

COMPARATIVE ANALYSIS OF BANKING MODELS

Abhishek Pinyani, Prateek Saluja, & Vaibhav Kumar Daga
Great Lakes Institute of Management, Chennai

Narendar V. Rao
Northeastern Illinois University, Chicago, USA

Abstract. *This study compares 3 diverse banking models namely Islamic, American and Canadian and provides insights on how these banks performed during the period 2007-2010. CAMEL model has been used to assess the performance of 3 major banks under each banking model. The study suggests that despite good profit figures, a banking system can collapse if the fundamentals are not followed and risks are not properly evaluated. The analysis shows that Canadian banking system has outperformed American and Islamic banking system in terms of asset quality, expenses, securities, liquidity and earnings. Also, Islamic banks have performed better than others in terms of capital adequacy and management ratios. Based on the analysis, recommendations for a robust banking model have been identified.*

Keywords: *Islamic banking, American Banks, Canadian Banks, CAMEL Model.*

The role of financial services firm in a nation is to provide financial services and products that help citizens participate in the broader economy. By offering vehicles for investment of savings, extension of credit and of risk management, they fuel the modern capitalistic society. Banking is at the center of all financial services firms and is a lifeline of any nation. Thus, when a major banking institution fails in any nation, it causes a ripple effect on the entire economy of the nation and even has global repercussions. In recent past some of the largest and most reputed banking institutions have collapsed. Hence, it becomes imperative to understand and compare disparate banking models. There are various banking models followed in different countries and regions. This study is based on comparative analysis of banking models. The study focuses on three major banks from each of Islamic, US and Canadian banking models.

1. Islamic banks are based on the principles of Islamic Law (Shariah). The Islamic banking model has a huge untapped potential and has shown strengths over the existing conventional banking models. Islamic banks exclude interest-based transactions. The Islamic banking model is included in this comparative study because of its inherent features and uniqueness.
2. Considering the collapse of major financial houses and banks in US during the 2008 recession and its ripple effect globally, US banks have been a focal point of a lot of studies. Also, US banking model is fragmented compared to banking models of other major countries. It is regulated both at federal as well as state level.
3. Canada has been recognized as a country which was able to weather the financial crisis better than other countries. Universal Bank model,

diversification of funds, healthy loan to deposit ratio, interprovincial lending are some of the factors which make the Canadian banking model different from other models.

Although a lot of research has been done on comparison of Conventional Banks & Islamic Banking models, it was found that a research gap exists in comparison of Islamic banks with American and Canadian banks as separate entities. Although these are conventional banks, the structure and operations of the banks are distinct in nature. The study strives to compare three diverse banking models described above.

The study focuses on the positives and negatives of these banking models in terms of profitability, risk of default, recovery of lent amount and banking regulations. This study aids understanding of the ability of different banking models to weather crisis situations. This study also provides recommendations in terms of banking procedures which could be incorporated to come up with a better and sustainable banking model.

LITERATURE REVIEW

Wael Moustafa Hassan (2011) examined the degree to which the Islamic and conventional banks use risk management practices and techniques in dealing with different types of risk in Middle East region. The research was aimed at understanding how the risk perceptions of Islamic banks differ from Conventional banks. Another aspect of the study was to understand the most important risk type facing Islamic and conventional banks. He analyzed the data and concluded that there is no significant difference between Islamic Banks and conventional banks concerning risk identification, understanding risk and risk management. However, there are differences in risk assessment and analysis, risk monitoring, risk management practices and credit risk analysis.

In the study done in 2010 by Sat Paul Parashar and Jyothi Venkatesh, on performance of Islamic banks during financial crisis, it is shown that Islamic banks underperformed as compared to conventional banks in terms of capital ratio, leverage and ROE. On the other hand, Islamic banks outperformed conventional banks in terms of return on assets and liquidity measures. Overall Islamic banks performed better than conventional banks in the period from 2006-2009. The Key Performance Indicators used were: Capital Adequacy Ratio, Cost to Income ratio, Return on Average Assets, Return on Average Equity, Equity to Total Assets Ratio. The changes in means of these ratios before and after the crisis were statistically tested.

Maher Hasan and Jemma Dridi (2010) performed a comparative study of the effect of the Global crisis on Islamic Banks and Conventional Banks. They highlighted the key challenges faced by Islamic Banking - (i) the infrastructure and tools for liquidity risk management, which remain underdeveloped (ii) a legal framework, which is incomplete or untested; (iii) the lack of harmonized contracts; and (iv) insufficient expertise (at the supervisory and industry levels) relative to the industry's growth. They showed that factors related to IB's business model helped them contain the adverse impact on profitability in 2008. Also Larger IBs have fared better than small ones on account of better diversification, economies of scale and stronger reputation. During crisis, IBs asset and credit growth grew at twice the rate of CBs.

