On Bank Market Structure and Competition in Egypt*

*Mahmoud Mohieldin***

ملخص

"فى هيكل السوق المصرفية والمنافسة فى مصر"

هناك جدل فى الكتابات الاقتصادية المعاصرة حول علاقة هيكل السوق لأى صناعة وسلوك المنشآت فيها وأدائها، مقاساً بمؤشرات الربحية المتعارف عليها. فمن الكتابات ما يؤيد نظرياً وتطبيقياً وجود علاقة مستقرة وسببية بين الهيكل والأداء، ومنها ما يرى أن هذه العلاقة ليست راسخة من الناحية النظرية إذ يشوبها قدر من التبسيط الذى يعتمد على ما يشبه الحركة الميكانيكية التى تنتقل من هيكل السوق إلى سلوك المنشآت الفاعلة فيها بما ينعكس على أداء المنشأة دون اعتبار لمحددات خارجية تؤثر على النشاط أو عوامل داخل المنشأة ذاتها تتعرف عليها إذا ما فتح هذا الصندوق المغلق على ما فيه من علاقات عمل بين الإدارة والعاملين والمالكين وهيكل التمويل وأسلوب إدارة المنشأة وغير ذلك من عوامل مؤثرة فى أدائها.

وتقوم هذه الدراسة باستعارة منهج تحليل "هيكل السوق – السلوك – الأداء" المتبع فى دراسات حقل اقتصاديات الصناعة فتطبقه على حالة الجهاز المصرفى، حيث تستقر فيه أوجه تشابه قوية مع قطاعات الصناعة المختلفة التى خضعت لمثل هذا التحليل، كما أن هناك عدداً، وإن كان محدوداً، من الدراسات التطبيقية التى اتبعت منهجاً مماثلاً فى دراسة هيكل السوق المصرفية فى اقتصادات متقدمة وأخرى نامية، وكذلك فى تحليل أداء وحدات الوساطة المالية الفاعلة فيها على النحو الذى تشير إليه هذه الدراسة.

تناقش الدراسة منهج التحليل من الناحية النظرية بعد استعراض لمراحل تطور السوق المصرفية فى مصر، والغرض من هذا ليس مجرد التتبع التاريخى لتطور النشاط ولكن محاولة البحث عن أثر الأحداث والحوادث التاريخية المؤثرة فى هيكل السوق وسلوك المنشآت الرئيسية فيه. ثم تقوم الدراسة بإجراء اختبارات قياسية لمنهج "الهيكل – السلوك – الأداء" باستخدام قاعدة بيانات تغطى الفترة من عام ١٩٨٠ حتى عام ١٩٩٨، وتشمل ٤٧ بنكا عاملاً فى مصر، وتنتهى الدراسة بملاحظات استنتاجية.

* The author wishes to thank Ziad Bahaa El-Din, Hany Dimian, Pal Gaspar, Rolf Luders, Sahar Nasr, Mohamed Ozalp and the participants of the conference on "Financial Development and Competition in Egypt" for useful comments and discussions. He is also grateful to Rasha Awad for research assistance. Usual disclaimers apply.

** Associate Professor in Financial Economics, Department of Economics, Faculty of Economics and Political Science, Cairo University.

"Why is the industrial structure as it is? ...[S]ome parts of industrial structure are determined by factors outside the influence of participating firms... [N]umber of firms, ..., are seen as determined by a series of historic accidents which are not directly relevant to current conduct and performance."
Malcolm Sawyer (1981), p. 154.

I. Introduction:

Despite the partial liberalisation measures of the 1970s that encouraged the establishment of foreign, private and joint-venture banks and the more comprehensive financial reform program of the 1990s, branches of the public sector commercial banks dominate the Egyptian banking system. The structure of the banking system and the geographic concentration of branches indicate a highly segmented market and lack of competition. The relatively large branch networks of a few public sector banks allow them to dominate the process of savings mobilisation from the public. Other banks target mainly big savers. Financial services are still basic with very limited innovation, though joint-venture banks are in a better position. The domination of public banks in a highly concentrated market resulted in a frail competition and limited innovation.

It is not just lack of competition that the Egyptian banking system is suffering from, it is also lack of contestability. It is argued that contestable markets and potential firms' freedom of entry, promote efficiency, encourage innovation and give highly favorable welfare outcomes. This can be achieved by efficient pricing and allocation of production among incumbent firms to eliminate significant excess profits. However in practice there are different barriers to entry facing potential firms and

preventing them from joining the market even in the presence of high excess profits.

Large economies of scale and high sunk costs, in addition to other entry costs are examples of such barriers, but in the case of banking government regulations through permits and licenses are far more important than other barriers. However, the recent financial liberalisation eliminated interest rate controls, eased the entry of new financial intermediaries, and allowed new types of instruments. Regulatory impediments were relaxed and the Egyptian banking system became more integrated with the world market.

The study attempts to investigate the impact of the structure of the Egyptian banking system on bank performance and examines the evolution of the banking market and identifies the factors that formed its structure and the extent of competition, using various indices of market concentration and performance measures.

The paper starts with a discussion of the evolution of the Egyptian banking system since 1856 in an attempt to understand the impact of development and financial policies during the different phases on the bank market structure and competition. The development of the Egyptian banking system can be divided into four main phases. The first starts in 1856 with the establishment of the first bank in Egypt and ends in 1956 with the start of the Egyptianisation of foreign banks. The analysis of this particular period is important for three main reasons. First to understand the distinctive characteristics of the banking system in Egypt that shaped its structure and role before the 1952 revolution and after. Second most of the operating banks in the subsequent periods, including the central bank, were established during this phase which requires some discussion of their historical background. Third, many of the measures taken

concerning banking activities in the 1950s and 1960s were, to a great extent, reactions to policies and practices adopted during this phase and affected the contemporary development and progress of the Egyptian banking system.

The second phase 1957-74 was a period of heavy government intervention in economic activity and witnessed the Egyptianisation and then the nationalisation of banks and the official adoption of financial repression through various measures. The third phase, which we consider to be a period of partial liberalisation, starts in 1974 with the introduction of open door policy (*infitah*) and ends in 1991 with the start of the application of the economic reform programme supported by the World Bank and the IMF, which marks the beginning of the fourth phase.

