

AMERICAN UNIVERSITY OF BEIRUT

CAPITAL RESTRUCTURING OF MEDIUM SIZED BANK

by
ARAZ HAROUTIOUN LADAYAN

A project
submitted in partial fulfillment of the requirements
for the degree of Master of Business Administration
to the Suliman S. Olayan School of Business
at the American University of Beirut

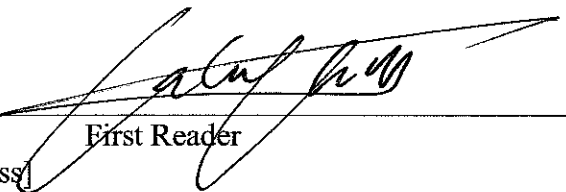
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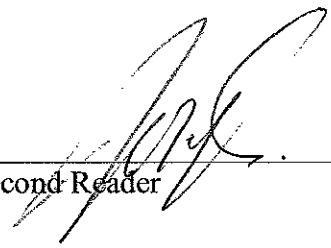
CAPITAL RESTRUCTURING OF A MEDIUM SIZED BANK

by
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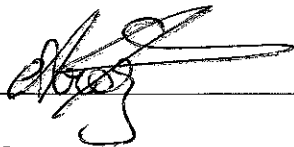
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AN ABSTRACT OF THE PROJECT OF

Araz Haroutioun Ladayan for Suliman S. Olayan School of Business
Major: Master's in Business Administration

Title: Capital Restructuring of Medium Sized Bank (The name of which remained confidential)

The Lebanese Banking system has always complied with Basel requirements by enforcement from the Central Bank of Lebanon. Basel guidelines have evolved over the years in response to the market evolution with the objective to stabilize the global banking system, the last and not least are Basel III which was the result of the 2008 crises. Basel II has evolved beyond capitalization and solvency to emphasize on liquidity, balance between sources & application of fund to secure stable funding and maintain an acceptable leverage, in addition to governance & risk management. Lebanese banks are in the process of complying with Basel III Capital Adequacy Requirements' implementation timetable set by the Lebanese Central Bank's Intermediate Circular number 282. In fact, this implementation which already started on December 31, 2012 and will be concluded on December 31, 2015 makes Lebanon one of the pioneering countries in complying with Basel III pillars.

As part of making this implementation as smooth and as effective as possible, determining the optimal capital structure that produces the highest bank value is crucial at this point of time. Hence, the need to call for capital increase that would trigger a proper valuation for a point of entry to new investors to the market, to invest in Lebanese

Banks, in general, and of medium size Banks similar to the size of the bank under study, in particular, before proposing an optimal equity structure that not only meets the regulatory capital requirements of Basel III but also maximizes the shareholders' value and secure proper funding of capital charge That goes along investment in infrastructure, products to warrant solid foundation for a steady growth.

It is true that valuation experts have classified valuing banks as being always difficult given the fact that estimating cash flows are not as easy as in other industries since capital expenditures and working capital are not clearly defined within the normal business operations of banks. Inherently, the regulatory frameworks governing the capitalization of banks and slicing equity funding by different categories ranging between common to Tier I and Tier II capital increase this difficulty; also, the Basel III requirements will make this task more thorough and challenging.

CONTENTS

ACKNOWLEDGEMENTS.....	v
ABSTRACT.....	vi
LIST OF ILLUSTRATIONS.....	xii
LIST OF TABLES.....	xiii

Chapter

I. INTRODUCTION.....	1
II. THE BANKING INDUSTRY:GLOBAL CHALLENGES	4
III. BANK PROFILE.....	5
IV. FINANCIAL ANALYSIS.....	6
A. Financial Template.....	6
B. Customer Deposits.....	7
C. Liquidity.....	9
D. Loan.....	10
E. Loan Portfolio.....	11
F. Credit Quality.....	11
G. Capital Adequacy and Solvency.....	13
H. Profitability and Efficiency.....	15

V. THE LEBANESE BANKING SECTOR.....	19
VI. RIAK PARAMETERES.....	21
A. Growth	21
1. GDP Growth rate.....	21
2. Convergence to Alpha Banks.....	24
B. Risk free rate.....	24
C. Risk Premium.....	25
D. Country Risk Premium.....	25
E. Liquidity Risk Premium	26
F. Beta.....	26
G. Cost of Equity	26
VII PROJECTIONS FOR YEAR-END.....	28
A. Major Business Operations.....	28
B. Non-Recurring Items.....	29
C. Estimated Future Cash Flows.....	29
VII DISCOUNTED CASH FLOWS.....	31
IX. COMPARABLE BANKS.....	33
X. ADJUSTMENT OF MULTIPLES.....	36
XI. RELATIVE VALUATION.....	37
XI. BOOK VALUES.....	38

XIII.	COMPARABLE TRASACTIONS.....	39
XIV.	AVERAGE OF THE MOST PROBABLE MODELS....	40
XV.	SENSITIVITY ANALYSIS.....	41
XVI.	BASEL III REQUIREMENTS.....	43
XVII.	CAPITAL MARKET AUTHORITY.....	49
XVIII.	CHALLENGES IN EVALUATING BANKS.....	51
	 BIBLIOGRAPHY.....	 52

ILLUSTRATIONS

Figure

I.	CUSTOMER DEPOSITS.....	7
II.	GROWTH.....	8
III.	DEPOSITS/ASSETS.....	9
IV.	LOANS/CUSTOMER DEPOSITS.....	10
V.	NET LOANS.....	11
VI.	CREDIT QUALITY.....	12
VIII.	NPL/Provisions.....	13
VII	NPL/LOANS.....	13
IX.	CAPITAL ADEQUACY RATIOS.....	15
X	EQUITY/NET LOANS.....	15
XI.	ROAA&ROAE.....	16
XII.	RETURN ON COMMON EQUITY.....	16
XIII.	NET INTEREST MARGIN.....	17
XIV.	INTEREST MARGIN & SPREAD.....	18
XV.	PUBLIC DEFICIT/GDP.....	20
XVI.	LEBANON GDP GROWTH	21
XVII.	REAL GDP GROWTH	22

XVIII.	COMMON SHARES DIVIDENDS.....	31
XIX.	COMPARABLES GRAPHS.....	35

TABLES

Tables

I.	FINANCIAL TEMPLATE.....	6
II.	LEBANON MAIN INDICATORS.....	23
III.	GROWTH RATES OF BANKING AGGREGATES.....	24
IV.	PROJECTIONS AT YEAR-END.....	29
V.	FCFE MODEL.....	32
VI.	COMPARABLES.....	34
VII.	EQUITY MULTIPLES.....	37
VIII.	AVERAGE OF MODELS.....	40
IX.	GROWTH SENSITIVITY.....	41
X.	COST OF EQUITY SENSITIVITY.....	42
XI.	BASEL III TIMETABLE.....	44
XII.	CAPITAL REFORM.....	46
XIII.	CURRENT CAPITAL RATIOS.....	47

XIV. CAPITAL RATIOS AFTER RESTRUCTURING.....	48
XIV. FORECASTED CAPITAL RATIOS.....	48

CHAPTER I

INTRODUCTION

The Lebanese Banking system has always complied with Basel requirements by enforcement from the Central Bank of Lebanon. Basel guidelines have evolved over the years in response to the market evolution with the objective to stabilize the global banking system, the last and not least are Basel III which was the result of the 2008 crises. Basel II has evolved beyond capitalization and solvency to emphasize on liquidity, balance between sources & application of fund to secure stable funding and maintain an acceptable leverage, in addition to governance & risk management. Lebanese banks are in the process of complying with Basel III Capital Adequacy Requirements' implementation timetable set by the Lebanese Central Bank's Intermediate Circular number 282. In fact, this implementation which already started on December 31, 2012 and will be concluded on December 31, 2015 makes Lebanon one of the pioneering countries in complying with Basel III pillars.

As part of making this implementation as smooth and as effective as possible, determining the optimal capital structure that produces the highest bank value is crucial at this point of time. Hence, the need to call for capital increase that would trigger a proper valuation for a point of entry to new investors to the market, to invest in Lebanese Banks, in general, and of medium size Banks similar to the size of the bank

under study, in particular, before proposing an optimal equity structure that not only meets the regulatory capital requirements of Basel III but also maximizes the shareholders' value and secure proper funding of capital charge. That goes along investment in infrastructure, products to warrant solid foundation for a steady growth.

It is true that valuation experts have classified valuing banks as being always difficult given the fact that estimating cash flows are not as easy as in other industries since capital expenditures and working capital are not clearly defined within the normal business operations of banks. Inherently, the regulatory frameworks governing the capitalization of banks and slicing equity funding by different categories ranging between common to Tier I and Tier II capital increase this difficulty; also, the Basel III requirements will make this task more thorough and challenging.

The structure of the project follows the research objectives. First, the global banking challenges are discussed and then the Lebanese banking industry is analyzed. Next, a detailed financial analysis for the bank under study is conducted to examine its liquidity, deposits, loan portfolio, capital structure, profitability, and efficiency. After scanning the current BASEL II ratios, suggestions for capital reform are made for the bank in order to meet the BASEL II requirements. Finally, the project summarizes the decisions issued by the Capital Market Authority.

A. Research Objective(s)

The banking industry: Global Challenges

Financial and strategic analysis of the Lebanese banking industry (Trends and challenges)

Financial analysis of the studied bank

Valuation of the medium sized bank which is under study and operating in Lebanon.

The requirements of Basel III which will be implemented in order to meet the deadline set by Basel Committee on Banking Supervision.

The legislations set by the Capital Market Authority (CMA) which is similar to U.S. Securities and Exchange Commission and has its autonomy in settings its laws and policies.

B. Research Questions(s)

In the midst of the changing regulations imposed on banks, the tighter capital requirements mandated by the Central Bank of Lebanon BDL, and the recent legislations set by the Capital Market Authority (CMA), what are the capital reforms that the bank must follow?

CHAPTER II

THE BANKING INDUSTRY: GLOBAL CHALLENGES

Industry strategic, regulatory, and operational efficiency challenges are the major encounters faced by the banking industry today. “The constant evolution of local and international regulations is a major driving force in the banking and securities industry” (Deloitte, pars.2-3). For instance the implementation of Basel III, oversight policies and bodies has many implications on the banking operations by turning the emphasis on the capital efficiency.

With financial markets continuously evolving, the banking institutions face not only the challenge of complying with the regulatory reforms, but also optimizing the profits, increasing the growth, and restructuring the operations model (Deloitte, par.1).

CHAPTER III

BANK PROFILE

XYZ is a commercial bank, one of Alpha group Banks operating in Lebanon for more than 25 years, run by a young and dynamic management. With its original products serving a wide customer base, innovative loans, unique engaging and communicating atmosphere at the workplace, the bank has been growing, during the last years, on a larger scale than any other Lebanese bank.

