

Islamic Banking Behavior towards Small Firms Financing:

Evidence from Sudan

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Abstract

Islamic finance worldwide has gained significant attention due to its size, fast growth, and the potential impact on the international financial markets. Islamic banks are considered as the most important source of external funds for financing small and medium sized firms. Their ability to channel long- term credit to small firms is still debatable issue in finance literature. This paper examines banks' behavior within the context of profound regulatory changes in the banking system and the extent to which this behavior affects small firms financing. Using aggregate data from all banks in the Sudanese banking sector and Ordinary Least Squares (OLS) method to estimate the relationship; our results indicate that banking behavior is determined by the structure of financial resources, as well as Central Bank's monetary and credit policies. We find evidence that inadequate capital base and the dominance of sensitive financial resources provide justification for the conventional banking behavior that is allocation of sensitive resources to short term financing. The empirical finding indicates that banking sector uses Murabaha financing rather than profit and loss sharing instruments to finance small firms. This evidence challenges the objective of Islamic bank which is supposed to provide long term financing, and facilitate availability of financing to small firms.

1- Introduction

Small and medium sized firms play an important role in the process of industrialization and economic growth for both developed and developing countries. However, the seminal role played by small and medium sized firms notwithstanding its development is every where constrained by inadequate financing. Imenson (2002) asserts that:

“Yet despite the government intervention and despite years of debate by governments, banks, and businesses across the world followed by the countless initiatives; there is still a shortage of debt and equity finance for small and medium firms”.

Beck and Demirguc-Kurt (2004) add that the structure of the financial system is important factor when discussing the financing constraints, so it seems there is a large agenda not only for small and medium sized firms and financial institutions but also for policy makers. Critically, the policy makers' role is ranging from offering specific service to providing enabling environment.

A European commission report (2002) on debt finance concludes that difficulties in accessing loan finance can arise either on the supply side or on the demand side. The supply side fails when appropriate sources of finance are not available on terms suitable for small and medium sized firms. Whereas, the demand side fails when small and medium sized firms do not make use of the financing opportunities that exist, because of lack of information, lack of collateral or through poor presentation of their case for funding. The provision of credit has increasingly been regarded as an important tool for small firm growth. In this regard, commercial banks and other financial institutions play crucial role in getting access to finance. However, Ogujiuba et. al (2004) concludes that, in developing countries there is dearth of information on operation of small firms, this situation brings the unwillingness of financial institutions in funding small firms. Thus, the interesting question that arises in this study is the extent to which credit can be offered to small firms to facilitate their growth.

At the latest 1980's and early 1990's the banking sector around the world has experienced profound regulatory and technological changes. Advanced application of information technology and introduction of new financial instruments have altered the way of conducting banking activities. Furthermore, the financial system has recently witnessed structural reforms to deregulate and stimulate competition; including recapitalization and creation of banking groups through merger and acquisition. Bearing into consideration these reforms together with the principal financial constraints that face small and medium sized firms; the objective of this study is to examine the extent to which banking behavior affects the access to finance and alleviates small firms financing constraints. Specifically, banks financial resource, credit policy and lending capacity have been investigated.

2. Overview of Islamic Banks and Financing

Islamic finance has gained significant attention in recent years due to its size, fast paced growth, and the potential impact on the international financial markets. Since its inception three decades ago, the number of Islamic financial institutions worldwide has risen from one bank in 1975 to over 300 today in more than 75 countries. They are concentrated in the Middle East and Southeast Asia, and also appear in Europe and United States (El Qorchi 2005). El Hawary et al. (2004) declare that; estimates for worldwide Islamic finance range from \$230 billion to \$250 billion, with a projected annual growth rate in assets of 12 – 15%, and the market potential has been estimated at close to 10% of global gross domestic product (GDP). Islamic capital invested in global financial institutions is currently estimated at \$1.3 trillion and over 105 Islamic equity funds globally are managing assets in excess of \$3.5 billion (Association of Islamic Banking Institution, Malaysia April 2004). Archer and Ahmed (2003) indicate that, 48% of Islamic banks were in Asian region, 20% in Africa, 15% in the Middle East, 12% in Gulf Cooperation Council (GCC) countries, and 5% in Europe and America. In countries where Islamic banking is operating, its coverage and extent vary significantly from situations where the sector is entirely Islamic (Iran and Sudan), to others where conventional and Islamic systems coexist (Indonesia, Malaysia, Pakistan and the United Arab Emirates), to countries where there are one or two Islamic banks. The continuing growth in Islamic finance is based on Islamic principles which include risk sharing, the promotion of entrepreneurship, and the prohibition of interest. Elements of micro finance are considered consistent with the broader goals of Islamic banking and finance. Kym (2003) presents interesting evidence that Islamic financial institutions like their conventional counterparts are subject to many forms of risk, which may broadly be classified into credit risk and market risk. Islamic financial institutions are providing an increasingly broad range of many financial services, such as funds mobilization, assets allocation, payment and exchange settlement services, and risk transformation mitigation. These financial intermediaries perform transactions using financial instruments compliant with Sharia principles. Islamic financial instruments take the form of contracts between providers and users of funds to manage risk. On the asset side, Islamic banks engage in investment and trading activities according to the various contracts available. On the deposit side, funds are mainly mobilized on the basis of a Mudaraba contract or an interest free loan contract (Qard Al Hasan). Overall, Islamic banks offer their depositors four classes of accounts: current, savings, investment, and special purpose investment accounts.