According to the study by Malaysia International Islamic Financial Centre (2010) the market of Islamic instrument *sukuk* is growing very rapidly. Big companies like GE are considering *sukuk* as a good investment because of its ability to survive during bad market

conditions. Islamic finance follows asset based financing structure and is relatively new in the market as the first instrument came to the market in 1963 in Egypt.

The study by Shayerah Ilias (2010) focused on the comparison of conventional banks and Islamic banks in purview of their ability to sustain during financial crisis and economic downturn. According to few analysts the reason behind Islamic banks to be more resilient is their avoidance of investing in speculative activities. But as per the study Islamic finance industry is not completely immune to general decline in demand and investor uncertainty. For an instance, the issuance of fastest growing instrument sukuk (capital market securities) dropped from \$35billion to \$15 billion in 2008 and recovered to \$20 billion in 2009. Islamic banks are considered to be immune from economic downturns because their financial transactions are backed by physical assets. But Islamic banks might be more vulnerable to fluctuations in mortgage market considering their high activity in real estate sector compared to conventional banks. A Slowdown in real estate activities in Gulf countries raised concerns about the financial position of Islamic banks.

Abdus, Gardner, and Cook (2005) studied two Islamic banks in Malaysia and Bahrain and showed that Islamic banks follow the Shari'ah's injunction to pay zakat and finance economic activities through Islamic contracts. The data indicates that for the two Islamic banks studied here, mudarabah, musharakah, and qard al-hassan financing are the least significant financial instruments. Mark-up products, such as murabahah and ijarah, appear to be the most popular, for they dominate all other modes of Islamic financing.

Bley and Kermit (2004) interviewed students across 40 countries to test their knowledge of Islamic Finance and proved that the use of Arabic language terminology in labeling Islamic finance products and services seems to hinder understanding for the vast number of non-Arabic language populations, which includes the majority of Muslims. Their research supported other studies, that found that a primary reason for choosing Islamic financial service organizations and products was religious in nature and not based on any specific understanding of the products themselves. Hence they concluded that ignorance is widespread regarding Islamic finance in general. They proved that students who had completed more education tended to possess more knowledge of both conventional and Islamic financial concepts.

The paper by Brent Dalrymple, University of Central Florida (2009) discussed the positives and negatives of asset-based and interest-based systems and their common ground that could provide a platform for a more stable world economy. The findings of this study are that the confidence of Federal Reserve and the SEC is reducing and that they are not planned for rapidly changing financial instruments and markets. Study concludes that a cultural change is required in U.S for banking system to ensure better resilience from economic downturns.

According to the study by M. Mansoor Khan, Business and Regional Enterprise, Mount Gambier Regional Centre, University of South Australia (2008), Islamic banks have acquired a great market share in Middle East, South East and South East Asia. These Islamic hubs are acting as a promoter for Islamic banks and as a financier in western business and financial markets. Major factors contributing to this success are amplification of oil prices worldwide, long-lasting boom in the Middle Eastern economies, product innovation and sophistication, increasingly receptive attitude of conventional regulators and information technology advancements. According to the study Islamic banking has a much greater potential as there is a huge Muslim population worldwide which constitutes 24% of world population.

Shaikh, Salman and Jalbani (2008) studied the risk management in Islamic and Conventional Banks and empirically established the result that the risk management procedures in Islamic banks are adequate to mitigate the large equity based investments and provide their customers with adequate returns comparable with conventional banks. The risk management procedures of an Islamic Bank are effective and adequate.

The paper authored by Jason Allen, Walter Engert and Ying Liu in the year 2007, compared the 6 largest Canadian banks with 2 groups of US banks using three different approaches: ratios, economies of scale and cost inefficiency using the finest performing bank of comparable size in each country. Based on the ratio analysis Canadian and US banks were found to be equally productive. Moreover, Canadian banks have been found to be less efficient in terms of scales. Authors have suggested that countries with more banking concentration have more efficient payment systems.

Ahmed Al Janahi and David Weir (2005 *Wiley Periodicals*) showed that the Islamic banking model can be leveraged to tackle business problems in developing markets. Authors have attempted to provide empirical evidence for the traditional and conventional characteristics of Islamic institutions, which was missing in earlier literatures as indicated by the authors.