CHAPTER IV

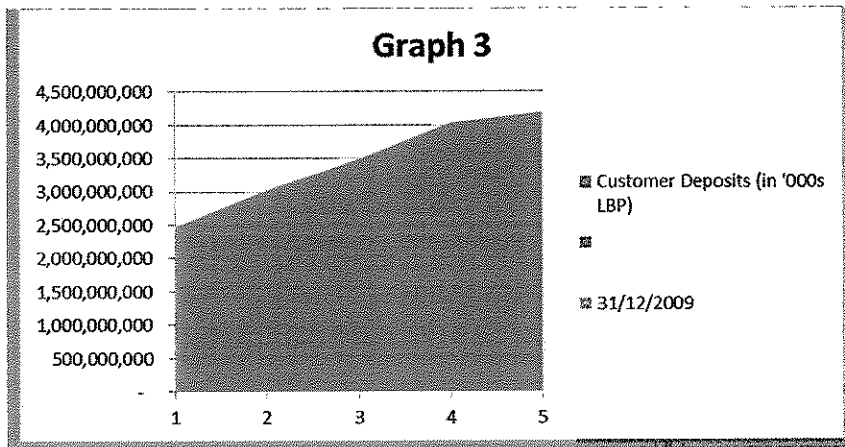
FINANCIAL ANALYSIS

A. Financial Template

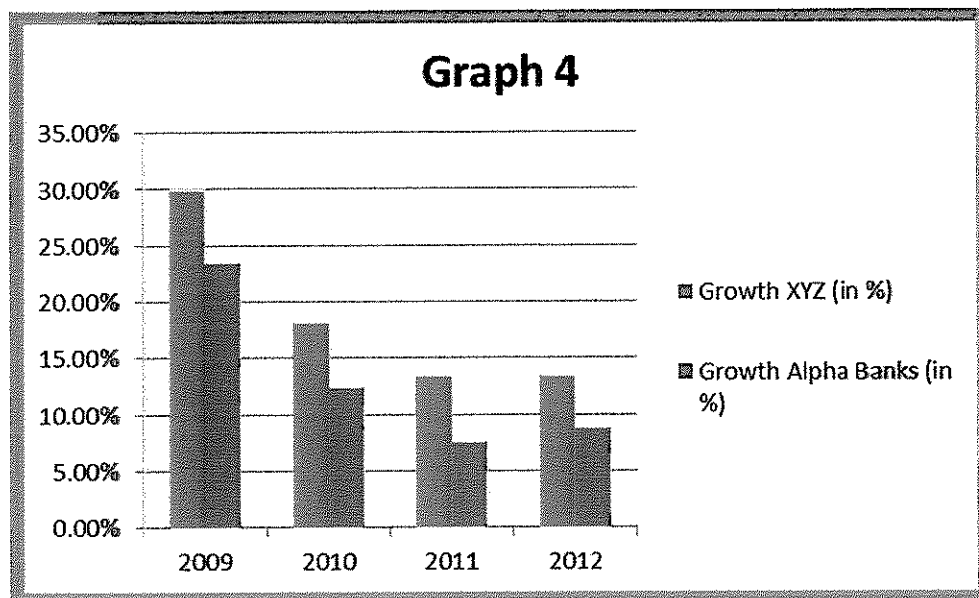
Year	2009	2010	2011	2012	Forecasted 2013
Earnings summary					
Net interest income (in '000s LBP)	39,000,000	62,200,000	66,300,000	81,000,000	79,000,000
Growth (%)		37.30%	6.18%	18.15%	-2.53%
Net fees and commission income (in '000s LBP)	6,200,000	4,300,000	3,200,000	7,900,000	11,700,000
Growth (%)		-44.19%	-34.38%	59.49%	32.48%
Net Profit (in '000s LBP)	14,700,000	24,600,000	25,000,000	29,000,000	36,000,000
Profit margin (%)	8.09%	11.26%	10.59%	10.59%	12.93%
Net profit Growth (%)		12.93%	50.60%	16.00%	24.14%
EPS	1,278.00	1,870.00	1,900.00	1,870.00	2,330.00
Key Performance indicators					
	31/12/2009	31/12/2010	31/12/2011	31/12/2012	30/6/2013
Yield on Assets (%)	5.66%	5.83%	5.57%	5.52%	
Cost of Liabilities (%)	4.62%	4.29%	4.07%	3.85%	
Spread (%)	1.04%	1.54%	1.51%	1.67%	
Customer Deposits (in '000s LBP)	2,480,000,000	3,030,000,000	3,500,000,000	4,040,000,000	4,200,000,000
Growth (%)		18.15%	13.43%	13.37%	3.81%
Net Loans/Customer deposits	27.42%	31.35%	33.43%	32.18%	31.67%
Deposits/Assets ratio	76.10%	79.35%	82.35%	79.29%	80.20%
Net Loans (in '000s LBP)	680,000,000	950,000,000	1,170,000,000	1,300,000,000	1,330,000,000
Growth (%)		28.42%	18.80%	10.00%	2.26%
Book Value per share	222,000,000	270,000,000	250,000,000	290,000,000	300,000,000
		17.78%	-8.00%	13.79%	3.33%
Asset Quality					
Non-performing Loans	38,000,000	39,000,000	35,000,000	41,000,000	43,000,000
Non-performing Loans/ Loans (%)	5.62%	4.09%	2.98%	3.13%	3.24%
Provisions	19,000,000	28,000,000	26,000,000	29,000,000	30,000,000
Provisions/Loans (%)	2.81%	2.93%	2.21%	2.21%	2.26%
Profitability					
	2009	2010	2011	2012	Forecasted 2013
ROA (%)	0.45%	0.64%	0.58%	0.58%	0.67%
ROE (%)	6.01%	8.44%	9.14%	9.45%	10.62%
Return on common shareholders' equity	6.19%	8.80%	9.22%	9.54%	10.79%
	31/12/2009	31/12/2010	31/12/2011	31/12/2012	30/6/2013
Leverage [(Assets+OBS)/Equity]	13.65	13.50	16.16	16.65	16.35
Gearing [Deposits/Equity]	10.17	10.41	12.96	12.96	12.83
Dividends	300	400	400	400	
Dividends payout ratio	23.47%	21.39%	21.05%	21.39%	

B. Customer Deposits:

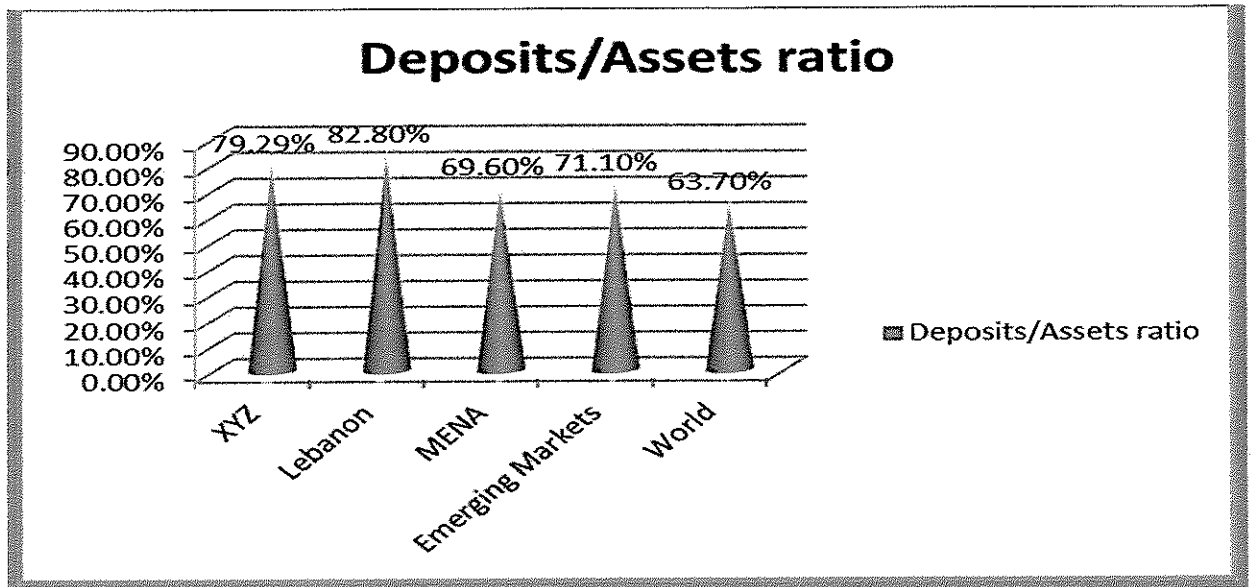
Customer deposits have been growing with an average of 15% over the last 4 – 5 years, excluding June 2013 since the growth over the 6 months period ending June 2013 cannot be compared with the 12 months growth deposits. In fact, XYZ's deposits have been increasing from over LBP 2 Billion in 2009 to over LBP 4 Billion as at 30/6/2013 with a total cumulative growth of 69%, as shown under graph 1.



When comparing the growth of customer's deposits over the four years (2009-2012), it was noted that the growth of XYZ is above alpha banks' deposits growth within an average of 5%, as shown under graph 4.

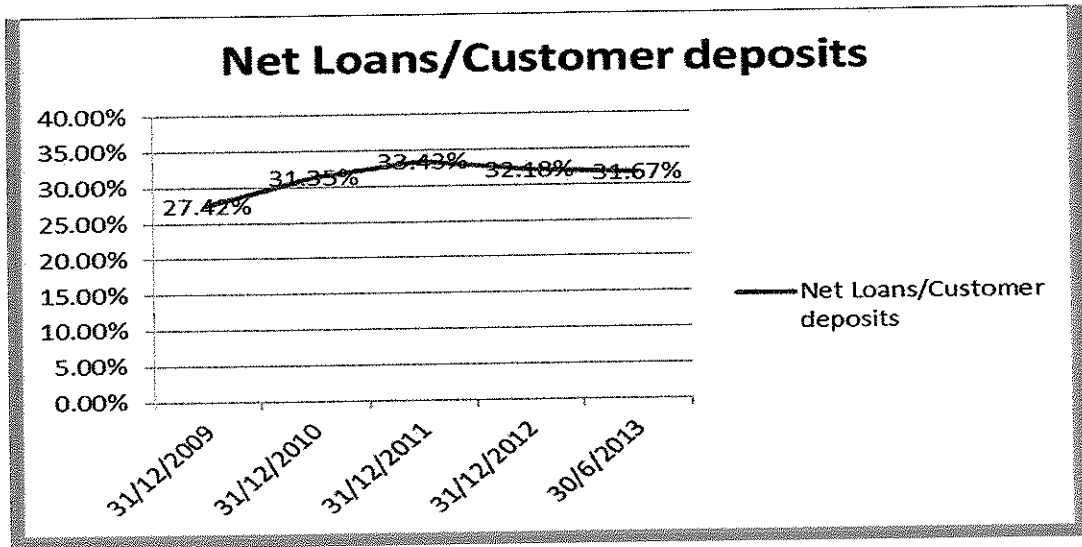


The analysis of Lebanese banks suggests that the small banks are the most dollarized in the customer deposits and the least dollarized in the customer loans (Bank Audi 3). The dollarization ratios of XYZ represent 51.40% in terms of deposits and 60,70% in terms of loans while that of Alpha banks are 68.8% and 82.8%, respectively. Moreover, the total customer deposits over total assets of XYZ is, as shown in the graph below, very close to the average ratio deposits over total assets in Lebanon. The latter having higher ratios when compared to MENA's, emerging markets, and world's ratios making the Lebanese banks, in general, and XYZ, in particular rely heavily on customer deposits which can be withdrawn without any prior notice (Bank Audi 2).



