THE EFFECT OF BANK SIZE ON THE OPERATION OF BANKING UNITS

A Research Topic
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APPROVAL OF RESEARCH TOPIC

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LIST OF TABLES

TABLE OF CONTENTS

Chapter 1

INTRODUCTION

A) Statement of the problem:

Despite the different barriers that are being erected by the legislative authorities to the entry of new banks, the banking sector in Lebanon is growing in number and in the magnitude of their operation.

It is clearly noticeable that one of the major objectives of any top management in banks is to increase the size of its deposits. For this reason, the banks tend to compete with each other by varying interest rate and quality of their service to their customers. Hence, it is obvious that the amount ot the deposits is a main facotr effecting the structure of a commercial bank, i.e the amount of deposits will allow the bank to grow in size and increase its operations and provide professional service to their customers.

Since banks are important financial intermediaries between savers and investors, their ultimate performance will effect the performance of the overall economy of the country. There are four parties involved in the banking activities, (a) the general public, (b) depositors (c) borrowers and (d) shareholders.

Depositors are interested in depositing their money at a safe place and to get the highest interest possible along with the good services provided by the bank. On the other hand, borrowers are interested in having at their disposal the enough amount of funds at the lowest interest rate possible. The share-

holders are interested in maximizing value and growth of Banks. Finally the interest of the general public is in efficiency in the payment system and preservation of competition which contributes to the economic stability of the country. In the following three paragraphs we are going to specify the goals and objectives of an individual bank.

- Deposits: Deposits from customers and banks is the most important objective, because the level of the deposits determine the overall level of operations of the bank. If a bank has little amount of deposits, it will maintain a tight lending and investment policies.

- Loans to customers and investments: A Bank's loan and investment portfolios form the core of its balance sheet and are the major sources of revenue. Morover, the level of loans in the banking system is directly related to the overall economic activity of the country.

Finally, both the objectives of attracting deposits and making sound loan and investment policies countribute to the overall goal of maximizing shareholders return on their equity capital.

The question remained is that what are the different strategies used to achieve the objectives mentioned above, which ultimatly will contribute to the bank's goal of maximizing shareholders return on equity capital.

The problem that we are going to analyze is whether or not

increasing bank size is a proper straregy to adopt, in order to achieve the organizational objectives in the banking units.

B- Statement of the purpose:

Some structural features of the banking industry lead the economists and banking authorities to expect that small banks cannot compete with large banks since they cannot offer the same specialized services offered by large banks. But no special research study has so far been under taken an actual banking statistics to study the effect of the structural differences of the banks on their performance. Therefore, the main purpose of this study is to analyze the effect of size on the performance of individual banks in Lebanon. No attempt will be made in this study to evaluate the social value of banking services in Lebanon.

C- Performance objective:

The main objective of this study is to evaluate whether increasing size of a Bank is a proper strategy to achieve the bank's goal of maximizing shareholders return on investment.

To achieve our objective we first have to define what is the criterion based on which we are going to rank the banks according to their size. The most common ways of ranking banks in the different countries of the world are either the size of total deposits or the size of the balance sheet at the end of the year. This is the reason why we wittness sharp competition

among banks in Lebanon to attract large amounts of deposits and hence improve its balance sheet position in the banking sector. Therefore, in this research we are going to adopt balance sheet size as the appropriate measure of bank size and operations.

After defining the criterion based on which we are going to rank the banks according to their size, we are going to divide our research work into two parts both of which together will contribute to our main objective mentioned above. First we are going to analyze the effect of size on cost structure in the Lebanese banks. Second, we are going to analyze the effect of size on profitability of banks in Lebanon. Finally both these analysis will contribute to our objective of evaluating the increase in size of banks as a proper strategy to achieve a bank's goal of maximizing shareholders return on equity capital.

D- Organization of the study:

The study is divided into three chapters as follows: the first chapter, is an introductory chapter defining the statement of the problem, the purpose of the study and its objectives. The second chapter, will present a breif overview of the Lebanese economy and the banking sector in the period under study. Morover, it will present the size distribution of banks ownership and control. Then, we are going to analyze the effect of

size on the cost structure and profitability in the banking units in Lebanon. In conclusion, the third chapter will present some important concluding remarks and recommendations and then summarise the main finding of the study.

Chapter 2

PRESENTATION AND ANALYSIS OF RESULTS

A) The Lebanese Economy and the banking sector (1982-1983)

The Lebanese economy in 1982:

The Israeli invasion in the summer of 1982 wreaked further damage and destruction to the Lebanese economy. The year 1982 witnessed a sharp drop in activity in almost all sectors of the economy, notably industry, construction, trade and transport. Yet the results of the first half of the year when the security situation was reasonably favorable, showed considerable improvement over the corresponding period of 1981. Only the banking sector maintained its growth tendencies throughout the year, though at rates slightly less than those registered in recent years.[1]

Economic activity picked up again with the return of relative calm in early October and there were encouraging signs early in 1983 of an imminent inflow of large private Arab and Foreign Capital to Lebanon to be invested in the banking and tourism sectors.[2]

Economic prospects are pinned on political developments but the uncertainty on the political level is tempered by strong international, Arab and Lebanese confidence in the ability of the economy to cover rapidly after almost a decade of lost growth.

(1) Iskandar Marwan and Elias Baroudy, The Lebanese Economy year 1982 MEEC Beirut

(2) Ibid

This confidence, together with an increasing Capital inflow had led to an appreciation of the Lebanese pound Vis-a-vis the dollar and other major curencies. The dollar's exchange value against the Lebanese poumd dropped from LL.5.30 at the end of August 1982 to LL.3.87 at the end of the year.[3]

A major cause of concern in 1982 was the increasing public debt.[4] The budget and treasury deficit at the end of the year totalled LL.13.569 billion. The larger part of the deficit in 1982, or LL.12.278* billion was financed by domestic borrowing in the form of treasury bill issues. Interest of bills in circulation for 1983 was put at LL.885* million.

A major factor contributing to the increased public debt was the sharp decline in state revenue caused by insecurity and the lack of government control over revenue generating sector. Custom dues, which traditionally represented an important source of state revenue, in 1982 dropped to their lowest level since 1974 reaching only LL. 403 million.

(3) "Banque du Liban Annual reports", year 1982

(4) Iskandar Marwan and Baroudy Elias, The Lebanese Economy, year 1982 MEEC Beirut

Banking Activity and Monetary development: (1982)

On the Monetary level, the growth in domestic liquidity (Money and near Money) slowed down from 40.1% in 1981 to only 14.5% in the year 1982. This is explained by a drop in resident deposits from in foreign curencies from LL.14.784* billion at the end of 1981 to LL.11.550* billion at the end of due to the appreciation of the Lebanese pound. At the end of June 1982, resident deposits in foreign currencies amounted to 17.373*billion.

The total of the consolidated balance sheet of commercial banks rose from LL. 52.981* billion at the end of 1981 to 61.780* billion at the end of 1982. Claims on the public sector more than doubled from LL.4.176* billion to 11.04 during the same period and consisted mainly of commercial bank subsriptions to Lebanese government treasury bills. Claims on non-resident banks, on the other hand, dropped by 21.3% between the end of 1981 and 1982, from LL.18.065* billion to 13.750* billion. This is explained by the disruption of credit extention during the months of the Israeli invasion and the appreciation of the Lebanese pound vis-a-vis the dollar and other major currencies, which reduced the Lebanese pound equivalent of each claims.

Deposits with commercial banks rose from 38.929* billion at the end of 1981 to 45.439* at the end of 1982. Resident deposits in foreign currencies which had risen by 17% in the first half of 1982 fell by about 5.5 Billion in the second half. The drop is again

explained by the appreciation of the Lebanese pound against major foreign currencies which reduced the pound equivalent of these deposits and led to a shift from foreign currency deposits into deposits in Local currency.[5] As a result of this total deposits in Lebanese pounds rose from LL.21.321* billion at the end of 1981 to 32.226* billion at the end of 1982. While foreign currency deposits by residents and non-residents fall from LL.17.608 Billion at the end of 1981 to 13.672* billion at the end of 1982.