Sudan launched Islamic banking in 1984, and the banking and financial industry are reformed in accordance with Islamic laws and principles. The Islamization was extended to the entire financial sector in 1989. Bank of Sudan has important role in entrenching Islamization of banking sector through credit and monetary policies. However, in the late 1980s and early 1990s the banking sector in Sudan has experienced severe weakness in relation to inadequate capital base, small size of deposits, low financing portfolio and high nonperforming loans. The Central Bank of Sudan developed different reform programs to improve the economic environment with in which the banking sector operates. These programs include financial liberalization in 1992; sharia higher supervisory board was established in 1993 to ensure the compatibility of banking activities with Islamic principles, and comprehensive financial reforms program 1999-2002 with an objective to ensure the soundness of the banking system and to cope with the challenge growth in the international financial market. By the end of 2005 there are thirty operating banks classified according to the ownership of capital as: specialized banks (7%); private and joint

venture banks (83%); and foreign banks branches (10%). The most significant problem is the banks' weak capital and deposit base, eroded by the high inflation in the past years. According to the Central Bank of Sudan evaluation in 2005, 30% Sudanese banks are classified as undercapitalized.

The recent growth of Islamic finance in Sudan show since Islamization there is significant growth in total assets, total advances, total deposits and capital (table 1). However, despite this growth, total assets in Sudanese banking sector in 2006 constitute only 4.8% of the total assets in Islamic banks worldwide. This evidence indicates that Sudan has a shallow financial market.

El Qorchi (2005) argues that despite the rapid growth, Islamic banking remains quite limited in most countries and tiny compared with the global financial system. Many Islamic financial institutions particularly in Bahrain, Malaysia, and Sudan, have been gearing up for further expansion by continuing to develop, refine, and market innovative Islamic financial instruments on both the asset and liability sides. In recent years, many new Islamic financial products have been developed and are increasingly used in financial market activities, including equity and bond trading and investment, Islamic insurance and reinsurance (Takaful/re-Takaful), Islamic syndicated lending and investment in Islamic collective investment schemes.

Table (1)
Recent Growth of Islamic Finance in Sudan (\$)

2006	2005	1990	
11.7 b	8.5 b	\$ 7.7 m	Total Assets
5.6	3.4	24.7	Total Advances
1.9	1.2	5.7	Capital
6.2	5	56.8	Total deposits

Source: Bank of Sudan Annual Reports, 1990-2006

3. Banking Behavior and Small Firms Financing

The last fifty years have seen drastic changes in the ways that firms are financed. Access to capital and credit is one of the most critical elements to the success of enterprises. Improving flow of capital to small businesses has been a priority in public policy and private industry for decades. To day, financial market presents a set of broader and complex financing choices. This market has created enormous opportunities for financial managers to take the right financial choice. Petersen and Rajan (1994) state that, in practice, managers of small firms often complain of being unable to borrow enough capital at reasonable rates. Because of the friction in capital market, funds will be available to firms with positive net present value investment opportunities. Similarly, Stiglitz and Weiss (1981) suggest that unavailability of funds to firms with profitable investment opportunities is due to market frictions such as information asymmetries and agency cost. The economic theory suggests that banks have a comparative

advantage as a provider of capital because of their knowledge of customers and ability to monitor uses of funds on ongoing basis. Furthermore, the empirical evidence shows that commercial banks are the single most important source of credit to small business. However their role as credit provider has been diminished in recent years, therefore, it is important to understand the factors that influence bank credit to small business. Owualah (1990) asserts that:

"The dominant source of institutional credit to small business is commercial banks. Nevertheless, obtaining credit from this source is not usually a free launch. Indeed, small business is often confronted with stiff conditions and obstacles due to the lack of adequate collateral required by banks to secure credit".

Although the Central Bank of Sudan is an independent body which regulates credit and has strong power over all banks, Ahmed (1987) finds that: *"The reason why financial institutions are reluctant to provide credit to small business is attributed to the financial policy of the central bank as well as credit squeeze system."* This evidence proves the existence of Radcliff gap (1959) in Sudan which is attributed to the banking policy and banks' management attitude towards small firms financing. It is known that banks performing classic functions of financial intermediaries to provide funds to small businesses; banks carefully analyze the capacity of the business to generate funds to repay the loan. Therefore, banks rely on financial statements, credit worthiness, and debt service capability. However, a problem facing all small business lenders is the difficulty in gathering data that can be certified or is easily verifiable, because very little public information on small business is available. Fama (1985) and Diamond (1991) describe that large financial institutions can overcome the problem by producing information that is used in credit decisions. However, larger banks tend to shy away from small firms' lending. Developing in this theme; Berger and Udell (2002) show that strong relationship between small businesses and their lenders are critical to ensure access to and continuity of funds. They define relationship lending as a situation where a bank bases its decision primarily on information gathered through continuous contact over time with the firm, its owner and other members of the local community.

In banking literature, a growing number of theoretical models focus on the role of banks in reducing the problems associated with external financing under asymmetric information. Johnson (1997) finds that financing choices from private or public sources depend on firms' asymmetric information problems. This implies that bank screening and monitoring can avoid tensions between borrowers and lenders. Peck, et al. (2003) assess the effect of banking structure on financing obstacles and access of firms to bank finance and find that: *"Bank concentration increases financing obstacles and decreases the likelihood of receiving bank finance, with the impact decreasing size"*. Similarly, Laporta et al. (2001) show that bank lending

is more concentrated in banking systems that are dominated by government owned banks. Therefore, the relationship between bank concentration and access to finance might differ across different institutional environment and ownership structure of banking system and different size of firms.