The paper proceeds by providing discussion of the structure-conduct-performance paradigm in the Egyptian context. Empirical tests of the structure-conduct-performance paradigm in banking industry have often found that the structure of the market, using market concentration as a proxy, has influenced both conduct and performance. Then, we analyse the relationship between performance of banks measured by ROA, as a dependent variable, and a proxy for market structure (MCR) and other independent variables that include both bank and overall market specific variables. We formulate a cross-sectional profit equation similar to those used in previous studies that followed Weiss (1974) and Smirlock (1985). More recently, the same approach has been used in a study on the effects of financial liberalisation on market structure in Turkey by Denizer (1997) and in another one on the relationship between market structure and performance in the Jordanian banking system by Al-Karasneh, Cadle and Ford (1997). Finally. The paper ends by a comment on the main policy implications.

II. An Overview of the Evolution of the Egyptian Banking Structure[1]:

Commercial banks were the first financial institutions to appear in the process of economic development in Egypt. The dearth of finance in Egypt received the attention of foreign financiers who found in the country an attractive outlet for their capital. Foreign capital started to flow towards the country in the form of loans to the government. In 1862 Egypt had its first foreign loan in its modern history. Foreign financier's response to the growing need for capital in Egypt took also the form of establishing local financial institutions. Thus modern foreign-owned commercial banks were founded to fund the cultivation of crops, mainly cotton, and finance foreign trade. Some of these banks were branches of European banks and a few of them were registered in Egypt. The first of these banks was the Bank of Egypt which was established in 1856 with a head office in London, a main office in Alexandria and a branch in Cairo.

Many foreign banks were established in the following years. Their main activity was the purchase of Treasury Bonds and meeting the increasing credit demands of the khedive. the National Bank of Egypt (NBE) was established in 1898 as a commercial bank with a capital of £1 million, with the head office of the bank was in Cairo. However the bank was owned and managed by British citizens and maintained close ties with England through what was known as the London Committee. This committee was supposed to be of consultative nature but it had a say on transactions exceeding £100,000 and other important decisions.

Effectively the country was still deprived of a banking system, which would contribute to its broader development. Financing crops other than cotton was neglected. Advancing loans to small cultivators was considered either risky or

technically difficult. Funding industrial projects was not compatible with the policy of short term financing adopted by foreign banks. Attempts to change this passive role of the operating banks were undertaken and took the form of government intervention and private initiatives. They were inspired by the independence movement and marked the main developments of the banking system until 1952, and took the form of extending agricultural credit and funding industrial projects.

Until 1920 several foreign banks were operating in Egypt in addition to the NBE which was legally considered an Egyptian bank, despite the fact that it was founded with British capital. The conditions of the First World War and the outbreak of the Egyptian revolution in 1919 inspired a campaign to establish a pure Egyptian bank as a necessary element of economic independence(2). It was realised that the operating banks with their concentration on short term financing for cotton and foreign trade did not cater for the growing needs for long term industrial credit. Thus, Banque Misr was founded in 1920 with an initial capital of £E 80 thousand raised to £E 1 million under a precise condition that only Egyptians could be shareholders and members of the board of directors. The capital of the bank was subscribed by 126 shareholders; mainly large landowners and big merchants who benefited from the economic boom which followed the World War I(3).

Banque Misr was influenced by the German banking system and its role in the rapid expansion of German industry and trade after 1880. The concept of a gross-bank, i.e. universal bank in current terminology, inspired the founders of Banque Misr to apply this idea in Egypt. After the end of the Second World War the need for industrial credit to small and medium size enterprises was again recognised, especially when Banque

Misr ended up acting like the rest of commercial banks. Thus, in 1947 the Industrial Bank was established with 51% of its capital owned by the government, 30% subscribed by the operating banks and 20% were in form of shares held by the public. The government guaranteed a minimum of 3.5% of the nominal values of the shares as profits. The aim of the bank was to widen the industrial base by establishing small enterprises or advance credit to them. Until early 1950s the bank was not able to fulfil its objectives. It advanced credit to relatively big projects, which were able, anyhow, to obtain credit from commercial banks and was reluctant to advance credit to newly established small projects because of high risk associated with their activities(4).

During the early years after the 1952 revolution the new government was trying to assure foreign investment about the stability of the economy. Thus the banking system did not observe any unusual changes regarding its structure, activities or the ownership of its institutions(5). Nevertheless the Suez Crisis of 1956 led to the subsequent radical measures of Egyptianisation by the government, under Nasser, in 1957. Indeed, there was some Egyptianisation attempts before the 1952 revolution. However, the measures of Egyptianisation, established by Law 22/1957, were far more substantial than any thing that went before. The law stipulated that all-operating British and French banks should be sequestrated. The rest of the operating banks had to take the form of joint stock companies, within five years. The paid-up capital of operating banks should not be less than £E 500 thousand, in the form of shares owned by Egyptians. Small banks, which could not fulfil the capital requirements under the new law, either joined one of the Egyptian banks or closed down. As a result of these measures the number of banks decreased from 35 in 1957 to 27 in 1958(6).

The government felt that it had to assume more control over the credit market, so the NBE as a Central Bank was granted more power by the Law No. 163 of 1957. Determining interest and discount rates now became the right of the NBE. We mentioned above that setting interest rates was left previously to the League of Egyptian Banks, which succeeded the Conférence des Banques in 1953. The bank's supervisory authority was confirmed, as registration of banks, the opening of new branches and mergers were all put under its charge. The NBE was entitled as well to use reserve and liquidity ratios to control the credit market.

The financial market in LDCs has always been subject to substantial government intervention. Such intervention is not always justified by regulatory purposes and/or intentions for correcting market failure. In most cases government intervention in LDCs can be considered repressive, as far as the financial market is concerned. Governments impose an array of measures that deviate the operations of the financial system away from the market discipline and result in various distortions.

Financial repression can be explained by different arguments(7), such as the condition of the financial system in the less developed countries after their independence, the impact of the dominating ideologies during the late 1950s and 1960s, and/or anti usury laws, but the main common cause for repression was financing the budget deficit. Financial repression in Egypt took different forms such as setting ceilings on interest rates, high reserve requirements, directed credit schemes, intervention in the portfolio composition of banks in addition to extracting revenues from the inflation tax and direct state ownership of banks.

