, and Islamic funds in different parts of the world. It was to meet this demand and capture this emerging market that CBs started opening Islamic windows and Islamic units for those clients who did not want to indulge in interest-based transactions. This conviction created an increased demand for Islamic products in the field of financing and gave birth to a market where only Islamic products are acceptable. Thus, banks working under Islamic windows are established to provide an additional service to Muslim clients or to offer a variety of products for general clientele.

Despite the fact that most of the IBs are within emerging Middle Eastern countries, many universal banks in developed countries have begun to value the massive demand of Islamic financial products. Islamic financing is, at the same time, becoming more diverse and venturesome. Its base has both deepened and widened. IFIs include commercial, investment and offshore banks, insurance companies and trust funds.

As far as principles, Islamic banking has the same purpose as conventional banking except that it operates in accordance with the rules of *Shari'a*, known as *Fiqh al-Muamalat* (Islamic rules on transactions). The basic principle of Islamic banking is the sharing of profit and loss and the prohibition of *Riba* (interest or usury).

III. THE UAE BANKING SYSTEM

The UAE banking sector is backed by solid macro fundamentals, such as a low interest rate environment, high oil prices, and a flourishing economy. Banks in the UAE belong to three categories: national (local), foreign and Islamic. The three types of banks are seen to be operating simultaneously. They are commercial (conventional), Islamic and Islamic windows banks. Indeed, some commercial banks have started opening Islamic windows and Islamic units for those clients who do not want to indulge in interest-based transactions. This conviction created an increased demand for Islamic products in the field of financing and gave birth to a market where only Islamic products are acceptable. Thus, banks working under Islamic windows are established to provide an additional service to Muslim clients or to offer a variety of products for general clientele.

The first Islamic bank in the UAE, Dubai Islamic Bank, was established in 1975. Islamic banking is one of the fastest-growing segments in the financial sector globally. Assets of the UAE's Islamic banks reached over two hundred million dirhams at the end of 2011, according to the UAE Central Bank governor. Islamic banks in the UAE target all categories to broaden their reach through innovative product offerings, including Islamic personal finance, Islamic credit cards and Islamic

auto finance, *Shari'a* complaint mortgages, and a growing range of investment funds. These different types of banks vary in terms of their sizes, measured in terms of total assets.

Data released by the respective GCC central banks for 2009 has reaffirmed the UAE banking system's position as the largest within the GCC, with total assets expanding to USD414 billion, followed by Saudi Arabia, which reported assets of USD365 billion. In fact, this is confirmed by the presence of the banking sector in this economy, where 23 locally incorporated commercial banks were operating during 2010, while the number of Islamic banks was only 10. The number of other foreign banks remained unchanged at 22. The national banks have a total of 731 branches in December 2010. The total assets of banks operating in the UAE (net of provisions for bad and doubtful loans and interest in suspense) increased by 5.7% from an AED of 1,519.0 billion at the end of 2009 to AED 1,605.6 billion at the end of 2010. Most of the national banks are listed either on the Abu Dhabi Securities Market (ADSM) or the Dubai Financial Market (DFM).

According to the International Monetary Fund (IMF) report on the UAE (2011), local banks are controlled substantially by governments, ruling families, or government-related entities (GREs), with the exception of one of the 10 largest banks, which is owned by a Dubai merchant family (Mashreq Bank). Banks majority-owned by the public sector control 75 percent of local banking assets—90 percent when including substantial minority shareholdings.

The UAE banks have employed International Accounting Standards since 1999. The Central Bank of the UAE (CBU) implemented the Basel II Accord in 2006. Banks were expected to be compliant with at least the standardized approach for credit risk by 31 December 2007. All banks were expected to be IRB compliant for credit risk by 1 January 2011. Moreover, the UAE inaugurated the adoption of the UAE corporate governance code in 2010, which regulates the corporate governance disclosure strategies of banks in the UAE.

For operational risk, banks were expected to adopt the approach they themselves determined as most appropriate. For market risk, banks were expected to adopt the 1996 amendment to Basel I, in accordance with the Basel II requirements. In 2010, The CBU revised the basis for classification of loans and their provisions in order to depict a truly realistic position of banks and other financial institutions.