Donsyah Yudistira (2004) analysed the technical and scale efficiencies of 18 Islamic banks using a non-parametric approach called Data Envelopment Analysis (DEA). DEA is a linear programming technique for examining how a particular decision making unit operates relative to other banks in the sample. To calculate the efficiencies, staff costs, fixed assets and total deposits were used as input variables while total loans, other income and liquid assets were used as output variables. Donsyah showed that the overall efficiency results suggest that inefficiency across 18 Islamic banks is small at just over 10 percent which is considerable compared to many conventional banks. He also proved that Islamic banks are closely coupled with other financial systems and that regulating authorities should consider Islamic banking in search of global financial stability. It was also found that there are diseconomies of scale for small to medium Islamic banks, which suggests M&A should be encouraged. It was also found that publicly listed Islamic banks were less efficient than their counterparts.

Tarek S. Zaher and M. Kabir Hassan, in their paper (2001) have done a broad deliberation of the literature on Islamic Banking and Finance. The paper covers varied facets of Islamic banking and the emergence and growth of Islamic banking in some countries. The various financial instruments offered under Islamic banking are compared with those offered under conventional Western banking. Moreover, an empirical evaluation of Islamic banks is done and the various legal problems, challenges and underlying investment opportunities are discussed.

The paper (2009) by Daniela Erler of Middlebury college, aimed at empirically suggesting that Islamic Finance had emerged and boomed during the global recessionary periods of 1973 (oil crisis) and 2007 (subprime crisis). The study demonstrated a positive correlation between oil prices and development of Islamic finance. Also the compatibility of Islamic and Western finance was evaluated, and Islamic finance with an ethical and conservative approach was suggested as a complement to conventional Western finance.

The study (2006) by Jahongirbek Burhonov, covers problems in profit-sharing instruments of Islamic banking during mobilization of savings and allocation of funds. The empirical evaluation of the Islamic Banking Scheme of Malaysia is done to check the conformity of practice with the theoretical aspect of Islamic banking system. Performance Ratio analysis is done to compare the performance of Islamic banks with the industry

average. Regression method is used to find a relationship between banking characteristics and the performance of Malaysian Islamic Banking Scheme banks.

Charles Freedman in his paper on “The Canadian Banking System” in 1998 suggested that US and Canadian banking systems differ chiefly on three major aspects: diversification, bank regulations and interest rate restrictions. Canadian banks did not impose the bans on interprovincial banking and hence diversified their exposure to a far greater extent. US banks on the other hand faced failures because of undiversified exposure to specific markets, recently the US housing market. Also in US regulation of interest rates was imposed by putting ceiling limits during inflationary times. This caused a setback to the banks as they could not finance the loans efficiently.

METHOD

To initiate the research, three banks were short-listed under each banking model as the sample set. To maintain consistency across models, large commercial banks were selected under each model. Following banks were used for the research.

1. American Banks
 - a. Bank of America
 - b. Citibank
 - c. Wells Fargo and Company
2. Canadian Banks
 - a. Royal Bank of Canada
 - b. Toronto-Dominion bank
 - c. Bank of Nova Scotia
3. Islamic Banks
 - a. Al Baraka
 - b. Abu Dhabi Islamic Bank
 - c. Sharjah Islamic Bank

The data used for analysis were collected from secondary sources. The financial statements were downloaded from the websites of the above-mentioned banks. The period of study was taken from 2007-2010. This allowed a comparison before, during, and after recession. The annual data for the banks were used for calculating the key financial ratios which helped analyze the performance of these banks.

Based on the literature review, CAMEL model was found to be a good financial instrument to measure a bank’s performance. The performance of a bank is measured across 5 areas—Capital Adequacy, Asset quality, Management Capability, Earnings capacity and Liquidity using financial ratios specific to each category. The ratios that we have calculated are CAR (Capital Adequacy ratio), Net NPA to Net Advances (Asset quality ratio), ROA and ROE (all Earnings ratio), Exp to Net Income, Earnings/employee, Expenses/employee, credit/deposit (all Management Ratios), Liquid assets/total assets ratio, Govt & other sec/total assets and liquid assets/deposits (all Liquidity ratios).

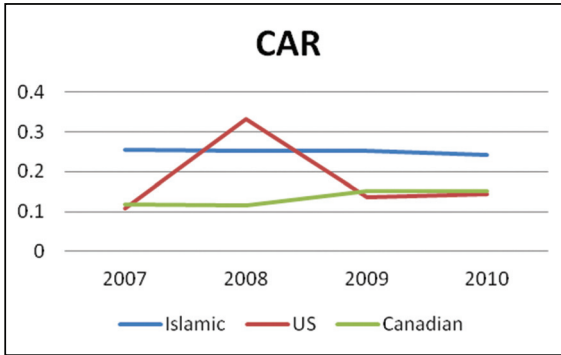
RESULTS

The averages for the various ratios under the CAMEL model over four years for three banks in each category viz. Islamic, American and Canadian were taken and plotted using line graphs.

