

ARAB PAYMENTS AND SECURITIES SETTLEMENT INITIATIVE

PAYMENTS AND SECURITIES SETTLEMENT SYSTEMS IN LEBANON

صندوق النقد
العربي
ARAB MONETARY FUND



مصرف لبنان
BANQUE DU LIBAN



WORLD BANK GROUP

**ARAB PAYMENTS AND SECURITIES SETTLEMENT
INITIATIVE**

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN
LEBANON**

July 2017

FOREWORD

Recent developments in the Arab region, which have started to integrate the economic and financial systems of the region's countries, have also begun to accelerate the flow of payments related to greater trade and greater labor and capital mobility within the region. This trend is expected to continue due to bilateral and multilateral policy initiatives of the countries in the region to integrate their national economic and financial systems even more effectively in the coming years. Consequently, the national authorities of many of the region's countries, especially the Central Banks, have begun to consider the case for the integration of payment systems within the Arab region.

To this end, the Arab Monetary Fund (AMF), the International Monetary Fund (IMF) and the World Bank Group jointly launched the Arab Payments and Securities Settlement Initiative (API), which aims to describe and assess the payments and securities settlement systems of the Arab countries with a view to identifying possible improvement measures in their safety, efficiency and integrity. The long-term goal of the initiative is to build institutional capacity within the region in order to sustain the continued development of payment and securities settlement systems.

The initiative is undertaking a number of activities, including (i) the preparation of public reports containing a systematic in-depth description of each country's payments, clearance and settlement systems; (ii) the delivery of reports, including recommendations, to country authorities on a confidential basis; and (iii) the organization of workshops focusing on issues of particular interest and the promotion of working groups to ensure a continuation of the project's activity.

The AMF is acting as the Technical Secretariat and is playing a major role in making the process sustainable and capable of extension to all the countries in the Arab region. In this regard, this White Book, "*Payments and Securities Clearance and Settlement Systems in Lebanon*," is one of the public reports in the series and was prepared with the active support of the Central Bank of Lebanon (*Banque du Liban*). It is also one of the three main outcomes of the technical assistance provided by the World Bank Group under the umbrella of the API to the Central Bank of Lebanon over the past three years, under a technical assistance project funded by the FIRST initiative. Other outcomes included the completion of a self-assessment and the adoption of a new oversight framework for payment systems in Lebanon. The AMF has reviewed this White Book and has provided valuable comments and insights to make the book ready. In addition, the Central Bank of Lebanon, the Capital Market Authority (CMA), and MIDCLEAR have been instrumental and strongly involved in finalizing this book.

We extend our special thanks to all of the experts from the World Bank Group, the AMF and the Lebanese team who made substantial efforts to professionally complete the book. The team consisted of Massimo Cirasino, Harish Natarajan (the Head of the World Bank mission), Gynedi Srinivas, Corina Arteché, Maria Chiara and Dorothee Delort (the World Bank), Yisr Barnieh and Habib Attia (AMF), Vice Governor Haroutioun Samuelian, Ramzy Hamadeh and Makram Bou Nassar (Central Bank of Lebanon¹).

One of the main roles of the Central Bank of Lebanon is regulating and developing the payment systems in Lebanon, as well as setting safety and efficiency standards for the various kinds of

¹ In addition, the following experts from the Central Bank of Lebanon have been involved in preparing this book, including Pierre Kanaan, Youssef El Khalil, Chucris Mouaness, Carine Chartouni, Bassel El Zouhiery, George El Kazzi, Maya El-Hassanieh, Ziad El-Ashkar, Sanaa Abd El-Beki, and Samar Younes. Moreover, the Capital Market Authority and MIDCLEAR were also involved in this process, specifically Tarek Zebian and MIDCLEAR Chairman Fouad El Houry. Thanks also go to the Association of Banks in Lebanon, and to all banks and financial institutions, as well as the ATM switches in Lebanon for their cooperation in completing this book.

payments. This book shows clearly that the Central Bank of Lebanon has made significant efforts toward building an advanced, well-regulated and secure payment system that abides by international standards and best practices, including the Principles of Financial Market Infrastructures (PFMIs) and its ongoing updates. The Central Bank of Lebanon “went live” successfully with the "BDL-RTGS" in July 2012, followed by the automated retail payment system "BDL-CLEAR" in October 2013. The Central Bank of Lebanon is currently working on the third component of the National Payment System, the “Government Payment System”. The New Lebanese National Payment System enhanced the speed of movement of money within the national economy in a secure and efficient manner.

We hope that this book will contribute to the public’s understanding and will raise awareness about payment and settlement arrangements in Lebanon, both domestically and internationally.



Riad Salameh
*Governor of the Central
Bank of Lebanon*



Abdulrahman A. Al Hamidy
*Director General Chairman of
the Board
Arab Monetary Fund*



Ceyla Pazarbasioglu
*Senior Director
Finance and Markets Global
Practice
World Bank Group*

CONTENT	PAGE
FOREWORD.....	2
ABBREVIATIONS AND ACRONYMS.....	7
1. ECONOMIC AND FINANCIAL MARKET OVERVIEW.....	9
1.1 OVERVIEW OF RECENT REFORMS.....	9
1.2 MACROECONOMIC BACKGROUND.....	10
1.2.1 Monetary Sector.....	10
1.2.2 External Sector.....	11
1.2.3 Real Sector.....	12
1.3 FINANCIAL SECTOR.....	12
1.3.1 Historical Evolution of the Lebanon Financial System.....	12
1.3.2 Recent Performance of the Banking System.....	14
1.4 CAPITAL MARKETS.....	15
1.5 MAJOR TRENDS IN PAYMENT SYSTEMS.....	16
1.6 MAJOR TRENDS IN SECURITIES CLEARING AND SETTLEMENT SYSTEMS.....	17
2. INSTITUTIONAL ASPECTS.....	18
2.1 GENERAL LEGAL FRAMEWORK.....	18
2.1.1 Payments.....	18
2.1.2 Securities.....	19
2.1.3 Legal aspects related to clearing and settlement.....	19
2.2 THE ROLE OF FINANCIAL INSTITUTIONS: PAYMENTS.....	20
2.2.1 The Banking Sector.....	20
2.2.2 Other Institutions that Provide Payment Services.....	20
2.3 THE ROLE OF FINANCIAL INSTITUTIONS: SECURITIES.....	20
2.3.1 Beirut Stock Exchange (BSE).....	20
2.3.2 Securities Clearing Houses and Central Securities Depositories.....	21
2.3.3 Securities Market Participant.....	22
2.4 THE ROLE OF THE CENTRAL BANK.....	22
2.4.1 Monetary Policy and other Functions.....	23
2.4.2 Involvement in Payments System.....	23
2.4.3 Agent of the Government.....	24
2.4.4 Anti-Money Laundering Measures.....	24
2.5 THE ROLE OF THE BANKING CONTROL COMMISSION (BCC).....	24
2.6 THE ROLE OF THE CAPITAL MARKET AUTHORITY (CMA).....	25
2.7 THE ROLE OF OTHER PUBLIC AND PRIVATE SECTOR ENTITIES.....	27
2.7.1 Association of Banks in Lebanon (ABL).....	27
3. PAYMENT MEDIA USED BY NON-FINANCIAL ENTITIES.....	29
3.1 CASH.....	29
3.2 PAYMENTS MEANS AND INSTRUMENTS OTHER THAN CASH.....	29
3.2.1 Cheques.....	29
3.2.2 Direct Credits and Debits.....	30
3.2.3 Payment Cards.....	31
3.2.4 ATM networks and points of sale.....	32
3.2.5 Other Mechanisms and Recent Developments in Payment Media.....	36
3.3 NON-CASH GOVERNMENT PAYMENTS.....	38
4. PAYMENTS: INTERBANK PAYMENT SYSTEMS.....	40
4.1 EVOLUTION OF THE MAIN INTER-BANK PAYMENT SYSTEMS.....	40
4.2 LOW-VALUE PAYMENT SYSTEMS.....	40
4.2.1 Automated Clearing House (BDL-CLEAR).....	40

CONTENT	PAGE
4.3	LARGE VALUE PAYMENT SYSTEMS 43
4.3.1	Real Time Gross Settlement System..... 43
4.4	MAIN PROJECTS AND POLICIES UNDER IMPLEMENTATION 46
5.	SECURITIES, MARKET STRUCTURE AND TRADING 47
5.1	FORMS OF SECURITIES..... 47
5.2	TYPES OF SECURITIES 47
5.2.1	Shares and Subscription Rights 47
5.2.2	Short-Term and Long-Term Government Debt Instruments..... 47
5.2.3	CDs..... 47
5.2.4	Mutual Funds..... 48
5.3	SECURITIES IDENTIFICATION CODE..... 48
5.4	TRANSFER OF OWNERSHIP 49
5.5	PLEDGE OF SECURITIES AS COLLATERAL 49
5.6	TREATMENT OF LOST, STOLEN OR DESTROYED SECURITIES 49
5.7	LEGAL MATTERS CONCERNING CUSTODY 50
5.7.1	Segregation of accounts 50
5.7.2	Registration of client assets 50
5.7.3	Client Agreements 51
5.8	PRIMARY MARKET 51
5.8.1	Treasury Bills 51
5.8.2	Government Bonds and BDL’s CDs..... 52
5.9	SECONDARY MARKET..... 52
5.9.1	Treasury Bills 52
5.9.2	Government Bonds and BDL’s CDs..... 52
5.9.2	Shares 52
5.10	STOCK EXCHANGE TRADING 53
5.10.1	Trading Procedures..... 54
5.10.2	Trade Confirmation 54
5.10.3	Settlement Cycles 54
5.11	OVER THE COUNTER MARKET..... 55
6.	SECURITIES CLEARING AND SETTLEMENT SYSTEMS 56
6.1	ORGANIZATIONS AND INSTITUTIONS..... 56
6.1.1	BDL CSD 56
6.1.2	MIDCLEAR 56
6.2	SECURITIES REGISTRATION AND CUSTODY PROCEDURES 56
6.2.1	BDL CSD 56
6.1.2	MIDCLEAR 57
6.3	SECURITIES CLEARING AND SETTLEMENT PROCESS 59
6.3.1	BDL CSD 59
6.3.2	MIDCLEAR 59
6.4	GUARANTEE SCHEMES 60
6.4.1	Settlement Guarantee Fund..... 60
6.5	SECURITIES LENDING..... 60
6.6	INTERNATIONAL LINKS AMONG CLEARING AND SETTLEMENT INSTITUTIONS..... 60
7.	THE ROLE OF THE CENTRAL BANK IN PAYMENT, CLEARING AND SETTLEMENT SYSTEMS 61
7.1	SETTLEMENT 61
7.1.1	Use of Reserve Requirements for Payment Purposes 61
7.2	OPERATOR OF PAYMENT AND SETTLEMENT SYSTEMS 61
7.3	THE OVERSIGHT FUNCTION OF THE BDL..... 61