When Egypt started to modernise its economy in the 1950s, after gaining its political independence, the financial

system was comprised of foreign owned commercial banks, with the exception of Banque Misr and some scattered Egyptian shares in some financial units. The activities of these banks were concentrated in short-term trade and commercial credit. There was also geographical concentration as most of the banks were established in Cairo and Alexandria with very few branches in other big urban centres. The financial system was segmented and shallow in the sense that either some financial services and instruments did not exist at all in some areas, like insurance services, or they existed but were in an inadequate form, e.g. agricultural credit.

Encouraged by segmentation and shallowness, operating banks behaved in an oligopolistic manner. This was facilitated by the absence of a formal legislator. The National Bank of Egypt, as an acting Central Bank, was not adequately empowered to exercise the known functions of a well established monetary authority in terms of supervision and regulation. Asymmetric information, regarding both the services of the financial sector and potential borrowers, was a result of such oligopolistic environment and a cause for other problems, such as adverse risk selection and the application of non-price criteria for the allocation of credit, i.e. depending on the reputation of the borrower, political pressure, etc[8].

These characteristics are symptoms of market failure, which called for corrective intervention by the government. However the intervention, especially during the 1960s was not necessarily corrective as it was mainly driven by ideological motives, which left the entire financial system publicly owned and managed. The repression of the financial sector was one of the components of overall interventionist policy embraced by the government in the 1960s under the conviction of socialist ideas as a remedy for economic problems. According to these ideas,

the public sector was considered the engine of economic growth. Whereas the private sector was regarded as both economically inefficient, in undertaking the large projects of the ambitious development plans, and politically unreliable because of its close association with the former regime. Hence there was a series of Egyptianisation measures, de facto nationalisation, of foreign owned enterprises, including financial intermediaries in late 1950s and the comprehensive nationalisation measures of early 1960s.

Consequently publicly-owned banks comprised the entire financial system until 1975 and despite the allowance for some foreign and private banks to operate, public banks have been its dominant component afterwards. Although owning financial intermediaries by the state cannot be always considered a facet of financial repression, we argue that the way they functioned in Egypt, as in other LDCs, made them a catalyst for repression and a promoter for its unfavourable effects. In this environment the private sector found it hard to compete for credit, simply because credit is administratively allocated to the priority projects.

Under Law 40 of 1960 both the NBE and Banque Misr were nationalised by converting their shares to government bonds which could be redeemed after a minimum of 12 years. While the nationalisation of the NBE was justified by the fact that it was the State Central Bank, the nationalisation of Banque Misr was mainly because of the government's anxiety to obtain control over its affiliated companies. However, one year later, all banks were nationalised, under Law no. 117 for 1961 which was one of a group of laws nationalising the main economic establishments in the country to safeguard the creation of a centrally planned economic system as claimed at the time.

In 1961 the NBE was divided into two banks; one kept the same name and carried on as a commercial bank and the

other was called the Central Bank of Egypt. In 1963, a 'Public Organisation of Banks' was formed, replacing the League of Commercial Banks, to assist the CBE in controlling and supervising the banking units. To avoid dualism in activities, this organisation was later abolished and the CBE acquired its supervisory functions in 1964. However the Technical Committee which was established by the organisation was left intact to play a consultative role.

After liquidating some of the small banks and merging others, by the end of 1963 the banking system consisted of only five public commercial banks, namely: the NBE, Banque Misr, Banque du Caire, Bank of Alexandria and Port Said Bank; in addition to five specialised banks: an agricultural bank, an industrial bank and three real estate banks. In 1971 several banks were merged: the Industrial Bank into the Bank of Alexandria, Port Said Bank into Banque Misr and the Crédit Hypothécaire d'Egypte into the Crédit Foncier Egyptien. By 1974 there was just four commercial banks and three specialised banks, in addition to 3 unregistered banks, which were the only banks established during this period[9].

The period of war economy, 1967-1973 witnessed the abandoning of the second five year plan, as economic resources were directed to warfare. This period left the economy with a massive trade deficit and an immense shortage of financial resources needed for rebuilding what the two wars had destroyed. It was realised that an improvement in the structure of the banking system and an associated reform of credit policy was essential in order to find new resources of finance and encourage the private and foreign capital to participate in the development process.

The Infitah policy of the 1970s which was accompanied with a windfall of external resources stemming from oil exports,

workers' remittances, tourism, the Suez Canal revenues and foreign assistance had a radical impact on the banking system and structure. Under the Investment law 43 for 1974 and its amendments by law 32 for 1977, banks were no longer subject to the exclusive Egyptian management rules of the 1960s. Foreign capital was allowed to participate in joint-venture commercial banks, under the no-less-than 51% national ownership condition.

In an effort to overcome obstacles and eliminate restrictions hindering the banks from achieving the targets of the open-door policy, law 120 for 1975 was issued. It was promulgated with a view to defining the legal status of the CBE and its supervisory and regulatory powers over the banking system; giving the banking system more freedom in conducting its business; reinforcing the Central Bank's ability to manage monetary policy; freeing bankers from the laws, decrees and restrictions applicable to government and public sectors employees; and enabling the nationalised banks to compete with those established under Law 43 for 1974.

The Infitah laws encouraged the establishment of foreign and joint venture banks. Hence the number of operating banks increased rapidly from 7 banks in 1974 to 81 banks in 1991. The increase in the number of banks also resulted in a rise of the number of branches which reached a total number of 1882 branches in 1991[(10)]. However, during this period the structure of the banking system and the geographic concentration of branches, indicated a highly segmented market and lack of competition. The relatively large branch networks of a few public sector banks allowed them to dominate the process of savings mobilisation and other banks targeted mainly big savers.

Financial services during this period were basic with very limited innovation, though joint-venture banks were in a better position. Lack of innovation and limited instruments can be

attributed to three main factors: lack of competition, the imposition of ceilings on interest rates and intervention in credit allocation. In addition, restrictive measures applied by the CBE regarding the charges for banking services did not make financial innovation viable or worthwhile. Moreover, the virtual absence of active money and capital markets, has prevented the operating banks from diversifying their instruments according to risk and maturity.