Below are the details of the analysis done for the various ratios:-

Capital Adequacy Ratio

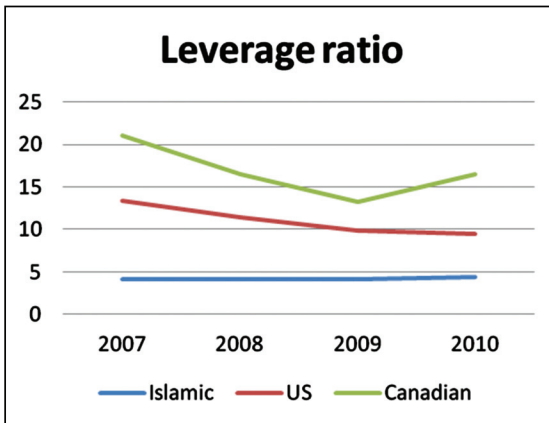
Figure 1: CAR



	Islamic	US	Canadian
2007	25.40%	10.80%	11.88%
2008	25.22%	33.15%	11.68%
2009	25.22%	13.74%	15.15%
2010	24.20%	14.35%	15.09%

CAR: A bank with a higher capital adequacy is considered safer because if its loans go bad, it can make up for it from its net worth. Islamic banks maintained the highest CAR except for the year 2008 when US banks showed the highest CAR. This is quite surprising because US banks plummeted in the very same year. The Canadian banks maintained the moderate CAR of 12% in 2007 and 2008 and later on increased to about 15% in year 2009 and 2010.

Figure 2 – Leverage Ratio



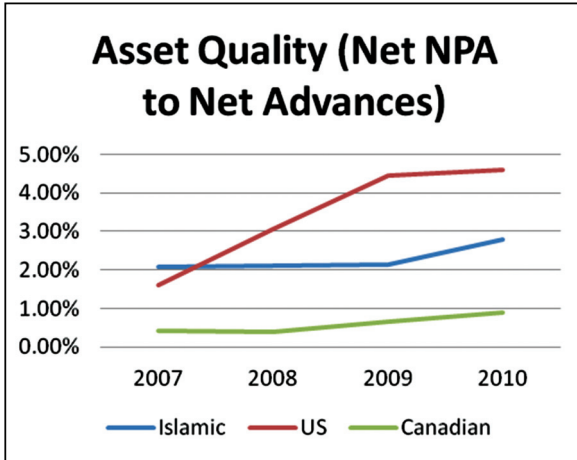
	Islamic	US	Canadian
2007	4.161686	13.35046	21.05837
2008	4.174009	11.39072	16.49719
2009	4.184238	9.820571	13.2951
2010	4.404505	9.434959	16.43842

Too much leverage leads to high risk of bankruptcy and very little leverage will lead to high cost of capital. Leverage of Canadian banks is the most. It ranges from 22%-13%. On

the other hand Islamic banks had the lowest leverage among the three. The leverage of US banks was between 10%-14%.

Asset Quality Ratios

Figure 3 - Net NPA to Net Advances

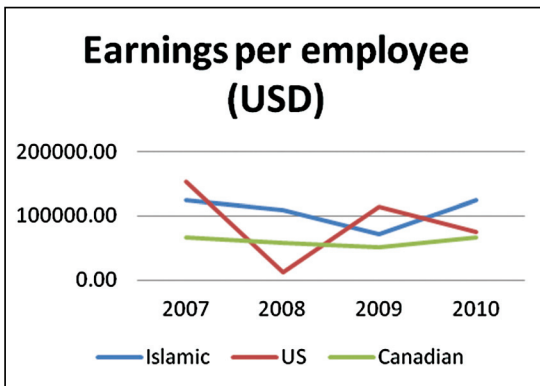


	Islamic	US	Canadian
2007	2.09%	1.60%	0.41%
2008	2.12%	3.06%	0.39%
2009	2.15%	4.46%	0.67%
2010	2.79%	4.61%	0.88%

If we see average asset quality of the three banking systems, Canadian banks have the least non- performing assets and US banks have the most which increased drastically in the period 2007-2009.