Commercial bank credit to the private sector rose from LL.21.292* billion at the end of 1981 to 25.478 billion at the end of 1982.

For the best part of the year the Central Bank maintained its policy of supporting the exchange value of the Lebanese pound.[6] Nevertheless, pressures on the pound were very strong and reduced its exchange value from LL. 4.61* to the dollar at the end of 1981 to a low of 5.20* to the dollar in Mid-August 1982 before it recovered starting in September and appreciated to around LL.3.81* to the dollar at the end of 1982.

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(5)"Banque du Liban Annual reports", year 1982

(6) Ibid.

The Lebanese economy in 1983:

In Lebanon, the year 1983 started on a light note. Security arrangements that followed the withdrawal of Israeli forces from Beirut led to renewed hopes for normalization of the security situation. Despite the widespread destruction of the physical infrastructure and fixed capital and losses which resulted from Israeli invasion in the summer 1982, optimism survived.

Sizable inflows of private capital, which started towards the end of 1982, continued in the early months of 1983. Most of these inflows were invested in banking and real estate. Partly, as a result of this, the exchange value of the Lebanese pound strengthened against the dollar and other major currencies. There were also signs early in 1983 that international community was prepared to make financial assitance available to Lebanon to support its reconstruction effort.[7] In particular, Lebanon hoped to obtain a substantial amount of soft loans and grants from the oil producing Arab countries to cover a good part of its massive reconstruction requirements.

Results for the main sectors of the economy point to a considerable improvement in the first half of 1983 when compared with the second half of 1982. Renewed tensions by mid-year, however, and the fighting which broke out in the second half of the year contributed to an accelerating recession.

(7) "Banque du Credit populaire Annual report" on the Lebanese Economy and the Banking system page (6-7) year 1983.

Signs of economic recession began to surface in the second quarter of 1983 after Saudi Arabia and other Arab Gulf countries banned Lebanese export from their markets, ostensibly for fear of the penetration of Israeli products. As a result, export dropped sharply, but recovered later in the year after succesive pleas by the Lebanese government led the authorities in those countries to take their decision.[8]

On the positive side, the government's success in March 1983 in reestablishing its control over illegal ports put an end to wholesale smuggling and led to a sharp increase in customs receipts from LL.403* million in 1982 to LL.1.272* billion in 1983. But government deficit continued to rise, mainly because of increased expenditure on rebuilding the army and the need to finance major public projects with an urgency dictated by political considerations. The public debt which amounted to LL.15*billion at the end of 1982 rose to an estimated LL. 17.5* billion by the end of 1983.

The optimism that prevailed in the first part of the year prompted the Lebanese government to push beyond plans to rebuild the the country's war ravaged economy to fully-fledged reconstruction.

A reconstruction project was realized in April 1983 which envisaged spending LL.62 billion in the various sectors of the economy in the period 1983 to 1992. A total of LL.21.87 billion are to be spent under the project for housing, namely the repair and reconstruction of damaged dwellings, and providing low-cost housing

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(8) Bank of Beirut, The Lebanese Economy 1982-83 Beirut page 35

and housing credit for limited income groups. Other sizeable allocations include those for transportation (LL.12.25 billion), telecommunications (LL. 7.10 billion), water supply and irrigation (LL 5.955 billion) and electricity (LL. 3.976 billion)[9]

The decline in exports and reduced levels of remittances from Lebanese workers abroad, due mainly to narrowing business opportunities in Gulf countries and Saudi Arabia led to a deficit in Lebanon's balance of payment.

Banking Activities and Monetary Developments:

For most banks in Lebanon, 1983 was a rather difficult year as they came full face against a lots of problems and limitations which resulted mainly from Lebanon's long period strife and instability. These included the accumulation of bad debts, limited outlets for safe investment on the local market, the slow down in import-export activity and excessive competition.

As against these problems, however, the Lebanese banking sector continued to grow in 1983. The total of the consolidated balance sheet of commercial banks rose by 19.2% in 1983 to reach a record level of LL. 73.62* billion.

Commercial bank claims on the public sector rose from LL.11.049* billion at the end of 1982 to LL.12.1* billion at the end of 1983, with commercial bank subscription to Lebanese government treasury

(9) Ibid. page 47

bills accounting for LL. 11.882 billions of such claims. It is estimated that the government deficit which reached close to LL. 6.4 billion in 1983 was financed during the first 10 months of the year by borrowing from commercial banks and the Bank of Lebanon to the LL. 4.1 billion. Borrowing from the Central Bank, whether in the form of advances or drawings or foreign exchange gains were estimated to have increased by 2.9 billion in 1983.[10]

Increased tensions in the second half of the year and the government's moves to cover the widening deficit in the balance of payments, mostly from foreign currency reserves and partly from direct dollar purchases on the local exchange market, led to a sharp increase in the exchange value of the dollar.[11]

With respect to deposits, a noticeable development was the sizeable increase in foreign currency deposits in the first and second quarters of 1983 to LL. 15.385* billion and 15.871 billion respectively from LL. 13.287 billion at the end of 1982, on the subsequent drop in the third quarter of the year to 15.505* billion. Deposits in Lebanese pounds on the other hand, rose from LL. 32.152* billion at the end of 1982 to about 39 billion at the end of 1983, while total deposits rose from 45.439* billion to about 55* billion during the same period. Deposits in Lebanese pounds made up around 71% of the total deposits at the end of 1983. This propotion is nearly identical to that which prevailed at the end of 1982, and

(10) "Banque du Liban Annual reports", 1983 p.32.

(11) Ibid page 46

again points to the fact that part of the increase in deposits observed in the first three quarters of 1983 was due to the revaluation of foreign currency deposits as a consequence of the depreciation of the Lebanese pound.

Commercial bank credit to the various sectors of the economy increased by nearly 18.7% in the first half of 1983 to reach LL. 30.265* billion. This compared with LL. 25.478 billion at the end of 1982. It should be noted however, that a sizeable portion of the increase in credit actually represented the capitalisation of interest on existing credits.[12]

On the broad monetary level, total domestic liquidity (Money and quasi-money) increased by 21% in 1983 compared with 20% for 1982.

In all, it may be true to say that the year 1983 marked an important turning point for Lebanon's banking sector from a period of rapid growth and high profits to one of increasing challenges and limitations which necessitate greater efficiency and modernisation of thinking.[13]

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(12) Iskandar M. and Baroudy Elias, The Lebanese Economy year 1983 MEEC. Beirut.

(13) "Banque du Credit populaire" annual reports year 1983

B) The size Distribution of Banks:

The structure of an industry has been considered in economic theory as an important determinant of performance. The size distribution of firms has received considerable attention from economists interested in competition and monopoly and issues of government regulating to these market structures. Thus, the number of organization and relative size of competing institutions have often been used to measure the dgree of competetiveness in markets.[14]

As we have previously mentioned, there are 3 variable on which basis Bank can be ranked in the Banking Sector. These variables are:

1- Total Deposits:
   a) Deposits from customers: checking accounts, current accounts, deposits at notice or fixed maturity and saving accounts.
   b) deposits from banks.

2- Loans: include portfolio bills and advances and debtor accounts.

3- Balance sheet size: This is the variable on which basis we are going to rank the banks in Lebanon and use it throughout the project. Mostly, balance sheet size is used to rank banks because it shows in addition to the total deposits and loans the overall banking operations.

(14) Power John, "The existence of economies of structure and scale in Commercial Banking". Journal of finance, XXIII (June 1968)p550

Table I presents the ranking of the Lebanese bank on the basis of the 3 variables discussed above. As we notice, the difference in ranking based on total deposit and on the balance sheet size do not differ much from each other.

Table II shows of the classification of bank balance sheet size into 6 size classes, and the percentage of each class constitutes of the whole banking system.

There are 106 registered bank in Lebanon, of which 5 banks started operating in 1983, and so we cannot include them in our analysis. Two banks started operating in 1984.[15] I have been able to collect data and information of 89 banks, hence, our analysis will be based on these banks.

