The Convergence of Financial Institutions in GCC Countries

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ABSTRACT

This paper investigates the scope of GCC financial convergence in the member countries of the Gulf Cooperation Council. In addition, it is investigate whether has been shift towards convergence of the banking systems in the region. Indication of convergence is a substantial and significance in determining how banking sector and financial markets could be affected by risk premium in terms of interest rate changes, from one hand, and on the another hand the rules and regulation that relative to monetary policies in the region. Despite the limitation of data we build up the model by using a panel of GCC data suggesting that regional integration is non-negligible. Equities data using cross-listed stocks confirms that stock markets are fairly integrated compared to other emerging market regions, although financial convergence is vulnerable by market illiquidity Convergence of the GCC financial institutions is found in terms of loans to the private sector rather than the public, and also the government sector. Overall, the results imply that the financial intuitions of GCC economies have converged in certain key aspects of their intermediation roles. In addition, convergence in terms of demand deposits was found while convergence for time and saving deposits and foreign liabilities was not achieved yet. The evidence suggests that the banking systems of the region have converged.

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INTRODUCTION

Over the last decades GCC countries have made significant progress in laying down the foundations of modern economies and financial system. Gulf economies have been boosted largely by the oil export revenues resulting in among the highest rates of economic growth and per capita income in the world. All the GCC financial markets have witnessed an extraordinary growth over the period 2002-2007. Market capitalization in all the markets reached to their highest level in 2007 amounting to US$ 1.07 trillion. The Saudi Stock Market is by far the largest (over US$ 515 billion in 2007) while the United Arab Emirates is the second largest market (over US$ 224 billion in 2007) in the region in terms of market capitalization. On the other hand, Oman stock market is the smallest market with a market capitalization of US$ 23 billion in 2007. Over the last two decades these countries have experienced a wave of liberalization of financial institutions and mainly banking sector. The primary task of banking system has been to finance the government needs, public enterprises, and priority sectors through mandatory holding of treasury bills and governmental bonds. Researches and studies in this field still limited. See for example, El-Erian and Kumar (1995), which covered five markets over the period 1992-94, Darrat and Hakim (1997) covering three markets and the period 1996-97, Hakim and Neaime (2000) the period 1995-1998, and Butler and Malaikah. Following the previous studies we attempt to concentrate on investigating whether there has been some convergence in the banking systems of GCC countries in terms of a systematic shift in the output of banking operations in these economies, taking the year 1993 as the initial conditions period. In contrasts to the literature on economic growth models (e.g. Sala-i-Martin, 1996) where convergence is tested with respect to the growth rate of national output, the paper re-interprets the convergence tests for banking systems with respect to the growth rates of bank output. It thus follows the literature on the cost and output behavior of banks, relating to economies of scale and scope. The paper provides an evolutionary perspective on banking systems based on complex systems theory. This perspective is used to organize the discussion about the convergence and non-convergence of banking systems.

The paper attempts to assess the current phase of Integration by using homogenous group of GCC to test for convergence of the banking systems across these economies. In the paper, econometric test for integration and convergence used to support the concept of convergence which is banking systems with lower bank output (i.e. loans),
expressed relative to their steady-state levels at 2002, tend to grow faster; over time, 2002 to 2007, and that the bank output growth rates across all the GCC tend to converge. This concept of Integration should not be confused with an alternative meaning of convergence in which the dispersion of bank output would tend to fall over time. In this paper, we argue that even if absolute Integration holds in our sense, the dispersion of bank output growth rates does not decline over time. Groups of GCC economies (Bahrain, Qatar, Saudi Arabia, Oman, Kuwait, and UAE) have been used in the investigation. In a previous study, I find that each of the banking systems has some similar underlying features. This implies that convergence takes place in the sense that non GCC countries have lower starting values of bank output and higher bank output growth rates, and these tend to catch up or converge to those the GCC countries. In both the first and second steps, the loan activities of banks, which tie down the product (output) of banking operations, are disaggregated into two tiers: loans to the private sector, and loans to government sector. The analysis also draws from the literature which addresses the main controversy of defining output in a banking firm (Murinde, 1992). This literature argues that deposits may be regarded as bank output. In this case, the convergence test is applied to determine if there has been a shift towards a sustained increase in bank output (this time defined by deposits), given an initial level, in a manner that suggests that the banking systems are converging. Hence the convergence tests will also shed light on whether the banking systems are converging on the supply-side (loans) or on the demand side (deposits), or both.