Management Ratios

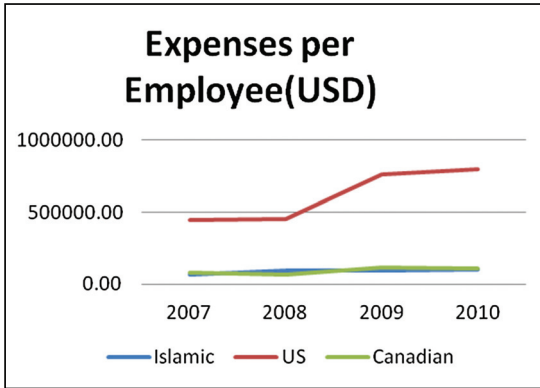
Figure 4 - Earnings per Employee (USD)



	Islamic	US	Canadian
2010	124094.09	75390.25	65687.44
2009	71082.97	113536.10	50433.36
2008	108260.70	11452.18	57263.25
2007	124644.38	153317.07	66376.39

Earnings per employee were stable for both Islamic and Canadian banks for the period 2007-2010. But if we see US banks their earnings came down drastically in 2008 and in 2009, because they had laid off many employees, their earnings per employee went up again.

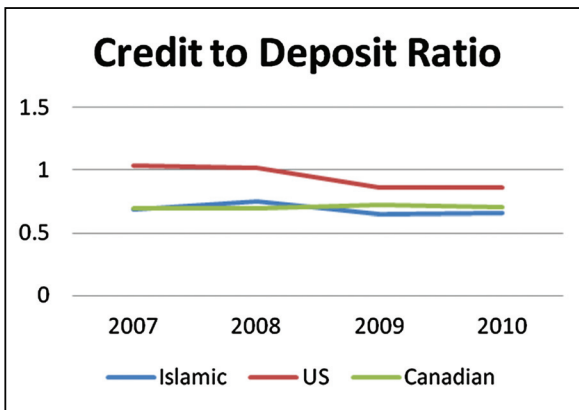
Figure 5 - Expenses per Employee (USD)



	Islamic	US	Canadian
2010	104874.17	792558.78	112795.75
2009	97544.20	757767.95	113906.02
2008	93515.48	454141.11	66866.19
2007	67306.43	443660.89	77290.92

Expenses per employee are highest for US banks. The top executives get very high compensation and bonuses. After retiring they are given extraordinary severance packages. Since these are not regulated, stockholders' money gets wasted in such activities. In comparison to the US, Canadian and Islamic banks have stable expenses per employee.

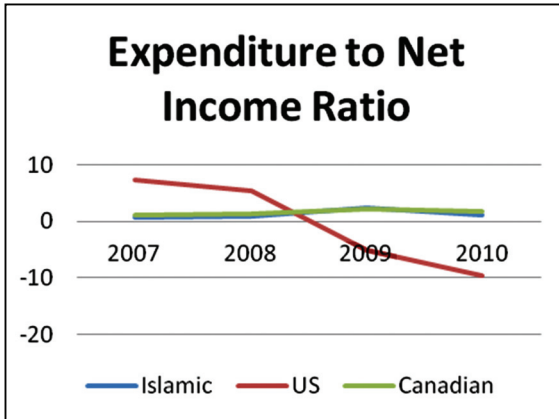
Figure 6 – Credit to Deposit Ratio



	Islamic	US	Canadian
2007	0.69	1.04	0.70
2008	0.75	1.02	0.70
2009	0.64	0.86	0.72
2010	0.66	0.86	0.70

Credit to deposit ratio is very high for US banks. Credits are more than deposits. As credit is high, if people start defaulting the impact will be highest for US banks as they won't be able to pay their depositors.

Figure 7 - Expenditure to Net Income Ratio

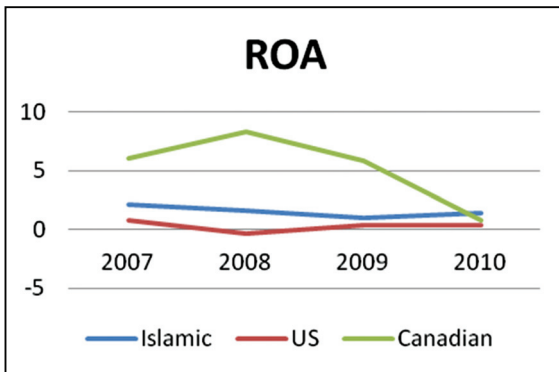


	Islamic	US	Canadian
2007	0.67	7.28	1.09
2008	0.98	5.46	1.28
2009	2.29	-5.05	2.09
2010	1.11	-9.53	1.68

Expenditure is highest for US banks and in 2009 and 2010 net income is negative, which makes this ratio go below zero. But if we see Canadian and Islamic banks they have maintained a constant ratio.

