Original Article

Bank-level stability factors and consumer confidence – A comparative study of Islamic and conventional banks' product mix

Received (in revised form): 20th July 2010

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ABSTRACT This study examines the behaviour of key bank-level stability factors of liquidity, capital, risk-taking and consumer confidence in Islamic and conventional banks that operate in the same market. Using fixed effect for a sample of 194 banks of Gulf Cooperation Countries between 2000 and 2007, we found that liquidity is not determined by the bank's product mix but rather attributed to systematic factors. However, non-performing assets (representing loans to sub-prime borrowers) have a positive and significant relationship with liquidity, implying that during the crisis Islamic banks tend to take stringent risk strategies compared to conventional banks. Furthermore, Islamic banks generally tend to provide higher consumer confidence levels as they were more capitalized than conventional banks, although conventional banks had carried higher averages of liquidity compared to Islamic banks. Consumer confidence levels or depositors' discipline as proxied by deposits and customer funding over liabilities generally appear to be higher in Islamic banks than conventional banks.

Journal of Financial Services Marketing (2010) 15, 259–270. doi:10.1057/fsm.2010.21

Keywords: bank stability; consumer confidence; depositors' discipline; Islamic banks; gulf cooperation countries

INTRODUCTION

The stability of the banking sector is the foundation of steadiness of the entire financial system as banks play a central role in the money creation process; in the payment system, in the financing of

investment and in economic growth. Furthermore, to preserve monetary and financial stability central banks and supervisory authorities have a special interest in assessing banking system stability. Bank stability is normally reflected by features, such as bank runs or illiquidity and subsequent risks relating to illiquidity in the banking sector, which affect their customers and is reflected in their confidence levels.

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There are numerous inferences that the product mix of Islamic banks provides more stability¹⁻⁵ and are not affected by the financial crisis because the nature of an Islamic bank's product mix, for example, does not trade in the collateralized debt obligation market that has been blamed for igniting the current bank crisis particularly among European and American banks.⁶

Previous studies have shown that the majority of bank stability has been affected by liquidity problems (see, for example, Largan⁷). Bank liquidity itself is affected by many factors, but credit risk and capital adequacy are closely intervening causes. It is for this reason that even regulators are very concerned about liquidity management, credit risk and consumer confidence by the banking institutions.

This study examines the behavior of key bank-level stability factors (of liquidity, capital, risk-taking) and consumer confidence in Islamic and conventional banks that operate in the same market. We are motivated to examine the relationships and behavior of these four factors because of their importance in understanding the stability of the banking institutions and the financial system in general.

We endeavour to compare product mixes of Islamic and conventional banking because of the assertion that Islamic banks during the crisis had provided more stability, and that liquidity in such banks was much higher. Generally, liquidity management provides a distinctive characteristic compared to that of the conventional counterpart as the available product mix (financial instruments) normally used for liquidity management in conventional banking is interest-based and for that reason is prohibited, and the applications are restricted in Islamic interbank money markets. Similarly, the distinctive characteristics of the respective product mix provide different practices and results on different behavior and levels of risk capital and credit risk that have to comply with the Basel Accord requirements. Sarker⁸ reports

that Sharia-compliant products provide different risk characteristics. Therefore, it is important to ascertain whether the product mix of Islamic banks has the same effect towards stability and consumer confidence in comparison to conventional banks' product mix when exposed to the same economic and market conditions.

Literature on the issue of liquidity management, risk, capital and of confidence level of consumers of the Islamic banks' product mix is invariably limited to issues related to efficiency (see for example Yudistira⁹ and Moktar *et al*¹⁰). To our knowledge, no previous research on the relationship between bank-level stability factors and consumer confidence has been done, and this study therefore contributes to the literature on stability factors.

Finally, surveys in the United States suggest that customers' confidence levels have been on the downturn. For example, the Gallup poll (Figure 1) traces levels of confidence in banking from 1980 to 2005, which shows a declining consumer confidence the US banking sector from 60 per cent to 32 per cent.