4. Methodology

This study investigates commercial banks' behavior by examining the structure of deposits, capital base and lending capacity as well as the financing modes. Miller, *et al.* (2001) find that bank size is strongly correlated with both the size of the firm and the size of the loan. While Fama (1985) argues that the deposit relationship associated with commercial bank borrowing facilitates monitoring and supplying of several types of loans over time. However, Petersen and Rajan (1994) consider bank variables and characteristics as proxies for nature of relationship between firm and its bank. Kishan and Opiela (2000) find that monetary and credit policy affects bank's ability to lend and the strength of that effect depends on bank capital. Taking into consideration these theoretical foundations, we measure banks' ability to finance small firms by examining banking behavior in relation to industry and financial structure. The nature of resources and the size of the bank as well as central bank credit policy are the main determinants of the bank's lending capacity. The main purpose here is to investigate the determinants of the lending capacity of commercial banks in Sudan during 1990-2005. Ordinary Least Squares (OLS) method is used to estimate the relationship in equation (1).

$$LC = F(A, C, P) \quad (1)$$

Where:

LC : Lending capacity of commercial banks.

A : Total assets of commercial banks.

C : Capital adequacy ratio.

P : Profit Margins.

Economic theory and past empirical studies have indicated that total assets of commercial banks and capital adequacy ratio have a positive impact on lending capacity of commercial banks, while the impact of profit margins (which used to capture the effect of monetary policy) is negative.

The advances to lending capacity ratio are used to measure the used or unused resources among banks. The lending capacity of the bank is equated by total financial resources (total deposits + equity) after allowing for certain percentage of legal reserves and cash liquidity (as determined by Central Bank of Sudan Credit Policy).

The study covers all banks in Sudanese financial sector to show the trends of the whole banking system. We use secondary data from Central Bank annual reports, mainly: Financial statements, policy directed towards small business in the banking system, financing instruments and collateral required, and level of documentation required and necessary rules and regulations in the bank financial policy. Traditional ratios analysis is used as a technique of investigating banks' financial performance.

5. Credit Policy and Small Business Financing

Access to finance by small firms is normally seen as one of the constraints limiting their benefits from credit facilities. In this context, several questions posed to be answered in evaluating the impact of credit policy on small business financing. We stress the role of government policy as an important and inevitable mechanism for removing the obstacles. An empirical study conducted by Darsana (1984) on Indonesian experience shows that:

"The central bank policy to regulate and maintain stability of currency and to promote production development is undertaken in conformity with government policy. As such, credit policy is one of important weapons that can transfer resources to large numbers of small businesses, and the central bank takes a leading part in this regard".

The Central Bank of Sudan has a substantial responsibility in maintaining financial system stability as a whole through conducting monetary and credit policies. Bank of Sudan monetary and credit policies aimed at continuing the process of liberalizing the banking finance, and achieving banks soundness. Furthermore, the policy aimed at encouraging the banks to mobilize more resources to finance economic priorities, especially the social development sectors. Thereby, financial liberalization consists mainly of the removal of administrative control on profit margins and scaling down the directed credit programs. In considering the role of credit policy in financing small firms; the Central Bank of Sudan develops lending rules that accommodate the peculiar characteristics of small and medium sized firms and design ways for providing them financing facilities, as well as the collateral and conditions for small firms financing, such as: license for operating the activity, current account of the client, appraisal of the project, two checks one provided by the client and the other by third party, and payment of the first installment under murabaha financing. However, from 2001 to date the payment of the first installment depends on negotiation between the borrower and lender.

Table (2) reflects the role of credit policy in encouraging small business sector. Bank of Sudan credit policy recognized small business under crafts and small producers and considers it as a priority sector. The 1996 credit policy defines small business by the volume of finance which is not exceeding 300,000 SD. However, banks have different definitions depending on volume of finance and number of employees. Despite the lack of unified definition in Sudanese banking

sector, the credit policy determines its credit ceiling of not less than 10% of the total finance provided by the bank.

Table (2) Credit Ceiling for Financing Economic Sector

Non Priority Sector	Priority Sector					Years
	Total	Other	Small business	Industry	Agriculture	
20 %	80 %	40 %	-	-	40 %	1991
10 %	90 %	40 %	-	-	50 %	1993
10 %	90 %	50 %	-	-	40 %	1994
10 %	90 %	50 %	-	-	40 %	1995
10 %	90 %	50 %	-	-	40 %	1996
5 %	95 %	40 %	-	25 %	30 %	1997
5 %	95 %	10 %	-	30% industry 25 export	30 %	1998
5 %	95 %	90 %	5 %	-	-	1999
10 %	90 %	83 %	7 %	-	-	2000
Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	2001
Undefined	Undefined	Undefined	10 %	Undefined	Undefined	2002
Undefined	Undefined	Undefined	10 %	Undefined	Undefined	2003
Undefined	Undefined	Undefined	10 %	Undefined	Undefined	2004
Undefined	Undefined	Undefined	10 %	Undefined	Undefined	2005

Source: Bank of Sudan' Monetary and Credit Policy during 1991 – 2005.

6. The Financial Structure of Commercial banks

Commercial banks are institutions that engage in two distinct types of activities, one on each side of the balance sheet; deposit – taking and lending. We argue that since bank often lend via commitments, their lending and deposit taking may be two manifestations for one function which is the provision of liquidity on demand. Interestingly, the bank is a source of liquidity both for the depositor and the entrepreneur. The idea that banks provide liquidity on both sides of the balance sheet is explored by Kashyap, et al. (1998); their argument is that there is a synergy between lines of credit and demand deposits in that; the bank can better use existing sources of liquidity by offering both. In this part we analyze the structure of the banking system and its effect on financial service activities which requires the development of different types of resources.