Thus, lending by public and other banks has been effectively controlled by the CBE. The remaining amount of credit left to the discretion of banks was directed mainly to relatively large enterprises. Lending to small and medium-sized projects suffered from a lack of information and collateral. Further under financial repression, there was a tendency to lend according to non-price criteria when interest ceilings are binding. Applied lending criteria in such conditions, included the reputation of the client, size of loan and political pressure making large enterprises more likely to obtain credit.

The Iraqi invasion of Kuwait in 1990, resulted in massive returns of Egyptian workers from the conflict zone, losses of workers remittances, a decline of tourist receipts and Suez Canal dues and a worsening of investment climate. However, Egypt received significant financial assistance from the Gulf states and the USA which cancelled US$ 13 billion of its total external debt of US$ 51 billion. Egypt was also granted, in 1991, a debt/debt service relief by the Paris Club creditors equivalent to 50% of the outstanding debt over three phases through mid-1994 conditional upon implementing an IMF agreement[11].

This financial assistance, accompanied with higher oil export prices and a decrease in main import prices, especially foodstuffs, offset the losses incurred as a result of the Gulf crisis. The balance of payments experienced a surplus of around US$

0.9 billion in 1990/91, the debt forgiveness and rescheduling reduced the debt service from 46% of exports to approximately 16.5% and permitted an increase in the net international reserves from only US$ 1.7 billion to US$ 6.1 billion[12].

These developments improved the creditworthiness of the Egyptian economy and improved its capacity to embark on a comprehensive Economic Reform and Structural Adjustment Programme (ERSAP) in 1991. This programme has involved the financial sector in three main ways[13]. First, channelling loanable funds into budget deficit, in a way that reduces the reliance on inflationary finance until the deficit itself can be controlled. Second, advancing finance to the existent and emerging private sector activities. Third, the financial sector in its own right has been subject to an array of liberalisation and institutional restructuring measures included in the programme. Hence the financial sector is considered as being in the forefront of the reform programme as an 'agent of change'[14].

The reform of the banking sector during the 1990s took three main forms. First, liberalisation of financial variables, by mechanical reversal of financial repression measures adopted since early 1960s. Hence, interest rates ceilings were eliminated, the required reserve ratio were reduced, liquidity ratio decreased, the government minimised its intervention in credit allocation and the portfolio composition of banks. Real interest rates have turned positive in 1991 as a result of financial liberalisation through the lifting of ceilings on interest rates. However, the relatively high real interest rates which reached 7.9% in 1999, indicate, inter alia, lack of competition between the operating banks.

Second, as part of the banking reform program, one of the main priorities of the authorities was improving the regulatory framework. New prudential measures were introduced in 1991

for capital adequacy and asset classification and provisioning after setting bank liquidity requirements for domestic and foreign currencies in 1990. Other regulatory measures followed: international concentration limits were introduced in 1992 and domestic concentration limits in 1993. By 1996, the regulatory framework was in compliance with international norms, and banks were required to produce periodical financial statements based on international accounting standards since 1997(15).

Third, the banking sector was included in the privatization program, which took the form of the privatization of the public sector shares in joint venture banks, and the public banks. The 23 joint venture banks were mainly established during the free entry of the 1980s, most of which were majority owned by the public sector. During the 1990s there was a reduction of the public sector shares in joint venture banks(16).

Privatization of joint venture banks has been facilitated by several regulatory measures. The four public banks were requested in 1994, to reduce their shares in joint venture banks to less than 51%, and in early 1996 they were requested to further reduce their shares to a maximum of 20%. Moreover, majority foreign ownership was then permitted in joint venture banks through passing Law 97 of 1996. Privatizing the public sector shares in joint venture banks is expected to lessen the commercial interdependence between different banks. No major activity in the privatization of joint venture banks occurred until early 1996 and despite, several divestitures of public shares in joint venture banks, total privatization of the public banks' shares in joint venture banks has not been completed. As shown in table (1) below, as of March 2000, out of the 23 joint venture banks, seven are still majority owned, by the public sector, of which two are majority-owned by the four public banks, three are majority-owned by other public entities(17) ,and two are jointly

owned by both the public banks and other public sector entities. The public sector has less than 20 percent in eight other joint venture banks.

Further, the parliament in June 1998 passed Law 155, which allows for private sector participation in the ownership of the public banks. However, no action has been taken regarding the privatisation of any of the public banks. This has been explained by giving the priority for the sale of public ownership in the joint venture banks and then the privatisation of the public banks may be considered in the future(18).

Table (1)
Capital Structure of Joint Venture Banks as of March 2000

Joint Venture Bank	Total Public Banks	Other Public Entities*	Total Public Share
Alexandria Commercial & Maritime	0.0	52.2	52.2
Banque du Caire et de Paris	22.0		22.0
Cairo Barclays International Bank	40.0		40.0
Cairo Far East Bank	29.0	20.0	49.0
Commercial Arab Bank	9.8		9.8
Commercial International Bank (CIB)	19.6		19.6
Credit Internationale d'Egypte	19.5		19.5
Egypt Arab African Bank	0.0	18.2	18.2
Egyptian American Bank (EAB)	35.3		35.3
Egyptian Gulf Bank	0.0	24.4	24.4
Egyptian Saudi Finance Bank	23.6	12.7	36.3
Trade and Development Bank	59.2	27.2	86.5
Export Development Bank	44.5	40.0	84.5
Housing & Development Bank	0.0	62.5	62.5
Islamic Bank for Investment	80.0		80.0
MIBank	24.8	4.0	28.8
Misr America International Bank	32.8	67.2	100.0
Misr Exterior Bank	19.5		19.5
Misr Iran Development Bank	37.5	37.5	75.0
Misr Romanian Bank	33.0		33.0
National Bank for Development	0.0	11.9	11.9
National Societe General Bank	18.0		18.0
Suez Canal Bank	4.7	12.3	17.0

Source: Nasr (2000), p. 19.

After almost three decades of partial liberalisation of the banking system and a decade of relatively more comprehensive financial liberalisation within the economic reform program, there has been a notable increase of the number of operating banks and a corresponding increase in the number of branches, from 30 banks and 530 branches in 1975 to 62 banks and 2444 branches in 1999. However, the banking density[19] at 0.37 in 1999 is still quite modest, which is not better than banking density in 1980, which was 0.34. Given the high concentration of branches in particular parts in Greater Cairo and Alexandria, the distribution of banking services, at such low average banking density cannot be considered as sufficient. After some improvement in the banking density, not adjusted for distribution, during the 1970s and 1980s, it remained almost constant during the 1990s.