Unfortunately, such surveys used in the United States are normally based on consumer perceptions rather than the consequent behaviour. Therefore, in this article we follow an econometric approach to examine the relationship between consumer confidence levels using bank-level data to reflect actual behaviour rather than perceived behaviour. We compare whether such behaviour impacts differently between the Islamic bank product mix and conventional product mix. Our focus is to analyse the behaviour of the Islamic product mix, particularly the relationship between stability factors of liquidity, risk and capital in Islamic banks, and compare them with conventional commercial banks in a region that has been characterized by economic stability. We achieve this by examining the stability factors of bank performance (ROAV – volatility) and firm value (Tobin Q) both in the Islamic

Figure 1: Consumer confidence in the United States.

and conventional commercial banks, as well as looking at the level of non-performing assets (NPA) as a result of poor loan screening lending to sub-prime borrowers (reflected in loan-loss provisioning). Finally, we examine whether consumer confidence levels in the two market domains are different or the same through sensitivity to deposit and customer funding over total liabilities.

The rest of this article is organized as follows: in the next section, we briefly examine differentiating features between the Islamic and conventional banking practices. Section 3 discusses the methodology used in the study including construction of the variables, data issues and descriptive statistics used, while section 4 presents the empirical results. Summary, conclusions, and suggestions for further research are presented in section 5.

MAIN FEATURES OF PRODUCT MIX FEATURES – A COMPARISON

In this section, we examine the main features that contrast between the two specialization of banks, their similarities and pertinent issues regarding capital adequacy, liquidity, risks and consumer perception of confidence levels.

The main contrasts of the dual product mix

The main contrasting feature between Islamic and conventional banks is based on interest

payment in their transactions, and the prohibition of undertaking or financing unethical activities such as gambling, prostitution, alcohol and narcotics. Islamic banks are governed by Sharia, as well as the regulations set in place by the individual host country. Basically, the Islamic bank has different objectives, procedural and operational characteristics in contrast to conventional banking, which may also have a different impact towards capital, liquidity, risk, and may influence consumer behaviour towards confidence.

There are at least six basic ethical principles from the *Quran*: Avoidance of interest, risk sharing, treating of money as potential capital, prohibition of speculation, sanctity of contracts and avoidance of prohibited activities such as those connected with alcohol and gambling. Table 1 summarizes the key features that differentiate the nature of two product mixes.

Conventional banks evolved over several centuries, whereas only over the last 30 years Islamic banks were purposely established to operate within the Sharia code of conduct,^{11–16} while some banks were converted from conventional banks to Islamic ones. For example, in Iran and Sudan, all conventional banks were transformed to Islamic banks following a change in political regime that enacted legislation to change them.¹⁷ Some countries that are characterized with large Muslim populations (like Malaysia, Bahrain, Pakistan, Saudi Arabia and Egypt) allowed a parallel

Table 1: Differentiating features in bank's product mix

<i>Islamic bank product mix</i>	<i>Conventional product mix</i>
Each product or service is guided by sources of Sharia and products are approved by the Sharia Board within each bank	Products are developed based on demand, competition and bank strategy. Product development is not guided by religious doctrines but corporate governance practices and approval of the bank's board of directors
The product mix's aim is to balance profit-maximization and social responsibility	The product mix's emphasis is on profit and value creation
Financing products/instruments are based on either asset-backed trading contract or equity financing with risk-sharing	Financing instruments are based on interest-bearing mechanism and market speculation
Deposit products are compensated by profit– loss sharing mechanism	Deposits are agreed rents
Defaulters are not penalized (although in some countries a small penalty is levied as a deterrent and the fine is channelled to charity)	Past due loan products are normally charged a cumulative interest rate and if collected are recognized as other income
Islamic banks product cannot finance economic activities that are non-Sharia-compliant (examples: loans to breweries, piggeries and casinos)	There are no such restrictions for conventional banks to such avenues of lending

Source: Adapted from Dusuki.⁵⁴

existence of Islamic banking alongside conventional banks.¹⁸

In contrast, conventional banks operate mainly on the basis of a business model that 'banks like other firms are to maximize shareholders value'. The driving force behind value creation is normally the next quarter's earnings. In the conventional banking system, the rate of interest is a vital yardstick in running the entire banking business as it applies the business model. In its value maximization objective, interest (in its different forms such as cost of capital, net interest margin (NIM)) conveys the nature and state of supply and demand, and embodies information concerning the market, the targets of the executives and shareholders expectation.