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(15) Le Commerce du Levant (Speciaux Banques) year 1984

TABLE-1-

RANKING OF BANKS ACCORDING TO BALANCE SHEET SIZE AND TOTAL DEPOSITS FOR THE YEARS 1982 AND 1983

	BALANCE SHEET SIZE		TOTAL DEPOSITS	
	1983	1982	1983	1982
BANQUE DU LIBAN & D'OUTRE MER	1	1	1	1
BANQUE LIBANO FRANCAISE	2	2	2	2
BANQUE AUDI	3	3	3	3
BANQUE BYBLOS	5	5	7	7
CREDIT LIBANAIS	6	6	6	5
ARAB BANK LIMITED	7	7	5	6
BANQUE DE LA MEDITERRANEE	8	10	8	10
BEIRUT RIYAD BANK	9	13	11	16
BANQUE NATIONAL DE PARIS	10	9	9	9
BANQUE LIBNAISE P.L. COMMERCE	11	11	10	11
SOCIETE NOUVELLE B.S.L.	12	14	15	13
BANQUE SARADAR	13	8	14	8
B.B.A.C.	14	12	12	12
BANK ALMASHREK	15	15	16	14
B.B.M.E.	16	17	13	15
BANQUE DU CREDIT POPULAIRE	17	16	18	18
B.I.T.	18	18	17	19
MEBCO BANK	19	20	19	20
BANQUE TRAD C.L.	20	19	20	17
SOCIETE GENERALE L.E.B.	21	21	21	21

SOURCE: Prepared by the researcher based on Bilanbanque 1982 & 1983

	BALANCE SHEET SIZE		TOTAL DEPOSITS	
	1983	1982	1983	1982
BANQUE MISR LIBAN	22	23	23	25
CAPITAL TRUST BANK	23	31	29	32
JAMMAL TRUST BANK	24	22	24	22
BANQUE LIBANO BRESILIENNE	25	24	22	23
BANCO DI ROMA	26	25	25	24
ADCOM BANK	27	33	27	28
TRANSORIENT BANK	28	28	26	27
UNIVERSAL BANK	29	27	30	29
ARAB LYBIAN TUNS. BANK	30	32	78	73
UNITED BANK OF LEB. & PAKIST.	31	26	28	26
SAUDI LEBANESE BANK	32	36	32	33
LEBANON & GULF BANK	33	44	39	46
UNITED BANK OF SAUDIA & LEB.	34	39	45	60
SOCIETE BANCAIRE DU LIBAN	35	40	34	40
B.B.C.	36	34	31	30
LITEX BANK	37	30	62	61
C.C.F.	38	29	41	38
BANQUE TOHME	39	37	35	31
DREDIT SUISSE	40	35	37	42
FEDERAL BANK OF LEBANON	41	38	50	35
BANQUE NASR LIB. AFR.	42	45	33	36
THE LEBANESE ARAB BANK	43	47	36	34
FOREIGN TRADE BANK	44	64	40	62

SOURCE: Prepared by the researcher based on Bilanbanque 1982 & 1983

	BALANCE SHEET SIZE		TOTAL DEPOSITS	
	1983	1982	1983	1982
CREDIT BANCAIRE	45	48	38	43
ORIENT CREDIT BANK	46	49	42	45
THE ROYAL BANK OF CANADA	47	43	46	39
MOSCOW NARODNY BANK LTD	48	68	85	82
GLOBE BANK	49	72	54	66
THE CHASE MANHATTEN BANK	50	42	47	41
CITIBANK	51	41	44	44
AMERICAN EXPRESS INT. CORP.	53	62	51	57
BANK OF CREDIT COMM. INT.	52	50	43	37
ALEMEMENE BANK NEDERLAND	54	53	58	51
B.N.D.I.T.	55*	46	87	87
ARAB AFR. INT. BANK	56	58	57	54
METROPOLITAN BANK	57	51	52	52
SAUDI NAT. COMM. BANK	58	67	48	56
AL MAWARID BANK	59	56	55	48
BANQUE PHARAON ET CHIHA	60	61	49	50
BANK HANDLOWY	61	55	65	65
BANK OF BEIRUT	62	54	61	53
BANQUE DE LA BEKAA	63	66	60	59
JORDAN NATIONAL BANK	64	63	56	55
RIFBANK	65	57	59	49
BANK OF AMERICA	66	52	53	47
FIRST PHOENICIAN BANK	67*	60	67	63

SOURCE: Prepared by the researcher based on Bilanbanque 1982 & 1983

	BALANCE SHEET SIZE		TOTAL DEPOSITS	
	1983	1982	1983	1982
BANQUE DE L'HABITAT	68	59	69	64
BANK OF NOVA SCOTIA	69	65	63	58
SYR. LEB. COMM. BANK	70	70	64	70
ALLIED BUSINESS BANK	71	76	66	67
BANK OF LEBANON AND KUWAIT	72	69	70	68
N.E.COMM. BNAK	73	78	68	71
INVESTMENT & FINANCE BANK	74	73	81	78
BANK AL MADINA	75	71*	76	74*
CHEMICAL BANK	76	77	71	73
BANK OF KUWAIT & THE ARAB W.	77	85	72	83
BANQUE J. GEAGEA	78	74	74	69
INTERCONTINENTAL BANK OF LEB.	79	79	73	77
RAFIDAIN BANK	80	75	80	79
THE CHARTERED BANK	81	80	75	75
HABIB BANK LTD	82	82	77	76
BANQUE DE FINANCEMENT	83	81	82	81
BANQUE J. LATI & FILS	84	84	79	80
COMM. FACILITIES BANK	85	82*	88	88*
BANK SADERAT IRAN	86	86	86	84
BANQUE DE CREDIT NATIONAL	87	87	84	85
PROSPERITY BANK OF LEBANON	88	88	83	86
FUTURE BANK	89	89*	89	89*
TOTAL Nº OF BANKS = 89				

* Data to process these information was not communicated , so the researcher made them estimates based on data of (1983)

SOURCE: Prepared by the researcher based on Bilanbanque (1982-1983)

TABLE 2-(1)

DISTRIBUTION OF BANKS BY SIZE OF THEIR BALANCE SHEETS
FOR THE YEARS 1982 & 1983

SIZE GROUP IN MILLION L.L.	1983		1982	
	Nº of Banks	% of total	Nº of Banks	% of total
LESS THAN 500	48	54	56	63
500-999	17	19	11	12
1,000-1,999	13	15	14	16
2,000-2,999	6	7	6	7
3,000-3,999	3	3	2	2
4,000 & above	2	2	—	—
TOTAL	89	100%	89	100%

* As the researcher mentioned in the performance objective that the size of balance sheet of individual banks is the appropriate measure of its size and operations.

SOURCE: Prepared by the researcher based on
-Bilanbanque 1982 & 1983 by Freddie Baz
-Lebanese Economy 1982 & 1983 by M. Iskandar & E. BAROUDY

TABLE -2-(2)

DISRIBUTION OF BANKS BY SIZE OF THEIR TOTAL DEPOSITS

1982 - 1983

SIZE GROUP IN MILLION L.L.	1983		1982	
	Nº of Banks	% of total	Nº of Banks	% of total
LESS THAN 500	57	64	62	71
500 - 999	11	12	9	10
1,000-1,999	13	15	12	13
2,000-2,999	5	6	4	4
3,000-3,999	2	2	2	2
4,000 & above	1	1	-	-
TOTAL	89	100%	89	100%

Remark: It is noticable that there is a slight diffrence in ranking of banks according to the two size measures , balance sheet and total deposits.

Source: Prepared by the researcher based on:
Bilanbanque 1982 & 1983 by Freddie Baz
The lebanese Economy 1982 & 1983 by M.Iskandar & E.Baroudy

C) Ownership and Control patterns:

The operating banks in Lebanon are divided into following five main categories with respect to ownership and control patterns.