C. Liquidity:

Lebanese banks maintain a relative high liquidity buffer which is based on the Central Bank's reserve requirements and the depositors' based funding for the purpose of establishing a barrier for the absorption of any possible shock (Bank Audi 4). A liquidity ratio to be studied is the customer deposits over the availability of funds. Whereas the Lebanese banks maintain one third (33.335) of their deposits covered by term placements at central banks and other non-resident financial institutions, XYZ's deposits are covered by over 35% % from the total placements and current accounts at the Central Bank and financial institutions as at 31/12/2012 and 30/6/2013, respectively. Hence, XYZ maintains relatively a liquidity ratio within the benchmark of its peer group.

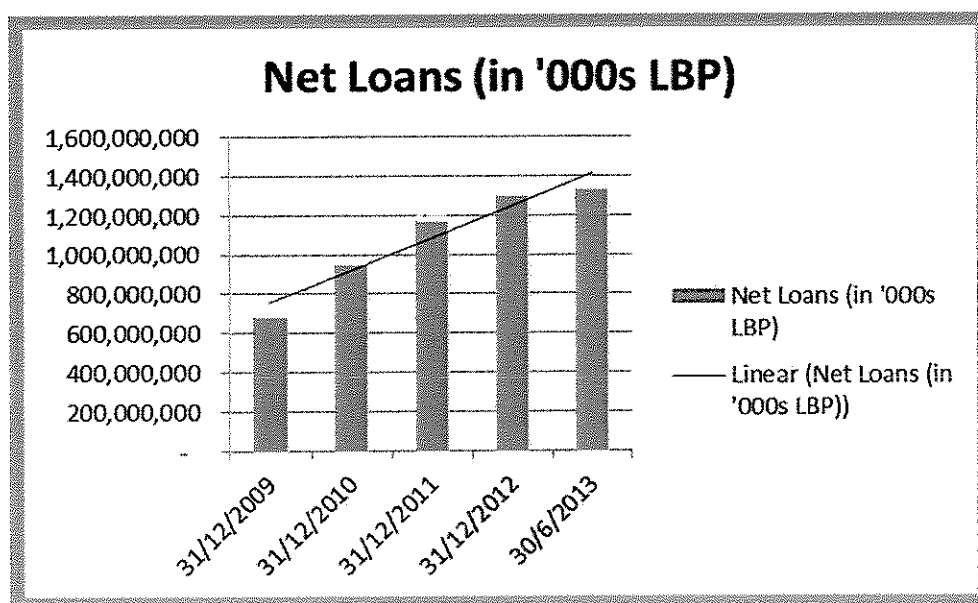


D. Loans:

The average ratio of loans over deposits on the Lebanese banking system, as shown by the figures as at 31 December 2013, is around 34.8% reaching as high as USD 45 Billion of loan book against USD 130 Billion of customer deposits (Association of Banks in Lebanon, Research & Statistics Department 4). Although XYZ’s loans to deposits ratio is slightly below the average as it has been diminishing with time. Historically, this ratio, as shown under the graph below, has been on average 31%. This growth in the banks’ lending to the economy was fueled partly by the special lending program funded by compulsory reserves and subsidized loans funded by the treasury. Circular 331 of Central Bank of Lebanon sets the requirements needed in order for the CBL to finance eco-friendly projects, housing loans, and microloans which represent exemptions on the customer deposits’ compulsory reserves.

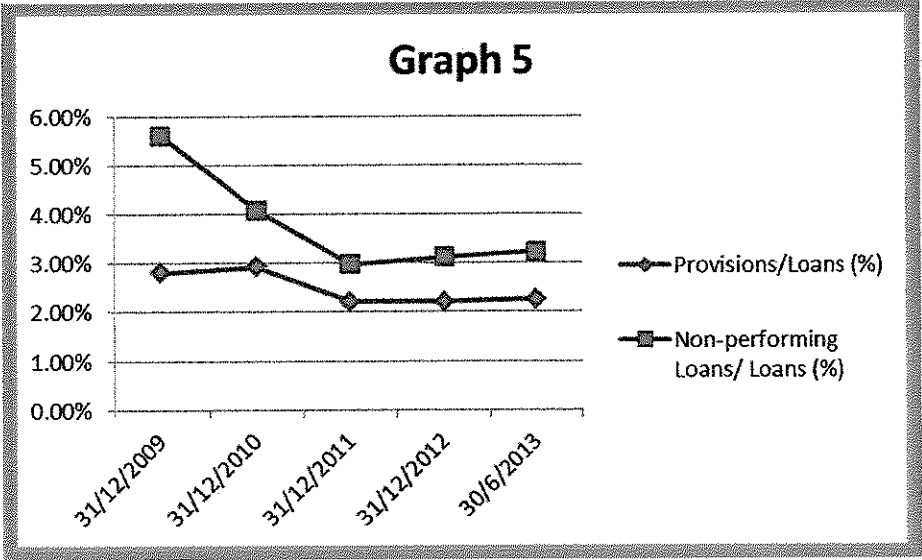
E. Loan portfolio:

The loan portfolio of XYZ has been growing following an inconsistent pattern. The graph below shows the increase of loans for the prior five consecutive years. Note that majority of the loans outstanding as at December 31, 2012 are given within Lebanon and less than 5% within Middle East and Africa. Hence, the loan portfolio is not diversified based on geographical location even though it is well diversified within the mix of borrower. Over 50% of the borrowers as at December 31, 2012 are corporate customers, and balance is split between personal loans, and mortgages, mainly housing.

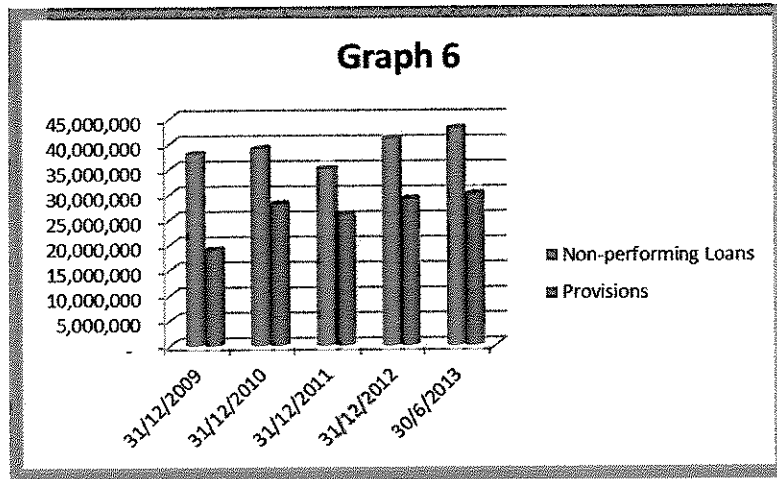


F. Credit quality:

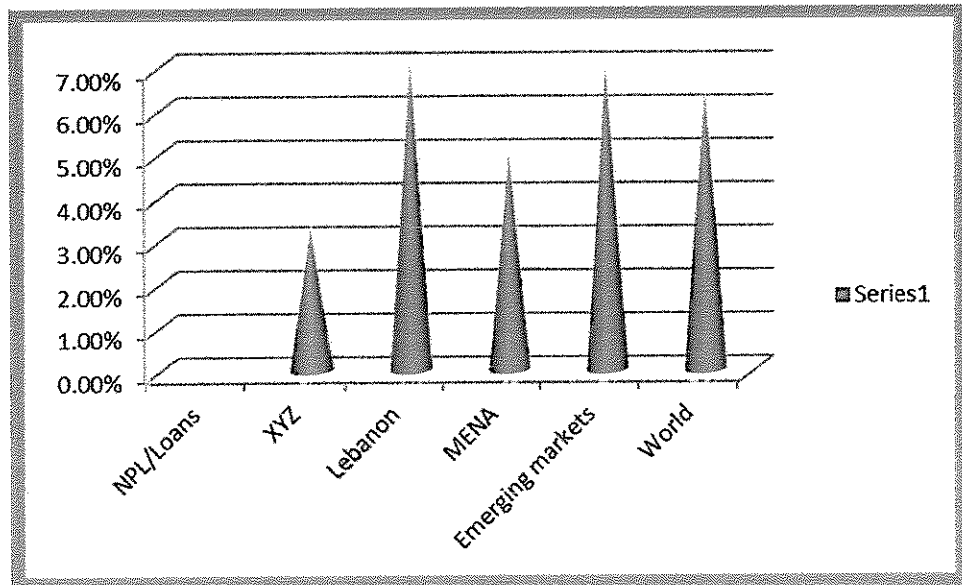
As shown in the graph 5, the non-performing loans over loans ratio has been decreasing from 6% in 2009 to the level of 3 in June 2013. The same is the case with provisions over loans ratio that is decreasing on a lower scale from 3 % in 2009 to 2% in June of 2013.



However, the main reason is the substantial increase in the total loans which grew from 2009 till 2013 by 97%. No major improvements were noted, in graph 6. Even though a slight decrease occurred during 2011, non-performing loans and provisions were stable throughout time.



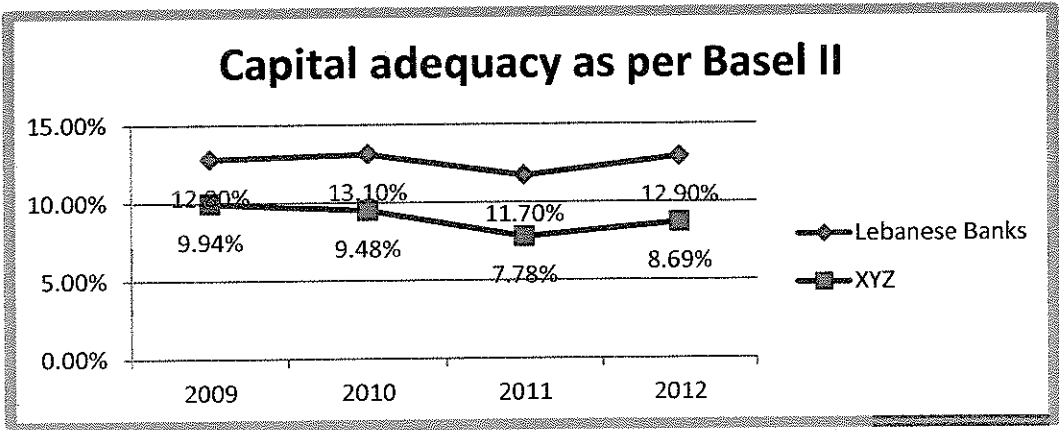
Regardless of the above mentioned facts, XYZ bank seems to maintain a good credit quality of loans as its NPL'Loans is far below that of Lebanon, MENA, emerging markets, and the world in general (Bank Audi 7).