Earnings Ratio

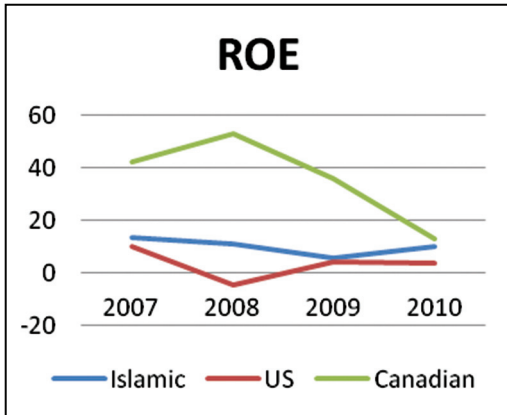
Figure 8 – Return on Assets



	Islamic	US	Canadian
2007	2.17	0.83	6.09
2008	1.66	-0.36	8.36
2009	1.01	0.39	5.79
2010	1.39	0.37	0.75

Canadian banks had the highest Return on Assets except for the year 2010. US banks had the lowest ROA with a negative average ROA in year 2008. This was the crisis period. Islamic banks had the lowest ROA in year 2009 followed by 2010

Figure 9 – Return on Equity

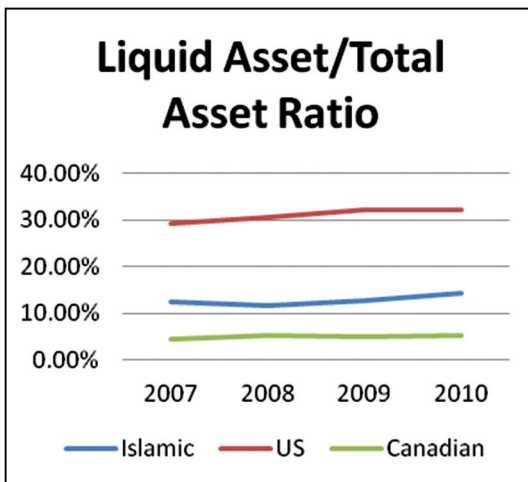


	Islamic	US	Canadian
2007	13.52	10.10	42.38
2008	11.21	-4.87	52.79
2009	5.60	4.14	35.97
2010	9.79	3.79	13.10

Return on equity was very impressive for Canadian banks and during crisis situation also they showed a good growth. On the other hand US banks had negative ROE during 2008 (crisis period). Islamic banks showed very stable return on equity for period 2007-2010.

Liquidity Ratios

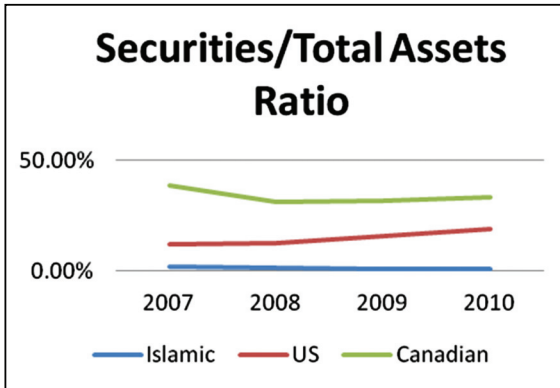
Figure 10 – Liquid Asset/Total Asset Ratio



	Islamic	US	Canadian
2007	12.33%	29.24%	4.52%
2008	11.54%	30.40%	5.21%
2009	12.69%	32.14%	5.07%
2010	14.24%	32.25%	5.12%

This is a measure of the solvency. US banks had the highest value among the three categories. The US banks were on a spree of disbursing many loans even to non-creditworthy individuals. On the other hand the Canadian banks had the lowest value of this ratio. Islamic banks had moderate values of liquid assets to total assets ratio.

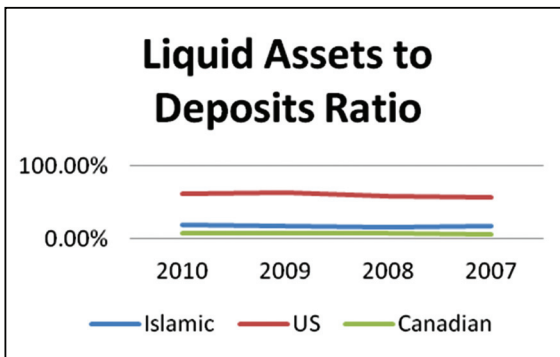
Figure 11 – Securities/Total Assets Ratio



	Islamic	US	Canadian
2007	1.94%	11.87%	38.57%
2008	1.46%	12.71%	31.01%
2009	0.79%	15.69%	31.54%
2010	0.68%	18.94%	33.32%

Canadian banks had the highest average for the value of government and other securities per unit total assets. The Islamic banks had the lowest average of Securities per unit total assets throughout the years 2007-2010.