1) Foreign non-Arab banks
2) Foreign Arab Banks
3) Lebanese banks with majority participations of foreign non-Arab banks.
4) Lebanese banks with majority participations of foreign Arab banks, and
5) Lebanese banks

Foreign banks (1 and 2) are branches of foreign banks operating in Lebanon. In 1984, 13 foreign non-arab banks consisted of American, British, Canadian, Dutch, French, Italian and Russian banks. The five foreign Arab banks are controlled by Jordanian, Iraqi, Egyptian and Saudi Arabian banks. The 15 Lebanese banks with majority participation of foreign non-Arab banks consisted of four Lebanese-French banks, three Lebanese-American, one Lebanese-French-Belgian, one Lebanese-French-Italian, one Lebanese-Bulgarian, one Lebanese-Pakstani, one Lebanese-Canadian and one Lebanese British bank. The 10 Lebanese banks with majority participation of foreign Arab banks consisted Egyptian, Syrian, Kuwaity, Saudi, Lybian Tunisiam participation. All other banks are grouped under "Lebanese banks", which consist of banks owned in majority by Lebanese or Arab individuals and banks owned and opera-

TABLE -3-(1)

DISTRIBUTION OF BNAKS BY SIZE OF BALANCE SHEET AND TYPE OF OWNERSHIP

1983 (by Nº of banks)

SIZE GROUP IN MIILION L.L.	I*	II*	III*	IV*	V*	TOTAL
LESS THAN 500	10	4	6	5	23	48
500 - 999	1	–	5	3	8	17
1,000-1,999	1	–	3	2	7	13
2,000-2,999	1	1	–	–	4	6
3,000-3,999	–	–	–	–	3	3
4,000 & above	–	–	1	–	1	2
TOTAL	13	5	15	10	46	89

* I -Foreign non Arab Banks
II -Foreign Arab Banks
III-Lebanese Banks with majority participation of Foreign non Arab Banks
IV -Lebanese Banks with majority participation of Arab Banks
V -Lebanese BANKS

Source:Prepared by the researcher based on
- Bilanbanques 1982 & 1983 by Freddie Baz
-The Lebanese Economy 1982 & 1983 by M.Iskandar & E. Baroudy

TABLE -3-(2)

DISTRIBUTION OF BANKS BY SIZE OF BALANCE SHEET AND TYPE OF OWNERSHIP

1982 (by N° of Banks)

SIZE GROUP IN MILLION L.L.	I*	II*	III*	IV*	V*	TOTAL
LESS THAN 500	10	4	7	7	28	56
500 - 999	1	–	4	2	4	11
1,000-1,999	1	–	3	1	9	14
2,000-2,999	1	1	–	–	4	6
3,000-3,999	–	–	1	–	1	2
4,000-4,999	–	–	–	–	–	–
TOTAL	13	5	15	10	46	89

Source: Prepared by the researcher based on:
-Bilanbanques 1982 & 1983 by Freddie Baz
-The Lebanese Economy 1982 & 1983 by M. Iskandar & E. Baroudy

* See remark on page

TABLE -4-

DISTIBRUTION BANKS BY SIZE OF BALANCE SHEET AND TYPE OF OWNERSHIP

1983 over 1982 (by %)

SIZE GROUP IN MILLION L.L.	I*	II*	III*	IV*	V*	TOTAL
LESS THAN 500	79 / 76	80 / 80	38 / 47	50 / 70	50 / 60	54 / 63
500 - 999	7 / 8	– / –	35 / 26	30 / 20	17 / 9	19 / 12
1,000-1,999	7 / 8	– / –	20 / 20	20 / 10	16 / 20	15 / 16
2,000-2,999	7 / 8	20 / 20	– / –	– / –	9 / 9	7 / 7
3,000-3,999	– / –	– / –	– / 7	– / –	6 / 2	3 / 2
4,000 & above	– / –	– / –	7 / –	– / –	2 / –	2 / –
Total	100%	100%	100%	100%	100%	100%

* See page

Source: Prepared by the researcher based on:
-Bilanbanques 1982 & 1983 by Freddie Baz
-The Lebanese Economy 1982 & 1983 by M. Iskandar & E. Baroudy

Explanation of tables 3(1) and 3(2) and 4

Table 3(1) and 3(2) besides shwowing the distribution of banks by size (total assets) and type of ownership show the changes of the size structure in the different types of banks for the year 1983 over 1982. We notice that although there are some changes in size distribution in type III and type IV ownership category, the main change in the size structure has occured in the group of Lebanese banks. Our purpose is to explain whether or not these changes in the size structure effect the performance of the bank.

Table 4 serves for the same purpose but show the result in percentages.

ted by the Lebanese government.[16]

These various types of banks are characterized by different size distributions as shown by Table 3(1) and 3(2), where it will be recalled that size is defined by the size of the balance sheet of individual banks.

D) Regulations affecting Banking structure and Competition:

Banking Structure:

Prior to the introduction of the Monetary and Credit Code in 1963, the only laws regulating banking activities were the Banking secrecy law and the joint account law. There was no restriction on the opening of new banks. The establishment of a bank required the same conditions as the creation of any ordinary company and was regulated by the Commercial Code.

After the establishment of the Central Bank in 1964, the number of banks continued to grow until it reached 94 at the end of 1966. With the reorganization of the banking sector and the restrictions put by the government, the number of banks again reduced to 74 in 1975. However, the number of Banks again started to grow in the last few years reaching a record of 106 Banks.[17]

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(16) Iskandar M. Baroudy Elias The Lebanese Economy 1982-1983 MEEC Beirut

(17) Le commerce du Levant (Speciceux Banques) year 1984

The growth in the nunmber of banks led the lebanese government to restrict entry conditions. In addition to the approval of the Central Bank, the price of establishing bank licenses has increased tremendously reaching to as much as 20 million Lebanese pounds. However, foreign banks wishing to have a presence in Lebanon can still establish representative offices, which do not have local banking facilities.[18]

Price Competition:

The Central Bank does not directly restrict the ability of commercial banks to compete on a price basis. There are no regulations limiting the rate of interest on deposits or loans. However, the Central Bank can indirectly affect the general level of interest rate by manipulation the rediscount rate.

Bank Examination

Commercial banks are required to submit to the Central Bank reports of their operations. The central Bank regulates the competition between banks by fixing the limits and percentages to be adhered to between:

1- The amount of bank's equity capital and its total amount of deposits.

2- The amount of bank's equity capital and its total short term liabilities.

(18) Ibid.

3- The amount of the bank's own funds and its total liabilities.

4- The total amount of credit granted by a bank to one physical customer.

Restriction on loans and investments:

The Monetary Code places some restriction on the ability of banks to compete among themselves by preventing them from making certain types of loans and investments.

E) The effect of size on operating costs in banking units:

Economic efficiency refers to the relationship between inputs and outputs, where as social efficiency takes into consideration the degree to which Banks contribute to the level of consumption and standard of living of the community. Economic efficiency is more specifically defined in terms of low costs, and the most efficient business is defined as that "which has the ability to produce and market goods or services at the lowest cost possible under the environmental circumstances facing the management."[19]

Efficiency is a crucial aspect in any study attempting to evaluate performance of firm. In a competitive market situation,

(19) Richard C. Osborn, "Efficiency and profitability in relation to size" Harvard Business Review (March 1951) p.83

the economic efficiency of a firm will determine in the long-run its prospects for survival and growth.

Economic theory has identified three behavioral patterns with respect to the long-run relationship between average costs and size of firm or rate of out-put. These are decreasing costs, constant costs and increasing costs.

Economies of scale are attributed to the indivisibility of fixed nature of some factors of production. Other reasons for decreasing costs are the cost advantages associated with large scale distribution and large scale buying from suppliers.

The main reason behind increasing costs with size of firm is the limitation of management as a factor of production or what has been referred to as "diminishing returns to management."[20] As firms become larger, decision-making and coordination of activities become more complex.

In general, economic theory refers to the long run average cost curve as being U-shaped, initialy decreasing until the optimum size of firm is reached after which it starts increasing.

Some special characteristics of the banking industry lead us to expect larger banks to have lower average costs than smaller banks at least over a range of bank sizes.

The banking industry is essentially labor intensive. The increasing complexity of banking operations requires a high dgree of specialization of employees which cannot be achieved by small banks.