UAE banks are among the best capitalized in the world, and historically stringent standards set by the UAE Central Bank for capital requirements means that local banks already surpass the norms set by the Bank for International Settlements (BIS) as part of the Basel III accord, which has a 2019 deadline. For the UAE banking

sector, tier 1 and total capital requirements currently stand at eight percent and 12 percent, respectively, which are already higher than the target 2019 ratios set by Basel III (of six percent and eight percent, respectively). Within the UAE banking sector, the National Bank of Abu Dhabi (NBAD) is considered the primary banker to the Abu Dhabi government (39% of loans and 54% of deposits), and it provides a clean balance sheet and the lowest NPL ratio (1.3% in 2009) (Prime Holding Report, 2010).

As policy responses to the crisis, the CBU provided liquidity support (repos) to help banks handle the sharp reversal of deposit inflows, as seen in the drop of banks' holdings of central bank CDs. By the end of 2008, central bank repos were replaced by government deposits funded by an AED 70 billion loan from the CBU to the federal government. The authorities also recognized quickly that capital ratios of 13 percent would be too low in the new environment. A plan was put in place to boost capital. As a result, capital adequacy rose to 19 percent by mid-2009, a combination of tier 1 capital from emirate governments and conversion of federal and emirate government term deposits into tier 2 capital (IMF-Selected Issues, 2011).

IV. LITERATURE REVIEW

Previous literature (Samad, 1999; Samad and Hassan, 1999; Iqbal, 2001; Hassoun, 2002; Rosely, 2003; Sarker, 1999) has compared the profitability of IBs to CBs, using comparative ratio analysis. Studies that have examined the performance of IBs using financial ratios include (Samad, 2004; Wibowo and Saptutyningasih, 2004; Hassan and Bashir, 2005; Widago and Ika, 2007; Hassan and Dridi, 2010; Ika and Abdullah, 2011; Isik and Hassan, 2002). Several other studies (Isik and Hassan, 2002; Hassan and Marton, 2003; Yudistira, 2004; Mokhtar et al., (2006, 2008); Kamaruddine, 2008; Sufian et al., 2008; Al-Faraj et al., 1993; Darrat et al., 2002; Grigorian and Manoe, 2005; Al-Tamimi and Loutah, 2007; Ramathan, 2007; Mostafa, 2007; Sufian, 2007; Miniaoui and Tchantchan, 2010; Srairi, 2010; Čihák and Hesse, 2010; Ben Ali and Sghaier, 2012; Ahmad and Abdul Rahman, 2012) have examined the efficiency of IBs and compared them with CBs and Islamic windows operation, using Data Envelopment Analysis (DEA) and/or Stochastic Frontier Analysis (SFA). Moreover, competitive conditions are likely to affect bank performance and efficiency (Berger, and Mester, 2003), in addition to equity capitalization levels (Schaeck and Cihak, 2007). In fact, several authors (Panzar and Rosse, 1987; Haron, 1996; Bashir, 2003; Hassan and Bashir, 2003; Mohammed-Zulkhibri and Sufian, 2007; Turk-Ariss, 2010) have investigated the importance of competitive conditions on bank profitability, distinguishing among Islamic and conventional banks and using a variety of key indicators (traditional concentration measures, the PR-statistic, and the Lerner index).

Some studies (Kosmidou et al., 2007; Ben Naceur and Goaid, 2008; Kwan, 2003; Bonin et al., 2005) have examined bank-specific factors of profitability (e.g., size, revenue growth, risk, and control of expenses), while cross-country investigations (Hassan and Bashir, 2005; Valverde and Fernandez, 2007) have considered external factors (e.g., inflation, concentration, and GDP growth), in addition to a few internal factors of profitability. The results from many of these previous studies comparing the performances of IBs and CBs are unsatisfactory for several reasons. First, a large proportion of the studies is based on small samples (particularly of IBs). Second, where sample sizes are large, the data have often been collected across a variety of countries with very different economy size. Third, the significance of the differences in performance between the two types of banking is often not tested. Studies have generally employed few financial ratios--mainly ROE and ROA--to examine the performance of the banks.

The main research questions in this paper are twofold: (i) Which banking system in the UAE performed better before, during, and after the 2008 financial crisis?; and (ii) What is the level of this performance gap between CBs and IBs in the UAE, in terms of profitability and productivity? The paper contributes to the literature at two levels. First, it is one of the first papers to use conditional and unconditional gap estimation methods to estimate the differences between IBs and CBs. Moreover, by focusing on one country, the bias of economy of scale is eliminated.