Moreover branches of the four public sector commercial banks comprise 37.6% of total branches in 1999 and witnessed an increase of 2.4 percentage points compared with 1991 at the start of financial liberalisation. There was an interesting development of the public sector banks during the 1990s, as far as the growth of their market share is concerned. While there was a negative growth rate of the public banks' share in the total loans, deposits and assets of commercial banks, their branching growth rate continued to grow steadily. During the 1993-1999 period, public sector banks share in total assets of commercial banks declined from 74.6% to 63.1%; their share in total deposits declined from 75.5% to 66.1%; and their share in total loans decreased to only 59% from a high level of 92.6 at the beginning of the period.

III. A note on the SCP paradigm in the Egyptian context:

Benefiting from the advances in the field of industrial organisation, many empirical studies have sought to analyse the

relationship between market structure and various aspects of bank conduct and performance as suggested by the structure-conduct-performance paradigm (hereinafter SCP)[20]. According to Caves (1967)[21], in his analysis of the American industry, market structure determines the behaviour of firms and that behaviour in turn determines the performance of the industry at large. Moreover, It has been argued that fewer and larger firms, i.e. higher concentration, are more likely to engage in anti-competitive conduct. According to this paradigm causation runs from the structure of the banking market to performance, through the behaviour or conduct of the banking units, in an essentially deterministic manner.

Empirical tests of the SCP paradigm in banking industry have often found that the structure of the market, using market concentration as a proxy, has influenced both conduct and performance. Gilbert (1984) concludes in his comprehensive survey that the majority of the evidence supports the idea that banking industry structure influences bank performance.

It is also established in the industrial organisation literature that contestable markets and potential firms' freedom of entry promote efficiency, encourage innovation and give highly favourable welfare outcomes[22]. For a market to be contestable there should not be any significant entry barriers. In a contestable environment the only way for incumbent firms to prevent additional entry is to give no incentive for potential entrants to do so. This can be achieved by efficient pricing and allocation of production among incumbent firms to eliminate significant excess profits. However in practice there are different barriers to entry facing potential firms which prevent them from joining the market even in the presence of high excess profits. Large economies of scale and high sunk costs, in addition to other entry costs are examples of such barriers[23]. But in the case of

banking, government regulations through permits and licenses are far more important than these other barriers.

As indicated above, we argue that the Egyptian banking system has suffered from two main problems. The first was the application of financial repression measures, such as interest rate ceilings and directed credit which virtually prevented competition among incumbent banks. The second was the use of restrictive regulations that prevented new entry and made the incumbent banks far from being contestable.

The banking system, after a series of Egyptianisation and nationalisation measures in the 1950s and 1960s, was left with four publicly owned commercial banks and five specialised banks. The market was highly concentrated. Competition was limited further by the application of sectoral and, then, functional specialisation which made the system a sectoral based mono-bank one. The introduction of Infitah policy of the 1970s and the financial liberalisation measures of the 1990s resulted in an increase in the number of banking units without a significant decrease in market concentration. The domination of public banks in a highly concentrated market resulted in frail competition and limited innovation.

The main reasons behind restrictive regulations regarding new entry can be summarised by six factors: first, concerns about "cream skimming" by private and foreign banks. Second, fear of acquiring dominant positions by foreign banks in the domestic market. Third, concern about hit and run activities by foreign banks. Fourth, protecting the interest of the incumbent banks, especially the public ones. Fifth, concerns regarding extensive allocation of mobilised domestic savings abroad. Sixth, regulatory concerns based on a claim that foreign and private banks may require particular regulatory capacity[24].

It was not only the restricted entry that made the Egyptian banking market suffer from lack of competition and contestability, restricted exit was also responsible. Indeed, whereas it is important to remove barriers to entry, it is also crucial to maintain a reliable exit mechanism to improve the efficiency and the soundness of the Egyptian banking. In Egypt banks are not allowed to fail. This policy was given effect neither through prudential policy, nor measures that enhance the efficiency of banks. Instead, weak banks were allowed to continue in business using support from the rest of the banking system and public money. This was 'justified' by the fear of a public misunderstanding that the failure of a bank may imply that others will follow in the future, made the banking system adopt a form of collective self-preservation.

According to this approach inefficient banks were left to operate through support from the banking system, while adequate measures like restructuring, merging or liquidation were not applied. This policy encouraged inefficient banks to continue their violation of credit standards by indulging in high risk lending and bidding for deposits(25). In addition, because all banks are supported by an implicit rescue mechanism in which bad banks are cross subsidised by good ones, banks' clients cannot distinguish between an efficient bank and an inefficient one(26).

Three different types of operating ratios are frequently used as indicators of the performance of banks and their efficiency, namely rate of return on assets (ROA); rate of return on income, (ROI); and rate of return on equity (ROE). ROA relates net income to total assets; ROI relates net revenues to the total of interest and non-interest income i.e. gross income; ROE is the ratio of net income to average equity(27). Three issues are worth emphasising: first, these ratios should be considered only

as rough indicators of efficiency as these ratios are significantly affected by differences in capital structure, accounting methods used and product mix, both across countries and banking units. Second, bank data in developing economies should be treated with caution. Until the adoption of the Egyptian Accounting Standards, which are compatible with the international ones, in 1997, different banks used different accounting practices regarding their valuation of the quality of assets and depreciation. Accordingly their provisions and reserves may differ as well. Some banks, in developed and developing countries may indulge in some form of window dressing. Such practice distorts the quality of information and produces misleading indicators.