Figure 12 – Liquid Assets to Deposits Ratio



	Islamic	US	Canadian
2010	18.73%	61.38%	7.66%
2009	16.67%	63.48%	6.63%
2008	15.66%	58.94%	7.31%
2007	16.78%	56.96%	6.37%

US banks had the highest average value of liquid assets to deposits ratio. The Canadian banks maintained lower values for this ratio across the years 2007-2010. A low ratio of liquid assets to deposits indicates excess liquidity, and potentially low profits, compared to other banks. A high liquid assets -to-deposit ratio presents the risk that some loans may have to be sold at a loss to meet depositors' claims.

DISCUSSION

The result indicates that there is a significant difference in the way these banks have performed during the time frame considered in the study. All banking systems have their positives and negatives which have been highlighted. The CAR of Islamic banks over the period was consistent at an average of 25%. This is the highest among the three banking models under consideration. This suggests that Islamic banks are comparatively more capable of absorbing a reasonable amount of loss and meeting the time liabilities and other risks such as credit risk, operational risk, etc. The US banks reported a high CAR of 33% in year 2008

but this was the time when the banks were actually sitting on highly risky assets due to subprime lending and high leverages. A high CAR of US banks in 2008 indicates that risk evaluation was not appropriate and there was a high degree of ineffective regulation in the US banking sector. An important aspect with CAR is that the risk evaluation of assets should be proper, else CAR can be a misleading measure. The resilience of Canadian banks during the crisis can be attributed to discipline in lending, proper risk evaluation of assets and stable deposit funding.

The average leverage ratio for the period is at 4% for Islamic Banks, 11% for US Banks & 17% for Canadian Banks. For Islamic Banks, the leverage ratio is low while for US and Canadian banks the ratio is three times and five times respectively of that of Islamic Banks. Financial leverage measures the level of risk taken by a bank as a result of its capital structure since it relates to how much debt it has on its balance sheet. Based on these results, we can conclude that Islamic banks show a better leverage ratio and hence have a lower default and bankruptcy risk as compared to other two banking models.

Among the three banking models it is observed that Canadian banks have highest leverage. The reasoning behind this fact is over half of Canadian mortgages are guaranteed by Canadian government, with banks paying a low price to insure the mortgages. Virtually all mortgages where the loan to value ratio is greater than 80% are guaranteed indirectly or directly by the Canadian Mortgage and Housing Corporation. The system works well for banks; they originate mortgages and then pass on the risk to government agencies. Hence, Canadian banks can afford to live with comparatively higher leverage ratios.

Comparative results show that US banks have been extravagant in their expenditures. These expenditures involved severance packages to higher level employees, paid trips to management teams, private jets etc. But income was dropping because of the bad loans they had. Most of the banks were running into losses and they were finally bailed out by the government. Islamic and Canadian banks are disciplined in their expenditure which is evident in stable values of expenses to net income ratio for them.

Results also show that the non-performing assets have increased drastically for US banks in period 2008-2010 because of the fact that the quality of loans given by these banks was very poor. Credit score of the borrower was low but the loan was disbursed. This resulted in lots of defaults and increased the non-performing assets for US banks. On the contrary the regulation of Canadian banking system was strict and their quality of assets was not impacted during the period 2007-2010. Islamic banks have shown a stable ratio of NPAs to Net Advances.

US banks had very high credit to deposit ratio in the years 2007 and 2008. After the global financial crisis they changed their lending pattern and reduced their credits for the same level of deposits. The expenses per employee were more or less constant between 2007 and 2008 but the earnings per employee had a great downfall. This indicates a lowered profitability of US banks. Moreover, there was a sharp increase in the expenses per employee and earnings per employee between 2008 and 2009. The number of employees laid off during this period is very significant resulting in an increase in earnings per employee.

Based on the ratio analysis, following is the snapshot of performance of the three banking models on parameters indicated in the CAMEL Model.

Banking Models	US	Canadian	Islamic
Capital Adequacy Ratio	Moderate	Moderate	Strong
Asset Quality	Weak	Strong	Moderate
Management Ratios	Weak	Strong	Strong
Earnings Ratio	Weak	Strong	Moderate
Liquidity Ratio	Moderate	Strong	Moderate

Based on the literature review and research findings below are the recommendations for a robust banking system:

1. Diversified banks will be less exposed to concentrated exposure to specific markets. For instance, the recent global crisis was mainly due to concentrated exposure of US banks to real estate market.
2. Regulated banking systems: There should be a periodic reassessment and updating of the regulations and laws governing the banking systems in order to address the challenges and threats of the future needs of the financial sector. In Canada there is a reassessment of banking related laws and regulations every decade and hence it has evolved into a robust banking model.
3. Interest rates should not be tampered much artificially against the market forces. For example, US Federal cut the interest rates that led to excessive borrowings and later defaults happened when the interest rates were increased.
4. High banking concentration with leading nationalized banks is advisable. For example in Canada six nationalized banks comprise the major part of the banking system.
5. Prudent lending practices should be followed. Asset based securitized lending is also advisable, though care should be taken while evaluating the assets' worth. For instance, most of the financial transactions of Islamic banks are backed by physical assets.
6. A clear and transparent banking system is inevitable with inbuilt accountabilities.
7. Risk evaluation should be appropriate and over exposure should be avoided.