The operations of Islamic banks are characterized by different vocabulary or nomenclature.

LITERATURE ON BANK STABILITY AND CONSUMER CONFIDENCE

Several causes have been responsible for bank stability in the past ranging from macroeconomic volatility both external and internal. For example, Caprio and

Klingebiel¹⁹ and Kaminsky²⁰ reported trade imbalance while the real exchange volatility is another major factor in Latin America and South East Asia stability predicament. The East Asian bank instability identified how excessive dependence on short-term and foreign currency nominated debt shook bank stability.²¹

According to Borio,⁶ other stability factors prevalent in the recent state of bank instability among conventional banks are characterized by a sharp *repricing* of its product mix, particularly credit risk that, given the leverage built up in the system, led to, and was made worse by, a disappearance of liquidity in many markets leading to further risk-taking behaviour by US banks lending even more to the sub-prime mortgage market. The performance of this sub-prime mortgage market of the conventional bank product mix advanced into a prolonged period of broad-based aggressive risk-taking in lending. The situation was complicated by lack of clarity of the (new– derivatives) instruments. Borio⁶ adds that banks experienced a crisis of confidence in valuations. As time passed, the original quality of assets weakened and became more apparent, and therefore banks

were affected with liquidity problems and default on different classes of assets that also lowered consumer confidence levels considerably.

Generally, customers' confidence levels for banks are due to several advantages over capital markets. According to Freixas and Santomero,²² there are at least three main reasons that banks have a comparative advantage that also largely accounts for customers' confidence levels. The first good reason for the existence of intermediaries suggests that banks screen potential borrowers on behalf of their depositors, and furthermore banks are valuable providers of monitoring.²³ The task of provision of liquidity²⁴ through their services, including checking accounts and investment services, granting of loans, and facilitating financial transactions, makes the bank customer trust it. Another reason is that banks are good at creating safe assets, and as such they are the most efficient institutions to handle credit risk and liquidity because of the immense expertise they possess.²⁵ Finally, of late, banks have taken steps to securitize loans through quantitative and qualitative processes and have the capacity to transfer their default risk, which also influences customers' perceptions on confidence levels. Several studies provide a theoretical basis for our article. For example, Pyle²⁶ and Hart and Jaffe²⁷ regard banks as utility-maximizing units and use mean-variance analysis to compare portfolio choice with and without a capital regulation, while Koehn and Santomero²⁸ showed that the introduction of higher leverage ratios may shift their product mix to include more riskier assets. Kim and Santomero²⁹ suggested the use of correct processes of risk measurements, and recommend the use of the solvency ratio. Rochet³⁰ found that the effectiveness of capital regulations depended on whether the banks were value-maximizing, meaning capital regulations could not prevent risk-taking actions by banks.

Another strand of the literature on factors of bank stability uses option models. For example, Furlong and Keeley³¹ and Keeley³² found that higher capital requirements reduce the incentives for a value-maximizing bank to increase asset risk. The recent product mix by conventional banks saw growth of credit risk transfer and the development of a market for credit risk transfer influence structural innovation in the financial system as it puts forward a wide range of instruments to deal with different aspects of credit risk³³ that also affected consumers in many ways. For example, Scheicher³³ reports that such instruments present default protection for individual firms through credit default swaps (CDS), and that such CDS are packaged and traded by means of collateralized debt obligations (CDOs) that eventually became the centre of bank instability.