CONTENT	PAGE
7.3.1 Legal Foundations of the Oversight Function.....	62
7.3.2 Objectives and Scope.....	62
7.3.3 Activities.....	63
7.3.4 Instruments	63
7.4 MONETARY POLICY AND PAYMENT SYSTEMS	65
7.5 COOPERATION.....	65
7.6 THE ROLE OF THE CENTRAL BANK IN CROSS-BORDER PAYMENTS.....	65
8. SUPERVISION OF SECURITIES SETTLEMENT SYSTEMS.....	67
8.1 SECURITIES REGULATOR SUPERVISORY AND STATUTORY RESPONSIBILITIES	67
8.2 SELF-REGULATORY ORGANIZATIONS SUPERVISORY AND STATUTORY RESPONSIBILITIES.....	67
8.2.1 Beirut Stock Exchange (BSE).....	67
8.2.2 Central Securities Depositories.....	68
APPENDIX: STATISTICAL TABLES	69
TABLE A10: PAYMENT INSTRUCTIONS HANDLED BY SELECTED INTERBANK TRANSFER SYSTEMS	74
TABLE A11: PAYMENT INSTRUCTIONS HANDLED BY SELECTED INTERBANK TRANSFER SYSTEMS	74
TABLE A13: SECURITIES HOLDINGS IN CENTRAL SECURITIES DEPOSITORIES.....	74
TABLE A14: TRANSFER INSTRUCTIONS HANDLED BY SECURITIES SETTLEMENT SYSTEMS.....	75
TABLE A15: TRANSFER INSTRUCTIONS HANDLED BY SECURITIES SETTLEMENT SYSTEMS.....	75
TABLE A16: PARTICIPATION IN S.W.I.F.T. BY DOMESTIC INSTITUTIONS	75
TABLE A17: S.W.I.F.T. MESSAGE FLOWS TO/FROM DOMESTIC USERS.....	75
SERIES B	76
TABLE B3: DEPOSITS.....	76
TABLE B4: EQUITY.....	76

LIST OF TABLES

Table 1: Beirut Stock Exchange Summary Activity Report	16
Table 2. CMA Board Decisions issued since establishment.....	26
Table 3. Bank’s clearing in LBP and foreign currency.....	29
Table 4. Distribution of payment cards by category	32
Table 5: Payment Card Statistics	32
Table 6. Entities involved in payment cards market	36
Table 7. BDL Clear Statistics (4Q, 2016).....	40
Table 8. BDL-CLEAR: Clearing and Settlement parameters	41
Table 9. Volume and value of transactions settled in BDL-RTGS.....	44
Table 10. Mutual Funds by Type.....	48
Table 11. Mutual Funds by Institutions	48

LIST OF FIGURES

Figure 1: National Payment System Overview.....	17
Figure 2: BDL-RTGS settlement process.....	45

ABBREVIATIONS AND ACRONYMS

ACH	Automated Clearing House
ABL	Association of Banks in Lebanon
AMF	Arab Monetary Fund
ANNA	Association of National Numbering Agency
ATM	Automated Teller Machine
ASA	Authorized Settlement Agent
BCC	Banking Control Commission
BDL	Banque du Liban
BDL-CLEAR	Retail Payment System /ACH operating in Lebanon
BDL-CSD	Central Security Depository in BDL
BDL-RTGS	Real Time Gross Settlement System operating in Lebanon
BIS	Bank for International Settlements
BSE	Beirut Stock Exchange
CCM	Credit Card Management
CMA	Capital Market Authority
CSD	Central Securities Depositories
CTM	Centre de Traitement Monétique
DNS	Deferred Net Settlement
DVP	Delivery versus Payment
EUR	Euro
FIFO	First in – First out
FMI	Financial Market Infrastructure
FOD	Financial Operation Department in BDL
FSI	Fund Settlement Instruction
GBP	Great Britain Pound
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
IATI	Intra-Account Transfer Instructions
IOSCO	International Organization of Securities Commission
IPN	International Payment Network
ISIN	International Securities Identification Numbers
LBP	Lebanese Pound
LOM	Liquidity Optimizing Mechanism
LVPS	Large Value Payment System
MENA	Middle East and North Africa Region

MIDCLEAR	Private Central Securities Depository operating in Lebanon
MoF	Ministry of Finance
MOU	Memorandum of Understanding
NPC	National Payment Council
NPS	National Payment Systems
OMT	Online Money Transfer
PFMI	Principles for Financial Market Infrastructure
POS	Point of Sales Terminal
PSD	Payment System Department
RTGS	Real Time Gross Settlement System
RTM	Real Time settlement Mechanism
SIC	Special Investigations Centre - The FIU of Lebanon
SITI	Secure Information Technology Infrastructure
SSS	Securities Settlement Systems
STP	Straight Through Processing
SWIFT	Society for Worldwide Interbank Financial Telecommunications
TIA	Technical Infrastructure Agent
USD	United States Dollar

1. ECONOMIC AND FINANCIAL MARKET OVERVIEW

1.1 OVERVIEW OF RECENT REFORMS

The past few years have strained the Lebanese economy with political tensions, security challenges, and regional unrest, caused particularly by the spillover risks from the Syrian crisis. As a result, the main economic indicators, namely foreign trade, tourism, investment and consumption for instance, have experienced a decrease since 2011. In addition, the Debt-to-GDP ratio has risen from 130 percent to about 147 percent in 2016. However, the outlook for year 2017 is positive, especially with the election of President Aoun and the formation of a new Government. Several reforms in the electricity and power sector as well as the telecommunications sector are currently in process. There are continuous efforts to reduce Public Debt and increase GDP, but the political and security situation in the region is having a negative impact on the Lebanese Economy.

The banking sector in Lebanon has been largely insulated from the effects of the global financial crisis as well as other local and regional instability due to a conservative model which has proved to operate well in stressful situations. The Lebanese financial model, as designed by the Banque du Liban (BDL), has managed to inspire confidence in the Lebanese Financial System.

The most important measures and reforms undertaken by the BDL in the financial system during the past few years are:

- Regulating the on and off-balance sheet operations;
- Regulating banks dealings with derivatives and structured products, which requires prior approval from the BDL's Central Council, and prohibiting banks from making subprime investments, both domestically and internationally;
- Implementing lending regulations that place a ceiling of 50 percent on the value of an equity portfolio. On real estate operations (excluding housing), the BDL determined that banks could not lend more than 60 percent of a project's value;
- Maintaining a stable exchange rate of the Lebanese Pound against the US Dollar, contributing to price and financial stability;
- Establishing a stable banking system that abides by international banking and accounting standards, particularly in terms of capital adequacy, good governance, transparency, profitability, liquidity, and fighting money laundry and countering terror-financing;
- Ensuring that safeguarding measures are in place to prevent the bankruptcy of any bank;
- Maintaining high liquidity levels (Currently around 30 percent);
- Establishing tight ceilings on loans for real estate projects in order to prevent a real estate bubble.
- Focusing on stimulating private sector investments in productive sectors and knowledge economy. The BDL issued several circulars aiming at encouraging lending in Lebanese pounds at a lower cost, by setting new exemptions from statutory reserve. Such credit incentives will activate the economy, create job opportunities and contribute more efficiently to development and growth.

1.2 MACROECONOMIC BACKGROUND

In keeping with the BDL's objective, the Lebanese economy was able to achieve real annual growth of 2 percent in 2016 and inflation close to Zero.

A stable monetary policy, a highly liquid banking sector, confidence in the markets and in the Lebanese Pound (LBP), as well as flow of remittances from the Lebanese immigrants were the main components that enabled the economy to maintain its relative strength.

In 2017, the Lebanese economy is still showing signs of optimism. A chief factor is its human capital and the potential it has to turn Lebanon into a regional hub for innovation, a knowledge economy. Another sector with potentially positive impact on the economy is the oil and gas sector. With new employment opportunities and added revenues, this sector will be able to bring down the government debt to more sustainable levels. Yet this optimism will not be able to take full effect unless it is coupled with the appropriate structural reforms. Barring adverse political and security events, fiscal discipline remains a priority if the economy is to recover and move towards its full potential.

1.2.1 Monetary Sector

At the monetary level, the BDL's main commitments have been to maintain exchange rate and interest rate stability. On one hand, BDL's foreign assets reached a historical record level of more than USD 41 billion, thus conferring stability to the Lebanese pound and to interest rates. In addition, the balance of payments has recorded a surplus of USD 1.3 billion in 2016. On the other hand, the BDL will spare no efforts to continue its intervention in the bonds markets without disrupting market mechanisms.

The BDL also resorted to unconventional monetary policy tools to stimulate internal demand and sustain the country's growth and job creation potential. The stimulus packages of 2013 and 2014 proved to be successful, contributing around 50 percent of real GDP growth. These included incentives to support housing, education, renewable energy projects, innovative projects, research & development ventures, entrepreneurship, and other productive sectors of the economy. In 2015 and 2016, the BDL announced a third and a fourth stimulus package, coupled with the funds revolved from 2014, with an average of USD 1 billion per year.