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(20) Milton H. Spencer, Managerial Economics (Illinois: Richard D. Irwin Inc. 1968), p.231.

The risk pooling associated with conducting financial operations on a large scale implies that small banks cannot compete with larger banks with respect to their lending function. In addition, computers and other automatic data processing equipment which result in important cost reductions cannot be used economically below a minimum size of bank.

In this section we attempt to determine the existence of economies of scale in the commercial banking sector of Lebanon. The hypothsis to be tested is that, at least up to a certain size, average costs decrease with size of bank.

Analysis and interpretation of results:

The cost measure adopted by this study to analyze the efficiency of commercial banks with respect to their size is the ratio of total operating costs to total assets. Operating costs are not influenced by the often arbitrary methods followed in determining reserves and provisions which are in general a characteristic of bank accounting. Total operating costs consist of the following compenents:

1- Cost of resources: This include interest paid on deposits, commissions and other paid charges.

2- Charges of debenture loans: This accounts for a very small proportion of total operating costs. Very few banks have standing debenture loan issues.

3- General expenses: This consists predominantly of wages and salaries (salaries and other payments to the staff, staff indemnity fund, board of director...) It also includes tan paymets and contributions to head office expenses. This last item applies to foreign banks.

4- Amortization charge.

5- Miscellaneous expenses: This includes other expenses that cannot be classified under the above-mentioned categories as well as losses on exchange operations. Also included under miscellaneous expenses are losses on portfolio securities when these losses exceed revenues from securities.

It can be observed that some of the above mentioned items such as losses on securities and on exchange operations as well as taxes cannot be considered as operating expenses. Unfortunately, only the major cost components are disclosed to the public. The individual items under each major component are treated as confidential information. It was therefore impossible to make the appropriate adjustments. This limitation should be kept in mind when analyzing the operating cost ratios of commercial banks in Lebanon.

Table 5 shows that the ratio of total operating costs to assets by size group and type of bank, where it will be recalled that size was measured by total Assets which was judged to be most appropriate size measurement along with the total deposits of banks.

The selection of the size criterion is not expected to have important effects on the relationship between the cost ratio and size. As previously mentioned(see Table 1, chapter II part B) no major differences between the ranks of commercial banks were observed when these were alternatively ranked according to their total assets, deposits and loans.

For the sake of better results the researcher had divided the operating banks in Lebanon into 3 main groups instead of five.

I: -Foreign non Arab Banks

-Foreign Arab Banks

II: -Lebanese banks with majority participation of foreign non-Arab Banks.

-Lebanese Banks with majority participation of foreign Arab Banks.

III: -Lebanese Banks.

TABLE - 5 -

MEAN RATOIS OF TOTAL OPERATING COSTS TO ASSETS BY SIZE GROUP AND TYPE OF BANK

1983 / 1982 (in %)

	I		II		III		Average of all banks	
SIZE GROUP IN MILLION L.L.	FOREIGN BANKS		LEBANESE BANKS WITH MAJORITY PARTICIPATION OF FOREIGN BANKS		LEBANESE BANKS			
	1983	1982	1983	1982	1983	1982	1983	1982
Less than 500	8.38%	10.92%	9.84%	12.13%	11.09%	11.93%	10.01	11.72
500 - 999	8.30%	10%	9.87%	11.58%	9.07%	11%	9.40	11.23
1,000-1,999	7.5%	11.36%	9.88%	10.5%	8.71%	10.9%	9.06	10.81
2,000-2,999	8.45%	10.8%	-	-	8.98%	10.8%	8.80	10.80
3,000-3,999	-	-	-	10.3%	8.82%	9.9%	8.82	10.10
4,000 & above	-	-	8.3%	-	7%	-	7.65	-
MEAN RATIO	8.33%	10.88%	9.79%	11.54%	9.95%	11.5%		

Source: Computed by the researcher based on:
- Bilanbanques 1982 & 1983 by Freddie Baz
- Profit à loss statement supplied by the Central Bank for the years 1982 & 1983.

Average ratio of operating costs by size of Banks:

It is clearly noticeable that the average ratio of operating costs to assets of foreign banks is the lowest followed next by the Lebanese banks with majority participation of foreign Banks and the Lebanese Banks in one succession after another.

One of the reasons responsible for the low ratio of operating costs to assets for the foreign Banks is that all these Banks are large banks in terms of deposits and assets, and they do not need to compete with other local banks by paying higher interest rates on deposits from customers. For this reason, their cost of resources are lower compared to Local Banks of similar size.

The following factor may also be attributed as reasons for the low ratio.

Most of the expensive administrative services are carried by the main office in the home country, and these costs are not transfered to the appropriate branch abroad.

The operation of foreign Banks are highly automated. It in fact, causes the average cost of bank transactions to decline.

The above factors keep the ratio of the operating costs to assets of foreign Banks low compared to other operating banks in Lebanon.

The average ratio of operating costs to assets tends to decline for big size banks, but it tends to increase when the type and size of bank change. Although this observation is in harmony with

our hypothesis, but it is difficult to generalize because the number of foreign banks operating in Lebanon is too few (there is one bank in the third size group and no banks in the last size groups).

In case of type II Banks (Lebanese banks with majority participation of foreign Banks), the average ratio of operating costs/Assets increase slightly as size of bank increase untill it reaches to the third size group and decreases a great deal after it becomes big enough to fall in the highest size group.

Observing the results of type III Banks (the Lebanese banks), the reasearcher notices that average ratio of operating costs to assets decrease as size increases till the third size group then increases slightly in the following two size groups, and decreases again in the last size group. These results somewhat support our hypothesis. The reason for these results is that first, we have enough observations (46 banks) which constitute more than half of the banks under study. Second, almost all the new banks entering the banking industry are Lebanese banks with relatively higher cost ratio compared with same size group banks of other type of banks.

However, the researcher notices that decline in the average operating cost ratio does not continue as size of Bank increases. It is interrupted by slight increase in the cost ratio in the 4rth and 5th group size, followed by a sharp decline in the 6th group size. The trend the cost ratio upholds may be due to economies of scale where banks are growing in size by opening new branches, increasing transaction and providing new and better services. This may be true for the first three group sized banks. On the other

hand, opening new branches in areas where the market is saturated and customers are used to their banks, will cause average operating costs to assets rise and diseconomies of scale to set in.

The average ratio of total operating costs to assets had declined for all sizes and types of bank in the year 1983 over 1982. The main reason for decline in average operating cost for the year 1983 over 1982 was due to lower cost of resources. Average interest rate on deposits from customers declined greatly in the year 1983 whereas because of the unstable political and economic situation in the country during the second half of the year 1982 the cost of resources and services rendered was quite high.

- Unlike the results of the year 1983 where only the average cost ratios of the Lebanese banks supported our hypothesis that average cost to total assets of banks fall as size increases, we observe that in 1982, the results of all the three types of banks support our hypothesis by showing lower average operating costs as bank size increases.

However, observing the results of average cost ratio of all banks in the year 1983 and 1982 the researcher can conclude that average operating cost of banks to total assets of banks fall as size of banks increase.

The main reasons responsible for declining tendency of average operating cost to asset ratio as size of banks increase are

due to the following:

1) Cost of resources:

The main three types of resources for banks are the folowing.

-current acounts or checking accounts	(low interest rate)
-saving accounts	(medium average interest rate)
-blocked or time deposits	(high interest rate)

An analysis of the balance sheets of banks in the different size groups show that the percentage of current or cheking accounts to total deposits increase as size of bank increases. And since current or cheking accounts are the cheapest banking resources, the average cost of resources decrease as size of bank increases. The explanation of this behavior by the customers is that most of the customer having current or checking accounts, in addition to the safety reason, are interested to issue checks that are valid and could be easily compensated or collected in the different regions of the country, and the only banks that can provide these services to their customers are banks that have branches in those areas. To have branches in different areas a bank must be big enough to render such services. This proposition is supported by the fact that 80% of the banks in Lebanon having 10 or more branches over the Lebanese territory have total asset of more than 1.500 million LL.