The link between stability factors and confidence

It is important to note that the link between liquidity, capital, risk and confidence has occupied the banking literature. As a result, supervisory authorities argue that in order to protect the stability of the financial system, additional restraints on capital adequacy should be implemented. They argue that the losses suffered when a bank fails lead to the exceeding of costs taken up by the investors in the banks' securities is due to the nature of liabilities. For example, Diamond and Dybvig³⁴ point out that one of the key reasons why banks are fragile is that as they execute their function of transforming maturity, they succumb to meet depositors' potential liquidity needs. Nonetheless, almost no effort has to date been devoted to an analysis of one of the key ingredients that makes banks safer institutions and that is their own holdings of liquid assets. Borio,⁶ for instance, asks three pertinent questions on factors of bank stability: How much liquidity should banks hold as a buffer against bank run? Do liquidity ratios reflect capital and risk behaviours? How might the size of bank

liquidity shield be influenced by bank idiosyncratic factors? Although we might not directly answer all these questions, our discussion and conclusions would epitomize them.

Generally, the requirements for a higher capital to assets ratio is assumed to reduce the deposit funding of a bank and is linked to risk-taking strategies.³⁵ The main reason for higher capital, leading to liquidity, may also be linked to greater risk exposure because, according to Santomero and Watson,³⁶ during the last century commercial banks have been financed with less capital relative to debt. Therefore, some economists and regulators see this trend with uncertainty as they argued that low capital leads to bank failures, financial instability and consequent consumer confidence levels. Furthermore, regulatory authorities also argue that allowing bank capital to lessen is not safe or proper, and that in order to protect consumer confidence in the financial system therefore additional restraints on capital adequacy should be implemented.

The argument that the losses suffered when a bank fails leads to excessive costs taken up by the investors in situations when banks experience bank runs. This reason is evidenced by the current financial turmoil where banks issued and bought several securities in the financial market that were contaminated. This line of argument is mainly based on market evaluation and on the relative riskiness of commercial banks. It generally holds that the debt and equity capital in the securities market tends to be enough to keep the commercial banking system to assume undue risks. Furlong and Keeley³¹ report that the federal deposit insurance was an important factor towards the increase of capital standards in banking during the 1980s. Furthermore, they noted that an increase in asset risk was obvious because of the enforcement of higher capital ratio requirements. The effect of a higher capital ratio on default risk is explained as the central issue in bank capital regulation.

Shrieves and Dahl³⁷ examined the differential responses of undercapitalized banks and suggested that, for undercapitalized banks, the degree of undercapitalization is a substantial influence on the probability of equity market issues. Berger *et al*³⁸ too found growth rates for a number of asset mix to have positive relationship with capital.

Financial markets have become obscure in several behaviours. For instance, some markets, hedge funds or CDS, hardly disclose useful information for risk assessment. Notwithstanding its importance, disclosure alone does not necessarily guarantee genuine transparency. Market participants need adequate, bias-free and relevant information delivered in an appropriate, timely manner. As an illustration, recent market occurrences involving off-balance-sheet entities and complex financial instruments reveal the lack of transparency ensuing from the incorrect information disclosed late and in the wrong way. Information on mortgages too suffers from a similar predicament, leaving many borrowers failing to make a well-informed decision. These complex instruments surrounded by speculation may not have similar effects for Islamic banks compared to conventional banks.

In a study on the performance of Bank Islam Malaysia Berhad, Samad and Hassan³⁹ examined liquidity, and solvency risk for the period 1984–1997. The analysis showed that Islamic banks were somewhat more liquid when compared to the other eight commercial banks operating in the same market. Bashir⁴⁰ examines the relationship between banking characteristics and performance measures for 14 Islamic banks for the period 1993–1998 in 8 Middle Eastern countries, and found that Sharia-compliant banks in his sample have more liquidity than non-Sharia-compliant banks.

In another study, Siddiqui⁴¹ examined financial contracts, risk and performance of Islamic banks in Pakistan for the period 2002–2003, and documented that Islamic

banks have higher liquidity and larger cash balances compared to their conventional banks' counterparts. More recently, Samad⁴² examined the financial performance and liquidity of Islamic banks and conventional banks in Bahrain for the period 1991–2001 for 6 Islamic and 15 conventional banks. Results for Samad⁴² confirmed the study by Bashir⁴⁰ that there were higher ratios of liquidity in Islamic banks compared to those of conventional banks.