During (1990 – 2002) the Sudanese Financial sector grew steadily, passing through different stages of development that lead to the major changes in the financial resources of the banking sector. The change has been observed clearly in the capital base and the volume and structure of deposits as a result of restructuring the banking system.

Capital buffers the bank against shocks to assets value and future unexpected losses that can be generated by credit and operational risks inherent in the business. Because financial fragility is

essential to banks to create liquidity, our study highlights the capital requirements that make the banking system safe. However, the extent to which a borrower is squeezed by bank depends on borrower's liquidity and the bank's capital structure. In the late 1980s, the new challenges of growth in international financial market let banks regulators to enforce a minimum capital standard of the bank as an effort to safeguard depositors and to ensure the on going viability of the financial system. A key statistics in formulating capital requirements is capital ratio; that is the ratio of capital to total assets, which measures capital adequacy of the bank.

In Sudan the application of Basel Accord standards (1988) to Islamic Banking is still debatable issue in academic and professional views. Table (3) provides evidence that during 1990-2002 capital ratios represent 7.2% on average with a negative deviation of 14%, which is below the minimum requirements of Basel Accord (8%). This decline is attributed to increase in the risk weighted assets, reduction in the absolute amount of capital, overall losses in the bank operations, and adverse movements of exchange rate. The Central Bank comprehensive banking sector reform program results in a significant growth in the banking system. The restructuring program was issued with an aim of increasing capital of all banks to the minimum level of 3 billion SD by the end of 2002 and 6 billion SD by end of 2007, leaving space for the option of merger or sale to avoid liquidation. This has been done on the ground that recapitalization of banks in collaboration with other reforms is intended to help in mobilizing domestic savings, deepening and broadening intermediation, and improving allocation of resources.

The comprehensive structural reform program reflects that the banking sector is capitalized, and capital adequacy of 8.4% on average reflects the extent to which capital can protect assets against risk.

Table (3) Financial structure of the Banking Sector

	Advance to equity %	Advances to total asset %	Advances to total deposits%	Equity to total assets %	Equity to total deposits %	Saving and Time Deposits %	Demand Deposits %	Year
	431	32	44	8	10	26	74	1990
	580	31	47	5	8	32	68	1991
	242	23	35	9	15	46	54	1992
	312	13	32	4	10	62	38	1993
	261	17	43	7	16	58	42	1994
	265	14	35	5	13	30	70	1995
	305	21	50	7	16	24	76	1996
	281	17	43	6	15	32	68	1997
	233	14	39	6	17	32	68	1998
	200	12	34	6	17	59	41	1999
	259	23	42	9	16	56	44	2000
	309	32	54	10	17	59	41	2001
	291	35	59	12	20	58	42	2002
	196	37	62	14	38	31	69	2003
	199	42	67	14	37	27	73	2004
	256	48	72	12	26	43	57	2005
	288	26	47	8.4	18	42	58	Avg.

Source: Bank of Sudan Annual Reports, 1990-2005

As far as the structure of deposits is concerned, the analysis shows that the sensitive financial resources are dominant and represent 58% on average compared to quasi resources (42%). This

profile puts Sudanese commercial banks within the stream of conventional formula with the trend to allocate sensitive financial resources to short- term advances. Table (2) also provides clear evidence that the contribution of long - term financial resources is very low as measured by the ratio of advances to equity. Alternatively, the ratio of risky assets measured by advances to total assets is relatively low compared to the ratio of advances to total deposits (1:1.8). This observation provides documented evidence that commercial banks lending is based on demand deposits, and supports Kashyap, et al. (1998) finding that there is a real synergy between deposits taking and lending.

7. Commercial Banks' Lending Capacity

While the problem of access to financing per se is critical; it is not as pressing as the problem of access to the type of financing required to support private sector development. Much of the hindrances tend essentially to be regulatory or legal in dimension and the relatively high cost of financing derives in part from tight monetary policy and in part from inefficiencies in financial intermediation (Demirguc- Kunt and Maksimovic 1998).

In Sudan, the financial sector appears to be most regulated and controlled by the government and its agencies. Banks' capital influences the lending ability, since equity is linked to risk taking behavior. Table (4) and figure (1) analyze the lending capacity of commercial banks. The nature and volume of deposits, the volume of equity, monetary and credit policy are the main determinant factors of lending capacity. Based on lending capacity model (Ahmed 1987), and bearing into consideration the central bank credit policy, the lending capacity of banks has been illustrated as:

$$LC = TFR - 10\% \text{ Liquidity} - \% \text{ Reserves}$$

Where: LC: Lending capacity; TFR: Total Financial Resources (total deposits plus equity)

Deposits as a source of liquidity, requires a bank to get small volume of liquid assets on its balance sheet to hedge depositors. Cash liquidity of 10% of total deposits is stated by the central credit policy to secure depositors' demand. However, the broader measures of capital include reserves against loan losses and possible losses from loans to sovereign governments, other banks and borrowers.