V. Model specifications, data and preliminary results:

We analyse the relationship between a measure of performance (ROA), as a dependent variable, and a proxy for market structure (MCR) and other independent variables that include both bank and overall market specific variables. We formulate a cross-sectional profit equation similar to those used in previous studies that followed Weiss (1974) and Smirlock (1985). More recently, the same approach has been used by a study of the effects of financial liberalisation on market structure in Turkey by Denizer (1997) and another one on the relationship between market structure and performance in the Jordanian banking system by Al-Karasneh, Cadle and Ford (1997). The estimated equation takes the following form:

$$ROA_{it} = \alpha_0 + \alpha_1 MCR_t + \alpha_2 MS_{it} + \alpha_3 CA_{it} + \alpha_4 TA_{it} + \alpha_5 LA_{it} + \alpha_6 DT_{it} + \alpha_7 OEA_{it} + \alpha_8 MDGR_t + \alpha_9 D \quad (1)$$

MCR as a proxy for market concentration[28], is calculated as the sum of shares of the 5 leading Egyptian banks in total deposits. Here, the use of a proxy is justified by the fact that

industrial organisation literature does not specify an exact critical minimum of number of firms or their size distribution to exercise market power. The market share (MS) variable that is calculated as bank deposit divided by total market deposits is again a proxy for firm-specific effects. Influenced by the SCP literature, the equation also includes a number of control variables, from the assets and liabilities sides of the banks' balance sheets, to internalize the possible effects of factors such as risk, costs and demand that influence our measure of profitability (ROA) as a dependent variable.

The equation includes a capital-asset ratio (CA) which account for the bank specific risk exposures; total assets (TA) gives an indication of the size of individual banks and possible economies of scale and product diversification associated with it; the ratio of total loans to total assets of the individual banks (LA), shows the extent of bank's risks, as higher ratios of loans to total assets reveals the aggression of lending by the bank to increase profits. The amount of demand deposits relative to total deposits (DT) is also included to give an indication of relative cost of funds. Operating expenses (OEA) as a proportion of total assets is included as a cost factor that reduces bank profits. The equation takes into account the impact of market demand by including the market deposits growth rate (MDGR). Finally, a dummy variable D is included to differentiate between different types of bank ownership; for private banks D equals 1, and for public banks D equals 0.

The data have been specifically obtained from the individual balance sheets of 47 commercial banks, out of a total of 59 commercial banks. The rest of the commercial banks are not included either because of no response to a series of data requests during a six months period of data collection, or because of insufficient and/or missing data for parts of the period

under study. The sample represents 79.6% of the total number of operating commercial banks, but more importantly comprises 94.6% of the total assets of the commercial banks in 1998. The sample data cover the period between 1980 and 1998. The sample contains the required information to calculate the 10 variables included in equation (1). The data which include 893 observations have been pooled, to allow for cross-section time series analysis.

Equation (1) is estimated using OLS in three steps. In the first step, equation (1) is estimated with both market structure (MCR) and market share (MS) variables. Here two competing hypotheses are tested: the first one is the traditional SCP that establishes a positive relationship between MCR and profits, the second is the efficient structure hypothesis that suggests a direct positive relationship between profits and market share attributed to firm specific efficiency, which is established if $\alpha_2 > 0$ and $\alpha_1 = 0$. But if $\alpha_1 > 0$ and $\alpha_2 = 0$, this will mean that market share (MS) does not affect ROA and higher profitability reflects only market concentration (MCR). In the second step, equation (1) is estimated to test the traditional SCP hypothesis, by eliminating market share from the equation. Finally, in the third step the effect of market share on profits is tested by estimating equation (1) without market structure variable. Using White test for heteroskedasticity shows the absence of such problem from the pooled data. The explanatory power of the three equations is acceptable, bearing in mind the cross-sectional nature of the data-set. Table (2) summarises the results of the three estimated versions of equation (1).

Table (2)
Dependent variable is Return on Assets (ROA)

Variable	1.		2.		3.	
	Coefficient	t-Statistic	*Coefficient*	t-Statistic	Coefficient	t-Statistic
C	-1.283403	-0.988285	-1.468596	-1.131045	-0.158093	-0.573765
MCR4	0.357176	0.886740	0.414205	1.028428		
MS	0.116897	2.155732			0.120055	2.219029
CA	0.296550	3.331066	0.165645	2.539202	0.299192	3.363033
TA	-0.230727	-7.806664	-0.213456	-7.487802	-0.232069	-7.863336
LA	0.026701	0.394647	0.050821	0.760065	0.018955	0.282549
DT	-0.317475	-3.858509	-0.354017	-4.387925	-0.321772	-3.918019
OEA	-0.074120	-0.912405	-0.069794	-0.857646	-0.074712	-0.919844
MDGR	-0.284127	-2.068307	-0.248824	-1.820578	-0.288012	-2.097908
D	0.509274	4.272696	0.421639	3.755350	0.507808	4.261323
R-squared		0.264835		0.260966		0.264181
Adjusted R-squared		0.257342		0.254278		0.257522
S.E. of regression		0.820128		0.821818		0.820029
F-statistic		35.34352		39.01958		39.67277

The coefficient on the market structure (MCR) variable is statistically insignificant at 5% level in all equations, while the coefficient on the (MS) is positive and significant at the same level. It can be argued that in effect MCR and MS explain the same phenomenon[29], indicating a high colinearity between them and result in one variable, that is MS in our case, becomes statistically significant at the expense of the other. But those who support the efficient structure hypothesis will reject this argument, claiming that the significance of MS, as a proxy for firm-specific effects, is due to superior efficiency, not market power as the traditional SCP school would see it.

As far as the impact of the control variables(30) is concerned we find that the coefficient of (CA) the capital asset ratio is significant and positive, indicating that the highly capitalised

banks are conservative and hold less risky assets. The significant and negative sign of the coefficient of size variable (TA) indicate lack of exploitation of economies of scale or rather an experience of diseconomies of scale, and imply that larger banks, which are the public ones, do not necessarily realise, inter alia, benefits of product diversification opportunities.

The significant and negative coefficient of the cost of funding variable (DT) is rather a surprising finding. But given that the banks that enjoyed higher demand deposits to total deposits ratios during the study period, i.e. public banks, were not among the highest performing, the surprise may be less. The coefficient of market deposits growth rates (MDGR) is significant but negative, which indicates that banks did not benefit from the growing demand for deposits in a way to increase their profits. Although it can be argued that markets with high growth rates are more likely to increase the deposit base of banks but it should not be taken for granted that this would necessarily lead to higher profits of the concerned banks. This obviously depends on the ability of banks to convert deposits, as liabilities, into performing assets under the prevailing macroeconomic and sectoral conditions(31).