More recently, the BDL placed additional focus on targeting the knowledge industry. Lebanon's human capital is apt to effectively turn innovative ideas into successful businesses, creating room for new employment opportunities, therefore expanding the country's GDP and ensuring sustainable development. Believing that this is the new growth model, and having faith in the Lebanese youth, the BDL accordingly issued Intermediate Circular 331 to encourage Lebanese banks to invest in the equity capital of startups, incubators, accelerators and other companies working in the knowledge economy. This innovative scheme made available around USD 400 million to support creativity and innovation. In addition, the recent financial engineering scheme, launched by BDL between May and August 2016, has had a positive impact on both the monetary and banking fronts.

On another note, and as part of its modernization plan launched in March 2014, the BDL has established the Financial Stability Unit whose mission is to monitor the financial sector and the Corporate Governance Unit and the Compliance Unit in 2016 to ensure the compliance of BDL's departments as well as banks and regulated institutions with applicable laws and regulation. The BDL focuses on consumer protection, and for this reason issued Circular 134

in February 2015, which requires banks and financial institutions operating in Lebanon to educate their customers, raise their awareness, and explain their rights, by spreading awareness and education programs at the head offices and branches, on their websites and any other means of communication with customers. Through this Circular, banks are required to provide customers with accurate, clear, and key information on the conditions, fees, benefits and risks of products or services, inform them of any change in these conditions, and respond with a high degree of professionalism, accuracy and speed to any inquiry made by a customer. This Circular was followed by Explanatory Circular 281 issued by the Banking Control Commission, which clarified all details of Circular 134, and includes providing accurate information to customers about ATM cards fees, withdrawal fees, card renewal fees, transfer fees, exchange rate fees, etc. Moreover, The Banking Control Commission (BCC) is in the final stage of establishing the Consumer Protection Unit to ensure that banks treat their customers fairly and in a transparent manner.

1.2.2 External Sector

Lebanon's Current Account deficit has continued its deterioration through 2016, where it has reached \$9.8 Billion (19.3 percent of GDP) by the end of the year, up from \$8.1 Billion in 2015. This deterioration has mainly been driven by a sustained decline in the net exports of services, on account of the disruption of traditional markets due to regional instability. These conditions have affected net receipts from tourism as well, leading to a gradual decline from the level of \$3.1 Billion in 2011 to just under \$1.8 Billion in 2016. It is worth noting that following the downward trend in oil prices, and as in average mineral products imports constitute approximately 23% of the value of all imports, we should expect a narrowing of the deficit in the future due to a smaller goods account deficit. At the same time, remittance credits have remained relatively stable including inflows from workers based in the GCC countries.

At the same time, against the backdrop of regional turbulence, the relative stability of the country and the sound monetary policy implemented by the BDL have preserved Lebanon's appeal as an attractive destination for international and regional capital. Indeed, the Financial & Capital Account has witnessed an upward trend of net inflows from the rest of the world, from a level of \$3.7 Billion in 2011 to that of close to \$9.3 Billion for 2016. Although humanitarian contributions to alleviate the burden of the Syrian refugees' crisis have contributed to \$1,039 Million in 2013 and \$972 Million in 2014, the fact remains that these figures are still well below the amounts pledged by donors at the three successive "International Humanitarian Pledging Conferences for Syria.

It is also worth noting that BDL launched Lebanon's first Coordinated Direct Investment Survey (CDIS) through Basic Circular 131 (issued on 29 November 2013), which will cover the Banking & Financial Sector and the Insurance Sector (in cooperation with the Insurance Control Commission for the latter). This should help improve the accuracy of the estimation for Foreign Direct Investment (FDI) figures. FDI inflows to Lebanon reached \$2.6 Billion in 2016, down from \$3.2 Billion in 2012. Conversely, direct investments by residents abroad decreased from \$1 Billion in 2012 to \$642 Million in 2016.

Finally, the stock of Portfolio Investment in foreign securities held by the resident private sector has decreased from \$7.4 Billion in 2011 to \$944 Million in 2016. This figure represents 2% of GDP and reflects residents' conservative and prudent approach vis-à-vis portfolio investments abroad, as it is globally concentrated in equity and long-term debt. Also, Lebanon's external public debt stock – i.e. the part of the public debt that is owed to non-residents- has grown from \$7.5 Billion in 2012 (14.2% of GDP) to the level of \$10.5 Billion in 2016 (20.7% of GDP).

1.2.3 Real Sector

The real growth of the GDP has been sustained between 2007 and 2010 at an annual rate of 8-9 percent per year. Between 2012 and 2016, the BDL observed a net slowdown of this growth at a rate of 2 percent per year. This is due mainly to the regional context which had a negative effect on economic activity.

After a sharp increase, inflation slowed down in 2014 due to the decline in prices for raw materials, in particular petroleum products.

1.3 FINANCIAL SECTOR

The Lebanese banking sector remains sound with total banking activity growing by around 9 percent and total bank assets exceeding USD 204 billion in December 2016. The commercial banks have seen private deposits increase by USD 10 billion at end-2016. Deposits of non-residents rose by 12 percent to USD 31 billion in April 2015, including a net increase of USD 948 million in the first four months of 2015, signalling continued confidence in the country's banking sector.

Bank deposits grew by around 8 percent to reach a new high of USD 164 billion at the end of 2016, with a dollarization ratio of 66 percent. In parallel, lending activity registered 5.4 percent growth during 2016 compared to an 8 percent increase in 2014, with total credit to the private sector exceeding USD 58 billion in December 2016. The loan dollarization ratio continued its downward trend to reach 72 percent at the end of 2016, its lowest recorded so far.

The Lebanese banking sector's high levels of liquidity enable commercial banks to finance the government and private sector needs while maintaining a stable interest rate structure. In terms of capitalization, Lebanese banks capital base has exceeded USD 18 billion in December 2016, with an annual growth rate of 9%, which enables banks to comply with the new international capital risk and IFRS requirements. Moreover, the BDL recently issued circulars regulating consumer loans and requiring the formation of provisions. These measures are intended as preventive steps to avoid any future crisis.

Exposures of Lebanese banks operating abroad are regularly monitored and assessed by the BDL. The banking sector has the appropriate regulatory and supervisory framework which is in line with international standards.

1.3.1 Historical Evolution of the Lebanon Financial System

After the First World War and under the French mandate, the banking system in Lebanon was dominated by the presence of branches of foreign institutions. These foreign banks focused on the financing of Lebanon's foreign trade, leaving the domestic financing to local banks whose capital was limited and scope of activities restricted to the region of their establishment. They mainly engaged in discounting of short term bills of exchange, provided collateral loans and advances against goods or in the form of current accounts, and engaged in foreign exchange trading. They also accepted deposits.

On the other hand, local banks relied on the receipt of deposits offering higher deposit rates of interest. However, a great proportion of funds were retained with foreign banks abroad. Local banks also provided advances in the form of current accounts and discounting of local bills of exchange, and engaged in foreign exchange operations. Discount Houses also existed and their main operations revolved around discounting and rediscounting commercial paper which were

not accepted by banks. However, unlike local commercial banks, the Discount Houses relied on their own funds to finance their activities. In addition, a large number of money lenders were widely spread granting commercial, agricultural, and consumption loans against high interest rates.

Starting with the independence of Lebanon in 1943 and continuing with the establishment of the BDL in 1964, the banking system in Lebanon prospered. The pronounced difference between foreign and domestic Lebanese banks had been relatively reduced as the former no longer greatly monopolized the foreign financing of Lebanon, contributed to its domestic financing, and began competing for local deposits. In fact, the Lebanese banking system witnessed the entry of 13 foreign banks during that period.

In the period prior to the establishment of the BDL, banks operating in Lebanon were classified by the Ministry of Finance into three categories: Banks whose guarantees were accepted by the Lebanese government, non-approved banks whose guarantees were not accepted, and discount houses. Since 1964, and by virtue of the Code of Money and Credit, a list of banks operating in Lebanon has been issued by BDL in January of every year.

Before 1964 the Lebanese banking system was characterized by the absence of specific banking regulations and supervision. Banks merely abided by the Code of Commerce which regulated commercial business, with the exception of the Bank Secrecy Law enacted in 1956. Regulation, supervision, and control were only introduced with the enactment of the Code of Money and Credit and the establishment of the BDL which was granted regulatory and supervisory authority over the banking system as part of its function to safeguard its soundness.

Between 1975 and 1991 Lebanon suffered from the Civil War. Instability, insecurity and uncertainty were the dominant elements of daily life. The economic consequences of the civil war were clearly evident in the Lebanese banking sector as well. Specifically, hyperinflation and severe depreciation in the value of the currency led to declining loan values. Many bank customers pulled their funds out of Lebanese banks and reinvested in banks and other financial institutions abroad (disintermediation). With bank borrowers under stress, bank profits turned to losses as loan default rates soared. Capital resources of Lebanese banks, the final line of defense for any bank, were reduced dramatically and most banks became undercapitalized. In this environment, some banks went out of business. Nevertheless, the majority of Lebanese banks managed to survive the civil war and some of them even managed to open branches in foreign countries. By the end of the civil war, although total assets of the Lebanese banking sector had increased, in nominal terms, from about USD 5 billion in 1975 to USD 6 billion in 1990, they had declined in real terms because of inflation. Regarding personnel and facilities, a paucity of both existed as Lebanese bank employees lacked modern training and facilities lagged substantially behind those in developed countries

After the end of the Civil War, the BDL created prudent and conservative regulations that largely insulated the Lebanese Banking Sector from the effects of various stressful economic and political situations, including the recent global financial crisis. The BDL has also set a series of general precautionary regulations aimed at deepening the resilience of the banking sector against risks in general, keeping in mind that respecting free market rules does not contradict with setting precautionary measures. These main regulations and measures are:

- Encouraging small banks to merge with larger banks in order to mitigate weaknesses that could cause bankruptcies or losses to depositors or correspondents of Lebanese

banks. In this regard and over the past seventeen years, the BDL has achieved the biggest reform program in the banking sector based on its powers in the bank's merger law (*Law No 192 of January 4, 1993*) which requires prior approval on each merger between two or more banks. As a result, 33 banks have ceased their activities. According to the merger law, the BDL can grant, when necessary, soft loans within an agreed upon contract between the acquiring bank and BDL.