The main contribution of this study is that it is a cross-country study which carries out a systematic estimation to find evidence to suggest that there is a convergence in the banking system in banks located in the GCC economies by examining a panel of homogeneous groups of these countries for the period 2002-2007 in order to assess: convergence amongst the GCC countries.

Two main conclusions emerge: it is shown that the banking system in GCC countries exhibited convergence in terms of their loan portfolio to the government sector and the private sector. It is also found that these banking systems also exhibit convergence in terms of their liabilities in terms of demand deposits but not foreign liabilities, and time and saving deposits. Taking both the results on the demand supply sides of banking operations, the findings emphasize some reasonable degree of convergence among the banking systems of the all countries.

The remainder of the paper is structured into five sections. Section 2 present short overview of relevant literature. Section 3 briefly reviews the experience with banking sector restructuring in GCC countries, with the question: what have they achieved? The approach taken to model convergence in this paper is discussed in Section 4. Section 5 reports the estimation and testing. Section 6 concludes.

**LITERATURE REVIEW**

Since the early 1970s there has been substantial liberalization of the banking sector and financial innovation. The process has been facilitated by re-regulation of banks (Mullineux, 1977). The general trend has been away from proscriptive regulation of financial activities, quantitative control of bank lending in total (in pursuit of monetary control), directed lending to sectors of the economy, and qualitative controls and guidance; see Hermes, Lensink and Murinde (1998, 2000). Over the last decades, the empirical finance literature has been concerned with the financial integration of the world major financial systems (see for example, Kim and Wadhani 1990, Joen and Von Furstenberg 1990, Arshanapalli and Doukas (1993), Eun and Shim (1989), and Kasa (1992). Recently, there has been a shift in attention to the convergence of financial and banking systems in emerging markets of developing countries (Bekaert and Harvey 1997, DeSantis and Imrohoroglu 1997). Barro and Sala-i-Martin (1995) and Sala-i-Martin (1996) draw a useful distinction between two types of convergence in growth empirics: σ-convergence and β-convergence. When the dispersion of real per capita income (henceforth, simply income.) across a group of economies falls over time, there is σ-convergence. When the partial correlation between growth in income over time and its initial level is negative, there is β-convergence. To date the empirical relationship between financial system development and saving, investment and economic growth has been difficult to test. Two streams of research may be distinguished. The first investigates more generally the relationships between financial development indicators and economic performance (King and Levine (1993), Atje and Jovanovic (1993), Levine and Zervos (1998 a), Rajan and Zingales (1998), Harris (1997). The second focuses more specifically on the impact of financial liberalization on economic performance (Bayoumi (1993), Henry
(2000), Kim and Singal (2000), Bekaert and Harvey (2000). Levine and Zervos (1998) have focused on the relationship between economic growth and financial development using both bank and stock market indicators. They tested this relationship for a sample of 42 countries over the period [1976-1993]. They found that the initial level of stock market development liquidity and the initial level of banking development are positively and significantly associated with long term economic growth, productivity growth and capital accumulation. Levine (1999), and Levine et al. (2000) introduce an instrumental variable (the legal origin) that explains cross-country differences in financial development but is uncorrelated with economic growth. They find that the strong link between financial development and growth is not due to simultaneity bias. Arellano and Bond (1991) and show that both stock market development and banks contribute to spur economic development. Arestis et al. (2001) use quarterly data and apply time series methods to five developed countries and find that both bank and stock market development lead economic growth. They also find that the impact of banking sector development is substantially larger than that of stock market development. Rousseau and Wachetl (2000) provide a huge contribution to the growth literature by using panel data techniques. In most MENA markets, there are a small number of listed companies. Many listed companies have substantial government ownership. Most of the listed private companies are family owned with limited transparency. There is a serious problem at this time that markets are already under pressure due to the small amount of available equity and the surge in oil related revenues. Liberalization must therefore be accompanied by a sharp increase in the supply of equity, which can be achieved by improving the overall environment to encourage companies that are now closely held to list increased portions of their equity. In this study we will focus only about the convergence of banking system across Middle East countries because stock markets remain to some extent unsophisticated and the financial systems of the countries are more heavily bank oriented than in any other world region.