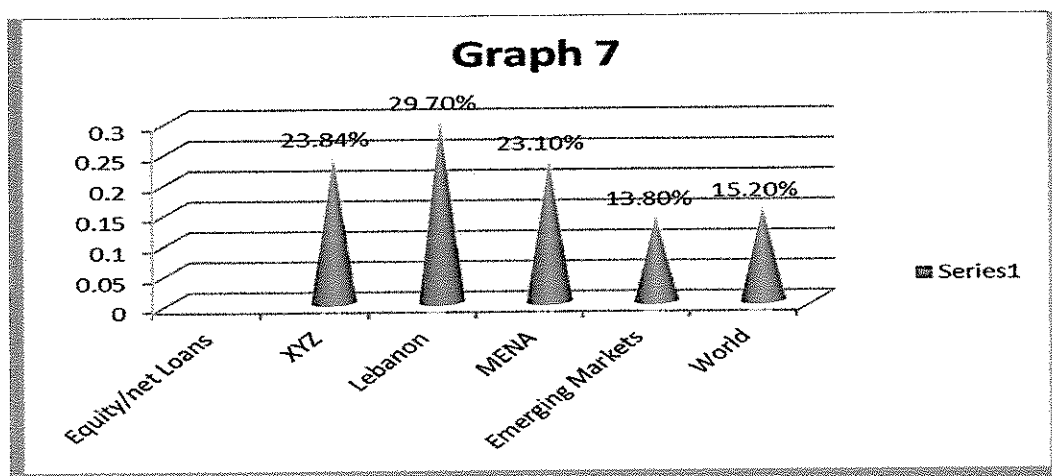
G. Capital Adequacy and solvency:

While analysis show that “smaller banks are better capitalized than larger banks relative to the risk weighted size of their activity” (Bank Audi 8), XYZ bank’s Basel II capital adequacy ratio as at December 31, 2012 is 9% which is less than Alpha banks’ ratio of 12.5% and less than the Lebanese banks’ consolidated capital adequacy ratio of 12.91%. In addition, in 2012, Alpha banks’ asset to equity ratio was 8.6%, as per the report issued by bank Audi, while that of XYZ was 6 % even though the latter slightly increased as at June 30, 2013 to over 6% (8). Note that the bank improved its Tier 2 capital by the issuance of preferred shares during September 2013.

Furthermore, the ratio of equity to total loans for XYZ is significantly lower than that of Lebanon 29.7%. The graph 7 shows that XYZ’s equity to loans ratio is equal to that of the MENA region whereas the ratios of the emerging markets and the world remain substantially low since the Lebanese Central Bank issued the circular number 44 requiring the early adoption of capital conversation buffer of 2.5% by 2015 while the Basel Committee requests that before January 1, 2019 (216).



As shown above, the capital adequacy requirement as per Basel II was decreasing except for an increase during 2012 when the bank issued additional common shares. However, XYZ's capital adequacy ratios remain far below Lebanese banks' average ratios. Nevertheless, refer to the analysis of the improvement of the capital adequacy and solvency under the Basel III requirements section.

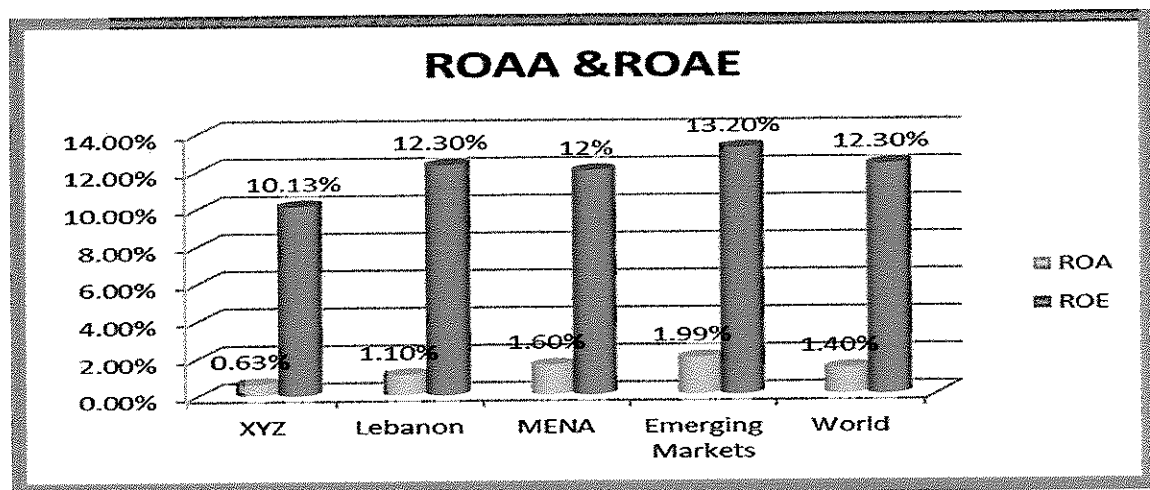


H. Profitability and Efficiency:

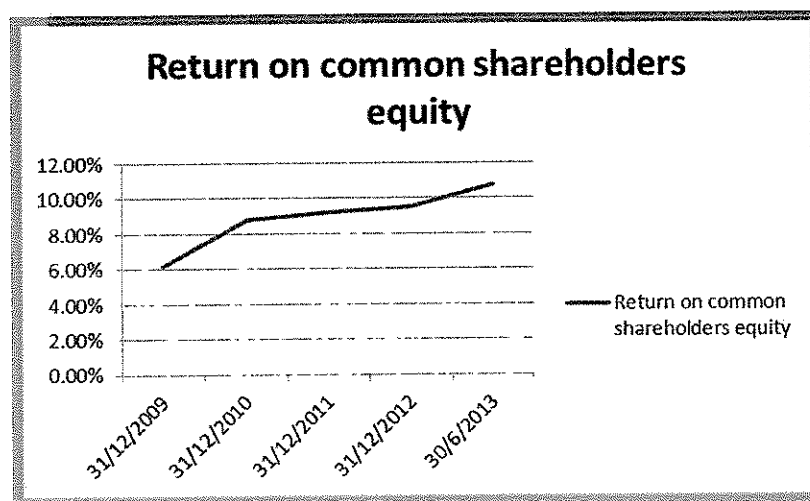
Regardless of the reduced global interest rates, narrowed banking margins, increased provisions due to uncertainties in the region, and decelerated domestic economic growth; Lebanese banks recorded a growth of 7.4% in net profits during the year 2012 (Bank Audi 8).

Even though the banking operations became very tough worldwide, Lebanese ROAA and ROAE are competent with the regional and international ratios, as shown in

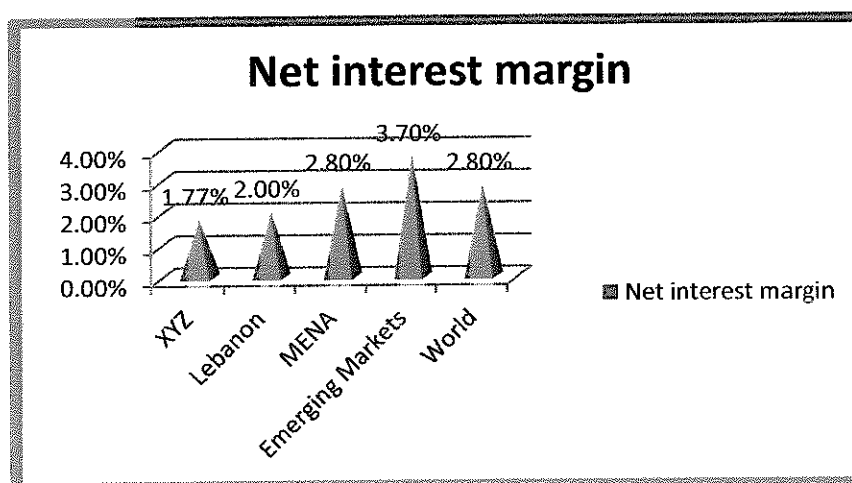
the graph below. However, XYZ's return on average assets and on average equity remained relatively low. Note that the expected ROAE for the year 2013 shows improvement of ROAE which might reach 11.67%.



In addition, the return after the distribution of preferred shares' dividends on common shareholders' equity as shown in the graph below increased from 6.19% in 2011 to 10.79% in 2013.

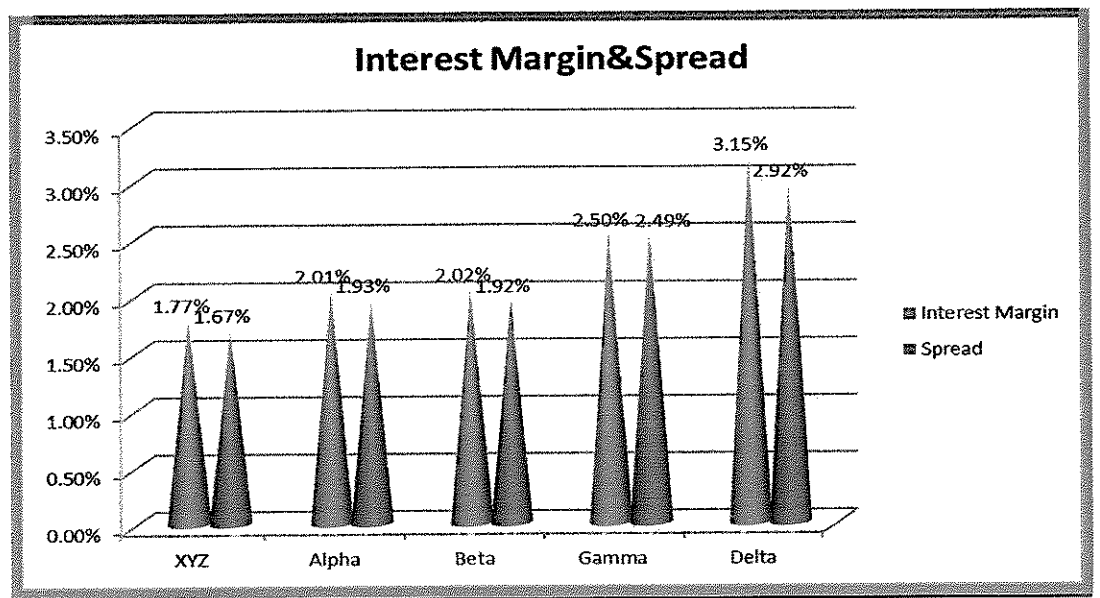


The reason for low ROAAE and ROAA was examined by monitoring the spread and interest margin of XYZ. As shown in the graph below and despite the internationally low interest rates, XYZ's interest margin (1.77%) and spread (1.67%) are slightly lower than that of Alpha banks (2.01%) and (1.93%) which have lower interest margin than Beta, Gamma, and Delta. The latter have higher interest margin and spread as these ratios are inversely related to the size of the bank (Bank Audi 10). However, when comparing the interest margin of XYZ to the average domestic, regional, and international ratios; it is noted that the interest margin is not the main factor behind the relatively low profitability of XYZ.



Subsequently, the efficiency of the bank was examined. Note that the average cost to assets ratio of Lebanese banks, as per the research conducted by Bank Audi is 1.45% while that of XYZ was slightly below that in the percentage of 1.32% in 2012 (9). However, the cost to income and operating expense to average assets for XYZ is

64% and 3.95% higher than that of average Lebanese banks 50,10% (Alpha Banks' 47.90%) and 1.52%, respectively (Bank Audi 9). Therefore, XYZ is not as cost efficient as the other banks and does not enjoy a high level of economies of scale, as done by larger banks.