- The merging banks are exempted from the tax as in code 45 of the income tax law in case of reassessment of fixed assets of any of them. The merging banks are also exempt from all stamps, notary public, and registration expenses in any public authority due to the merging process together with issuing new shares;
- Opening the Lebanese Banking Sector to foreigners, irrespective of whether authorities in the foreign country allow the establishment of Lebanese banks or not. Thus, Lebanon, does not apply any reciprocity treatment (since 1991);
- Setting a ceiling of 60 percent on bank loans for real estate development projects;
- Setting a ceiling of 50 percent on the value of an equity portfolio with the requirement to cover losses immediately if the decrease in the portfolio's market value reaches 25 percent of its initial value;
- Regulating banks' dealing with derivatives and structured products which requires a prior approval from the central council;
- Prohibiting the acquisition of subprime mortgage debt and high risk assets which triggered the recent global financial crisis;
- Prohibiting banks derivative transactions on own account;
- Requiring that off-balance sheet operations be subject to the supervision of the BDL and Banking Control Commission;
- Protecting investors through prohibiting misrepresentation by banks of financial products while marketing;
- Requiring banks to maintain a high capital adequacy ratio which reached 12 percent in 2008;
- Building adequate provisions against doubtful operations;
- Abiding by international standards as to fighting money laundering and combating terrorism financing, establishing good governance, transparency and capitalization requirements;
- Adopting lending policies that balance between the commercial purpose of the loan and management of the associated risk; and
- Fine tuning excessive financial leverage in the Lebanese economy through prudent policies by creating channels to avail credits to the private sector representing around 3 times the private equity of banks, while this ratio exceeded 20 and even 40 times in many countries in the world, including some in the region.

1.3.2 Recent Performance of the Banking System

The growing confidence in the national currency has enhanced the BDL's ability to have an efficient monetary policy through controlling interest rates and preserving their current structure. The BDL is ready to make use of the appropriate monetary policy tools in order to

manage liquidity and keep inflation under control. In fact, annual remittances from the Lebanese migrants usually represent a major source of external funding that spurs the Lebanese economy.

The banking sector in Lebanon is steadily reporting a healthy performance as revealed by deposits growing at around 7 percent and credits rising by more than 14 percent.

The BDL is also aiming at strengthening banks' capital funds in order to achieve a capital adequacy ratio of 12 percent by the year 2015. Capital adequacy has reached 7 percent among Lebanese banks and this is the ceiling required by international standards (Basle III). The BDL is attempting to increase this ratio as a further prudential measure to exercise better control and protect the banking sector by sending positive signals at the international level.

Moreover, circulars issued in 2011 demonstrate the BDL's ongoing efforts to improve corporate governance, reinforce anti-money laundering measures, and deepen the regulation and supervision of financial institutions, brokerage firms and money dealers. The BDL is still emphasizing the clear separation between the role of commercial banks and investment banks in order to protect both banks and customers' interests. In fact, the BDL aims to preserve the banking sector's conventional approach toward monetary policy, by insisting that commercial banks in Lebanon will not be allowed to make any investments in financial markets, based on the capital markets law which was recently approved by the Lebanese Cabinet.

The BDL's continuous commitment to exchange rate stability policy has become the cornerstone in maintaining financial and price stability. Its strategy of preserving a high stock of assets in foreign currencies as a precautionary measure proved to be essential in dealing with any crisis that may hit the economy. As of June 2015, the BDL's foreign currency assets of US \$ 39 billion (excluding gold reserves), are the second-largest in the MENA region.

1.4 CAPITAL MARKETS

On August 17, 2011, the Lebanese Parliament issued the Capital Markets Law No. 161/2011. By virtue of Law 161/2011, the Capital Markets Authority (CMA), an independent autonomous regulator was established with two main objectives that underline its strategic mission and vision: (i) promoting and developing the Lebanese Capital Markets; and (ii) protecting investors from fraudulent activities, through issuing regulations that are in line with international best practices, and proper control and audit of all institutions that deal with financial instruments.

The governing structure of the CMA, as established by the law, permits the CMA to issue its own regulations and supervise the Capital markets in a way to reduce systemic risk. More importantly, the CMA is one of the few regulators in the world that have an autonomous Sanctions Committee and a Capital Markets Tribunal. The sanctions committee looks into financial market violations and has the power to impose administrative sanctions and penalties which give market participants more confidence in the market while at the same time allowing those affected to appeal decisions before the Capital Markets Tribunal.

The CMA is Chaired by the Governor of the BDL, and governed by a seven Board members, comprised of three full time executive members, the President of the Banking Control Commission, the Director General of the Ministry of Finance, and the Director General of the Ministry of Economy.

The Capital Markets in Lebanon has been dominated by two main activities; trading of listed shares on the Beirut Stock Exchange (BSE), and trading of T Bills and Eurobonds.

The Market Capitalization of the BSE has increased by 8 percent since the end of 2011, to almost USD 12 billion at the end of year 2014. The Banking Sector leads the BSE as the main market participant, occupying more than 80 percent of shares outstanding of the Listed Joint Stock Companies and securities.

The market value weighted index of all the Listed Companies at the BSE decreased by 18 percent in the last 3 years, however the Banking Sector showed continuous resiliency and managed to set a 5 percent increase from end of 2011.

Table 1: Beirut Stock Exchange Summary Activity Report

	2013	2014
Market Summary Report		
Number of transactions	9,857	10,805
Volume traded	51,411,834	96,790,303
Value traded (USD)	375,160,826	661,412,925
Avg. value per working day	1,556,684	2,699,645
Avg. volume per working day	213,327	395,062
Market liquidity		
Turnover ratio: YTD Value traded / Avg. Market Cap	3.5%	6.0%
Percentage of the free float	92.0%	92.9%
Number of listed securities	29	30
Number of listed Firms	10	10

Source: BDL

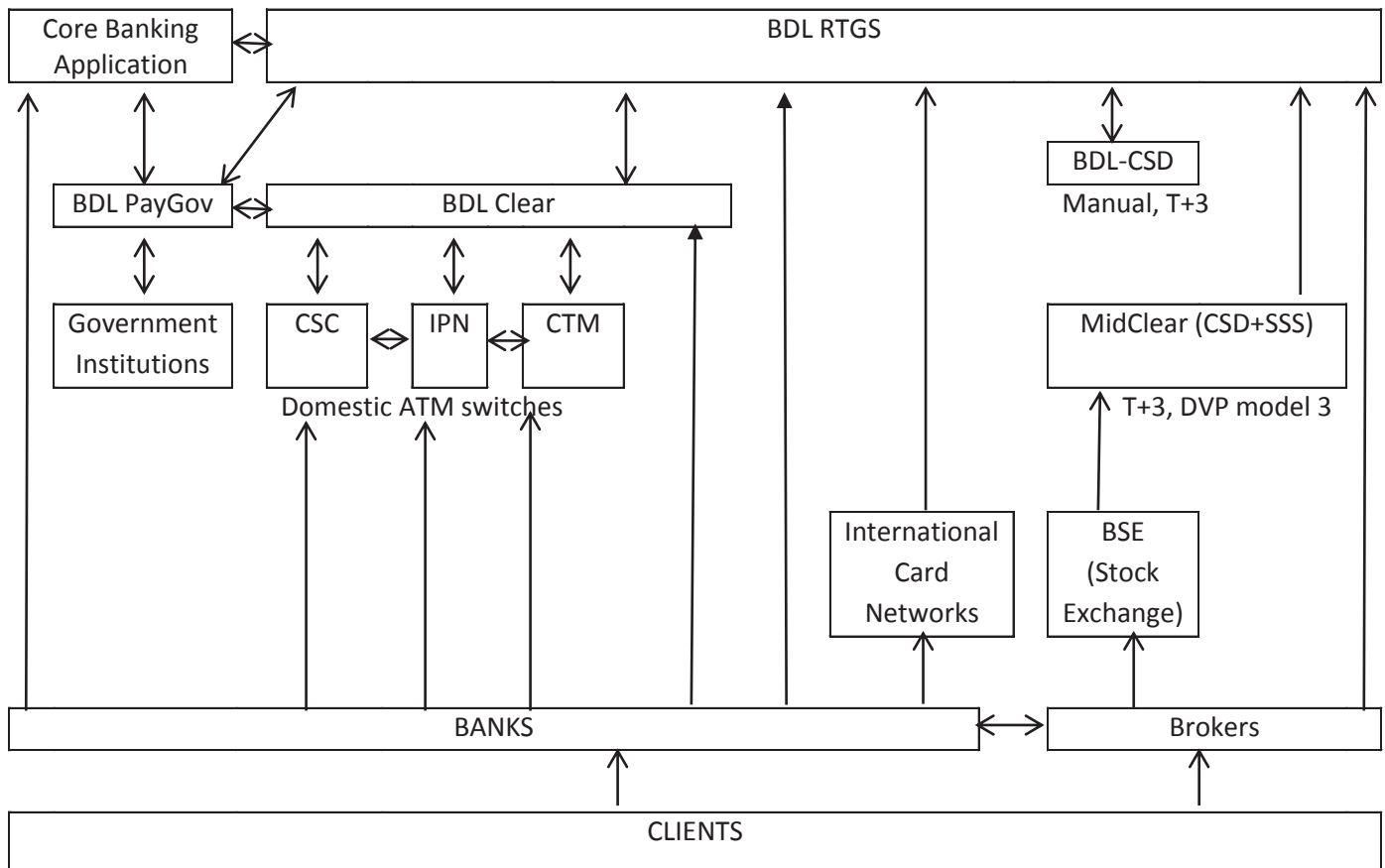
1.5 MAJOR TRENDS IN PAYMENT SYSTEMS

Cheques, followed by payment cards, are the most used payment instrument in Lebanon apart from cash; electronic payment transactions are predominantly denominated in foreign currency. The payment instruments available in Lebanon include credit transfers and direct debit. Internet banking and mobile banking services are widely available but restricted only for inquiry transactions and intra-bank transfers. Bill payments are available through internet banking and mobile banking, but get structured as intra-bank payments

The core infrastructure elements of the National Payment System (NPS) in Lebanon have been recently implemented and several new initiatives are already underway which will further enhance the overall NPS. The BDL successfully implemented the Real-Time Gross Settlement System, BDL-RTGS, in July 2012. There are 74 Participants in the BDL-RTGS, comprising all the banks operating in Lebanon, financial institutions that opted to participate and the CSD - MIDCLEAR. The BDL also launched the Automated Clearing House, BDL- CLEAR, in November 2013, for the clearing and settlement of retail payment instruments – cheques, credit transfers, direct debits and card payment transactions. The net settlement positions of the Cheques' Clearing arising from BDL- CLEAR are settled in the BDL-RTGS system. The BDL

is currently implementing a system for the clearing and settlement of government payments (PAYGOV), which is expected to be launched in the end of 2017.