**Banking and Financial Sector Restructuring in GCC Economies**

Despite considerable diversity among GCC countries, some broad generalizations can be made. In the first place, there is a striking imbalance between the large amounts of savings that have accumulated in certain GCC countries and the rather early stage of development of the financial markets. Numerous studies have concluded that the GCC region lags behind other major regions in terms of financial development, which in turn has made it more difficult to attain the objectives of economic diversification and employment creation. Moreover, while the level of development of financial markets in the GCC region was comparable to that of other emerging areas in the early 1980s, the gap has widened in the succeeding years. A recent study by the IMF using various measures of financial development found that all other regions of the world except sub Saharan Africa, had achieved higher rates of financial development in the past two decades than the MENA region. One measure of mobilization of financial assets is that bank assets and stock market capitalization account for relatively low shares of GDP. (Some of the Gulf States that aspire to become international financial centers have high ratios of financial assets to GDP and Jordan also has a rather high degree of financial intermediation.) The growth in economic performance of Arabian countries, as measured by real GDP, has shown substantial improvements over the last decades. During this period, growth rate exceeded 4 per cent annum compared to around 2 per cent during 1982-9. The economic growth of Arab oil countries has improved from about 1 per cent over the period 1982-91 to around 6 percent during 1992-9. The enhanced real GDP growth of these countries is attributed to the economic reform undertaken and the adoption of more market oriented policies in these systems. While the lack of growth in per capita GDP, especially in the oil exporting countries is attributed mainly to the negative consequences of the Gulf war, because the countries burdened with significant war expenses.

The Gulf countries stand out as one of the most important economic regions of the world.

The GCC member has witnessed significant change in their financial market during the last decades. The majorities of banks in GCC countries are privately owned, but the role of the public sector remains substantial. The public sector continues to have a prominent role in the banking industry of the GCC countries. Private sector ownership of financial institutions also tends to be concentrated in a few shareholders. Commercial banks operating in GCC are depository institutions that cannot take part in the leasing and trading of real goods for commercial purpose. In contrast, development and investment banks can engage in such activities, but they cannot accept deposits and also do not extend small commercial and individual loans. In order that GCC banks can successfully meet the challenges they are facing,
the right conditions and a favorable investment climate must be created to facilitate the flow of new resources to banking units, so that they can provide proper funding for economic sectors. The challenges confronting gulf banks are comprehensive some of them are related to the general economic climate, and others are related particularly to the banking business. The problems that confronting GCC banks do not differ greatly from those facing banks in most industrial countries, as they are not confined to the region where they occur. GCC banks are neither immune to them nor isolated from them. Other countries have moved to create new larger banking units via mergers. This has helped to increase and improve the quality of their assets and strengthen their financial positions, thus becoming better able to compete regionally and internationally. Other challenge is related to the rapid advances in technology in the banking industry. Therefore, unless GCC banks keep pace with technological advances, they stand to lose their major clients. Although GCC banks are aware of this challenge and are trying to introduce modern technology to their operations, investment in the area of technology is still low in many gulf banks. Policies of financial liberalization and financial restructuring were implemented with the goal of enhancing competitiveness in the banking sector. The banking industry in the GCC countries is relatively young, with the oldest banks dating back to 1950s. The GCC countries’ economies have been growing and powered mostly by their main source of income from oil production. However, these economies still remain exposed to fluctuations in international oil prices. Inflation rate were significantly reduced in many countries. External debt as a percentage of GDP fell, and reserves, especially of the non oil exporting countries were significantly enhanced. Domestic and foreign investments within the Arab region have also improved. Non oil countries are still suffering from trade deficit. Although Gulf oil exporters accumulated very large amount of assets at various times in past decades, limited domestic opportunities for investment in markets and the lack of financial systems capable of deploying those funds within the region, have meant that oil-related surpluses have often been placed with financial intermediaries based in OECD countries and invested offshore. Some of the symptoms of lagging development are the tendency to export capital for investment to other areas of the world while pressing economic needs within the region are unmet.