Finally, the significance of the coefficient for bank ownership and its positive sign emphasise what have been implied above through suggesting that private and foreign banks are more profitable than the public ones. This finding is supported by the average ROA figures for public banks compared with the non-public ones during the last two years. The average of the four public banks was 0.50%, while the average of four leading commercial JVs was 1.82%(32).

V. Concluding remarks and policy implications:

In this paper we have shown that the Egyptian banking system during the 1980s and 1990s, despite the partial

liberalisation measures of the Infitah policy and the more comprehensive financial reform measures under the ERSAP, suffered from various problems. Entry barriers, absence of an adequate exit mechanism, and preferential treatment of the public sector banks are the main difficulties that impede the development of the banking system. The emphasis of the financial reform program, in its early years of the 1990s, was primarily on the liberalisation of some of the financial variables and the introduction of prudential measures compatible with the international standards. Very recently, attention is being given to the development of the structure of the banking system and improving competition between the banking units.

We have tested the relevance of the structure-conduct-performance paradigm in the Egyptian banking context. The 'traditional' SCP model has been investigated using pooled cross-section time series data specifically collected from 47 commercial banks, out of a total of 59 commercial banks. While the coefficient on the market share is significant and positive we found that the concentration variable, i.e. the market structure variable is not significant. The view of the traditional SCP school can be used to argue that market power enjoyed by the dominating and protected public banks, the significant market share variable explains the impact of the structure on bank performance. According to our analysis of the evolution of the bank structure in Egypt, there is very little that can be said about bank specific superior efficiency in gaining this market share.

According to the analysis, we found that larger conservative banks that hold less risky assets, which are the public ones, do not necessarily realise, inter alia, the benefits of product diversification opportunities. Moreover, it does not seem from the analysis that public banks have benefited as they should

from the relatively low cost of funding, as they were less profitable than foreign and private banks.

The results of the estimated model should be used with care as far as their policy implications are concerned. The deterministic way in explaining the relationship between market structure and performance, that the SCP paradigm adopts, is an aspect of straightforwardness and weakness of the paradigm at the same time. The paradigm does not give sufficient consideration for rivalry and competition between firms and deals with them as passive economic agents or a bridge through which structure influences the performance(33). The model does not also give an explicit role of differential efficiency of firms on profits, and concentrates on the role of effective collusion between the leading firms(34).

Further, any drift from profit maximisation influences the results of the paradigm. Profit, as an indication of bank performance is subject to two important challenges in the Egyptian banking context. First, during most of the study period the Egyptian banking system was subject to financial repression measures that affected the profit maximisation behaviour. Second, given the nature of decision making process in the dominating public banks that is subject to 'external' on non-economic grounds, the assumption that they are always pure profit maximisers may be rather unrealistic. Considering such factors can help in better understanding of the estimated model and its policy implications. For example, when we analyse the concentration of public banks it should be viewed differently from the concentration of capitalist firms, and when we analyse market share we have to identify the segment of the market or the relevant market of public banks.

We have shown that the Egyptian banking system during the 1980s and 1990s faced a mixture of both the domination of

public banks and the high degree of concentration which discourages competition on one hand, and the heavy barriers to entry which makes incumbent banks incontestable on the other hand. However, recent financial liberalization measures eliminated interest rate controls, eased the entry of new financial intermediaries, and allowed new types of instruments. Regulatory impediments were relaxed and the Egyptian banking system become more integrated with the world market.

Further reform measures are required at two levels: first, at the banking units level by improving their management, granting them adequate autonomy in decision making, and encouraging training schemes and the acquisition of essential resources for efficient banking. Second at the banking system level, by encouraging competition and contestability, within an adequate regulatory environment, removing excessive barriers to entry and replacing them with an objective entry criteria and establishing a reliable exit mechanism accompanied with an efficient deposit protection scheme. Finally, it is worth referring here to the quotation at the very beginning of this paper, which emphasises the role of history and historical accidents on the structure of industry. The evolution of the structure of the Egyptian banking 'industry' supports this argument.

Bibliography:

Al-Karasneh, I, P. Cadle and J. Ford (1997), Market Structure, Concentration and Performance: Jordanian Banking System, 1980-1993, Department of Economics Discussion Paper 97-12, The University of Birmingham.

Bahaa Eldin, M., Mohieldin, M. (1998), Financial Development in Emerging Markets: The Egyptian Experience, Cairo: The Egyptian Center for Economic Studies.

Bain, J. (1956), Barriers to New Competition, Cambridge, Mass: Harvard University Press.

Baumol, W., C. Panzar and R. Willig (1982), Contestable Markets and the Theory for Industry Structure, New York: Harcourt Brace Jovanovich.

Brealey, R. and S. Myers (1991), Principles of Corporate Finance, McGraw-Hill, London.

Cameron, R. (1967) (ed.), Banking in the Early Stages of Industrialization, New York: Oxford University Press.

Central Bank of Egypt, Economic Review, various issues.

Davis, E. (1983), Challenging Colonialism, Princeton University Press, New Jersey.

Deeb, M. (1976), Bank Misr and the Emergence of Local Bourgeoisie, in the Middle Eastern Economy, edited by E. Kedouri, Frank Cass and Co. LTD. London.

Denizer, C. (1997), The Effects of Financial Liberalization and New Bank Entry on Market Structure and Competition in Turkey, Policy Research Working Papers, no: 1839, The World Bank.

El-Refaie, F. (1989), The Performance of the Banking Sector in Egypt During the 1980s: Some Basic Issues, Central Bank of Egypt, Mimeo.

El-Refaie, F. (1998), Financial Intermediation: the Efficiency of the Egyptian Banking System, in Financial Development in Emerging Markets: the Egyptian Experience, edited by El-Erian, M. and M. Mohieldin, Cairo: The Egyptian Center for Economic Studies and San Francisco: The International Center for Economic Growth.

Fry, M. (1990), 'Financial Sector and Government Intervention', International Finance Group, University of Birmingham, IFGWP-90-07.

Fry, M. (1991), 'Public Sector Financial Institutions in Economic Development', The International Finance Group, University of Birmingham, IFGWP-91-17.

Gilbert, R. A. (1984), Bank Market Structure and Competition: A Survey, Journal of Money and Banking, Vol. 16, No. 4, pp. 617-60.