Figure 1: National Payment System Overview



1.6 MAJOR TRENDS IN SECURITIES CLEARING AND SETTLEMENT SYSTEMS

The clearing and settlement of securities market transactions are carried out through the BDL CSD for Government securities, denominated in LBP, and through MIDCLEAR for corporate securities. The Lebanese pound denominated treasury bills ownership records and other related information are recorded at the BDL CSD. CDs issued by the BDL are in both Lebanese pounds and US dollars denominations and are held in custody with MIDCLEAR. MIDCLEAR established in 1999, is a CSD and the central registrar of Lebanese corporate securities. Its main functions include the safekeeping of securities for participants; immobilization of physical securities; real-time book-entry, clearing and settlement of transactions; collection, distribution and accounting of dividends and interest payments; maintenance of shareholders' registers; and, registering and safeguarding all banks' shares.

2. INSTITUTIONAL ASPECTS

2.1 GENERAL LEGAL FRAMEWORK

2.1.1 Payments

The BDL has regulatory and oversight powers over payment systems and instruments as established by Law 133 of 1999. The role of the BDL is regulated by the Code of Money and Credit, which dates from 1963 and has been amended several times. The BDL powers over payment systems have been established by Law 133/1999, which complements BDL's mandate pursuant to Article 70 of the Code, and empowers the BDL to: a) develop and regulate payment systems, especially with regard to Automated Teller Machine (ATM) and payment cards; b) develop and regulate payment transfers, including electronic transfers; and, c) develop and regulate clearing and settlement for both payments and financial transactions. Based on these powers, the BDL adopted various regulations, called Basic Decisions, on systems and instruments, with a special focus on electronic means and on the standards that financial institutions need to comply with when offering services by electronic means.

The Code of Money and Credit regulates banking and lending activities, as well as their supervision by the BDL and the BCC. Additional laws have been adopted regulating financial activities not covered by the Code and making these conditional upon authorization by the BDL.

In line with its powers under Law 133/1999, the BDL has adopted measures on financial services performed by electronic means, which potentially extend to all the operators in the financial market. With Basic Decision 7548/2000, as further amended, the BDL has established requirements for the provision of electronic banking and electronic means of providing financial services. Banks and all other institutions already registered with the BDL, with the exception of exchange institutions, are permitted to carry on any of their activities by electronic means provided that they previously inform the Central Bank.

The main provisions of the Basic Decision 7548 allow any financial activity to be performed by any of the mentioned entities by electronic means; however, there are specific restrictions on mobile devices as a transaction channel and e-money services. Article 3 of the Basic Decision explicitly states that banking operations through mobile phones is restricted to operations between banks and their customers, whereas issuance of electronic money is strictly forbidden. Only intra-banks transfers are allowed through mobile devices. On the other side, (both domestic and international) electronic fund transfers (excluding by way of mobiles and not including storage of value in a device) are permitted to non-bank institutions provided that these comply with a number of standards established in articles 5 and 6 of the Basic Decision (respectively for domestic and international electronic transfers). If the entity providing electronic transfers is not a bank or does not fall within another category already licensed by BDL, it shall need a specific license by the BDL, under the terms of article 12 of the Basic Decision.

BDL Basic Decision 7299/1999 on ATMs, ATM Switches, and credit cards specifically regulates the issuance and management of cards and ATMs, and requires clearing and settlement of domestic ATM transactions, using domestically issued cards, to be performed domestically. Basic Decision 7299 requires banks and bank-owned companies issuing and/or managing ATMs to notify the BDL beforehand. The number of permitted ATMs by each bank

is subjected to some restrictions and their management subject to specific requirements, such as interoperability.

2.1.2 Securities

Law 161/2011 mandates the Capital Markets Authority among other things to regulate and monitor the financial markets in order to ensure its expansion is in line with the changes and the domestic and international standards, reduce the systemic risk in the financial markets, ensure the protection of investors and proper conduct of capital markets in Lebanon and abroad, and define the framework and professional activities carried out by people who engage in business related to financial instruments and ensure their adherence to the code of ethics.

These mandates allow the CMA to regulate and oversee securities settlement infrastructure, and to cooperate with the various institutions which share the same goals of protecting the payment and settlement systems.

CMA authorized and licensed securities in the Lebanese Capital Markets are: stocks, bonds or shares issued by a public or private company or entity. Financial rights, options, futures, and all derivatives or structured financial products. Mutual Funds, and collective investment schemes.

The Public Debt Directorate Law No.17 of September 2008, institutionalized the debt management functions with the Public Debt Directorate at the MoF. The MoF allows Eurobond issuances in the international capital markets. Articles 85 and 99 of the Law of Money and Credit provide for the BDL to be a banker to the public sector and act as its financial agent. It is based on these provisions that BDL acts as a debt manager to the Government in respect of Lebanese Treasury Bills and CDs issued in Lebanese pounds and US Dollars.

2.1.3 Legal aspects related to clearing and settlement

2.1.3.1 Settlement Finality, Netting, Zero-Hour Rule

Payment instructions settled in the BDL – RTGS are all final and irrevocable, according to rules set by the BDL. Basic Circular 127 (Article 5) states that participants may not cancel their funds settlement instructions once they are executed in the BDL-RTGS. Payments are final once they are credited to beneficiary's account. The Parliament is currently studying a proposal to introduce a Finality Law which takes care of this issue at the level of a statutory act and defines settlement finality and irrevocability. As per the draft finality law, payments are deemed to be final once the relevant accounts have been appropriately debited and credited. Currently, the courts still have the authority to decide when payments are considered final as no law is yet ratified.

2.1.3.2 Protection of Collateral

The proposed Finality Law would also cover collateral. Currently, collateral rights are not protected against insolvency of the borrower.

2.2 THE ROLE OF FINANCIAL INSTITUTIONS: PAYMENTS

2.2.1 The Banking Sector

The Lebanese financial sector is comprised of 50 commercial² banks, including 11 foreign banks, with a total of 1056 branches; 17 investment banks; 50 financial institutions³; and 13 financial intermediaries. Except for the financial intermediaries, these institutions are all licensed by the BDL. Other financial intermediaries like brokerage institutions are licensed by and registered with the CMA. Brokerage institutions are not allowed to receive deposits or carry out any activity other than brokerage. They carry out operations in financial markets and portfolio management operations. Money dealers' operations are restricted to foreign exchange operations and precious metal trading. They primarily serve retail customers.

The Lebanese banking sector is considered to be one of the most contributing factors to economic growth. It contributes 6 percent of GDP despite the fact that it employs a limited number of the total Lebanese labor force. Deposits at commercial banks reached USD 162 billion the deposits of specialized banks reaching USD 3 billion in the last year, the growth of deposits in banks is tied to the conditions of the Lebanese immigrants that represent the major source of capital inflows and remittances either to their families or to their private accounts. The Lebanese banking sector remains the first and largest financing source for the Lebanese economy evidenced by the ratio of loans granted to both private and public sectors. It is worth noting that since 2010, the share of bank credits to the private sector started exceeding that of the public sector.

2.2.2 Other Institutions that Provide Payment Services

There are three inter-operable card switches in the country for ATM transactions. These are: CSC Bank, International Payment Network (IPN) and Centre de Traitement Monétique (CTM) which operate ATM switches in Lebanon for domestic transactions. The CSC Bank has a banking license but its predominant business is related to offering payment card services – ATM switching, hosted ATM switches and hosted card management platforms. It has a large international business in these areas and currently offers services to banks in thirty countries spanning Africa, Middle East and South Asia. The IPN is structured as banking consortium and CTM is owned by two banks. Credit Card Management (CCM) operates a hosted credit card and merchant acquiring platform that are used by several banks. These switches are inter-connected to each other and are inter-operable.

2.3 THE ROLE OF FINANCIAL INSTITUTIONS: SECURITIES

2.3.1 Beirut Stock Exchange (BSE)

The BSE is the lone stock exchange in Lebanon. It is the second oldest stock market in the Middle East and North Africa (MENA) region; it was established in 1920. It is ruled by the provisions of the BSE, stipulated in the legislative decree number 120, dated September 16, 1983 (amended by decree 4729, dated 30/3/1988, and by law 418, dated 15/5/1995) and decree 7667, dated 16/12/1995.

² Source: Banque du Liban

³ Financial institutions are defined in the BDL law as any institution other than banks, whose fundamental activity is offering credit (refer discussion in Pillar I)

The BSE is a public institution, run by a Committee comprising of a Chairman, a Vice-Chairman and eight members appointed by decree issued by the Council of Ministers, in accordance with a proposal by the Minister of Finance. The Committee's mandate duration is of four years. The composition of the Committee is:

- A President selected from specialists and skilled experts.
- A representative of the Ministry of Finance appointed as Vice-Chairman. If the representative of the Ministry of Finance is a civil servant, he must be of grade one, and should be from the Ministry of Finance.
- Two representatives of the banks operating in Lebanon, chosen from six candidates proposed by the Association of Banks in Lebanon.
- Two representatives of the brokers, chosen from six candidates proposed by the Brokers' Association of the Stock Exchange.
- Two representatives of Lebanese joint stock companies having their shares listed on the Stock Exchange.
- A representative of Lebanese joint stock companies being members of the Stock Exchange.
- A Lebanese or foreign expert, selected from skilled professionals and experts well-versed in the Stock Exchange and capital markets issues.