A report by analysts at the World Bank notes that financial intermediation has been transformed by technology, innovation and liberalization and that MENA country face serious challenges in adapting to the new highly competitive environment. Another recent research study by IMF staff identified four main factors that underlie lagging financial performance in the GCC and MENA countries a) excessively large government sectors, b) weak institutions, c) underdeveloped financial sectors, and d) inefficient investment. Beyond the low aggregate rates of financial intermediation, the concentration of financial intermediation in the banking sector is an additional challenge. It is widely seen as desirable to have balance among the three possible sources of financing a) bank credits, 2) bonds, and 3) equity. In most GCC countries government ownership of banks is pervasive. Moreover, the private sector receives a lower share of bank credit than in other emerging areas, and bank credit is skewed toward shorter term lending, with more than half of all credits having maturities of less than one year. Partly owing to the prevalence of government ownership and reliance on guarantees for loans, many banks have not developed a sophisticated credit approach, and thus may have concealed problems of non-performing assets. In essence, privatization of banks, modernization of the legal and regulatory environment and fuller integration into the global financial system represent long term solutions.

Financial convergence remains a distant goal, and has been overtaken by smaller more functional arrangements, such as the (GCC). This regional convergence is important because the GCC stock markets as a group may be able to offer investment opportunities not possible by one individual MENA market. Specifically, GCC countries have traditionally discriminated against other regional market, but the rest of the regional markets, are relatively open to MENA investors. And attempting to reach a considerable stage of regulation and enhance the transparency that would help to strengthen the financial market fundamentals.

Most GCC countries and particularly the UAE played a leading role in accrediting the ownership of properties by GCC citizens. In 2009, GCC citizens owning properties in the UAE amounted to 22,706, which is the highest number in all member states. Concerning bilateral trade, UAE contributed to approving laws, systems and policies facilitating the outflow of commodities, services and transport among GCC countries. It also encouraged GCC products and treated them as local products; allowing businesses and productive units to open commercial offices in the country and import
without the need of a local agent. This move positively impacted the growth of GCC exports the volume of bilateral trade between member states

**MODELING CONVERGENCE OF BANKING SYSTEMS IN GCC**

This paper proposes and implements applications of econometric tests for convergence to determine whether there has been a shift towards convergence of the banking systems for a panel of GCC countries. Model is specified for the growth rate of bank loans, estimated and tested using data from the International Financial Statistics for the period 2002-2007 and bankscope database.

The model has isolated two predominant concepts of measuring the convergence in the growth literature (Quah, 1993). One concept, referred to as beta, implies regression to the mean and applies if a country with less economic growth tends to grow faster than a high one, such that the poor country tends to catch up with the rich one in terms of the dynamics over time involving the level of per capita income (Barro and Sala-i-Martin, 1995). The other concept, known as “rho”, concerns cross-sectional dispersion and applies if the dispersion, measured as a change in the standard deviation of a given variable (e.g. GDP), declines over time. The relationship between beta and rho measurement is that the former tends to generate convergence and integration of the type implied by the latter i.e. if poor countries grow faster than rich ones, there is reduced dispersion of incomes overall (see Bernard and Durlauf, 1996). The modeling procedure used for testing for convergence, based on the following equation

\[ q = \gamma_0 + \sum_i \alpha_i k_i + 0.5 \sum_i \eta_i m_{i;1} \]  

where \( \eta_i = \eta_0 \) for all \( i, j \). A key output of the banking firm comprises loans to the company sector. And it based on cross-section tests of unconditional and conditional convergence. The cross-section unconditional convergence tests were constructed as follows:

\[ g_{i;T} = \alpha + \beta q_{i;0} + \varepsilon_{i;T} \]  

where \( g = q_i - q_i;0 \) and \( T \) is a fixed horizon.

Conditional convergence tests are constructed by modifying equation (2) to include control variables:

\[ g_{i;T} = \alpha + \beta q_{i;0} + \pi w_{i;T} + \varepsilon_{i;T} \]  

where \( w_i, T \) denotes a vector of control variables.

Given that our database consists of unbalanced short-panel data, we explored the possibility of using the dynamic panel data programme by Arellano and Bond (1988). We started by assuming that we have observations on \( i = 1,....,N \) countries for each of \( t = 1,....,T \) years, with \( g_{i;T} \) as the dependent variable and the independent variables are denoted by \( w_{i;T}, \alpha \) intercept, which may or may not be correlated with the independent variables:

\[ g_{i;T} = \alpha + \beta q_{i;0} + \pi w_{i;T} + \varepsilon_{i;T} \]  