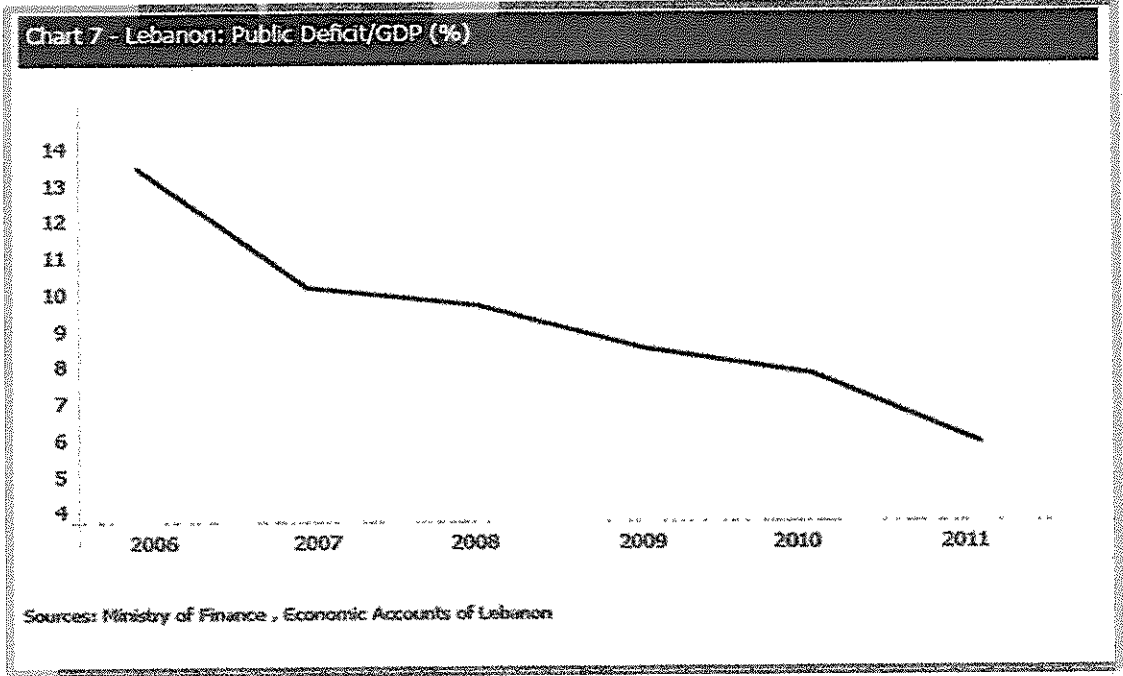
CHAPTER V

THE LEBANESE BANKING SECTOR

The Lebanese economy recognized by its political and regional instability, conflicts, and crises has been able to maintain a relative stability and constant growth despite the global financial downturn. The main pillars of this economy remain the Lebanese financial structure and banking system (Association of Banks in Lebanon 2). In fact, the banking system constitutes around 6.2% of the Lebanese economy (Association of Banks in Lebanon 10). Note that the banking sector was able to insulate itself by relying on the customer deposits which constitute 84% of the banks' total assets rather than relying on the financial and credit market, as it is done in other countries. Another way used by Lebanese banks to safeguard itself from the various shocks, as explained by the study "The Lebanese Banking Sector: Pillar of Lebanon's stability" issued by Association of Banks in Lebanon, is the high liquidity and dollarization of its statement of financial position without the need to rely on the "lender of the last resort in foreign currencies" (16).

When talking about the Lebanese economy, it is a must to mention Lebanon's public debt which resulted from the reconstruction and infrastructure costs after the war in 1991. With the growth of the GDP with time, the gross debt to GDP ratio was reduced from 179.9% in 2006 to 134.8% in 2011. Hence, the deficit to GDP ratio was reduced from 13.5% to 5.9% in 2011, as shown in the graph below (Association of

Banks in Lebanon 23). The latest data issued by *Trading Economics* show that this government debt to GDP ratio in 2013 was 145.9% (*Trading Economics Home page*).



CHAPTER VI

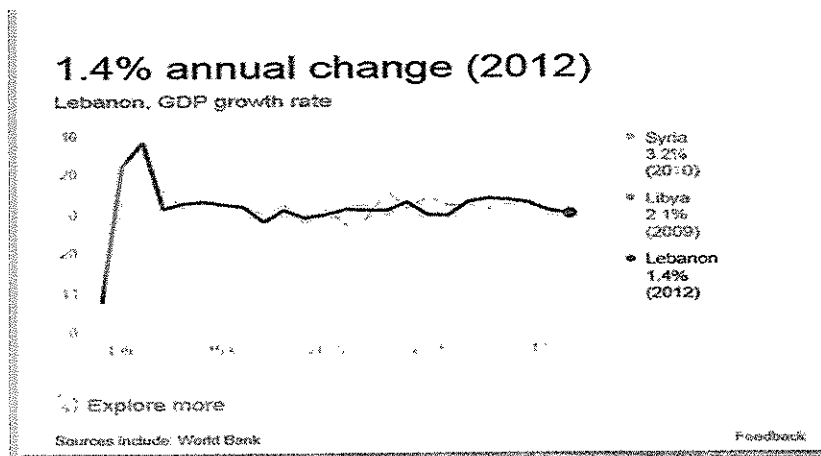
RISK PARAMETERS

A. Growth

In our valuation, two major assumptions were used to estimate the growth of XYZ bank for the coming years.

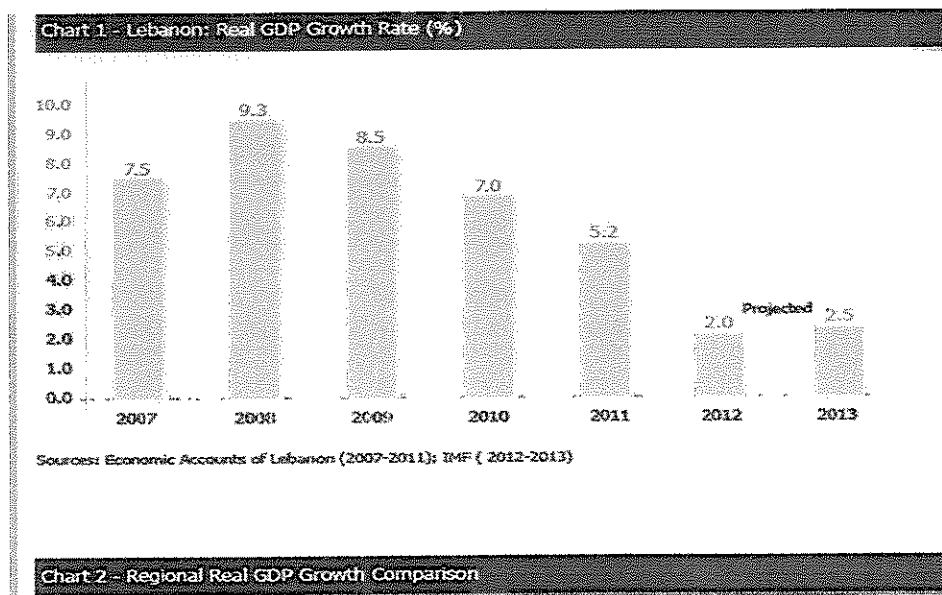
1. First Scenario: GDP Growth rate

First scenario was taken to have growth rate following Lebanese GDP growth since the banking sector is the main pillar driving the Lebanese economy. The below is the graph showing the annual change in GDP growth rate as estimated in 2012 and as extracted from the World Bank is around 1.4%.



Between 2002 and 2012, the real output witnessed a growth rate of 5.1% in Lebanon. Furthermore, between 2007 and 2010, reconstruction spending after July war in 2006, the increase of oil revenue in the region, and the favorable political climate

from presidential election, Doha agreement, and the restoration of the Lebanese registrations encouraged an exceptional economic growth of 8.25%. More recently, the political uncertainty had caused a deceleration of the economic growth to 3.6% . Moreover, the growth rate for the coming years till 2015, as forecasted in mid 2012, was assumed to be around 3.5% depending on the “regional stability and the domestic operating environment” (Association of Banks in Lebanon 16)



The Institute of International Finance (IIF) declared, in a report published by SGBL, that Lebanon’s economic performance is dependent on the ending of the Syrian’s conflicts and the regional political issues “with downside risk”. In fact, the Syrian civil war had already caused around USD 9.7 Billion losses between 2011 and 2013, besides, the cost of the hosting 1 Million Syrian refugees. All of these conflicts

resulted in a loss of annual economic output. Despite the risk surrounding Lebanon, in specific, and the region, in general, during the beginning of 2014, the optimism of internal political security along with the Syrian peace talks in Geneva is sending positive signals which already increased the trading activities of the Beirut Stock Exchange by 25% and the market index by 5.2% (SGBL 1).

From one hand, the formation of unity government, improvement of security control, the construction activity, tourist arrival, and Foreign Direct investment might increase the GDP growth rate by 5 % in 2014, even 6% in 2015. From another hand, if the political situation and bombings in the country persists, Debt to GDP ratio will increase to 150% in 2014 (144.2% estimated in 2013), tourist arrivals will fall by 3% in 2014 and 2015, fiscal deficit to GDP will increase to 11.9%; hence, growth will remain below 1% of GDP (SGBL 1).

Lebanon: main indicators, 2014f

	Scenarios	
	A	B
Real GDP Growth (%)	1.0	5.0
Private Investment (% GDP)	20.9	21.7
Tourist Arrivals Growth (%)	-3.0	16.0
Total Deposit Growth (%)	7.0	9.0
Fiscal Deficit (% GDP)	-11.9	-9.1
Primary Balance (% GDP)	-3.1	-0.2
Government Debt (% GDP)	150.2	143.5

Source: IIF

2. Second Scenario: Convergence to Alpha Banks

Although XYZ Bank have high historical growth rate, the second scenario uses the growth rate to be that of the Alpha Banks assuming that Lebanese banks will follow the growth rate of the leader banks in Lebanon. During 2012, the growth rate of Alpha banks in assets, customer deposits, and net profits was respectively 8.4%, 8.8%, and 7.4% as shown in the graph below (Bank Audi 2). Hence, an average growth rate of 8% is assumed to be a conservative growth rate specially that, during the first nine months of 2013, loans increased by 9.84%, ROAE by 12.08% even though assets' increase was 5.35 and customer deposits by 5.01%.

GROWTH RATES OF BANKING AGGREGATES							
	2007	2008	2009	2010	2011	2012	Var 12/11
Assets	15.0%	12.8%	21.7%	11.9%	7.7%	8.4%	0.7%
Loans to customers	30.7%	24.9%	15.6%	25.2%	13.6%	11.7%	-1.9%
Customer deposits	16.0%	13.9%	23.4%	12.4%	7.5%	8.8%	1.3%
Shareholders' equity	11.5%	14.7%	24.0%	15.9%	0.0%	12.9%	12.9%
Annual L/C openings	42.2%	55.2%	-21.4%	31.2%	-8.5%	-4.6%	3.9%
Net profits for the year	27.2%	26.6%	17.4%	28.6%	-5.1%	7.4%	12.5%

Source: Bankdata Financial Services wll.