V. DATA AND METHODOLOGY

The data used in this paper are collected from the balance sheet of each bank in the UAE. The data sources are mainly the bank's annual and interim reports and the Zawya database. Zawya Dow Jones was consulted for financial statements and interim accounts, and the Bankscope database was also used to compile data. The data cover 25 national banks in the UAE, whenever data for certain measures is available. The balance sheet of each bank allowed us to collect the data to assess the performances of the two systems. The main purpose of this paper is to assess the magnitude of the gap between the conventional and the Islamic banking systems using conditional and unconditional methodology. In order to do this, we used two sets of performance indicators to compare the performance of the conventional and Islamic banking systems in the UAE.

The first set of performance indicators is six profitability indicators, and the second set is two productivity variables. The indicators are: the Return on average asset (ROAA); the Return on average equity (ROAE); the Net income on average asset (NIAA); the Net income on average asset growth rate (NIAAG); the Net income growth rate (NIG); and the Gross loan growth (GLG). The productivity indicators

measure the efficiency of each banking system—its ability to effectively employ existing resources. We use the Cost to income ratio (CTIR) and the bank total asset rate (AssetG) to assess banking system efficiency. The CTIR is useful in measuring how costs are changing compared to income. It is the ratio of operating expenses to operating income.

The following sections describe the summary statistics of the two banking systems in the UAE. A distinction is made between the periods before and after the financial crisis. Table 1 provides the distribution of market share of IBs and CBs. In terms of market share, measured by the net interest profit, the Islamic system increased its market share from 19%, on average, between 2000 and 2007 to 20% between 2008 and 2010. In terms of nominal value, the market share of IBs almost doubled between these two periods, while CBs market value increased by about 20%

		1995-1999	2000-2007	2008-2010	1995-2010
Market Share	IB	9	19	20	18
	CB	91	81	80	82
Growth rate of assets	IB	27	9	9	10
	CB	73	91	91	90

Table 1. The market share by banking system and country (%)

Figure 2 provides the evolution of the annual market share for each of the banking systems. The market share of IBs has been shown to have consistently improved from 1995 to 2010. One major feature to notice is the sharp increase of IBs just before the crisis (an increase of five percentage points between 2003 and 2006). The gain of market share of the IBs continued after 2007-2008, to reach 20% in 2009.

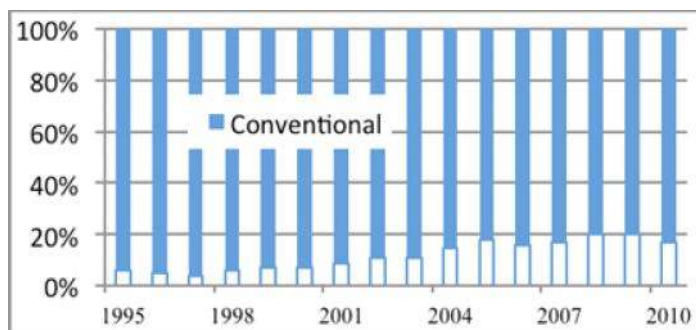


Figure 2. The market share by banking system per year

The descriptive statistics of profitability and productivity variables are displayed in Tables 2 and 3.

Variable		Mean	Std. Dev.	Min	Max	Observations
ROAA	overall	2,4	2,8	-11,6	35,1	N = 280
	between		1,8	-2,2	7,0	n =25
	Within		2,5	-10,8	30,5	T-bar =11,2
ROAE	overall	12,6	22,6	-233,1	73,2	N = 280
	between		10,0	-14,8	20,2	n =25
	Within		21,0	-205,7	69,2	T-bar =11,2
NIAA	overall	3,2	1,2	0,0	8,1	N = 277
	between		1,1	1,6	6,0	n =24
	Within		0,6	1,4	6,1	T-bar = 11,5417
NIAAG	overall	0,0	0,3	-0,6	3,4	N = 252
	between		0,7	-0,4	3,4	n =24
	Within		0,2	-0,6	0,6	T-bar =10,5
NIG	overall	0,6	4,6	-8,0	59,5	N = 254
	between		3,1	-3,2	14,8	n =25
	within		4,2	-15,1	45,3	T-bar = 10,16
GLG	overall	0,3	0,5	-0,6	4,3	N = 255
	between		0,8	-0,1	4,3	n =25
	within		0,3	-0,9	2,7	T-bar =10,2
CTIR	overall	41,8	39,0	9,8	402,3	N = 275
	between		45,8	21,5	250,0	n =24
	within		31,3	-102,1	355,7	T-bar = 11,45
AssetG	overall	0,3	0,3	-0,2	2,6	N = 256
	between		0,4	-0,2	2,1	n =25
	within		0,3	-0,7	2,0	T-bar = 10,24
leverage	overall	6,9	2,7	1,9	23,0	N = 138
	between		2,1	2,6	10,0	n =23
	within		1,8	3,3	19,9	T-bar = 6