2) General expenses:

- Administrative expenses:

Average administrative expenses tend to decrease as size of banks increases, because in larger banks more administrative work is done almost by the same number of administrative personnel as in small banks. The ratio of average administrative expense to total assets tends to decrease as bank size increases up to a certain point after which it increases for a while and then starts to decline again as the bank continues to grow in size. This is explained by the "Lumpiness" or fixed nature of the administrative expense in banks.

- Professional cost on ad-hoc basis:

Average professional labour cost to total assets tends to decrease as size of banks increases, because efficient proffesional work is done when proffessionals are hired, but on condition that there is enough work to be done by this profesional. An example of this case is what happened in our bank. A year ego, our bank management hired a team of proffesional employee to operate the newly planned branch at Hamra sector. However, with the prevailing instable political security situation, their assignment was pospaned for six months. In this case we observe that average general expense to total assets may increase if this team of professional employees are not doing any productive work.

Moreover, they are causing diseconomies of scale for the different branches where they are working temporarily, because these branches specially the main branch is already saturated enough to accomodate any new personnel.

Since the income statement that is supplied by the Central Bank does not include details of administrative and professional work cost. The analysis will concentrate on the trend analysis of general expenses consisting of wages and salaries (salaries and other payments to the staff, staff indemnity fund, board of directors...) without giving any breakdown of those costs.

Expenses/assets shown in the table indicates almost similar pattern as for the average ratio of total operating expenses. Analyzing each bank type seperately the result of Foreign banks and to some extent Lebanese Banks with majority participation of Foreign Banks, do not support the proposition that average general expenses to total assets decline as bank size increases. The result of all banks combined together, as indicated in the last two culumns shows that although the relationship is not smooth and continuous, they do indicate that there is an inverse relationship between size of bank and general expenses. Therefore, there is a relationship between size and cost which says that average operating expenses/assets decline as size of bank increases. But to what extend this relationship is significant is a matter of statistical testing, which the researcher intends to carry in the following section of the research.

TABLE - 6 -

MEAN RATIOS OF TOTAL GENERAL EXPENSES TO ASSETS BY SIZE GROUP & TYPE OF BANK

1983 / 1982 (in %)

SIZE GROUP IN MILLION L.L.	FOREIGN BANKS		LEBANESE BANKS WITH MAJORITY PARTICIPATION OF FOREIGN BANKS		LEBANESE BANKS		AVERAGE OF ALL BANKS	
	1983	1982	1983	1982	1983	1982	1983	1982
LESS THAN 500	1.67%	2.18%	1.96%	2.42%	2.21%	2.38%	2	2.34
500 - 999	1.66%	2%	1.97%	2.31%	1.81%	2.2%	1.88	2.24
1,000-1,999	1.5%	2.27%	1.99%	2.1%	1.74%	2.18%	1.81	2.16
2,000-2,999	1.69%	2.16%	-	-	1.79%	2.16%	1.76	2.16
3,000-3,999	-	-	-	2.06%	1.76%	1.98%	1.76	2.02
4,000 & above	-	-	1.66	-	1.4 %	-	1.63	-
MEAN RATIO	1.66%	2.17%	1.95%	2.32%	1.99%	2.3%	1.91	2.28

Source: Computed by the researcher based on:
-Bilanbanques 1982 & 1983 by Freddie Baz
-Profit & loss statements supplied by the Central Bank for the years 1982 and 1983.

Statistical Testing:

For the purpose of testing the relation between the dependent variable (Average cost to total assets ratio) and the independent variable (size of bank), the following statistical formula was used to compute the corelation coefficient (R) and the coefficient of determination (R^2):

The population (banking system) correlation coefficient, which is denoted by p, is defined as:

$$R_{xy} = \rho = \frac{Cov\ (X,Y)}{\sigma_x\ \sigma_y}$$

$$= \frac{E(X-\mu_x)(Y-\mu_y)}{\sqrt{E(X-\mu_x)^2}\ \sqrt{E(Y-\mu_y)^2}} \qquad (21)$$

First, as the term covariance suggests, we are interested in the covariability of the two variables x and y.

- do x and y vary in the same direction or do x and y vary in opposite direction.

Second, we are interested to know that x and y vary closely together, we mean a situation where changes in x and y are approximately proportional.

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(21) Yamare, Taro Statistics: An introductory Analysis New York: Harper & Row 1967.

Formula (1) is used to determine the amount (%) of variation shared by each independent variable and dependent variable. If R is greater, in absolute value, than 0.8 (80%) then there is a strong relation between dependent and independent variable. If R as absolute value is between 0.4 and 0.8 (i.e 40% and 80%) then there is a strong to moderate relation. If R is less than 0.4, in absolute value, ie (40%) then the relation is weak.

It is important to note that absolute values of R is used to test the significance of the relation because it is always expected to have a negative R because the two variables x and y are expected to vary inversly.

The coefficient of determination R^2 gives the percentage of variation between dependent and independent variables as explained by the independent variable.

Results of 1982:

Correlation Coefficient / Coefficient of determination of

1) All banks in Lebanon
Rxy = -0.29 $(Rxy)^2 = 0.0841$

2) Lebanese banks in Lebanon
Rxy = - 0.42 $(Rxy)^2 = 0.1764$

3) Lebanese banks with majority participation of foreign Banks
Rxy = -0.25 $(Rxy)^2 = 0.0625$

4) Foreign banks
Rxy = -0.18 $(Rxy)^2 = 0.0324$

Results of 1983 as classified above:

1) Rxy = -0.35 $(Rxy)^2 = 0.1225$

2) Rxy = -0.49 $(Rxy)^2 = 0.2401$

3) Rxy = -0.2 $(Rxy)^2 = 0.04$

4) Rxy = -0.23 $(Rxy)^2 = 0.0529$

The correlation Coefficient of all banks in Lebanon (-0.29) indicates that although there is a relation between size and Average operating cost to assets, the relation is weak and not significant enough. However, the correlation coefficients of Foreign Banks and Lebanese banks (with majority participation of Foreign bank) show similar results.

The correlation Coefficient of the Lebanese banks show that there exists a moderate relation between the dependent and independent variable. Morover, the results of the correlation analysis is similar to the results deduced from the analysis of the average cost/assets ratio by size (goups) and the type of banks where the relation between Average costs and size of bank was only significant in the case of the Lebanese banks only.

Conclusion:

The proposition concerning the existence of significant economies of scale in the commercial banking sector of Lebanon could not be accepted, with the possible exception of the Lebanese banks where a moderate relationship exists. - Two alternative situation may explain the reason for the finding:

1- There are economies of scale in the commercial banking sector of Lebanon, but these could not be identified due to inaccurate reporting of cost data and/or due to the lack of sufficient details, which did not permit a precise isolation of the effects on costs of factors other than size.

2- Erroneous conclusions are sometimes reached on this question by viewing apparent economies as actual economies of size. Thus, according to the conclusion of a similar study on banking structure in Michigan, it would be best to conclude that while there are economies of scale of direct costs with respect to the number of deposit accounts or loans; they are not great because efficiency of operations is not largelt a function of bank size. Consequently, had Lebanese deposits or loans been used to measure output, economies of scale would have been significant. But these economies would have been the result of larger accounts or loans rather than more efficient prosessing of these accounts or loans since larger banks serve customers with larger deposits and loan accounts than do smaller banks. The conclusion is that it is an erroneous finding that economies of scale are positive function of bank size.[22]

3- There are no significant economies of scale in the commercial banking sector of Lebanon with the possible exception of the Lebanese banks, as the correlation coefficient suggests. This might be explained by the fact that as banks grew, the factors exerting downward pressures on average costs tend to be offset by other factors causing an upward influence, as was mentioned in the analysis of the operating cost of 3 type of banks in Lenon.

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(22) Lanzilloti F Robert, Banking structure in Michigan 1945-1963, MSU Business studies, 1966.

F) The effect of size on profitability in banking units:

While the previous section dealt exclusively with efficiency with respect to size of bank, the present chapter is concerned with the relative profitability of banks. Profitability should be clearly distinguished from efficiency. The latter is measured in terms of average costs, whereas the former is usually considered to be "the rate of return either on total investment or on the equity segment, that is net worth."[23] Profit is a residual sum and it is generally affected by other factors in addition to average or unit costs.