With respect to risk, according to Sarker⁸ Islamic banking products have different risk characteristics, and therefore different prudential regulation should be erected while Khan and Bhatti⁴³ report that in order to manage risk of the banking sector as a whole, central banks of the Islamic countries have stipulated various capital adequacy and reserve requirements that are not uniform to all Islamic banks in various regions of the world. It should be noted that Islamic banks do not have a large portion of their assets in fixed-income, interest-bearing assets as compared to conventional banks. Therefore, they may require a larger capital adequacy ratio and a larger liquidity ratio, and that by basing on this argument the Basel Committee has stipulated higher minimum capital requirements for Islamic banks.⁴¹

METHODOLOGY

Data

We obtained our data from Bankscope, and our sample is drawn from the following six countries for the period 2000–2007: Bahrain, Kuwait, Qatar, Saudi Arabia, Oman and United Arab Emirates. The data have included two types of product mix or bank specializations: Islamic and conventional. This classification criteria is in accordance with the International Association of Islamic Banks membership categorization. The sample comprises 194 banks of which 50 provide an Islamic bank product mix and 144 an conventional bank product mix.

Model

In our study, we measure financial stability in the banking sector (*BS*) using three important indicators. First is BS_{ROAV} , which is computed as the standard deviation of *ROA*. We expect positive and significant results. Our second measure of stability is the $BS_{Tobin\ Q}$, which we calculate by equity by earnings. In Tobin's *Q* (Tobin, 1969),⁵⁷ *Q* gives the summary of available and pertinent information about the future for a bank's investment decision. *Q* implies that a unit increase in the firm's capital stock increases the present value of the firm's profits by *Q*, and therefore raises the value of the firm by *Q*.⁴⁴

Moore *et al*⁴⁵ and Almeida *et al*⁴⁶ have also used Tobin's *Q* in their model to examine liquidity during economic constraints or crisis period, and found a significant relationship between *Tobin's Q* and cash flow. In our study, we expect a positive Tobin *Q* because a value that is greater than 1 indicates the bank is doing well in terms of decision investment making decisions (in our case Sharia-compliant decisions versus conventional banking decisions), which may lead to differences in changes in capital, liquidity and risk. We therefore also interpret that if *Tobin Q* is higher, then the access profit of a bank is used to improve its liquidity and risk capital as in accounting it constitutes some form of non-distributable profit. Therefore, generally, a higher *Tobin's Q* means more confidence as far as depositors are concerned.

Our third measure of *BS* is captured by bank liquidity (BS_{LIQ}). Banks in a stable situation will not face liquidity constraints because not only will the deposits be easy to mobilize, but the timing of cash flows from loans will also not be affected by an increasing level of NPA. We use loan loss provision over deposits to measure the impact of non-performing loans to bank sustainability. Finally, we estimate illiquidity using the ratio of current asset over current liability to find factors that may influence the

level of liquidity among banks. Therefore, we run equations (1)–(4):

$$BS_{ROAV_{ijt}} = \alpha + \lambda_1 PBT_{ijt} + \lambda_2 LLP_{ijt} + \lambda_3 NLTA_{ijt} + \lambda_4 CIR_{ijt} + \lambda_5 CC_{ijt} + \lambda_6 \xi_{ijt} \quad (1)$$

$$BS_{TobinQ_{ijt}} = \alpha + \lambda_1 PBT_{ijt} + \lambda_2 LLP_{ijt} + \lambda_3 NLTA_{ijt} + \lambda_4 CIR_{ijt} + \lambda_5 CC_{ijt} + \lambda_6 \xi_{ijt} \quad (2)$$

$$BS_{NPA_{ijt}} = \alpha + \lambda_1 PBT_{ijt} + \lambda_2 LLP_{ijt} + \lambda_3 NLTA_{ijt} + \lambda_4 CIR_{ijt} + \lambda_5 CC_{ijt} + \lambda_6 \xi_{ijt} \quad (3)$$

$$BS_{LIQ_{ijt}} = \alpha + \lambda_1 PBT_{ijt} + \lambda_2 LLP_{ijt} + \lambda_3 NLTA_{ijt} + \lambda_4 CIR_{ijt} + \lambda_5 CC_{ijt} + \lambda_6 \xi_{ijt} \quad (4)$$