In accordance with the provisions of the laws and regulations governing the BSE, the Committee is responsible for managing, regulating, and developing the markets as stipulated by the law; protecting the interests of the investors trading at the BSE and monitoring the activities of the listed companies, providing adequate source of information to the issuers and traders at the BSE on an equal footing.

The Committee may also present to relevant authorities any draft proposal for the amendment of the legislative and regulatory texts relating directly or indirectly to the BSE, or any new legislative or regulatory text.

The laws of the BSE stipulate the establishment of a disciplinary board formed by three members and entrusted with the task of examining any violation of the provisions of the law and the circulars by BSE members, registered brokers or listed companies.

The members of the BSE are joint stock companies, brokerage companies and issuers companies.

2.3.2 Securities Clearing Houses and Central Securities Depositories

2.3.2.1 BDL-CSD

BDL-CSD is managed by the Financial Operations Department at the BDL. The participants of the system are: banks, financial institutions, public entities, employees and the general public. However, the main participants are banks.

All primary and secondary market operations of government bonds in local currency are recorded in the BDL-CSD. If a participant acts on behalf of a final beneficiary they also act as a custodian. The information about the final beneficiary is not maintained by the BDL-CSD.

2.3.2.2 MIDCLEAR

MIDCLEAR acts as a CSD and Securities Settlement System (SSS) in the Lebanese market. It was established in 1999, as a CSD and the central registrar of Lebanese securities. Its main functions include the safekeeping of securities for participants; immobilization of physical securities; real-time book-entry, clearing and settlement of transactions; collection, distribution and accounting of dividends and interest payments; maintenance of shareholders' registers; and, registering and safeguarding all banks' shares.

MIDCLEAR was appointed CSD for Lebanon by Law No 139 of October 1999, and Central Registrar for all Lebanese banks shares, by Law No 308 of April 2001.

MIDCLEAR is a Lebanese joint stock company with a capital of LBP 3 billion, established and governed by the provisions of the Lebanese Commercial Code and other regulations in force in the Lebanese Republic. It has been mandated that the BDL shall continue to be the holder of not less than 75 percent of the company's capital as specified in the Articles of Incorporation. Currently BDL owns 99.8 percent of the Capital, with the remaining portion held by the local and foreign banks; local and foreign financial institutions; foreign central securities depository and clearing houses and issuers.

2.3.3 Securities Market Participant

The stock market participants include:

- All Lebanese joint stock companies, including holding and offshore companies, registered at the secretariat of the Commercial Register, with a capital above five hundred thousand Lebanese pounds;
- Brokerage companies authorized by the BSE to operate and trade in securities listed on the BSE;
- Issuers: Companies having any of their stocks or other financial instruments listed on the BSE. Such companies are also called "listed companies".

2.4 THE ROLE OF THE CENTRAL BANK

The BDL was established by the Code of Money and Credit promulgated on the 1st of August 1963, by Decree no. 13513. It started to operate effectively on April 1st, 1964.

The BDL is a legal public entity enjoying financial and administrative autonomy. It is not subject to the administrative and management rules and controls applicable to the public sector.

The BDL is vested by law with the exclusive right to issue the national currency. As stipulated by article 70 of the Code of Money and Credit, the BDL is entrusted with the general mission of safeguarding the national currency in order to ensure the basis for sustained social and economic growth.

This mission consists of the:

- Safeguard of monetary and economic stability;
- Safeguard of the soundness of the banking sector;

- Development of money and financial markets;
- Development and regulation of the payment systems and instruments;
- Development and regulation of money transfer operations including electronic transfers;
- Development and regulation of the clearing and settlement operations relative to different financial and payment instruments and marketable bonds;

2.4.1 Monetary Policy and other Functions

Since 1993, monetary policy is centred on maintaining the Lebanese Pound exchange rate pegged to the U.S. Dollar. Therefore, the central bank of Lebanon intervenes to maintain orderly conditions in the foreign exchange market. The U.S. dollar is used as the intervention currency and a tight intervention band of 1501-1514 vis-à-vis the US dollar is maintained.

The main operational target is the level of the BDL's foreign currency reserves. Two subsequent operational targets were set: A currency risk spread between local currency interest rates and U.S Dollar interest rates in the local market, to promote deposits in Lebanese Pound; and a country risk spread between foreign currency deposit rates in the country and those on the international scene.

The BDL controls bank liquidity by adjusting discount rates, by intervening in the open market, as well as by determining credit facilities to banks and financial institutions. It regulates banks' credit in terms of volume and types of credit, by extending soft loans against collaterals to direct credits towards specific sectors and setting the terms and regulations governing credits in general.

The BDL imposes on banks obligatory reserve requirements on time and demand deposits denominated in LBP and required placements on deposits denominated in USD, as well as penalties should shortfalls occur. Investment in TBs may be considered by the BDL as part of the reserve requirements.

There is a regular coordination between the BDL and the Government in order to ensure consistency between the BDL's objectives and those of the Government. Cooperation with the Government implies coordinating fiscal and monetary policy measures. The BDL informs the Government on economic matters that might negatively affect the national economy and currency and suggests measures that might benefit the balance of payments, the price level, public finance and offers advice on how to promote economic growth. It also supports the relations between the Government and international financial institutions.

2.4.2 Involvement in Payments System

The BDL has regulatory and oversight powers over payment systems and instruments as established by Law 133/1999. The role of the BDL is regulated by the Code of Money and Credit (in particular article 70), which dates from 1963 and has been amended several times. By law, The BDL powers over payment systems are: a) develop and regulate payment systems, especially with regard to ATM and payment cards; b) develop and regulate payment transfers, including electronic transfers; and, c) develop and regulate clearing and settlement for both payments and financial instruments. Based on these powers, the BDL adopted various regulations, called Basic Decisions, on systems and instruments, with a special focus on electronic means and on the standards that financial institutions need to comply with when offering services by electronic means.

2.4.3 Agent of the Government

Articles 85 and 99 of the Law of Money and Credit provide for the BDL to be a banker to the public sector and act as its financial agent and Economic advisor. It is based on these provisions that BDL acts as a debt manager to the Government in respect of Lebanese Treasury Bills and CDs issued in Lebanese Pounds and US Dollars.

Among other functions:

- To manage domestic debt issues (Treasury bills and bonds), and the securities accepted by the BDL in its credit operations;
- To examine credit applications by the public sector or public institutions;
- To operate and manage the CSD for Government securities.

2.4.4 Anti-Money Laundering Measures

Anti-Money laundering legislation has been implemented since 2001. With Law 318/2001 a Lebanese financial intelligence unit has been established and named Special Investigation Commission (SIC) to ensure observance of anti-money laundering principles. Further amendments to Law 318/2001 reinforced the original provisions and covered also countering financing of terrorism. Further, Intermediate Circulars 273 and 274 of 2011 by the BDL impose specific restrictions on financial intermediation entities engaging in cross-border transfers of funds.

On April 20, 2001, the Lebanese Parliament passed Law 318 on fighting money laundering. This law criminalizes the laundering of proceeds of crimes related to narcotics growing, manufacturing and trading, organized crimes, terrorist acts and terrorist financing, illegal arm trade, stealing or embezzling public or private funds or their appropriation by fraudulent means and counterfeiting money or public credit instruments. The law defines money laundering operations and stipulates fines and imprisonment sanctions imposed on such operations.

Law 318 established the SIC for combatting money laundering as an independent legal entity with judicial status at the BDL. The Commission has the exclusive right to lift restrictions related to banking secrecy for use by competent judicial authorities and the Higher Banking Commission. The SIC, Lebanon's Financial Intelligence Unit, receives, analyses and investigates suspicious transaction reports and ensures compliance of banks, financial institutions and other reporting entities with pertinent AML regulations. The SIC comprises of four members: (i) The Governor of the BDL (Chairman); (ii) The President of the BCC; (iii) The Judge appointed to the Higher Banking Commission and (iv) a professional appointed by the Council of Ministers.

According to Law 318, the SIC appoints a full-time Secretary to implement the decisions of the Commission. The Secretary is responsible for day-to-day operations and supervises the different units (Audit & Investigation; Financial Investigation Administrative; Compliance and IT & Security).

2.5 THE ROLE OF THE BANKING CONTROL COMMISSION (BCC)

The Banking Control Commission (BCC), an independent commission created within the BDL in 1967, supervises banks operating in Lebanon. The BCC is the prudential supervisor for banks and other regulated entities. Based on BCC's reports and investigations, the BDL may impose

disciplinary sanctions on banks determined to be in violation of or inconsistent with legal provisions. The establishment of any Lebanese bank and the opening of any branch of a foreign bank in Lebanon are subject to an authorization issued by the Central Council of the BDL. Such authorization is granted by the BDL, and each year, the BDL publishes in the Official Gazette the list of banks (updated on an on-going basis on the BDL website).

2.6 THE ROLE OF THE CAPITAL MARKET AUTHORITY (CMA)

Law 161/2011 on the Capital Market established the Capital Market Authority (CMA) with specific powers over custody, clearing and settlement of securities. As indicated in the previous paragraphs, Law 133/1999 attributes to the BDL regulatory powers over clearing and settlement of financial instruments. Law 161/2011 on the Capital Market, although not directly affecting such allocation of powers, establishes the CMA with the function of ensuring the protection of savings invested in financial instruments. The CMA is also in charge of reducing systemic risk (Article 5 (b) and of regulating and controlling the work of licensed stock exchanges, and of persons who provide custody, clearing and settlement services for financial instruments (Article 5 (f). In accordance with Article 6 of the Law, the Governor of the BDL is the Chairman of the Board of the CMA. Article 5 (f) of the Law, empowers CMA to regulate and control the work of licensed Stock Exchanges, and the persons who provide custody, clearing or settlement services. In terms of Article 34 of the Law, MIDCLEAR is deemed as duly authorized to act as a custodian, clearing and settlement center for financial instrument operations.

The Law makes CMA responsible for the regulation of all financial intermediaries in the capital markets. Since 2011, BDL and CMA share regulatory oversight over the BDL-CSD.