Invcap	overall	18,1	6,2	7,2	55,8	N = 165
	between		5,3	9,7	28,7	n =19
	within		3,9	8,6	45,2	T-bar = 8,68
EquLoan	overall	31,3	20,4	-4,3	161,0	N = 280
	between		20,3	13,7	107,8	n =25
	within		13,0	-18,0	126,7	T-bar =11,2
EquAss	overall	18,6	11,1	-3,2	100,0	N = 281
	between		11,4	8,9	60,5	n =25
	within		7,7	-10,8	75,5	T-bar = 11,24
CusDep	overall	87,7	16,8	0,0	100,0	N = 280
	between		17,0	26,7	100,0	n =25
	within		6,5	61,0	116,0	T-bar =11,2
BankDep	overall	11,7	16,7	0,0	100,0	N = 256
	between		16,9	2,0	73,3	n =24
	within		6,3	-16,0	38,4	T-bar = 10,66
CAR	overall	21,4	9,3	10,8	81,6	N = 183
	between		10,8	12,8	62,4	n =24
	within		5,6	2,2	40,7	T-bar = 7,62
CB	overall	0,6	0,5	0,0	1,0	N = 400
	between		0,5	0,0	1,0	n =25
	within		0,0	0,6	0,6	T =16
Bsize	overall	0,6	0,5	0,0	1,0	N = 400
	between		0,4	0,0	1,0	n =25
	within		0,3	-0,3	1,6	T =16

Table 2. Descriptive statistics, 1995-2010 (IBs and CBs)

Overall, it seems that IBs in the UAE have been hit harder by the financial crisis. Indeed, the ROAA growth for the IB has decreased from 16.26% during the period 2000-07 to -36.36% during the period 2008-10. Meanwhile, over the same period the ROAA growth for the CB experienced a lower reduction from 4.6% between 2000-07 to -26.2% between 2008-10. A similar trend is observed for the other performance indicators (ROAE and GLG).

	ROAAG	ROAEG	NIAAG	NIG	GLG	CTIRG	AssetG
All banks							
95-99	13.11	7.37	1.40	6.37	13.72	-6.59	7.73
00-07	5.00	6.80	-2.47	23.32	22.56	-3.11	24.35
08-10	-28.12	-29.26	3.16	-3.37	23.77	13.58	10.91
95-10	-0.71	-1.51	-0.34	12.91	20.37	-0.95	16.97
Conventional Banking							
95-99	13.87	8.76	1.55	7.04	14.23	-6.90	8.49
00-07	4.63	7.11	-2.05	23.42	24.72	-3.42	25.90
08-10	-26.20	-28.83	1.99	-1.24	23.97	13.58	10.33
95-10	-0.20	-0.89	-0.30	13.64	21.69	-1.21	17.85
Islamic Banking							
95-99	13.08	-11.02	0.68	11.45	3.73	-8.66	-0.66
00-07	16.26	16.05	-3.16	35.69	12.94	-4.77	20.37
08-10	-36.36	-31.59	7.38	-4.56	21.23	13.71	13.92
95-10	2.30	-2.73	-0.11	17.38	11.98	-2.42	13.11

Table 3. Evolution of Performance Variables, All Banking Systems, 1995-2010 (%)

VI. CONDITIONAL AND UNCONDITIONAL GAPS BETWEEN BANKING SYSTEMS

This section presents the performance gaps between IBs and CBs before and after the financial crisis, using compensating differential frameworks. First, the unconditional performance gap between Islamic and conventional banking systems is assessed. It is calculated as the difference between the performance indicators of the two banking systems.

A t-test was performed to assess the validity of the test at the statistical level. The results are presented in Table 4. Based on the six profitability indicators, the findings of previous studies—that CBs performed better than IBs in the UAE before and after the crisis—cannot be confirmed. However, this gap is positive, but statistically not significant, for the ROAA and the NIE. When we consider all of the period 1995-2010, CBs seem to be performing better than IBs in the UAE, since the gap is positive and statistically significant.