Harvey, C. and Jenkins, C. (1994), 'The Role of the Financial Sector in Structural Adjustment in South Africa, Zambia and Zimbabwe', Mimeo, IDS, Sussex University.

IMF (1991), 'Egypt', Staff Report for the 1991 Article IV Consultation and Request for Stand-by Arrangement, IMF, Washington.
Killick, T. (1993), The Adaptive Economy: Adjustment Policies in Small, Low-Income Countries, Washington D. C.: The World Bank.
Mohieldin, M. (2001), On the Evolution of the Egyptian Banking System, and competition in Egypt, mimeo .
Mohieldin, M. (1995), Causes, Measures and Impact of State Intervention in the Financial Sector: the Egyptian Example, Working paper 9507, Economic Research Forum for Arab Countries, Iran and Turkey.
Nasr, S. (2000), Privatizing and Restructuring the Public Sector in Egypt, mimeo, May.
National Bank of Egypt (1948), National Bank of Egypt: 1898-1948, Cairo.
Sawyer, M. (1981), The Economics of Industries and Firms Theories, Evidence and Policy, London: Croom Helm, Second Edition.
Smirlock, M. (1985), Evidence on the Non Relationship Between Concentration and Profitability in Banking, Journal of Money, Credit and Banking, vol. 17, pp. 69-83.
Tirole, J. (1989), The Theory of Industrial Organization, MA: The MIT Press.
Weiss, L. (1974), The Concentration-Profits Relationship and Antitrust, in H. Goldschmid, M. Mann and J. F. Weston (eds.), Industrial Concentration: The New Learning, Boston: Brown and Company, 184-233.
Wijnbergen, van S. (1983), 'Credit policy, Inflation and Growth in Financially repressed Economy', Journal of Development Economics, vol. 13, pp. 45-65.

Notes:

(1) For further discussion of the history and evolution of the Egyptian Banking System , see Mohieldin (2001).

(2) The idea of establishing a pure Egyptian bank dates back to the period following the crisis of 1907 and was discussed in the Parliament in 1911 which passed a recommendation of establishing such a bank but without success. It was Talat Harb Pasha, a leading economic figure who adopted the idea and started a campaign in 1919 to establish the first pure Egyptian bank which was officially inaugurated in May 1920. See Deeb (1976), p. 70, and for a discussion of the main political developments of this period and its economic implications see Davis (1983).

(3) Davis (1983), pp. 108-109 and Deeb (1976), pp. 70-71.

(4) Doghaim (1989), pp. 135-137.

(5) For an analysis of economic and institutional changes during this period see Mabro (1974), chapter (6).

(6) See NBE (1974), pp. 10-15 & p. 19 and Issawi (1963), op. cit., pp. 249-251.

(7) For a detailed analysis of the causes, measures and impact financial repression in Egypt, see Mohieldin (1995).

(8) See Killick (1993), op. cit, p. 256.

(9) Note that exemption from registration with the central bank means exemption from banking, credit and exchange rate control laws. The first of the unregistered banks was the Arab African Bank which was established in 1964 in the form of a joint stock company, its dealings were confined to foreign currencies. The second bank was Nasser Social Bank, which was established in 1971 with the aim of promoting social cooperation and solidarity. Nasser Social Bank is officially classified as an Islamic bank. One of its important functions was the collection of alms tax and charities to assist poor families by helping them to establishing small projects. The third unregistered bank was the International Arab Bank and its dealings were restricted to foreign currencies.

(10) See CBE, annual report 1990/91, p. 132.
(11) IMF (1991), pp. 7-8.
(12) bid.
(13) Harvey and Jenkins (1994), p. 1.
(14) Wijnbergen (1983), p. 9.
(15) IMF (1998) pp. 58-60 and for a discussion of prudential regulation in Egypt see Bahaa Eldin and Mohieldin (1998), pp. 111-135.
(16) Sale of public sector shares in joint venture banks took several forms, the sale of shares on a stock market through a combination of a local IPOs, and International Global Depository Receipts (GDRs), increases in capitalization of existing private sector owners, and private placements to local and foreign partners.
(17) These public entities include Public Insurance Companies, NIB and Public Specialized Banks and Authorities.
(18) Reuters in the 19th of September 1999 reported that President Mubarak in an interview with *October*, an Egyptian weekly magazine, declared that "Maybe, at some point in time, we will think about offering a stake but that is not being considered at this point in time".
(19) Bank density = (Number of branches *10000) /Total population. A density of 1 is high, 0.5-1 moderate and below 0.5 is low, see Cameron (1967), p. 296.
(20) For a comprehensive survey of the empirical studies see Gilbert (1984).
(21) Cited in Sawyer (1981), p.154.
(22) For an analysis of contestable markets see Baumol, Panzar and Willig (1982).
(23) On entry barriers see Bain (1956) and Tirole (1989), chapter (8).
(24) For further discussion of these arguments see Bahaa Eldin and Mohieldin (1998), pp. 130-131.
(25) Even under the application of interest ceilings, a bank like the Bank of Credit and Commerce International, which was registered in Egypt as a joint-venture bank was paying a higher

interest rate on deposits, than the rest of banks, by 0.5-1 percentage points, till its collapse in 1991.

(26) Under the implicit deposit insurance scheme, the depositors of the collapsed BCCI were protected by transferring their accounts to Banque Misr at their full nominal values at the date of the BCCI's collapse. Registered banks were asked to contribute 0.5% of their deposits towards the funding of this operation in addition to a one billion pound interest-free loan to Banque Misr to accept the 'transfer' of BCCI accounts to its branches. See Bahaa Eldin and Mohieldin (1998), p. 128.

(27) See Brealy and Myers (1991), chapter (27) for an analysis of financial performance.

(28) We adopt the same approach used in Denizer (1997), pp. 18-22 in the calculation of the reported ratios.

(29) Al-Karasneh, Cadle and Ford (1997), p. 13.

(30) Note that Loan to assets ratio and operating expenses are statistically insignificant.

(31) Denizer (1997), pp. 21-22.

(32) The four banks are CIB, MIBank, EAB and EBB.

(33) Sawyer (1981), p. 158.

(34) Gilbert (1984), p. 629.