In wake of the establishment of the CMA, certain regulatory activities have naturally shifted toward the newly found regulator and away from the Central Bank and the Banking Control Commission. Thus, the first order of business was to engage in a regulatory gap analysis, taking into consideration the transition of certain Capital Markets related circulars from the Central Bank to the CMA. In addition, and as part of the cooperation with the World Bank under the “First” Initiative, the CMA focused on developing new regulations and revising existing ones to ensure that market regulations are up to International standards and in conformity with IOSCO Principles and best business practices. Today, the Board of the Capital Markets Authority has issued three core regulations, mainly focusing on (i) Licensing and Registration, (ii) Business Conduct and (iii) Market Conduct. The Business Conduct regulation includes a special focus on the systems and controls used by financial intermediary institutions. This includes the responsibility of the mentioned institutions to adhere to settlement and clearing rules set by the regulator, in order to limit systemic risk, and ultimately protect the investors.

Additionally, three important regulations will be issued by end of 2015. These regulations will cover the following:

- Listing Rules
- Securities Offerings
- Collective Investment Schemes

In this regard, the CMA has taken upon itself to always engage relevant stakeholders in consultation processes in the presence of International experts to further ensure the effective implementation of new regulations, and promote transparency in the regulatory framework.

Table 2. CMA Board Decisions issued since establishment

No	Date of Issuing	Topic	Summary	Issued /Transferred
1	11/6/2013	Disclosure Policy	Disclosure Policy required by some companies and organizations working in Lebanon in order to ensure compliance with the best practices of governance	CMA
2	11/6/2013	Disclosure by shareholders	Disclosure of all the information that will enable shareholders to exercise their rights to the fullest in some companies and organizations operating in Lebanon	CMA
3	11/6/2013	Crowdfunding	Setting the framework and rules of the work and establishment of "crowdfunding" companies in Lebanon.	CMA
4	14/8/2013	Compliance	Compliance Department which certain Joint Stock companies must establish.	CMA
5	14/8/2013	Committees, units and departments that must be established in certain anonymous corporates	Internal Audit department which certain Joint-stock companies must establish	CMA
6	20/11/2013	Insider Trading	The Prohibition of Exploitation of non-Public Information when Trading in the Capital Markets	CMA
7	03/12/2013	License documents, annual data and various provisions relating to the financial intermediaries	Procedures, and guidelines and general conditions relating to the establishment of financial intermediaries.	Transferred from BDL
8	27/12/2013	Requirements to practice of specific functions	All the documents and information required from all organizations and entities exercising business with financial instruments in Lebanon for their customers and / or for their own account.	Transferred from BDL
9	27/12/2013	Required Info	All the documents and information required from all organizations and entities exercising business with financial instruments in Lebanon for their customers and / or for their own account.	Transferred from BDL
10	09/01/2014	Financial intermediaries	All procedures, measures and conditions approved by the Capital Markets Authority relating to the business and financial intermediation.	Transferred from BDL
11	09/01/2014	A list of financial intermediaries	A list of financial intermediaries duly registered issued annually by the CMA.	Transferred from BDL
12	10/02/2014	Financial derivatives Operational Guideline	Provisions that govern the operations of financial derivatives.	Transferred from BDL
13	10/02/2014	Securitization of assets	The conditions according to which the CMA Board provides consent to the establishment of a securitization fund on assets.	Transferred from BDL
14	10/02/2014	Collective investment Schemes	Conditions for the license, establishment and work of the collective investment schemes in Lebanon.	Transferred from BDL
15	13/02/2014	Islamic Collective Investment Schemes	Provisions relating to the establishment and work of the Islamic collective investment schemes in Lebanon.	Transferred from BDL
16	13/02/2014	Financial products and Instruments	Various provisions and conditions relating to the issuance and promotion of financial products and instruments in Lebanon.	Transferred from BDL
17	09/03/2015	KYC Forms	Required information and forms needed for KYC compliance	Transferred from BDL

Source: CMA

2.7 THE ROLE OF OTHER PUBLIC AND PRIVATE SECTOR ENTITIES

2.7.1 Association of Banks in Lebanon (ABL)

The Association of Banks in Lebanon was founded in 1959, by virtue of License No 1643, dated October 6, 1959. The bylaws state that every bank enlisted in the list of banks set up by the BDL has the right to join the Association as an active member, upon its request. Moreover, the representative offices of foreign banks may adhere to the Association, as Associate members, on equal footing with the member banks in rights and obligations. However, they do not have the right to vote or to be candidate for the membership of the Board of Directors.

The Association aims at achieving the following objectives:

- Strengthening cooperation among the member banks through setting up a common vision for the higher interest of the sector;
- Representing the profession and defending collectively the interests of the banking sector.
- Highlighting the fundamental role of banks in upholding the national economy, through catering for an important share of the necessary financing needs to promote growth.
- Working with the concerned authorities to find and develop the regulations and promulgate the legislations in order to develop the banking profession, in addition to expressing opinions regarding the projects and laws pertaining to the financial and banking affairs.
- Reflecting the positive picture of the banking sector to the local and foreign public opinion, through multi-media, objective and arduous efforts.
- Enhancing the banking performance level through improving the competences of the human resources working in this sector, continuously increasing their capacities and creating an ongoing atmosphere of understanding with the users of the sector, in order to guarantee the stability of the labor force in it and ensure the joint interests for all partners.
- Endeavoring to consolidate cooperation between the banks in all other countries, especially in the Arab countries, in order to achieve the objectives of the Association.

The Structure of the ABL is composed of the following:

- The General Assembly: It is comprised of all operating member banks and has reporting and voting prerogatives stipulated in laws. The General Assembly meets at least once per year. It elects or re-elects the members of the Board of Directors.
- The Board of Directors: It is the highest executive authority, elected by the General Assembly for two years. It delineates the ABL policy to achieve its objectives, setting up its administrative and internal regulations. It also adopts its annual budget and its periodical reports, presents propositions and recommendations to the relevant official parties, designates the Secretary General and the temporary and permanent commissions, and decides the adherence to the international unions and organizations and of the filing of or involvement in lawsuits.

The Board elects, from among its members, a president, a vice – president, a secretary and a treasurer, constituting altogether the Bureau of the Board. The Board of the Directors holds

periodical (monthly) meetings with the Governor and Vice-Governors of the BDL and the BCC. The conclusions of these meetings are circulated to all operating banks in Lebanon.

- The Secretariat General: Its structure comprises 4 directorates: (i) Administrative and financial directorate, (ii) Directorate of studies and statistics; (iii) Directorate of training and rehabilitation of human resources and (iv) Directorate of communication and public relations
- The Advisory Committees: The Advisory committees assist the ABL's Board of Directors in its various activities and are particularly in charge of the following: (i) Assisting in studying draft circulars set up by the BDL and by the BCC; (ii) Recommending amendments to be introduced to draft circulars and laws and undertaking studies in specific economic, financial and banking fields; (iii) Providing counselling for the development of mechanisms and conditions for the banking professions in all its elements and branches.

3. PAYMENT MEDIA USED BY NON-FINANCIAL ENTITIES

3.1 CASH

The currency unit and legal tender in Lebanon is the Lebanese Pound (LBP), however other currencies are also used for settling payment obligations in the country. Cash is widely used for low-value transactions.

The currency in circulation at end 2016 amounted to LBP 4,592,343 million, equal to 6 percent of GDP. The demand for cash has grown since the end of the previous decade. In fact, in 1999 the Cash/GDP ratio was 3 percent, increasing steadily over the following years and reaching 5 percent in 2010. Cash in circulation is currently distributed in five denominations of coins: 25, 50, 100, 250, 500 LBP; and seven denominations of banknotes: 1,000; 5,000; 10,000; 20,000; 50,000 and 100,000 LBP. The BDL is the issuer of legal tender. It is responsible for ruling on the characteristics of banknotes and coins, as well as their production, supply and eventual withdrawal from circulation. In accordance with the law, credit institutions are authorized to receive deposits in cash.

3.2 PAYMENTS MEANS AND INSTRUMENTS OTHER THAN CASH

3.2.1 Cheques

Cheques, followed by payment cards are the most used non-cash payment instruments in Lebanon; the use of cheques remain stable since 2012. Table 3 shows the number of cheques and the values on LBP and foreign currency (USD, Euro and Sterling Pound)

Table 3. Bank's clearing in LBP and foreign currency
(number of cheques per thousand, value in billions of LBP and millions of USD)
(one month)

	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016
In LBP					
Number	325	343	365	367	376
Value	2,016	2,354	2,410	2,575	2,832
In Foreign Currency					
Number	801	778	765	726	648
Value	4,671	4,728	4,686	4,264	3,874

Source: BDL

Despite the recent developments in payment services, cheques remain to a vast majority of Lebanese as relatively safe and reliable delivery of value.

Although the use of cheques globally has begun to decline rapidly as consumers are provided with a greater range of more convenient payment options, cheques are still the main non-cash payment instrument in Lebanon. There are several reasons for that. First there is a lack of access or lack of knowledge to electronic methods in some rural areas and to elderly people, in addition cheques were the only alternative to cash for a substantial amount of time, furthermore some segment consumers and banks have always enjoyed the “float” that the cheques provide.

The most important advantage that is giving trust for cheques usage are the rules and laws that carry high measures of sanctions and penalties on bounced checks with a cheque black list data. These measures are keeping the percentage of bounced cheques very low not exceeding 1percent for the reason of insufficient fund.

3.2.2 Direct Credits and Debits

3.2.2.1 Retail Credit Payments

Direct Credit transfers in Lebanon are divided by their nature as high value credit transfers which is done solely through BDL-RTGS system. These credit transfers are mainly interbank transfers where most of them are a result of transactions between banks themselves.

On the other hand, direct credit payments are transfers from a customer of the sending bank participant to a customer or customers of the receiving bank participant.

In the new national payment system, the BDL offered two options for credit transfers: BDL-RTGS and a credit transfer stream in the retail payment system, BDL-CLEAR. In principle, Direct Credit stream in BDL-CLEAR caters to all types of low value credit transfers like Payroll direct credits, Loan payments, Standing orders etc.