B. Risk free rate:

The Lebanese government has only one issuance in LBP which matures in 2017 and considering the fact that none of the Lebanese governments' issuances are non-zero coupon; the strips of US bonds maturing in 10 years (November 15, 2024)

were selected with a yield of 2.94%, as extracted from *Damodaran* (Damodaran Home Page). In order to make the latter comparable to a YTM of a Lebanese government bond in LBP, the 10 year- CDS of Lebanon based on Moody's classification of local currency B1 in the rate of 4.38% was added along with the addition of the difference between Lebanon's (6.4%), extracted from *Indexmundi* (IndexMundi Home page) and USD inflation rates (1.5%), extracted from *Inflationeu* (Inflationeu home page) , as shown in the below formula to reach a YTM of Lebanon n LBP of 12.22% (Damodaran Home Page). $YTM(\text{Lebanon in LBP}) = YTM\text{ US (strips)} + DS + \text{Inflation Lebanon} - \text{Inflation US}$. Next, the risk-free rate being the government bond's rate without a default risk, the DS of Lebanon was deducted from the YTM, already computed, to reach a risk-free rate of 7.84%.

C. Risk Premium:

The risk premium was taken to be the implied equity risk premium on the Treasury bonds in order not to rely on the historical risk premium of the market. In fact, the implied equity risk premium was downloaded from Damodaran who uses S&P 500 and, for the year 2013, the IERP is 4.96% in U.S.A. (Damodaran Home Page).

D. Country Risk Premium:

In order to avoid the risk of understatement that the CRP taken to be the default spread provides, since the latter measures the risk related to bonds rather than to

countries' risk, the CRP was assumed to be the difference between DS of Lebanon and USA times the relative standards (1.5). Hence, the final CRP taken is 5.88%.

E. Liquidity Risk Premium:

The bank under valuation is a privately held bank the shares of which are not traded in the Beirut Stock exchange. Hence, the shareholders of the bank will be facing a liquidity risk when compared to the shares of a bank traded in the local stock exchange. Given the fact that the shares of a closely held firm are not as liquid as the shares of a publicly traded company, investors will be requesting a discount for lack of marketability (Robert P. Schweihs 53). In our valuation process, the liquidity risk premium was taken to be 3%, as suggested by the Private Equity Performance and Liquidity Risk published in Journal of Finance by Fransesco Franzoni, Eric Nowak, Ludovic Phalippou in December 2012.

F. Beta:

Beta used was the unlevered beta of 0.31 for regional banks operating in the emerging markets, as extracted from Damodaran's website. (Damodaran Home Page).

G. Cost of Equity:

While firms are valued by discounting the expected future cash flows over the cost of capital. Banks and financial institutions are valued by discounting the cash flows by the cost of equity (Damodaran 584-600). Hence, The cost of equity is given by the

CAPM formula to be Risk-free rate+ Beta* Risk Premium +CRP+ Liquidity Risk

Premium

CAPM= 7.84%+ 0.31*(4.96%)+ 5.88%+ 3% to reach a total cost of equity

18.24%.

CHAPTER VII

PROJECTIONS FOR YEAR-END

A. Major business operations:

While non-operating expenses were multiplied by two in order to form the P&L statement for the year ended 2013, operating income and expenses were treated differently. Interest earning assets were computed at the end of December 31, 2012 by adding the balances of term placements at the Central Bank, deposits with banks and financial institutions, loans to banks, loans and advances to customers, financial assets at amortized cost and FVTPL. The interest income from FVTPL portfolio embedded with the FVTPL operations note line of the P&L was added to the interest income in order to compute the total interest income for the year 2012. The latter was divided by the total interest earning assets in order to have the interest rate on interest earning assets. From another hand, the interest expense was divided by the interest bearing liabilities formed of deposits from banks and financial institutions and customer deposits in order to have the interest rate on interest bearing liabilities. Note that the difference between the two rates is the spread which was used in the “profitability and efficiency” financial analysis section.

The interest expense for the year ended 2013 was computed by multiplying the interest rate on interest bearing liabilities with the deposits from banks and financial institutions and customer deposits outstanding as at 30/6/2013.

The interest income for the year ended 2013 was computed by multiplying the interest rate on interest earning assets with the balances of deposits with banks and financial institutions, loans to banks, loans and advances to customers, financial assets at amortized cost and FVTPL, and term placements at the Central Bank. Note that the latter is not a separate note line on the P&L and no disclosure in the review report of 30/6/2013 shows the details of cash and central bank within which is the term placements. Hence, the balance of term placements was computed by adding on the balance of 31/12/2012 the increase in the term placements shown under cash flow statement.

	6/30/2013	12/31/2012	21/31/2011	31/12/2010	31/12/2009
Interest Earning Assets	4,700,000,000	3,800,000,000	3,600,000,000	2,100,000,000	1,700,000,000
Term placements	884,000,000	860,000,000	440,000,000	370,000,000	300,000,000
Interest on earning assets	130,000,000	260,000,000	220,000,000	210,000,000	170,000,000
FVTPL Investments	240,000,000	70,000,000	26,000,000	1,100,000,000	1,000,000,000
Net interest and gain on trading assets at fair value through profit or loss	11,000,000	1,700,000	1,600,000	400,000	350,000
Interest rate on interest earning assets		5.52%	5.57%	5.83%	5.66%
Interest Bearing Liabilities	4,800,000,000	4,700,000,000	3,900,000,000	3,400,000,000	2,900,000,000
Interest expense on these liabilities	100,000,000	180,000,000	160,000,000	150,000,000	130,000,000
Interest rate on interest bearing liabilities	2.02%	3.85%	4.07%	4.29%	4.62%
Spread	-	1.67%	1.51%	1.54%	1.04%

B. Non-recurring Items:

Net interest and gain/loss on financial assets at fair value through profit or loss is composed of interest income on securities held at FVTPL, and Unrealized & Realized gains/losses on FVTPL portfolio. Hence, the projections were based on the assumption

that the interest income for the first six months can be multiplied by two to forecast the interest income, assuming that the FVTPL portfolio remained intact during the second half of the year. However, the unrealized gains/losses on the FVTPL portfolio during the last 6 months of 2013 was assumed to be equal to the gain till June 2013. Hence, the Net interest and gain/loss on financial assets at fair value through profit or loss for the year 2013 was computed as follows:

Interest Income (from 1/1/2013 till 30/6/2013)x2 + Unrealized loss on change in fair value(from 1/1/2013 till 30/6/2013)+ Net realized gain on sold securities(from 1/1/2013 till 30/6/2013)

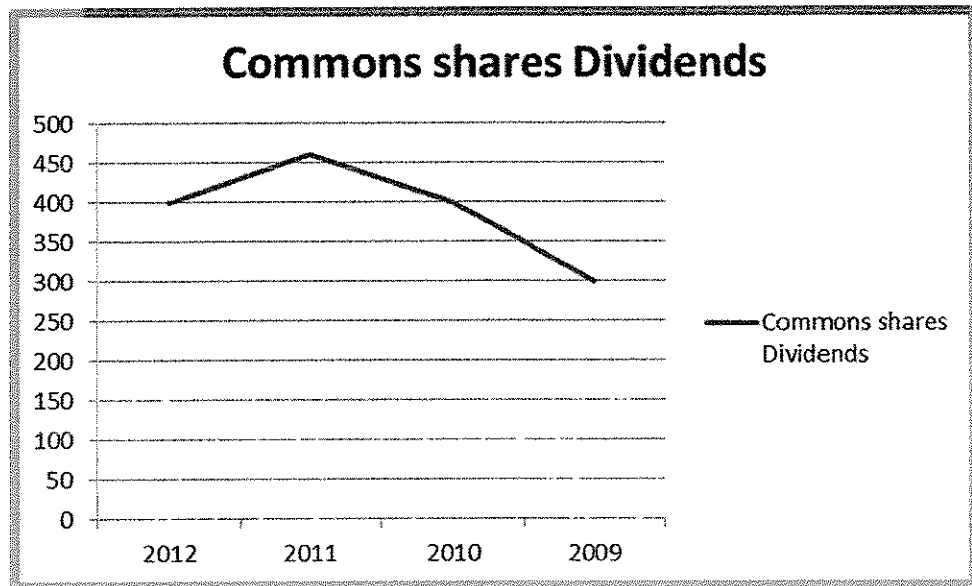
C. Estimating future cash flows:

Given the current Lebanese political situation and the thin financial market, the expected net income for the year 2014 was taken to be exactly equal to that of 2013 without any growth. The growth rate was taken into consideration starting the year 2015 and consistent till the year 2018.

CHAPTER VIII

DISCOUNTED CASH FLOWS

Since neither the capital expenditures nor the working capital can be easily computed for banks and financial institutions, Damodaran suggests two alternatives for estimating the future cash flows: dividends and investment in regulatory reserves (Damodaran 584-594). However, Lebanese banks' dividend distribution policy does not reflect the accurate growth of the banks rather it is relatively stable with time (Refer to the graph below). In addition, the ratio of total dividend to common shareholders over Net profit of the year 2012 was around 20% while the average growth of net profit is around 27%.



Regarding the other alternative of using the investment in regulatory reserves as an assumption for cash flows, the Lebanese Central Bank requires banks to maintain not only the legal reserves (10% of net income), but also to keep general banking reserves being the range from 2 to 3 per thousand from the risk weighted assets (RWA) to reach a total 2% of RWA in the year 2017. In addition, to the general banking and legal reserves, Central bank of Lebanon requires to take reserves for assets acquired in satisfaction of debt after two years from acquiring these assets. Due to the large restrictions on the reserves maintenance from the Central Bank, the model of investment in regulatory reserve is also not an accurate model. In fact, as at December 31, 2012; 46% of the Retained earnings and Income of the year was held as reserves (general banking, legal, and for assets in satisfaction of debt).

Due to the fact that these reserves are used for the growth of the bank, the total net income was used as an estimation for the future cash flows, as shown in the model below.