Hence, rather than using cross-section estimation, we used the dynamic panel data model to estimate the following equation with respect to the growth of output of the banking sector, based on equation (4):

\[ g_{i;T} = \alpha_0 + \beta_1 g_{i;0} + \beta_2 g_{i;T} + \beta_3 q_{i;0} + \varepsilon_{i;T} \]  

where \( g = q_i - q_i;0 \), the growth rate of bank output measures, i.e., loans to government sectors, bank loans to the private sector. \( q_{i;0} \) is the initial level of bank output measures (at 1993). As earlier noted the literature on the cost and output behavior (the microeconomics) of the banking firm stresses the controversy regarding the definition of bank output, and points out the possibility of redefining bank output in terms of deposits. To test for convergence of the banking systems, we apply a dynamic panel model to estimate the equation (5) with respect to the growth of output of the banking sector, in terms of demand deposits, time and savings deposits foreign liabilities.

**ESTIMATION AND TESTING RESULTS**

When the model was applied over the GCC countries, in terms of loans to government sectors, we find that there is a significant coefficient which indicates that there is a convergence across the GCC countries. Although these countries are oil-producers that have a surplus in their budgets, governments borrow from commercial banks in order to meet the new needs of the boom era in their economies. When we estimate conversion regarding loans to private sector,
a significant relationship has been found among the 6 countries because investors tend to borrow from banks to secure the finance to fund opportunities that ensure capital gains. Since the GCC countries are rich countries, they refund their loans from their own profits, a fact which encourages banks to lend huge investment projects with some times long maturities. The GCC countries include countries with high income levels, countries with large current surpluses and those with large borrowing requirements. Moreover, GCC countries have a high level of savings, which had traditionally invested their surpluses in the major global financial centers. These countries are now seeking to place an increased share of assets within the region by investing in many development projects in the whole region. And when we defined the output in terms of deposits to support our hypothesis we find the same results as far as demand deposits for GCC countries is concerned. Estimates are significant due to the high tendency towards the investments projects, while time and saving deposits are insignificant estimates. In addition, foreign liabilities exhibit insignificant results for the same measures since the non- GCC countries are still highly regulated. Most importantly is the fact that these banks keep their own foreign position currencies which are equivalent to their outstanding foreign liabilities.

Summary and Conclusion

This paper highlighted some important aspects of banking system convergence in the GCC region. After exploring the main characteristics of the GCC banking system the paper used a dynamic model to study empirically the implications of banking convergence. This paper proposes and implements novel applications of econometric tests for convergence (hitherto popularized in the growth literature) to determine whether there has been a shift towards convergence of the banking systems first for a homogenous group of GCC countries. Models are specified for the growth rate of bank loans, and are estimated and tested using data from the International Financial Statistics and Bankscope database for the period (2002-2007). For lack of data, we do not present evidence on the markets for stock market and corporate bonds. The paper uncovers a number of interesting findings. Convergence of the banking systems is found in terms of loans to government sectors as well as loans to the private sector. In addition, a convergence of the banking systems is also found in terms of demand deposits but not in foreign liabilities, and time and savings deposits. This finding is consistent with the signals from the correlation of the indices of the main banking system in this group of countries. To enhance the liberalization and integration, improvement of performances of financial and banking system is needed in order to enable financial development to be growth stimulator. Therefore, GCC countries need to improve the credit allocation process by privatizing national banks, and by strengthening credit regulation and by reinforcing competition in the banking sector.

REFERENCES


Table 1: Estimated coefficient for GCC countries

<table>
<thead>
<tr>
<th></th>
<th>Loans to government</th>
<th>Loans to Private Sector</th>
<th>Demand Deposits</th>
<th>Time and Saving Deposits</th>
<th>Foreign Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>-0.037493</td>
<td>0.003857</td>
<td>0.482192</td>
<td>0.000450</td>
<td>0.000628</td>
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<tr>
<td>t-Statistic</td>
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<td>2.489894</td>
<td>1.943305</td>
<td>0.109995</td>
<td>0.034192</td>
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<tr>
<td>Probability</td>
<td>0.0999</td>
<td>0.0166</td>
<td>0.0190</td>
<td>0.2847</td>
<td>0.090452</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.20021</td>
<td>0.14909</td>
<td>0.153430</td>
<td>0.712494</td>
<td>0.500386</td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>1.873086</td>
<td>2.047250</td>
<td>1.741613</td>
<td>2.114780</td>
<td>2.045209</td>
</tr>
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