The variables used and their computation is as follows:

$BS_{ROAV_{ijt}}$	Return on average assets for bank i , in country j on period t
$BS_{NPA_{ijt}}$	Non-performing assets proxied by loan loss provision over total assets
$BS_{LIQ_{ijt}}$	Liquidity measured by liquid assets over total assets
BS_{TobinQ}	Equity over earnings for each bank in country j and year t
PBT_{ijt}	Profit before tax for bank i in each country for each year
LLP_{ijt}	Loan loss provision over total loans
ETA_{ijt}	Equity to assets ratio, bank i country j

$NLTA_{ijt}$	Net loans to Total assets, bank i country j
CIR_{ijt}	Cost income ratio, bank i country j
CC_{ijt}	Consumer confidence proxied by the ratio of deposits over total assets for bank i in country j
ξ_{ijt}	The error term for each bank in each Gulf Cooperation Country (GCC) for each year

The summary statistics (Table 2) show that the mean PBT for all the GCC banks' sample is 60.8, which is close to the 64 for Conventional banks while the mean PBT for Islamic banks records at 138.3. This difference is attributed to two main factors. First, to some extent the nature of accounting treatment of PBT in profit–loss sharing arrangement may be counted as a financial cost, and second but to a great extent Islamic banks earn high PBT owing to its prices. We chose to use PBT because we cannot use NIM to compare these two types of banks because Islamic banks do not charge nor earn interest.

Another variable we have examined is the Loan Loss provision. Most reported values have been very small and rounded to 0. As for the GCC banking, it has a mean of 5 and a standard deviation of 5, while the highest is 20.64. This variation is evident by nature of accounting for NPA with respect to Islamic banks as they account for loan loss under profit loss because the nature of Islamic banking is a Profit–Loss Sharing Contract. On the other hand, the variable ROA ranges from -7 representing loss making banks to 53 per cent while the mean is 8 per cent. There is an interesting variation in the variable Cost–income ratio (CIR) with a mean of 44 per cent, but when we compare the CIR for the two bank specialization we note remarkable difference. Although Conventional banks

Table 2: Summary of statistics

Variable	Obs	Mean	SD	Min	Max
<i>(a) Summary statistics – All banks (Islamic and non-Islamic) for GCC countries from 2000 to 2007</i>					
PBT	194	60.8	91.8	–10.3	494.0
LLP	194	5.7	11.8	12.7	56.6
ROA	174	48.9	26.3	0.0	100.0
CIR	194	45.6	27.3	0.1	178.2
NLTA	137	28.5	76.7	0.0	665.8
LIQ	194	7.6	8.4	–7.2	53.2
Tobin Q	109	0.003	0.008	–0.016	0.071
NPA	194	40.47	27.50	6.98	100.00
CC	176	0.52	0.28	0.00	0.39
<i>(b) Summary statistics – Non-Islamic (conventional banks) of the GCC between 2000 and 2007</i>					
PBT	144	138.3	335.8	–26.7	563.0
LLP	133	25.8	58.0	12.7	239.1
NLTA	144	52.6	27.1	0.0	100.0
CIR	144	48.4	27.1	9.6	178.2
LIQ	143	20.5	71.1	0.02	665.8
ROAV	102	7.7	8.3	–7.2	53.2
NPA	82	0.0	0.0	0.0	0.0
Tobin Q	144	0.4	0.3	0.1	1.0
CC	133	0.59	0.285	0.000	0.854
<i>(c) Summary statistics – Islamic banks of the GCC between 2000 and 2007</i>					
PBT	50	64.0	113.9	–99.9	494.0
LLP	31	4.4	10.9	–1.5	56.6
NLTA	41	45.4	24.9	4.5	96.1
CIR	50	34.1	23.2	1	77.4
LIQ	50	41.3	79.8	0.1	419.1
ROAV	35	6.6	7.9	–5.0	30.2
NPA	27	0.6	2.3	–7.0	7.9
Tobin Q	50	52.77	85.84	1.53	278.7
CC	50	0.61	0.26	0.1	0.9

posit a 48 per cent *CIR*, the Islamic banks are lower at 34 per cent. The *NLTA* for all the banks has a mean of 50 per cent and a standard deviation of 26 per cent.