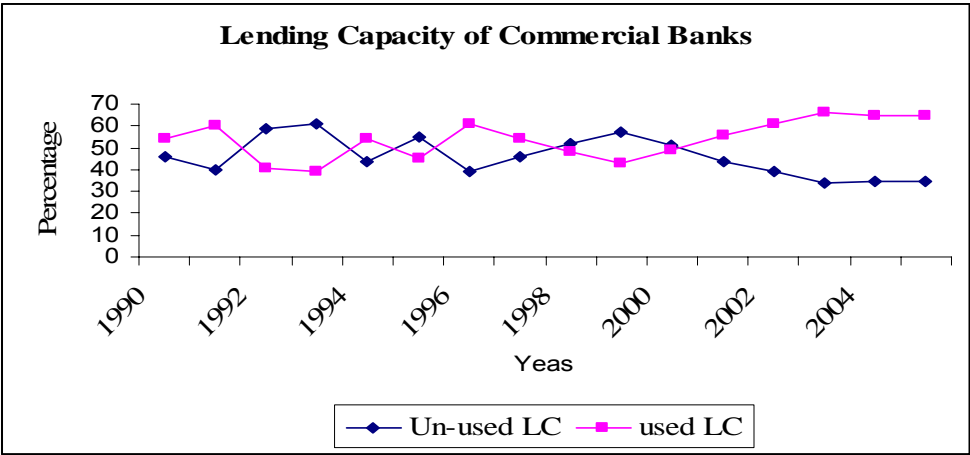
Table (4)**Commercial Banks' Lending Capacity**

	Un-used LC	Adv. m/SD	LC m/SD	Liquidity %	Reserve %	TFR (m/SD)	Equity m/SD	TD m/SD	Years
	46	742	1365	10	20	1876	172	1704	1990
	40	1403	332	10	20	3228	242	2986	1991
	59	3311	982	10	20	10815	1371	9444	1992
	61	5272	13403	10	20	18424	1688	16736	1993
	44	10073	17926	10	30	27300	3864	23436	1994
	55	14515	32537	10	25	47112	5470	41642	1995
	39	33948	55210	10	25	78937	11145	67792	1996
	46	41556	76691	10	26	111522	14768	96754	1997
	52	47383	98490	10	26	142450	20338	122112	1998
	57	48891	114686	10	28	169983	24464	145519	1999
	51	83438	170257	10	20	229424	32200	197224	2000
	44	147401	261507	10	12	321828	47640	274188	2001
	39	214078	349628	10	14	436766	73692	363074	2002
	34	216023	328534	10	14	397448	110308	287140	2003
	35	285964	441675	10	14	535769	143711	392058	2004
	35	470025	725111	10	14	896032	183862	712170	2005
	46%								Avg.

Source: Bank of Sudan Annual Reports: 1990-2005

Note: Lending capacity = LC; Total Financial Resources= TFR, Total deposits = TD; Total advances = adv

Figure (1)



Source: Based on the data shown in table (4)

Based on application of lending capacity model; the analysis provides documented evidence that the unused lending capacity is high and maintains 46% on average. The data shows that bank's financing depends more on demand deposits. This trend of lending behavior is due to bank's inability to raise alternative long- term funds as well as, weak capital base. However, as capital adequacy increases, the percentage of demand deposits to total deposits decreases and percentage of investment and saving deposits increases which qualify the banks for more quasi resources. The observation of higher increase in un - used resources accompanied with a lower rate lending capacity and advances in (1997 – 1999) encouraged the central bank to issue the comprehensive salvation program (1999-2002) in the way to gain its fruits by improving capitalization, attraction of more quasi deposits by liberalizing financial operations. This policy reflects the positive effect of capital on the bank's lending capacity in the sense that banks become better capitalized, and the response of loans become less negative.

The empirical investigation of the determinants of lending capacity explains the effect of total assets, capital adequacy and profit margin on lending capacity of commercial banks in Sudan during the period 1990-2005. Ordinary Least Squares (OLS) method is used to estimate the relationship in equation (1). The empirical results reported in table (5) below represent the regression results, where the figures in parentheses are the t-ratios of the estimated parameters.

Table (5) Regressions of Explanatory Variables on Lending Capacity, During 1990- 2005

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D.W	F	R ²	Coefficient		
1.88	318.00	0.98	P	C	A
			-1608 (-2.45)	5825 (1.85)	0.04 (12.22)

Source: Own Estimation.

The results in table (5) suggest that the estimated relationships are highly statistically significant, as indicated by the exceptionally high value of the F-ratio (it is statistically significant at 1% level). The coefficient of determination R^2 suggests that 98% of the variation in lending capacity (LC) is explained by the variations in total assets (A), capital adequacy (C) and profit margin (P). The Durbin-Watson statistic for the equation falls in the inconclusive region. Furthermore, all coefficients are statistically significant at 1%, 10% and 5% respectively, as indicated by the t-ratios and have the expected signs. Accordingly, total assets (A), capital adequacy (C) and profit margin (P) are the major determinants of lending capacity in Sudan. We observe that the value of the coefficient of capital adequacy is the highest. Also it is noticed that total assets is the most statistically significant variable.

According to our results if the central bank aims to increase the lending capacity of commercial banks in Sudan it has to work to increase the total assets of commercial banks and the capital adequacy and reduce the profit margin. Therefore, capital adequacy has an effect on quasi deposits and lending behavior. The empirical evidence supports bank lending channel (Kishan and Opiela 2000) in that; monetary and credit policy affect bank's ability to lend and the strength of that effect depends on bank capital.