Regarding the operating costs, the unconditional productivity difference shows that IBs have the higher cost to income ratio but higher growth of its asset. These results are confirmed over time. The gaps estimated in Table 4 show an important bias, in the sense that they do not take into consideration the heterogeneous characteristics of the banks in terms of portfolio, loans, exposure, risk taking, etc. To resolve this bias, this present study estimated the conditional differences in profitability and productivity indicators.

		1995-2010	1995-07	2008-10
Profitability indicators				
ROAA	CB	2.628645	2.771404	2.06093
	IB	1.831515	2.545714	0.5816667
	CB-IB	0.7971297**	0.2256893	1.479264***
	SE	(0.3910207)	(0.5191534)	(0.387477)
ROAE	CB	15.53603	16.17222	13.00605
	IB	2.958182	2.31881	4.077083
	CB-IB	12.57785***	13.85341***	8.928963***
	SE	(3.100114)	(4.243987)	(2.495903)
NIAA	CB	3.368551	3.391579	3.276977
	IB	2.833651	2.684762	3.131429
	CB-IB	0.5349006***	0.706817***	0.1455482
	SE	(0.1628254)	(0.1887123)	(0.3351236)
NIAAG	CB	0.0091629	-0.0065891	0.06631
	IB	0.0856981	-0.0011211	0.2410589
	CB-IB	-0.0765352*	-0.005468	-0.1747489
	SE	(0.0413928)	(0.029583)	(0.1254375)
NIG	CB	0.6652335	0.50317	1.253185
	IB	0.5863796	0.848003	0.1627988
	CB-IB	0.0788539	-0.3448331	1.090386
	SE	(0.7060517)	(0.572996)	2.046873
GLG	CB	0.2141558	0.2210637	0.188934
	IB	0.5288465	0.5480833	0.4977012
	CB-IB	-0.3146907	-0.3270196***	-0.3087672*
	SE	(0.0662327)	(0.068148)	(0.1631236)
Productivity indicators				
CTIR	CB	35.69244	36.36947	33.01581
	IB	62.8879	60.13732	68.25809
	CB-IB	-27.19546***	-23.76785***	-35.24228***
	SE	(5.387682)	(6.049852)	(12.02784)
AssetG	CB	0.2013428	0.223228	0.1214364
	IB	0.4624504	0.5481058	0.3196913
	CB-IB	-0.2611076***	-0.3248778***	-0.1982549**
	SE	(0.0471826)	(0.0563153)	(0.0859258)

Note: The statistical significance of the two-sample t-test with equal variance on the equality of means (* significant at 10%, ** significant at 5%, and *** significant at 1%). Standard errors of the mean differences are in parentheses. Sample weights are applied.

Table 4. Performance analysis, Unconditional CBS-IBS Difference

This conditional performance difference can be obtained by doing a regression of the indicator on a dummy variable representing the conventional bank and a set of variables representing the main characteristics of the banks. In so doing, the conditional difference controls for the observable characteristics of the banks.

The coefficient of the dummy variable represents the conditional performance difference between IB and CB systems. Based on the literature, the following equation (1) was estimated, by period, using the Ordinary Least Square (OLS) method:

$$S_i = CB_i \alpha + X_i \beta + \varepsilon_i \quad (1),$$

where S_i is the value of a performance indicator, CB_i is a dummy variable for being a conventional bank or not, X_i is the set of individual bank characteristics, and ε_i is the error term. The equation is estimated for three periods: the period 1995-2007, (before the crisis); 2008-2010 (after the crisis); and the whole period of 1995-2010. For each period, the data are pooled to obtain a cross-section data set.

The conditional difference in performance for each banking system was conducted for each variable. Table 5 (see the appendix) reports the estimated performance gap between IB and CB systems for various model specifications. Various models are specified and estimated using the OLS method. In models 1-3, we estimated the conditional difference using the only the dummy variable, CB, and the size of the bank. In models 4-9, various models were estimated using bank characteristics.

The conditional difference of bank performance remains large and in favor of the conventional banking. For instance, in Table 5, models 7-9 show that the conditional differences between the conventional and Islamic banking for ROAA are 0.521, 0.426, and 0.716, respectively in the periods 1995-2007, 2008-2010, and 1995-2010. The figures for the same period for the unconditional difference were 0.225; 1.47 and 0.79 (see Table 4).