FCFE Model	Growth rate 8%: convergence to alpha banks	1	2	3	4	5
	2013	2014	2015	2016	2017	2018
Net Income	35,070,705	35,070,705	37,934,813	41,032,822	44,363,836	48,008,516
Investment in regulatory reserves	35,200,000	35,200,000	38,000,000	41,200,000	44,600,000	48,200,000
Cost of equity		18.24% 29,769,616	18.24% 27,179,704	18.24% 24,922,345	18.24% 22,816,925	18.24% 20,854,504
Terminal value TV	517,497,683.89					
Present value of TV	223,903,677.76					
Total present value	349,446,770.91					
Value of equity per share	22,617.91					

CHAPTER IX

COMPARABLE BANKS

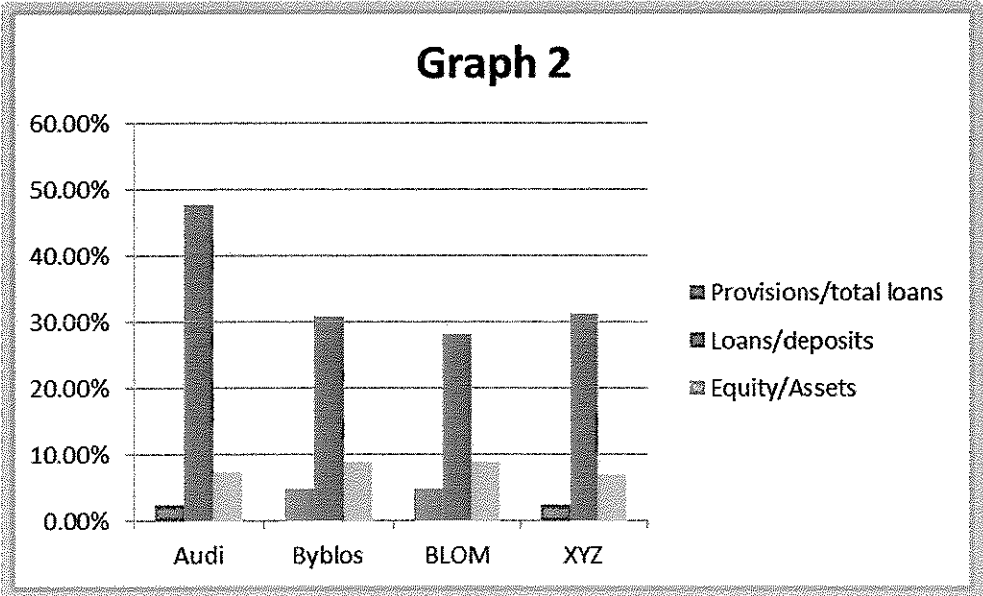
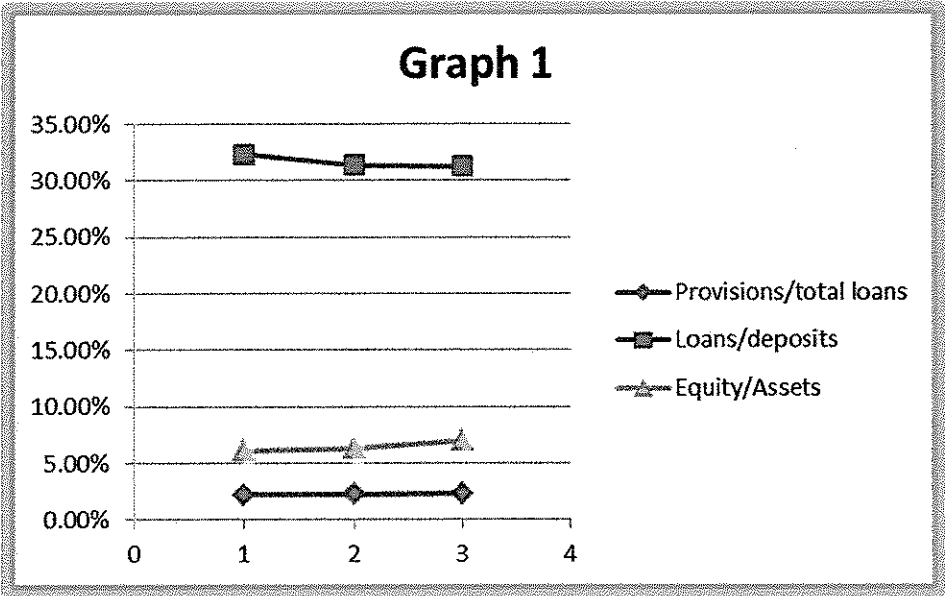
Of Association Banks of Lebanon's 71 banks only the following six banks are traded on the Beirut Stock Exchange: Bank Audi, BLC Bank, Bank of Beirut, Byblos Bank, Bank BEMO, and BLOM bank. Out of these banks, only Bank Audi, Byblos, and BLOM Bank have 100% of their capital listed and available to all investors as BLC, Bank of Beirut, and BEMO have only percentages of their common shares listed (33.42%, 33.33%, and 82.9% respectively). Hence, the selection of the comparable banks being Bank Audi, Byblos and BLOM bank.

From one hand, XYZ serves different customer groups from SME, retail, and corporate lending sector also targeted by the comparable entities; however, the other banks provide also investment and private banking activities in addition to the retail and commercial services provided by XYZ. From another hand, differences exist in the geographical locations served by each of the comparable banks: XYZ serves the Lebanese market only; however, Byblos serves eleven branches abroad, Audi has presence in Europe, Middle East, and North Africa; and BLOM bank has branches in Jordan, Cyprus, Iraq, and Abu Dhabi. Besides the mentioned differences, huge differences exist in term of total assets, LBP value of loans and customer deposits, total equity, and net profits, as shown in the table below:

	31-Dec-13			31/12/2012	30/6/2013	30/9/2013
	Audi Millions	Byblos Millions	BLOM Millions	XYZ Millions	XYZ Millions	XYZ Millions
Total Assets	54,447	27,868	39,421	5,095	5,237	5,249
Loans and advance	22,051	6,785	9,544	1,309	1,329	1,337
Customer deposits	46,117	21,981	33,874	4,047	4,238	4,277
Net profits	455	225	522	29	20	30
Equity	4,067	2,510	3,541	312	330	368
Provisions of loans	525	337	464	29	30	31

Regardless of the above mentioned differences which are mainly due to the discrepancy in the size of XYZ and the comparable banks, similarities were noted in the capital structure and policy adopted by the four banks. As shown in the graph 1 where the balances outstanding as at 31/12/2012; 30/6/2013, and 30/9/2013 were studied, XYZ bank was consistent in its policy of maintaining 2.27% of provisions over the total loans provided which were slightly reduced during the 9 months ended September 2013. The percentage of equity over assets was increased due to the issuance of preferred shares in the third quarter of 2013.

Furthermore, as shown in Graph 2, XYZ's loans/deposits percentage is similar to that of Byblos while the percentage of provisions taken in the doubtful and bad loans in addition to the collective loan provisions over total loans is similar to that of Audi's since Byblos and BLOM bank show that are relatively more conservative. Note that the variations of the percentage of equity over total assets are minimal.



CHAPTER X

ADJUSTMENT OF MULTIPLES

Due to the relatively low volume of transactions on the Beirut Stock Exchange and the nature of the listed banks being more family like, Lebanese banks' multiples are relatively lower than MENA banks. These multiples actually represent the result of the trade conducted by the minority interest since a high rate of the banks' shares are held either by the family owned or by close friends of the latter. In fact, it is only the minority interest lacking ownership control that might trade shares on Beirut Stock Exchange. Hence, the major explanation of the price discounts which are associated with the inability to exercise any control or rights by the minority equity holders. In order to adjust the multiples, control price premium of 30% was imposed on the multiples extracted from the Beirut Stock Exchange, as per cash tender offers' study and corporate equity securities' analysis conducted by Robert P. Schweihs in 2010. (Robert P. Schweihs 55).

CHAPTER XI

RELATIVE VALUATION

Regarding the choices of the multiples, price-earnings multiples and price-to-book value ratios were selected given the fact the value, operating income, and sales/revenues are easily measurable for financial institutions and banks. Hence, the multiples like value-EBITDA, value-to-EBIT, and price-to-sales ratios were ignored in this analysis (Damodaran 594).

PE and P/Book Value of Common shares of the comparable banks were selected using the data of the last quarter of 2013. The average of these multiples among the three comparable, after taking into consideration the adjustment discussed above, we reached the Price of XYZ with the following formula:

P based on PE multiple= average of PE X 1.3 X EPS of XYZ in 2013

P based on P/BV multiple= average P/BV X 1.3 X BV of XYZ in 2013

	Current figures	
	PE ratio of traded banks in Lebanon	P/B to common
Audi	7.20	0.98
Blom	5.40	0.87
Byblos	7.30	0.74
	6.63	0.86
EPS of XYZ in 2013	2,269.95	
	19,574.52	
BV of XYZ	20,012.28	
	22,460.45	

CHAPTER XII

COMPUTING BOOK VALUES

Tangible book value which is a more accurate approach to compute the value of a firm than the book value was used for XYZ bank. In fact, TBVPS is computed by deducting the goodwill value from the common equity since intangible assets are less liquid than the tangible assets (Harman, Bryn; pars.13). Moreover, the value of the buildings was adjusted to reflect the fair value prices of the market in case of the liquidation of the bank. In fact, the book value of the buildings owned by XYZ as at December 31, 2012 was LBP 10 Billion. As per the real estate registry of Bank Audi, the value of property sales increased from USD 3,000 Million in 2003 to USD 9,500 Million in 2010, with an approximate multiple of 3 (Global Property Guide).

The common equity book value of XYZ being the total equity less preferred shares at the end of 30/9/2013 is around LBP 308 Billion. After deducting goodwill in the amount of LBP 20 Billion and the book value of the buildings, and after adding back the fair value of the buildings owned by XYZ (being the book value X 3), the TBV was computed to be LBP 308 Billion. Hence, over the 16 Million shares of common stock, TBVPS is around LBP 19,900.

CHAPTER XIII

COMPARABLE TRANSACTIONS

Due to the illiquid Beirut Stock Exchange and to the political situation in Lebanon, Lebanese banks have been valued previously using 1.5 Price to Book Value multiple which is relatively low multiple when compared to the MENA region (Elena Sanchez – Cabezudo 1). Thus, on the TBVPS already computed the 1.5 multiple was used to reach LBP 30,018.42 value per share of common stock.

CHAPTER XIV

AVERAGE OF THE MOST PROBABLE MODELS

The average of the five models was taken with a growth of 5% and 8% view to the latest performance of the Lebanese commercial banks showing that the consolidated assets increased by 8% while the customer deposits increased by 9% in 2013 (Association of Banks in Lebanon, Research & Statistics Department 4). Hence, the probability of having a growth for the banking sector in Lebanon below 5% is seldom.

	Price per share
FCFE Model (Growth 8%: covergence to Alpha Banks)	22,617.91
PE Multiple Model	19,574.52
P/BV Multiple Model	22,460.45
Comparable Transactions	30,018.42
Average of the models	23,667.83

CHAPTER XV

SENSITIVITY ANALYSIS

Sensitivity analysis relative to the growth is presented below, assuming a cost of equity of 18.24%, the growth rate in the expected future cash flows and the terminal value was expected to be the worst case scenario 1% and 3% or the best case scenario, in case of the improvement of the Lebanese economy or of the situation of Lebanese Alpha Banks.

Growth	Price per share
1%	13,214.25
3%	14,948.25
5%	17,194.86
8%	22617.91
10%	27,644.90

Sensitivity analysis relative to the cost of equity is presented below where the original case took 18.24% being the cost of equity assuming that the growth is constant 5% for the coming five years. The worst case scenario might happen due to the political and regional instability in case the situation in Syria continued to remain as is and the political instability in Lebanon doesn't improve. In this case, the country risk premium was gradually increased from 5.88% to reach a total cost of equity of 19% or, even, 20%.