Limitations and Future Scope

The study can be broadened to include more banks under each category and time frame can be increased for more comprehensive trend analysis.

More key performance parameters can be included for comparing the banks.

Detailed analysis of the regulatory regime pertaining to these banking systems and corresponding impact on the performance of banks could be done.

Investigate the opportunities of development and growth as well as the main challenges to Islamic banking in non-Islamic countries.

REFERENCES

- Allen, J., Walter, E. & Ying, L. (2007). A comparison of Canadian and US universal banks: efficiency, productivity, and the role of new technology. *Money Affairs, Jan-Jun 2007*, p. 61-96.
- Bley, J. & Kermit, K. (2004). Conventional versus Islamic Finance: Student knowledge and perception in the United Arab Emirates. *International Journal of Islamic Financial Services, Vol. 5, No.4*, 1-13.
- Burhonov, J. (2006). *Islamic Banking Operations of Commercial Banks Under Islamic Banking Scheme (IBS) of Malaysia: The Performance Analysis*. Bangkok: Faculty of Economics, Thammasat University. Retrieved from: <http://blogpdf.com/islamic-banking-operations-of-commercial-banks-under-islamic-...-25524110>.
- Dalrymple, B. (2010). How Sharia law is affecting global interest rate determination. *Journal of Finance and Accountancy, July 2010, Vol 3*, p1.
- Erler, Daniela. (2009). Islamic Finance: Complement or substitute? An empirical analysis. *The Michigan Journal of Business, Vol 3, Issue 2*, 9-56.
- Freedman, C. (1998). The Canadian Banking system. *Conference on Developments in the Financial System: National and International Perspectives*. Retrieved from <http://www.banqueducanada.ca/wp-content/uploads/2010/01/tr81.pdf>.
- Hasan, Maher & Jemma Dridi (2010). The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study. *IMF Working Paper*. WP/10/201.
- Hassan, Wael Moustafa. (2011). Risk Management Practices: A comparative analysis between Islamic banks and conventional banks in the Middle East. *International journal of academic research (IJAR), Volume 3, No. 3*, 288-295.
- Ilias, Shayerah (2010). Islamic Finance: Overview and Policy Concerns. *Congressional Research Service*. Retrieved from <http://www.fas.org/sgp/crs/misc/RS22931.pdf>
- Khan, M. Mansoor & M. Ishaq Bhatti, (2008). Islamic banking and finance: on its way to globalization . *Managerial Finance, Vol. 34 Iss: 10*, pp.708 – 725.
- Malaysia International Islamic Finance Centre (2010). The Rise of Islamic Finance. *Fortune, July 2010*. Retrieved from www.mifc.com/index.php?ch=233&pg=823&ac=577&bb=contentownerlogo
- Samad, Abdus, Norman D Gardner, & Bradley J Cook (2005). Islamic Banking and Finance in Theory and Practice: The Experience of Malaysia and Bahrain. *The American Journal of Islamic Social Sciences, Vol 22: 2*, 69-86.
- Shaikh, Salman, Amanat Jalbani. (2009). Risk Management in Islamic and Conventional Banks: A Differential Analysis. *Journal of Independent Studies & Research, Vol 2 No 2*, 67-79.
- Venkatesh, J. & Sat Paul Parashar. (2010). How did Islamic Banks do during global financial crisis? *Banks and Bank systems, Vol 5, Issue 4*, p. 54-62.
- Weir, D. & Al Janahi A. (2005). How Islamic Banks Deal with Problem Business Situations: Islamic Banking as a Potential Model for Emerging Markets. *Thunderbird International Business Review, Vol. 47(4)*, 429–445.
- Yudistira, D. (2004). Efficiency in Islamic Banking: An Empirical Analysis of 18 Banks. *Islamic Economic Studies Vol. 12, No. 1*, p.1.
- Zaher, Tarek, M. Kabir Hassan. 2001. A comparative literature survey of Islamic Finance and Banking. *Financial Markets, Institutions & Instruments V.10 No. 4*, 157-199.