RESULTS AND DISCUSSION

Our first measure of *BS*, which is $BS_{ROAV_{ijt}}$, and differentiated among two bank specializations or product mix are $BS_{isb_{ROAV_{ijt}}}$ and $BS_{cb_{ROAV_{ijt}}}$ for Islamic and conventional banks, respectively. Table 3 gives the comparative results of the four regressions, which shows how the two types of banks are impacted by changes in financial conditions. $ROAV_{ijt}$ is positive and significantly related to *PBT* for all banks but exhibits a different relationship when examined separately. It has a positive but insignificant relationship with *PBT*, whereas is negatively and insignificantly related to *PBT* in Conventional banks.

We also use Tobin's *Q* to measure the effect of instability, and to assess whether it impacted the same for Islamic and conventional banks. As shown in Table 3, the equation $BS_{TobinQ_{ijt}}$ shows interesting results. First, Tobin's *Q* for all banks is inversely, but significantly, related to bank-specific factors of *PBT*, *LLP*, *NLTA* for all banks, which implies that as the stability factors decrease, bank value increases. On the other hand, conventional banks alone posit a positive relationship for *PBT* implying that profitability factors account significantly for bank value. Our measure for consumer confidence is $\lambda_5 CC_{ijt}$, which expresses depositors' discipline that customers exercise when then they lose confidence.

Although Islamic banks are more capitalized than conventional banks (conventional banks have higher averages of liquidity compared

Table 3: Results of fixed effect regressions for GCC countries for 2000–2007

	<i>All banks</i>	<i>Islamic</i>	<i>Non-Islamic</i>
<i>Results of the ROAV fixed effect regression</i>			
<i>PBT</i>	0.049738*** (0.013)	0.007 (0.006)	−0.017 (0.009)
<i>LLP</i>	−0.088 (0.143)	0.037 (0.051)	−0.271*** (0.024)
<i>NLTA</i>	0.050 (0.077)	0.080 (0.093)	0.027 (0.029)
<i>CIR</i>	−0.057 (0.031)	−0.086 (0.037)	−0.079*** (0.020)
<i>_cons</i>	1.222 (4.020)	1.994 (5.180)	5.677*** (1.219)
<i>Results of the Tobin Q fixed effect regression</i>			
<i>PBT</i>	−0.01 (0.02)	0.002 (0.008)	0.020 (0.084)
<i>LLP</i>	−0.07 (0.11)	−0.024 (0.075)	−0.055 (0.147)
<i>NLTA</i>	−0.04 (0.11)	−0.012 (0.120)	−0.094 (0.227)
<i>CIR</i>	0.02 (0.05)	0.038 (0.054)	−0.265 (0.132)
<i>_cons</i>	26.34*** (6.29)	24.667 (7.394)	31.962 (9.246)
<i>Results of the NPA – fixed effect regression</i>			
<i>PBT</i>	4E−06*** (2E−05)	2E−06*** (3E−06)	−0.075*** (0.027)
<i>LLP</i>	5E−04*** (9E−05)	1E−04*** (3E−05)	0.018 (0.081)
<i>NLTA</i>	3E−07*** (1E−04)	−4E−05*** (5E−05)	−0.051 (0.073)
<i>CIR</i>	3E−05*** (4E−05)	5E−06*** (2E−05)	0.025 (0.042)
<i>_cons</i>	−1E−03*** (5E−03)	2E−03*** (3E−03)	3.722 (3.089)
<i>Results of the LIQ-fixed effect regression</i>			
<i>PBT</i>	−0.04658 (0.028223)	−0.002183 (0.006614)	−0.14286 (0.28501)
<i>LLP</i>	0.141319 (0.143242)	0.014719 (0.059842)	0.196832 (0.499863)
<i>NLTA</i>	−0.36215*** (0.146927)	0.344331 (0.097095)	0.30752 (0.772327)
<i>CIR</i>	−0.07382 (0.082716)	(0.085085) (0.054346)	0.405731 (0.446947)
<i>_cons</i>	35.21088 (8.242715)	34.65794 (6.245046)	17.16252 (31.40039)