The magnitude of the differences varies between 5% and 150%. The conditional difference also portrays an interesting story. The performance gap between IBs and CBs has been shown to be shrinking after the crisis for all the performance indicators. Models 7-9, for indicators ROAA, NIAA, ROAE, GLG, CTIR and AssetG have decreased from the period 1995-2007 to the period 2008-2010. Hence, even if, in general, the performance of IBs is lower than CBs, this difference has been decreasing since the crisis. Future studies will assess the reasons for the various performances of the banking systems.

VII. CONCLUSION

This paper is a first attempt to measure the value of the performance differences of banking systems. This paper analyzed the profitability using unconditional and conditional differentiation econometric regression. Using balance sheet data for 25

banks of the UAE and a compensating differential framework, this study assessed the performance gaps between conventional and Islamic banking systems. Unconditional and conditional performance differences show that, unlike in other GCC countries, the conventional banking system in the UAE is performing better than the Islamic one. However, after the crisis, IBs seem to close the difference for most of these performance indicators. As for future research directions, it is necessary to provide an understanding and an explanation of the performance gap that exists between IBs and CBs.

APPENDIX

TABLE 5. CONDITIONAL GAP BETWEEN CBS AND IBs IN THE UAE

	Panel 1			Panel 2			Panel 3		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	1995-2007	2008-2010	1995-2010	1995-2007	2008-2010	1995-2010	1995-2007	2008-2010	1995-2010
ROAA	0.167 (0.513)	1.485*** (0.391)	0.778** (0.388)	0.275 (0.700)	0.301 (0.228)	0.404 (0.414)	0.521 (0.713)	0.426* (0.242)	0.716 (0.444)
ROAE	16.99*** (4.900)	16.70** (8.315)	16.63*** (4.144)	2.146 (3.989)	2.077 (2.166)	2.964 (2.406)	3.944 (4.142)	2.673 (2.193)	5.327** (2.558)
NIAA	0.652*** (0.170)	0.170 (0.324)	0.506*** (0.149)	0.114 (0.316)	-0.349* (0.192)	-0.251 (0.153)	0.427* (0.252)	0.00381 (0.223)	0.0828 (0.138)
NIAAG	-0.00647 (0.0299)	-0.173 (0.125)	-0.0734* (0.0416)	0.135 (0.108)	0.0138 (0.0558)	-0.0180 (0.0491)	0.165 (0.114)	-0.0920 (0.0659)	-0.0366 (0.0550)
NIG	-0.444 (0.575)	1.140 (2.056)	0.00915 (0.707)	0.229 (0.410)	-1.633* (0.911)	-1.017** (0.508)	0.475 (0.397)	-1.013 (1.258)	-0.639 (0.560)
GLG	-0.327*** (0.0688)	-0.313* (0.164)	0.312*** (0.0665)	0.109 (0.179)	-0.135 (0.0850)	-0.0677 (0.0788)	0.201 (0.182)	-0.326*** (0.0967)	-0.109 (0.0868)
CTIR	-23.73*** (6.072)	-34.68*** (11.94)	-27.32*** (5.394)	-10.12* (5.018)	-13.88*** (3.060)	12.15*** (2.525)	-12.71** (5.277)	-19.83*** (3.295)	-14.79*** (2.706)
AssetG	-0.331*** (0.0566)	-0.200** (0.0864)	-0.262*** (0.0473)	-0.0562 (0.169)	-0.0766 (0.0588)	-0.0373 (0.0690)	0.0882 (0.158)	-0.168** (0.0687)	0.0249 (0.0757)

Notes: The above table reports the estimated performance gap between IB and CB systems. The gap reported is the coefficient of the dummy variable CB obtained from the following regression: $(\text{Performance indicator})_t = \text{CB}_t \beta + X_t \gamma + \varepsilon$, where Performance indicator is the profitability or productivity indicator for each bank (the dependent variable), CB_t is a dummy variable for being a conventional bank (CB) or not (Islamic banking system is the comparison one), X_t is the set of bank-related characteristic variables, and ε_t is the error term.

Three panels of regression are defined depending on the vector (X_t). Panel 1 uses only the size of the Bank as the X_t vector. A bank is defined as being large if its asset value is greater than the median asset values of all banks. Panel 2 uses the leverage, the capital to investment ratio,

the equity-asset ratio, the capital to asset ratio, and the bank size as independent variables (X_i). Finally, in addition to the independent variables of panel 2, panel 3 used equity-loan ratio, the banks deposit ratio and the customer deposit ratio as (X_i).

Robust standard errors are in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%.

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