There is considerable disagreement and misunderstanding with respect to the definition and measurement of profit. Profit is interpreted in a different sense by economists, managers, accountants and investors and its definition varies with its use in reference to a single firm, to the aggregate of all firms or as an element of national income.

Economic theory reveals an abundance of profit theories. Spencer has clasified these theories into three main categories:

1. Compensatory or functional theories.
2. Friction and monopoly theories.
3. Technology and innovation theories.

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(23) Osborn Richard G "Efficiency and profitability in relation to size" Havard Business Review XXIX (March 1951) pp 82-94

The compensatory or functional theories define economic profit or "surplus" as the payment to the etrepreneur for the services he performs in coordinating to the theory of perfect competition, the economy is characterized by a smooth flow of resources and equilibrium is reached through the free enterprise would be exactly equal to its costs and no profit residual could result, friction and monopoly theories attribute the existance of profits to the reccurring obstacles to resource mobility that exist in the real world in the form of institutional rigidities.Finally, the essence of technology and innovation theories is that profits are considered to be reward for succesful innovations.

While it may be inferred from the monopoly and technology theories that size may be positively associated with profits, the effect of size on the profitability of firms has received more explicit theoretical justification by Baumal in his "Business Behavior or, Value and Growth", According to Baumal:

> "increase money capital will not only increase the total profits of the firm, but because it puts the firm in a higher echelon of imperfectly competing capital groups, it may very well also increase its earnings per dollar of investment."[24]

The logic of this proposition is that large firms have all the options of small firms and they also invest in lines which require

(24) N.J Baumal, Business Behavior, Value and Growth (New York: The Macmillan Company. 1959)

large scale. It follows that

> "So long as any industry is peculiarly well suited to large investments and so yields disproportionate returns to sizable funds, then, provided capital is prepared to move in response to profit differences, this will tend to be true of all other industries in which large firms operate."[25]

With respect to banking industry, an additional reason for expecting profitability to be positively associated with size of bank is the reduction of risk associated with conducting financial operations on a large scale. Profit, it will be recalled, is a residual figure. In addition to provisions and reserves, a bank deducts losses on loans and securities from its net operating revenues to arrive at its profit figure.

Small banks do not have as much choice as large banks in granting loans. Large banks can be more selective in granting a higher proportion of loans to the less risky customers and thereby reducing the uncertainty concerning default.

In general, small banks experience a higher degree of deposit variability. When a bank is faced with unusual or substansial deposit withdrawals, it may be forced to resort to selling securities at market prices below book values therefore realizing capital losses.

The hypothesis to be tested in this chapter is that, at least

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(25) Ibid,p.37

up to a certain size, profitability measured by the rate of return on equity capital increases with size of banks.

Analysis and Interpretation of results:

Net operating revenue to assets:

While the previous section dealt exclusively with the effect of size on costs, this section will deal with the effect of size on the net operating revenues of banks. This will be evaluated by comparing the effect of size on the relative ability of banks to generate revenues with its effect on the costs associated with such revenues.

1- Interest, discounts, commission, and micellaneous income:

This includes collected interests on accounts and portfolio bills; commissions, income on settlements; transfer of funds, exchange operations, exchange operartions and securities and coupons on engagements by signiture and other.

2- Revenues are products of income on portfolio securities. This includes revenues on Lebanese and Foreign securities.

Net operating revenues are the difference between total operating revenues and total operating costs as defined in the previous section.

Since the main purpose of the research is to find the effect of size on profitability of banks in Lebanon, the researcher is

TABLE - 7 -

MEAN RATIOS OF NET OPERATING REVENUES TO ASSETS BY SIZE GROUPS AND TYPE OF BANK

1983 / 1982 (in %)

	I		II		III			
SIZE GROUP IN MILLION L.L.	FOREIGN BANKS		LEBANESE BANKS WITH MAJORITY PARTICIPATION OF FOREIGN BANKS		LEBANESE BANKS		AVERAGE OF ALL BANKS	
	1983	1982	1983	1982	1983	1982	1983	1982
Less than 500	1.2%	1.05%	0.62%	0.5%	0.81%	0.68%	0.78	072
500 - 999	1.32%	1.1%	1.56%	1.3%	1.48%	1.24%	1.5	1.26
1,000-1,999	1,29%	1.08%	1.88%	1.71%	1.91%	1.74%	1.85	1.74
2,000-2,999	1.28%	1 %	–	–	1.75%	1.46%	1.59	1.30
3,000-3,999	–	–	–	1.8%	1.84%	1.54%	1.84	1.59
4000 & ABOVE	–	–	1.79%	–	1.82 %	–	1.8	–
MEAN RATIO	1.22%	1.04%	1.21%	0.93%	1.26%	1.12%	1.18	1.05

Source: Computed by the researcher based on:
- Bilanbanques 1982 & 1983 by Freddie Baz
- Profit & loss statements supplied by the Central Bank for the years 1982 & 1983.

going to employ the following measures of profitability:

- Net operating revenues to assets.
- Return on equity capital.

Profitability Analysis:

Observing the results of table 7 the researcher notices that there is not a significant relation between net operating revenues and bank size in the different type groups of banks except in the case of Lebanese banks. The degree and significance in each type group will be evaluated later by the correlation coefficient. The reason behind having this relation in the case of Lebanese bank is that the "spread", which is the difference between the interest rate earned on loans and interest rate paid on the deposits, which are the main factors of operating revenues and operating cost respectively, increases with size of bank. The reason for low rate of interest on deposits in larger banks was explained in the previous section. While the reason behind higher interest rate earned on loans in bigger banks is that these banks have the potential to supply large amount of loans while the banks of lower size cannot provide large enough loans to ask high interest. Morever, they can engage themselves with loans to customers that are more risky, because interest rate earned on these risky loans is much more higher than on any ordinary loans.

Finally, the analysis shows that, "spread" between the interest

rate earned and interest rate paid increases with size of banks in the case of Lebanese banks.

Morover, we notice that for almost all the operating banks in Lebanon, net operating revenue to assets are higher for the year 1983 over the year 1982. The reason for this behavior of net operating revenues to assets in 1982 is that operating costs to asset ratio for almost all banks in Lebanon was higher and that total revenue to assets was lower because of the lack of revenue sources caused by unstable economic and political situation caused by the Israeli invasion of Lebanon.

Finally the statitistical testing of the effect of size on net operating revenues to assets show the following results:

given

x: independent variable (Bank size)

y: dependent variable (net operating revenue to assets)

Rxy = Correlation Coefficient (defined in the previous section)

1983	1982
Rxy Lebanese Banks=0.39	0.35
Rxy Foreign Banks =0.18	0.15
Rxy Lebanese with foreign participation=0.22	0.25
Rxy all banks=0.37	0.32

$(Rxy)^2$= Coefficient of determination

1983	1982
$(Rxy)^2$ Lebanese Banks=0.1521	0.1225
$(Rxy)^2$ Foreign Banks =0.0324	0.0225

$(Rxy)^2$ Lebanese Banks with foreign participation=0.0484 0.0625

$(Rxy)^2$ all Banks = 0.1369 0.1024

Although the statistical results of the effect of size on net operating revenue to assets show that there is a direct relationship between the two variables, yet the results are significant.

Rate of return on equity capital

The previous part of this section dealt with the effect of size on the ratio of net operating revenues to assets. This measure was judged to reflect the relative efficiency of banks in generating operating revenues and in incurring operating costs associated with such revenues. The present section concentrates on the effect of size on the relative profitability of commercial banks. Profitability will be measured by the rate of return on equity capital. The numerator consists of profits which are arrived by deducting provisions from net operating revenues and by adding revenues from real state, extraordinary profits and provisions which have become available. The denominator consists of stockholder's equity which includes capital, reserves profits carried forward and results of the financial year.

The arbitrary accounting practices followed by banks, especially with respect to reserves and provisions, limit seriously the usefulness of the available profit data. These tend to understate profit rate differences for the following reasons:

- The profitable firms are under stronger pressure to adopt accounting practices that would understate their profit for tax purposes.