The Central Bank of Sudan takes the lead in developing instruments to encourage commercial banks to diversify their portfolios in the direction of providing greater volume of long term finance to productive sector. It is worth mentioning that the only credit ceiling issued by the Central Bank credit policy is for small business and productive families; that each bank has to finance small business by not less than 10% of its total financing portfolio. This is done to ensure the accessibility to small business and vulnerable groups to formal external finance. Despite the government direction and reform process for improving the role of banking system in financing small business sector; table (6) shows that there is still a shortage of finance, especially long-term finance. We find strong evidence that small firms are un-accessible to commercial banks' financing, which confirms the risk adverse behavior of commercial banks in funding small firms in Sudan. This empirical finding is consistent with the body of knowledge in that; the research of the World Bank group results indicates shortage of long- term finance in developing countries after controlling for differences in the macroeconomic factors.

To ensure stability and soundness of the financial sector, Bank of Sudan has recently (2005) issued the credit policy that addresses the medium term financing to ensure better chance for financing projects. However, banks may not be able to insure long term finance due to the nature of resources. The policy implication of these findings is the importance of increasing the supply of long-term credit through developmental finance.

Table (6)

Financing of Small Business Sector During 1999-2005
SD (m)

2005	2004	2003	2002	2001	2000	1999	Years
24739	19643	12293	9143	9655	7265	5563	Amount
3.6	4.6	4.4	4.4	6.6	7.2	7.5	Percentage

Source: Bank of Sudan Annual Report, 2005

8. Islamic Financing Instruments

Islamic banks developed interest free techniques in which the financing instruments have been based on two principles.

1. Profit and loss sharing modes “ PLS ” (2) Markup modes

PLS is accepted in Islamic legal and economic literature as a cornerstone for transactions. According to PLS, the bank earns a return on investment funds provided that the bank shares in the risk of investment and bears a loss if a project fails. Based on this principle two investments were used:

1. Joint venture “Musharaka financing”; where the entrepreneur and the bank jointly supply the capital and manage the project. Losses are borne in proportion to the contribution of capital; while profit positions are negotiated freely.

2. Trust financing “Mudaraba Financing”; where the bank provides capital and the entrepreneur contributes efforts and exercise complete control over the business venture. In the case of loss the bank earns no return or negative return on its investment and the entrepreneur receives no compensation for his effort. In the case of gain returns are split according to a negotiated equity percentage. Both of these instruments can be thought of as equity finance.

On the other continuum, Mark-up financing and other forms of trade financing are popular financing instruments among Islamic banks, and account for more than 75% of financing (Timberg, 2003). The two widely used instruments are:

1. Murabaha Financing; where the bank purchase the asset on behalf of an entrepreneur; the bank resell the asset to the entrepreneur at an agreed price that covers the original cost and added negotiated profit margin. Payment is made in the future in Lump sum or in installments. Ownership resides with the bank until all payments are made.

2. Lease and Lease Purchases (Ijara and Ijara wa iqtina); Under a lease arrangement the asset is used by the client for a specified period and amount without taking ownership of the product. Under a lease-purchase arrangement, payments include a portion applied toward the final purchase of the asset and ownership is transferred to the client at the end of the lease period.

Bearing into consideration these classifications, table (7) and figure (2) present significant evidence that commercial banks rely much more heavily on Murabaha financing than Musharaka financing. Murabaha financing constitutes 45% on average and 56% of the popular Mechanism used by banks. The popularity is due to their contracting environment; such as short- term nature, limited risk, and guaranteed profit, so most financing does not appear to be long-term in nature. While the application of PLS involve some constraints such as high cost of follow up and monitoring of the project, getting fair management share of partner, and evaluating fixed assets in diminishing Musharaka "self liquidating". Therefore, little evidence is found to support the claim that Islamic banks are supposed to serve the function of allocating investment funds to long term productive sector. They are expected to favor small entrepreneurs who do not have access to credit in the conventional banking system, as Islamic banking system is an engine for growth in Islamic countries. The financing mechanism is one of the problems of non-availability of finance to small firms. Therefore, equity finance should dominate. Our result is in line with Aggarwal and Yousef (2000) that most of Islamic Financial Instruments used by Islamic Banks are not based on equity financing, instead, they are very debts like in nature.

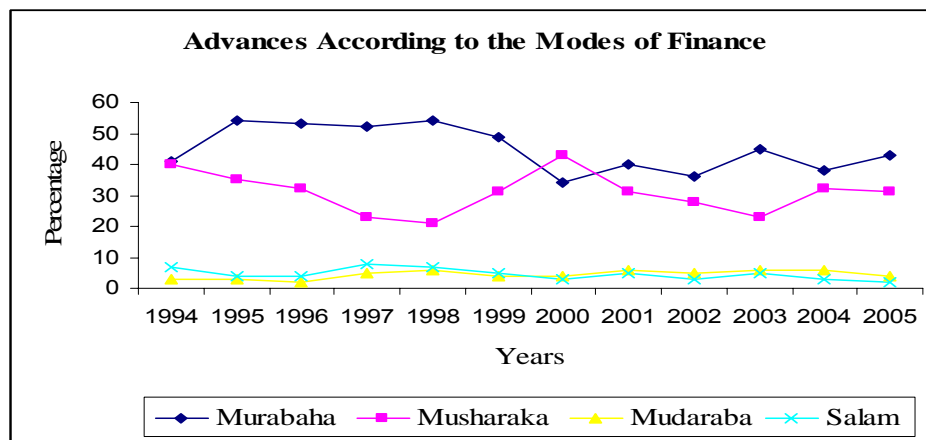
Table (7) Commercial Banks' Mode of Finance

Others		Popular Mechanisms - Economic Sector Wise				
Others %	Salam %	Total%	Mudaraba%	Musharaka %	Murabaha %	Years
9	7	84	3	40	41	1994

4	4	92	3	35	54	1995
9	4	87	2	32	53	1996
12	8	80	5	23	52	1997
12	7	81	6	21	54	1998
11	5	84	4	31	49	1999
17	3	81	4	43	34	2000
18	5	77	6	31	40	2001
28	3	69	5	28	36	2002
21	5	74	6	23	45	2003
21	3	76	6	32	38	2004
20	2	78	4	31	43	2005
14	5	81	5	31	45	avg.