to Islamic banks), we have found that liquidity in GCC banks generally tends not to be determined by bank-specific factors. This implies that factors external to the bank such as macroeconomic and market behaviour have a significant relationship with bank liquidity. Such macroeconomic factors that prevailed, for example in the US and European markets, were likely the major contributory factor to the recession.

Furthermore, Islamic banks reported very small NPA, and have shown a positive and significant relationship with liquidity, implying that sub-prime loans, as is the case in the United States and United Kingdom, may have a substantial effect on bank liquidity. Moreover, the regression for all banks in the sample too exhibits a positive and significant relationship with *LLP*, but shows an insignificant relationship when separated.

We also found that in GCC, conventional banks have higher liquidity levels than their counterparts, suggesting that, unlike the findings of Samad and Hassan,³⁹ in GCC conventional banks tend to carry more liquidity, most likely to maintain confidence levels for their consumers. Generally, compared to US or EU banks, GCC banks carried higher liquidity levels because of its economy during the period examined having accumulated funds from oil surpluses.

Other studies^{47–49} detailed several advantages of the Islamic banking system, citing Iran with its long experience since 1984. The stability contributed by Islamic banking may not be influenced by policy and other exogenous shocks alone. Kia and Darrat⁴⁹ compare the Islamic bank product mix, and conclude that it provides the most stable and invariant policy function, while Kaleem⁵ too supports on the stability of the Islamic monetary instruments in a dual banking system in Malaysia as less vulnerable to crises.

Our last measure for consumer confidence levels proxied by deposit and customer funding over total liabilities indicates higher confidence levels for Islamic banks in this region that operates both banks in parallel.

A recent review by the American Congress⁵⁰ reveals that the regulatory system not only failed to manage risk, but also failed to call for adequate disclosure of risk through a satisfactory level of transparency. As a result, American Congress⁵⁰ identified eight specific areas most urgently in need of

reform on the financial system to address the current bank stability situation. These are to (1) identify and regulate financial institutions that pose systemic risk; (2) limit excessive leverage of financial institutions; (3) increase supervision of the shadow financial system; (4) create a new system to regulate product mix, particularly mortgages and other consumer credit products; (5) create executive pay structures that discourage excessive risk-taking; (6) reform the credit rating system; and (7) establish a global financial regulatory floor.

Four of these American Congress⁵⁰ recommendations reflect distinct departure in regulatory practices in the nature of bank product mix such as areas of leverage, contracts, instruments and mortgages for both Islamic banks and conventional banks.

Blum⁵¹ discussed the possibility of increasing bank risk resulting from capital adequacy rules. By analysing a single bank with the result of optimal choices being compared with the first-best solution of the model, Blum⁵¹ found that an additional unit of equity leads to an additional unit of investment larger than a unit in the risky asset. This leverage effect makes equity more valuable to a regulated bank. Furthermore, Gehrig⁵² discusses that excessive risk-taking also takes through direct investments in risky assets where such assets may be high-risk projects, or might be risky securities, and is difficult to monitor substituted safe assets over risky assets by outside investors or depositors. Policy implication is that Islamic banks product mix provides alternative practices in risk sharing and capital worth considering their adoption, and have significant relationship with stability factors and consumer confidence.

Areas for future research concerns the nature in which banks are exposed to the sub-prime exposure as argued by Woertz,⁵³ for example, in that banks in GCC may have direct exposure incurred by sovereign wealth funds, such as the Abu Dhabi Investment Authority and the Kuwait Investment

Authority amidst maturity mismatches especially in real estate financing, and the probability that GCC bank customers had invested in CDOs issued in the United States.

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