- Large and profitable banks are in general more vulnerable to public opinion and would tend to understate profits for public relations purposes.

- To the extend that bank mergers seek to retain profits rather distribute dividents, there would also be a tendency for profitable banks to understate profits to maintain good relations with stockholders. Conversly, managers of unprofitable banks would have greater incentive to overstate profits in order to retain control.

Table shows ratios of profit to assets and profit to equity capital and types of banks. Morover for better results and since we are intending to reveal the effect of size on profitability of banks, we are showing average results, of profits to assets and profits to equity capital, of the year 1982 and 1983.

The examination of this table reveals a pattern of an increasing rate of return on equity capital for all sizes of bank for the 89 banks as a group and for the three types of banks seperately. While there is no major differences in the direction of change of the two profit ratios with respect to size of banks, the rate of of increase in return on equity capital is markedly higher than that

TABLE -8-

MEAN RATIOS OF PROFITS TO ASSETS AND PROFITS TO EQUITY CAPITAL

BY SIZE GROUP AND TYPE OF BANK

AVERAGE OF 1982 & 1983

SIZE GROUP IN MILLION L.L.	FOREIGN BANKS		LEBANESE BANKS WITH MAJORITY PARTICIPATION OF FOREIGN BANK		LEBANESE BANKS		ALL BANKS	
	PROFITS TO ASSETS	PROFITS TO EQUITY CAPITAL	PROFITS TO ASSETS	PROFITS TO EQUITY CAPITAL	PROFITS TO ASSETS	PROFITS TO EQUITY CAPITAL	PROFITS TO ASSETS	PROFITS TO EQUITY CAPITAL
LESS THAN 500	0.16	3.47	-0.03	-0.84	0.40	2.78	0.23	2.53
500 - 999	0.28	9.07	0.74	7.18	0.57	4.80	0.63	6.17
1,000-1,999	0.34	13.50	0.49	3.16	0.53	7.86	0.50	6.48
2,000-2,999	0.54	10.70	-	-	0.38	7.57	0.43	8.61
3,000-3,999	-	-	-	-	0.74	14.11	0.74	14.11
4,000 & above	-	-	0.52	17.17	0.80	10.90	0.66	14.03

Source: Computed by the researcher based on
-Bilanbanques 1982 & 1983
-Profit & Loss statements supplied by the Central Bank

of the ratio of profits to assets. This is an indication that the higher rate of return on equity capital with respect to size of bank does not reflect greater efficiency but is rather due to the fact that larger banks have a much lower capital to asset ratio than small banks.

Statistical results using the correlation coefficient defined earlier: (Average result for the year 1982 and 1983)

x: size of bank the independent variable

y: return on equity capital the dependent variable

Rxy for all banks=0.62	Moderate to strong relation
Rxy for Lebanese banks=0.7	Moderate to strong relation
Rxy for Foreign Banks=0.50	Weak to moderate relation
Rxy for Lebanese banks with foreign participation=0.39	weak relation

Coefficient of determination: (Average results for the year 1982 and 1983)

$(Rxy)^2$ for all banks=0.3844	Weak to moderate relation
$(Rxy)^2$ for Lebanese banks=0.49	Moderate relation
$(Rxy)^2$ for Foreign Banks =0.25	Weak relation
$(Rxy)^2$ for Lebanese with foreign participation=0.1521	weak relation

Finally, the hypothsis regarding the existence of a positive relationship between size of bank and the rate of return on equity capital is accepted for the 89 banks as a group and more specifically

for the Lebanese banks. The hypothsis could not be accepted in the case of Lebanese banks with majority participation of foreign banks. The correlation coefficient, the significance of effect of size on return on equity capital had high R values in the cases of Lebanese and foreign banks, implying that the rate of return first increases sharply with size and then tend to flatten out. Morover it is worth to mention that in the previous sections it was found that size of bank did not have any significant effect on the efficiency of banks as measured by the ratio of operating revenues to assets(with the possible exception of Lebanese banks), total operating costs to assets (with the possible exception of Lebanese banks). It should therefore be emphasized that the significant positive relationship between size of bank and profitability as measured by the rate of return on equity capital does reflect greater efficiency with size of bank.

Chapter 3

CONCLUSION, SUMMARY AND RECOMMENDATIONS

A) Conclusion and summary

This study was designed to explain the relationship between size and performance of commercial banks in Lebanon. From theoretical point of view, several justifications were found for expecting larger size to result in improved commercial bank performance. Furthermore, such a positive relationship between size and performance is assumed by the existing banking regulations in Lebanon, namely the restriction of entry conditions and the the encouragement of bank mergers. Finally the recent trend of acquisition by larger banks of the small banks is also consistent with such an assumed relationship. However, the present study were not always in line with the theoretical assumptions dealing with the effect of size on commercial bank performance.

Insufficient evidence was found to either the acceptance or the rejection of the hypothesis regarding the existence of economies of scale in the commercial banking sector of Lebanon. No significant relationships were found between size of bank and the ratio of total operating costs for the 89 banks as a group or for Lebanese banks with majority participation of foreign banks. A significant negative relationship between size and the total operating cost was found for Lebanese banks. However, the correlation coefficient show that the relation was a

moderate and not strong one.

Although the total operating cost ratio was not significantly related to size of bank for the 89 banks as a group, the general expense ratio which consists predominantly of wages and salaries was found to be negatively related to size of bank, implying the existence of diseconomies of scale in the sense that at least as far as the efficient utilization of employees is concerned, larger banks have a clear advantage over smaller banks.

On the other hand, the hypothesis regarding the existence of a positive relationship between size of bank and profitability as measured by the rate of return and equity capital was eccepted for the 89 banks as a group and for the Lebanese banks. Positive relation between size and profitability was found for Foreign banks but the correlation coefficient attained showed that the relation was not significant.

This study was intentionally limited to the analysis of the effect of size on some aspects of performance of commercial banks; namely, relative costs and proftability. Bank performance, however, is much more complex involving more variables which are beyond the purpose and means of present study.

Furthermore, even with respect to the limited aspects that were investigated in this study, hypothesis could be doubtful due to the lack of sufficient details and misleading and often inaccurate accounting practices and reporting procedures.

B) Recommendations:

This study has shown that, in the absence of detailed and accurate bank statistics, it is difficult to arrive at meaningful conclusions with respect to the reltionship between size and commercial bank performance. It was shown that the available banking statistics consist of aggregate figures which are often of limited practical value and help in arriving at a meaningful conclusion.

The bank secrecy law often been used as an argument for the lack of disclosure to the public of the relevant bank statistics. This law was originally intended to protect bank customers mainly by preserving their anonymity. However, the broader interpretation of this law legalize a sound banking practices and misleading accounting procedures.

This study has clearly demonstrated the need for disclosure to the public of more detailed information. More details are needed with respect to the loan portfolios and to the individual revenue and cost components of banks. It is further hoped that this study has demonstrated the need for more control by government agencies over the accounting procedures used by banks, especially for foreign banks. Foreign banks have considerable distortion in their revenues, costs and profits by the arbitrary manipulation of transactions between head offices and their various branches.

With respect to the existence of economies of scale in the

Lebanese banking sector, no conclusive answer could be reached in the present study. It was shown that in the absence of details with respect to the loan portfolios of banks, the effect of all relevant factors on the total operating cost ratio could not be accounted for, thereby preventing the accurate isolation of size effects and consequently preventing the acceptance of the observed lack of relationship between size of bank and the cost ratio. It is hoped that future research will have at its disposal more detailed information than is now available, that will enable more conclusive answers with respect to the important issue of economies of scale in the Lebanese banking sector. More research is also needed to examine the effect of size and type of bank on individual cost components and on the prices paid for various bank inputs and outputs with respect to profitability; further research is recommended to examine the effect of size and type of bank on the prices charged for various banking services.

Finally, this study dealt with some aspect of commercial bank performance. It is hoped that it will stimulate further research in order to arrive at a more complete picture of the relatioship between structure and performance in general and between size and performance in particular.

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