Source: Bank of Sudan Annual Reports: 1990-2005

Figure (2)



Source: Based on the data shown in table (7)

Table (8) provides clear evidence that before the salvation program (1999-2002) profit margin and the percentage of Musharaka participation differ according to economic sector; where as, after the reform the return required from financing any economic sector is fixed within the range of (12-15 %) during 2001-2002 and 12% during 2003-2005. Since the lenders are indifferent regarding profit margin from supplying credit, banks should consider the quality of the project they financed and its environment. The effect of financial liberalization is also seen in the determination of the percentage of Musharaka participation which has been based on negotiations between banks and borrowers. This trend improves the allocation of funds for investment and relaxes financial constraints for all classes of firms. Given the commercial banks' financial structure and financing mode, their lending has been in short term and quite heavily secured. Heightened competition among banks might generate more profit sharing contracts (Musharaka and Mudaraba) as borrowers are able to choose among various financing mechanisms offered by different types of banks. The evidence shows that commercial banks are niche providers of capital

Table (8)

Percentage of Musharaka Participation and Murabaha Profit margin

2002	2001	2000	1999	1998	1997	1996	1995	1994	Sector
Murabaha profit margin:									
12-15	12-15	18	20	36	45	30	30	30	Export
12-15	12-15	18	20	36	40	25	25	25	Crafts
12-15	12-15	18	20	36	35	15	15	15	Small Producers
12-15	12-15	18	20	36	45	30	30	30	Agriculture & Industry
12-15	12-15	18	20	36	45	36	36	36	Priority sector
% of Musharaka participation									
It has been determined by Banks				70	80	70	55	50	Local trade
				36	45	35	25	20	Export
				36	35	25	15	15	Crafts
				36	30	20	Agreement	Agreement	Small Producers
				36	45	30	20	15	Agriculture & Industry
				36	25	25	25	25	Priority sector
				36	40	35	25	20	Others

Source: Central Bank Credit Policy; 1994-2002

9. Challenges of Basel II for Small Firms and Banks

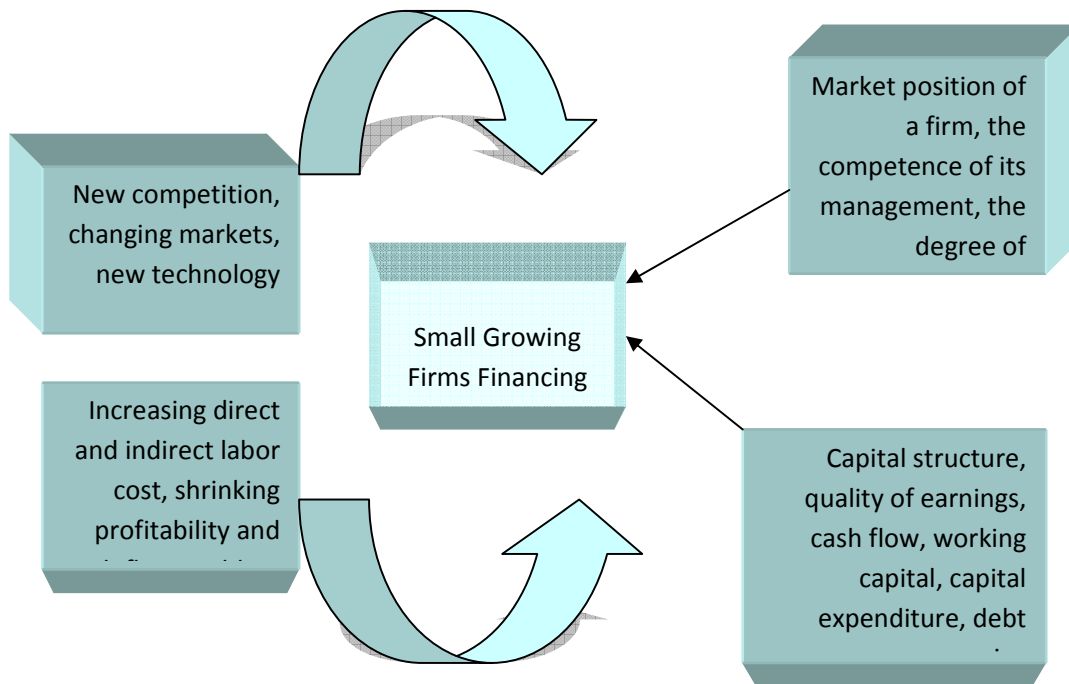
Bartels (2002) investigation in Germany reveals that for the majority of small and medium sized firms, a bank internal rating will be applied. The debate now focuses on the criteria itself and the process of a bank internal rating, because (a) small and medium sized firms are unfamiliar with formal rating processes and (b) the majority of small and medium sized firms are ill prepared in terms of documentation on strategy, market position/potential and the use of the instrument of controlling.