From another point of view, in case the unity government recently selected in Lebanon was able to maintain a sort of security and control, the country risk premium might be reduced to reach a total of 17%, 16%, or, even, 15%.

Cost of equity	Price per share
15%	22,783.17
16%	20,711.97
17%	18,985.98
18%	17,194.86
19%	16,273.69
20%	15,188.78

CHAPTER XVI

BASELIII REQUIREMENTS

The Basel committee undertook serious measures to strengthen the framework of Basel II after the market failures. In fact, these reforms occurred through two papers “Strengthening the resilience of the banking sector” and “international Framework for Liquidity Risk Measurement, standards and Monitoring” and help in main five points. First, by eliminating Tier 3 elements and restructuring the elements of Tier 1 and Tier 2, the Committee aims to reduce the systematic risks faced by banks. Moreover, the committee deals the quality, consistency, and transparency of the capital in order to increase the ability of the bank to absorb potential losses in the future. Second, the Committee is strengthening the risk coverage of the capital framework from the credit exposures resulting from derivatives, securities, and transmission of shocks from an institution to another through the financing channel. Third, the committee introduced the leverage ratio to increase the risk based requirements and address measurement errors. Fourth, the Basel III helps in building up the capital buffers during good times in order to be used during stress time. In addition, these buffers including the countercyclical buffer, dampen instead of amplifying the financial shocks that might happen in the future. Fifth, the committee introduces two regulatory standards to address liquidity risk: for the short run, liquidity coverage ratio which is stock of high quality liquid assets/Net cash outflow over 1 month and for the long run, net stable

funding ratio which is available amount of stable funding over required amount of stable funding (Abdel Samad slides 1-16)

As per the BDL circular number 44, Lebanese banks should comply with the following timetable in order to meet the requirements of Basel III. Note that the following ratios include the capital conversation buffer of 2.5% (Central Bank of Lebanon 8). The latter can be used by the banks to absorb possible losses during times of financial distress. In fact, the Basel Committee requires a rate between 0 to 2.5% countercyclical buffer special to each country to protect banks from excessive credit growth (Abdel Samad slides 19-20).

٢٠١٥/١٢/٣١	٢٠١٤/١٢/٣١	٢٠١٣/١٢/٣١	٢٠١٢/١٢/٣١	التفاصيل
(*) %٨	%٧	%٦	%٥	الحد الأدنى من نسبة حقوق حملة الأسهم العادية/مجموع الموجودات المرجحة (Common Equity Tier 1 Ratio)
(*) %١٠	%٩.٥	%٨.٥	%٨	الحد الأدنى من نسبة الأموال الخاصة الأساسية/مجموع الموجودات المرجحة (Tier 1 Ratio)
(*) %١٢	%١١.٥	%١٠.٥	%١٠	الحد الأدنى من نسبة الأموال الخاصة الإجمالية/مجموع الموجودات المرجحة (Total Capital Ratio)

The Basel III focuses mainly on raising capital through common equity in order financial crisis like the ones which already occurred and during which banks took “advantage of profits from low cost government bailouts” (Abdel Samad slide 23).

The schedule shown below extracted from BDL Circular 44 which classifies the capital into Tier 1, additional Tier 1, and Tier 2. In fact, Tier 1 of the bank XYZ was computed by deducting from total equity the preferred shares, the reserves for assets acquired in settlement of debts, and Cumulative change in fair value of equity securities at fair value through other comprehensive income. The latter are considered to be Tier 2 capital which is added to reach the total capital ratio. The capital ratios, using the data as at 30.9.2013 since the bank's capital structure slightly changed during the third quarter, were computed using a 3% increase in the Risk Weighted Assets as at 31/12/2012.

In fact, as shown in the below computations, the Capital ratio (Tier 1 and Tier 2) based on the Basel III requirements was 8.72%. This ratio was computed using the Tier 1 and Tier 2 as at 30/9/2013 since preferred shares were issued during the third quarter increasing the Tier 2. However, because the management did not provide any information about the Risk Weighted Assets outstanding during the year 2013 except to the fact that assets are increasing by 3%. Using this growth in asset, the capital ratio was computed as at 30/9/2013 showing an increase to 10.52%.

In fact, after valuing the bank, the average value per share of the common equity multiplied by the number of shares matches the value of the common equity of XYZ Bank. The difference between equity per share or FV per share over par value represent a premium to be embedded in any capital increase as it arises in case of need

to seek additional capital funding through common equity. . However, adding the net profits after deducting the expected dividend for the year 2013 on the adjusted common equity, the adjusted total capital ratio was computed, as shown in the computations below. Note that the latter uses the assumption no changes occurred in the Tier 2 capital.

Thus, with these computations, XYZ meet the ratio required as at 31/12/2014 and will be required to increase additional Tier 1 of 0.2% as the common equity adjusted is 9.8% (above the required 8%). An alternative to reach the 12% total capital ratio is to increase further preferred shares as the common equity required is reached with the adjusted proposal.

Suggestions	
Number of shares	16,000,000
Fair Value of common equity @ the average 23,667	378,685,233,173
Actual common equity as at 30.9.2013	310,000,000,000
Increase in common equity funded by increase to the estimated 2,9 million shares through the dilution of 18% of the current shares	68,685,233,173
Increase due to the increase in net profits	27,025,175,992

Value of the common equity being the 23,667.83 multiplied by the number of shares outstanding 16 Million. Hence, the maximum increase in common equity is nothing but the difference between the fair value of common equity (as per our valuation) and the actual common equity as at 30/9/2013 is around LBP 69 Billion which can be turned into actual increase of common shares by diluting the current

shares by 18% with an increase of 2.9 Million shares. The actual financial forecasts of the year reached to a post dividend profits during 2013, as shown in the table above, to be LBP 27 Billion. However, in order to maintain more conservative figures, the below suggestion to meet the capital requirement takes into account the yearly net profits after dividends to be LBP 25 Billion.

The computation of capital ratio as at 30.9.2013 took into account 3% the suggested increase in assets in the management's report for a total ratio of 10.52%

	30.9.2013	2012	2011	30/6/2013	2011 Ratios	2012 Ratios with RWA of 2012	30.9.2013 Ratios with RWA of 2012
Common equity Tier 1	310,000,000	280,000,000	240,000,000	300,000,000	8.55%	8.08%	8.78%
Additional Tier 1							
Tier 1	310,000,000	280,000,000	240,000,000	300,000,000	8.55%	8.08%	8.78%
Tier 2	62,000,000	23,000,000	23,000,000	23,000,000	0.79%	0.64%	1.74%
RWA as at 31/12/2012		3,400,000,000	2,800,000,000		9.34%	8.72%	10.52%

However, since the actual growth, as discussed in the report was around 8% for XYZ and Lebanese banks in general, the computations for the future years till 2015 when Lebanese banks are required to meet BASEL III requirements, uses a higher growth rate for RWA's future assumptions. The schedule below shows the expected effect on the different components of the capital ratio if XYZ dilutes its shares by 18% and the increase in common shares is added to the actual common shares. The coming two years' expected increase in common equity due to the net profits after dividends

were not added for the year 2013 as this was embedded in the fair value computation of XYZ as at 31.12.2013.

Year	RWA	growth in RWA	Actual common equity as at 30.9.2013	Increase in common equity	Effect on Capital Ratio
2012	3,422,724,000	Actual RWA	310,000,000,000		
2013	3,600,000,000	5%		68,685,233,173	10.52%
2014	3,800,000,000	6%	25,000,000,000		0.66%
2015	4,000,000,000	5%	25,000,000,000		0.63%
				Tier 1	11.80%
				Tier 2	1.74%
				Total Capital ratio	13.54%

As shown in the forecasted timetable below, XYZ will be able to meet the requirements of BASEL III even ahead of time if it maintains a minimum profit of LBP 25 Billion. Note that these computations took into consideration the new circular decided by the Central Bank governor in March 2014 to reduce the weight from 100 to 50 on the certificate of deposits in dollar-denominated currency (Habib par.4)

Year	Total Capital Ratio
2012	8.72%
2013	10.52%
2014	12.92%
2015	13.54%

CHAPTER XVII

CAPITAL MARKET AUTHORITY

Along with the capital reforms currently taking place in Lebanon from the establishment of the Financial Market Court, the restructuring of the Beirut Stock Exchange, and the implementation of the Basle III requirements; is the establishment of the organization of the Capital Market Authority (CMA) (OECD 2).

The Commission for the Modernization and Development of Financial and Banking Laws at the Central Bank of Lebanon drafted the Capital Market Law as per the requirements of the international financial market's norms and regulations. After five years of continuous revision and during August 2011, the Capital Market Law was ratified by the Lebanese parliament for the purpose of organizing the financial markets in Lebanon through the establishment of a legal framework and a national council which will be regulating and controlling the trading of securities and the participants in the capital market (Byblos Bank 3)

The Capital Market Law established the Capital Market Authority (CMA) the functions of which are similar to those undertaken by US. Securities and Exchange Commission. Having seven-member board of directors and headed by the Central Bank's governor, CMA enjoys the full autonomy in its policy setting role.

In addition to banning the insider-trading, CMA already issued two decrees mandating the joint stock companies and mutual funds that trade their shares on the

formal exchange and Over The Counter (OTC) and having more than 20 shareholders to comply with by May 23, 2014. The first decree requires having a disclosure policy complied with the corporate governance standards in order to protect the shareholders' right. Also, the publishing of the financial information should not be delayed in order to provide the stakeholders with all the information that might affect the capital market. The second decree requires the communication of all information from capital, unit values, and financial results to the shareholders so that the latter exercise their rights properly (Byblos Bank 5)

Recently, CMA issued a new policy to regulate the Lebanese crowdfunding activities. This decree mandates the crowdfunding institutions the set up an electronic platform and the indication of the minimum amount of capital (LBP 30 Million) in the process of raising money through crowdfunding by SMEs and startups . Also, this decree sets the range for the crowd investors' direct and indirect investment range to be between LBP 750,000 and LBP 15 Million (Republic of Lebanon Ministry of Economy and Trade 17).

CHAPTER XVIII

CHALLENGES IN EVALUATING BANKS

The fact that expected cash flows are difficult to be estimated since capital expenditures, working capital, and the level of leverage cannot be expected in this industry makes the evaluation of banks and financial institutions difficult. And what adds more difficulty to this task is the matter that the regulatory requirements have a lot to say when it comes to the capital structure and growth of the banks (Damodaran 1). Moreover, when evaluating Lebanese Banks challenges are increased for many reasons. First, the GDP growth rate is witnessing a decreasing trend from 8.2% in years 2007 and 2010 to around 3%. Next, the banking system exposure to the Lebanese government sovereign risk is high given the high budget deficit and the fact that the major funder of the latter remain Lebanese banks (Kyriakides slide 5). Other factors are the Syrian conflict, the regional and local instability, and the current Lebanese political situation. Finally, any future changes in the banks' tax structure which affects their profitability. In fact, the recent proposal of the Finance Minister to increase the 5% taxes on customer deposits and on government bonds' interest to 7% reduces considerably the profits of the banks and affects its fair value of the common shares (The Daily Star par.2).

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