The change in capital calculation methods made by new Accord raise the issue of Basel II and survival of small and medium enterprises. The Basel II Accord on capital adequacy has triggered a fundamental change in the attitude of banks towards borrowers, especially small and medium sized firms. Banks are reviewing their portfolios today along the lines of the criteria laid down by Basel II, although the Accord was Adopted in 2005, the criteria has been in the form of a bank internal rating, which is designed to permit a more accurate assessment of the true risk of a loan. The issue is that firms which are to be rated, are not familiar with the new formal rating process. Bank or credit managers do not always have good insights into the economics of small and medium sized firms to be able to accurately rate these firms objectively based on the criteria laid down by Basel II. This applies especially to soft facts, such as the market position of a firm, the competence of its management, and the degree of operating leverage.

Small and medium sized firms fear that Basel II will create enormous difficulties for them in finding adequate financing and many of them may be closed. If that prediction comes true, the immediate result will be the opposite of what Basel II had in mind. Not only will Basel II result in more non-performing loans, but it will also cause problems for trade creditors. If difficulties in rating soft facts will prevail, subjectivity in lending may continue to be around for a long time. Therefore, statistically valid benchmarks on small and medium sized firms' performance have to be created. Unfortunately, such benchmarks are not readily available. In the interest of achieving objectivity in lending, the idea of statistical base should be resurrected. Furthermore, small and medium sized firms need professional help to become better prepared for the rating process. Since Basel II will apply uniformly across the world, the issue is troubling. Small and medium sized firms in Sudan will most likely affect similar to other countries. Therefore, Basel II has emerged as a new credit risk factor.

Figure (3)

Challenges of Basel II for Small Growing Firms and Banks



Source: Bartels, J. C. (2002)

10. Conclusion and Policy Implications

The economic environment in which banks and small firms exist affects significantly the ability of the banks to lend small and medium sized firms. The empirical findings show that the analysis of banks' financial structure in relation to advances provides strong confirmation that credit availability depends on the banks' financial resources; as well as Central Bank's policies.

With respect to the financial resources; the result indicates that banks have inadequate capital base. Capital ratios, deposits structure, and lending portfolio address the inability of banks to provide long- term finance. This evidence also indicates the synergy between line of credit and demand deposits; that commercial banks' lending depends on sensitive financial resources.

The empirical result indicates that unused lending capacity is very high (46% on average) which confirms inaccessibility of small firms to long term credit, and also proves the risk adverse behavior of commercial banks in funding small firms. Our finding is also consistent with the documented of literature that long term financing is not in adequate supply in developing countries.

Murabaha is popular financing mechanism used by all banks in Sudan; this evidence challenges the objective of Islamic Banks which is supposed to provide long term financing, and facilitate availability of financing to small firms. Given the commercial banks' financial structure and financing mode, their lending has been in short term and quite heavily secured, therefore, commercial banks are niche providers of capital. However, equity contract should prevail from Islamic mode perspective. In this regard, we suggest Ijara financing as an equity financing mechanism for small firms. Islamic banks hold a number of various assets to respond to the needs of different customers. These assets have usually high degree of marketability. The bank rents these assets to its clients who want to utilize them for a term to be agreed upon on payment of rental amount. After expiry of the lease period, the assets are returned to the bank in the case of operational lease or the ownership of the leasehold asset transfers to the customer automatically under lease purchase contract. Islamic investment funds have also been prospered in Sudan as mechanisms for long-term financing; such as equity funds, real estate and property funds. These instruments have become the most common in Malaysia and the Gulf countries.

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سلوك المصارف الإسلامية نحو تمويل المنشآت الصغيرة

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المستخلص

اكتسب التمويل الاسلامى أهميته نسبة لكبر حجمه ونموه السريع وتأثيره على الاسواق المالية الدولية. تعتبر المصارف الاسلامية أهم مصادر الاموال الخارجية لتمويل المنشآت الصغيرة ومتوسطة الحجم. ولكن مقدرتها على منح التمويل طويل الاجل لهذه المنشآت مازالت قضية للنقاش فى أدبيات التمويل. تبحث هذه الورقة سلوك المصارف الاسلامية ضمن سياق التغيرات التنظيمية العميقة فى النظام المصرفى، والى اى مدى يؤثر هذا السلوك على تمويل المنشآت الصغيرة. استخدمت الدراسة البيانات الكلية من كل البنوك العاملة فى القطاع المصرفى السودانى وتم تحليلها عن طريق النسب التقليدية بالإضافة الى الطرق الاحصائية (OLS) وذلك لمعرفة محددات القدرة المالية للمصارف لتمويل المنشآت الصغيرة. وتشير نتائج الدراسة بان السلوك المصرفى تحدده التركيبة المالية للمصارف بالإضافة الى سياسات البنك المركزى النقدية والإئتمانية. اثبتت النتائج التطبيقية ان ضعف قاعدة رأس المال وهيمنة المصادر المالية الحساسة تبرر السلوك المصرفى التقليدى الذى أدى الى تخصيص هذه المصادر للتمويل قصير الاجل. وكذلك تشير الحقائق العملية ان المصارف تركز على التمويل عن طريق المراجعة بدلاً عن المشاركة وهذا يناهى هدف المصارف الاسلامية التى تسعى الى تحقيق المصالح عن طريق توفير وتسهيل عملية منح التمويل طويل الاجل للمنشآت الصغيرة.

Short Bio.

Dr. **Neimat Abdalla Ibrahim** received her M. Sc and PhD degrees in Accounting and Finance from Gezira University. Currently she is working as an assistant professor of accounting and finance in the Department of Accounting and Finance, School of Management Studies at University of Khartoum.

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