In addition to the examples listed above, which mainly occur between clearing institutions, clearing institutions can also send transfers to Government participants like annual car fees, Real estate taxes, VAT payments etc.

Payments orders in this stream are electronic, no physical exchange of any paper document apply. Detailed information and settlement notifications are electronic; the BDL does not supply any paper-based notifications to the payer nor to the beneficiary.

Clearing institutions can diarize payment instructions in this stream for future value dates, and there are two clearing sessions per day for participant's transactions in this clearing stream.

Payments are settled for the full original amount as instructed – there are no deductions from the principal amount at any stage in the process. This also applies to rejects and returns - they will be for the Original Amount of the payment.

BDL-CLEAR submits the settlement instruction to BDL-RTGS automatically at specified time for each clearing cycle.

The credit transfer's stream in BDL-CLEAR is subject to a maximum value amount limit per record, and not per batch total.

3.2.2.2 Direct debits

In Lebanon, direct debits have been in use for quite some time. Direct debits were mainly used for collection of mobile phone bills, electricity bills, and landline phones bills as well as other purposes. At that time, the collection process was not defined and BDL had not provided a clearing system for collecting these payments. Banks collected these values in many different ways between each other. Some of them asked the payer to issue checks in return or register a standing order if the amount is fixed, while other banks printed bills and exchanged them as checks in the clearinghouse.

With its plan for facilitating the clearing of payments and collection, the BDL has set rules for direct debits and cater a special stream in the retail payment system for these types of collections (Chapter 4.5 of Basic Decision 11597 of 6 Nov 2013 and appendices).

In principle, this stream caters to fund collection from the customer of the initiator (beneficiary bank) to pull money from a customer of the payer party (paying bank). In addition, it can be used by banks themselves to collect loan payments. The flow is from the beneficiary party to the paying party.

The BDL instructed all banks to follow a preset form for direct debits which is flexible taking into consideration all types of retail collection purposes. It is a mandate instruction from a customer to their bank authorizing an organization to collect varying amounts from their account because of a business contract between the customer and seller of goods or services. (Appendix K: Debit Authorization Format of Circular 130-Basic Decision 11597 of 6 Oct 2013).

The paying customer who benefited from the goods or services will sign the direct debit contract, which includes the authorization for the seller to withdraw money from the customer's account.

The bank of the customer verifies the account information of the customer by signing and sealing of the direct debit contract. The seller will submit this contract to his/her bank (collecting bank) in order to initiate the transaction.

In Lebanon, direct debits are used for bill collection types, like credit card bills, collecting utility provider's bills whether they are public or private, insurance companies, services establishments like hotels, restaurants car dealers, etc. Bill payments may be recurring or nonrecurring.

Direct debits stream in the BDL-CLEAR is a non-paper based stream; there is no physical exchange of bills between participants. The customer of the payer participant must provide/sign a pre-authorized debit authority to the payee's bank or beneficiary bank to debit his account through the payer's bank. Direct Debits are cleared and exchanged in four currencies: LBP, USD, EUR and GBP.

Direct Debit Stream in the system is subject to a maximum value amount limit. The paying bank has the option to decline bills electronically within a specified period.

3.2.3 Payment Cards

There were about 30 million card payment transactions and around 12 million cheques payments in 2016. By value, the order reverses – cheques around \$70 billion and cards around \$3.3 billion. The issuance and use of payment cards in Lebanon has grown considerably in recent years, debit cards represent the largest proportion, followed by credit cards. The debit and credit cards are used primarily for ATM transactions. Tables 4 and 5 show the details of the evolution of payment cards in the country.

	Dec 2011	Dec 2012	Dec 2013	Sept 2014	Dec 2015	Dec 2016
Credit Card	430,031	439,839	480,439	520,007	570,038	554,694
Debit Card	1,162,039	1,135,102	1,193,204	1,222,757	1,389,390	1,667,527
Charge Card	140,113	163,024	181,157	174,190	154,608	152,092
Prepaid Card	51,779	123,884	329,441	515,644	640,621	389,399
Total	1,783,962	1,861,849	2,184,241	2,432,598	2,754,657	2,763,712

Source: BDL

	2010	2011	2012	2013	2014	2015	2016
Number of ATMs	1,285	1,326	1,433	1,516	1,603	1,707	1,793
Number of POS (electronic terminals)	19,708	21,471	23,833	23,820	25,781	27,120	30,181
Cards (in millions)	1.68	1.79	1.87	2.18	2.4	2.7	2.8
ATM transactions -Volume (in millions)*	24.10	25.60	27.50	29.60	31.19	32.65	37.00
ATM transactions – Value (in USD mm)*	5,142.84	5,659.36	6,424.67	6,984.88	7,403.05	7,785.77	9,123.50
POS transactions -Volume (in millions)*	10.20	12.70	15.90	18.80	20.30	23.86	28.24
POS transactions – Value (in USD mm)*	1,368.07	1,705.57	2,051.19	2,314.98	2,526.76	2,791.47	3,141.70

Source: BDL

* Cards issued in the country - Transactions done at terminals located in the country

3.2.4 ATM networks and points of sale

There are three inter-operable card switches in the country for ATM transactions; POS transactions are authorized and cleared through international payment card switches: MasterCard and Visa. Settlement for all card transactions is done at the BDL-RTGS. CSC Bank, International Payment Network (IPN) and Centre de Traitement Monétique (CTM) operate ATM switches in Lebanon for domestic transactions.

3.2.4.1 CSC Bank

CSC Bank, incorporated in 1992, is a specialized bank regulated and monitored by the BDL, by the BCC and by the SIC. CSC Bank offers financial institutions a complete solution that spans the whole card business spectrum - from card issuing and merchant acquiring (face-to-face or e-commerce) to ATM driving and switching, counter cash dispensing and mobile payments.

CSC Bank provides services to 110 banks and institutions in almost thirty countries spanning Africa, Middle East and South Asia and drives a total of 933 ATMs locally and internationally; in Lebanon alone, the CSC Bank network comprises 41 client banks and financial institutions and a total of 1477 ATMs.

The services provided mainly include:

Card Issuing & Management:

CSC Bank manages over 2,000 branded product permutations in over 20 currencies and supports the issuance of all types and varieties of plastic payment cards encompassing charge cards, revolving credit cards, prepaid cards, offline debit cards, online debit cards, virtual cards, co-branded/affinity cards, corporate cards, installment cards and proprietary cards. CSC Bank handles all licensing requirements and operational aspects with the International Card Schemes on behalf of its clients and uses systems that are customizable to fit the individual needs of each issuer.

To efficiently manage each client's card portfolios the services supported include:

- Card design and stock management;
- Card personalization (chip and magstripe);
- Card account creation and management;
- PIN production;
- Switching, clearing and settlement with the International Card Schemes and acquirer hosts;
- Cardholder monthly statements generation and production;
- Cardholder disputes processing;
- 24/7 fraud monitoring;
- 24/7 customer service;
- Value added services and cardholder benefits;
- Points and rewards system;
- Reporting.

ATM Acquiring

CSC Bank provides banks with an ATM solution that includes ATM driving, 24/7 ATM monitoring and switching of the transactions to the various issuer hosts in addition to:

- 24/7 fraud monitoring;
- 24/7 help desk;
- Settlement and reconciliation of all transactions acquired through CSC;
- Full self-service banking functions;
- Mobile top-up;
- Disputes processing;
- Reporting.

Merchant Acquiring

CSC Bank provides a complete merchant acquiring service that includes the driving of the POS devices and switching of the transactions to the various issuer hosts, in addition to:

- Merchant account creation and management;
- Merchant settlement preparation and statement generation;
- 24/7 help desk;
- 24/7 fraud monitoring;
- Settlement and reconciliation of all transactions acquired through CSC;
- Disputes processing;
- Reporting.

- Assistance in applying for all VISA/MasterCard/Amex mandate certifications;
- Host to Host connections;
- Settlement and reconciliation to all IPN member banks and other switching hosts.

IPN is PCI DSS certified since 2011 assuring the highest level of security and compliance with the latest IT security trends and international standards as imposed by VISA and MasterCard.

IPN has a back-up disaster recovery site offering nonstop continuous availability of services to its member banks even in case major incident or disaster. A full simulation is carried out quarterly to test this disaster recovery site and in addition, readiness is sustained through daily backup of critical media and scheduled maintenance.

IPN uses microwave links to connect to its member banks and back up sites with different internet service providers insuring total redundancy to its network. IPN maintains its excellent quality of service by being ISO 9001:2008 certified since 2012. IPN is now expanding abroad with ATMs now being serviced in Bahrain, Iraq and Gulf regions.

3.2.4.3 Centre de Traitement Monétique (CTM)

Centre de Traitement Monétique (CTM) was established in 2001 by Société General Bank Lebanon and Libano-Française Bank, CTM manages the electronic transactions made on both banking cards and electronic payment terminals. The business model is around charging banks a switching fee and a separate commercial arrangement for processing. CTM's members are currently negotiating their own ATM Interchange rate on a bilateral basis. Services include:

- Issuance and personalization of cards;
- Management of ATM and POS networks;
- Authorization management;
- Clearing and settlement services between banks and local and international networks;
- Direct customer and merchant assistance through a dedicated hotline 24/7 service.

3.2.4.4 Credit Card Management (CCM)

CCM operates a hosted credit card and merchant acquiring platform that are used by several banks. CCM is the largest processor for card payment acceptance and issuance in Lebanon. CCM offers hosted card management platforms, a single point of contact for all merchants looking to accept international card brands such as Visa, MasterCard and Amex on all point of sale solutions, in store counter-top POS to wireless and mobile POS. CCM also offer merchants proprietary loyalty and gift card programs that are customized to their needs and businesses.

Founded in 1994 at the initiative of Credit Libanais and the participation of two other banks, CCM has grown to become one of the most dynamic leaders of the card industry in Lebanon and the Middle East, delivering services to banks, institutions, and over 10,000 merchants across the country, while handling the full range of card business activities in various set ups and telecommunication environments.

Based on the latest in high-tech equipment and programs, elaborated in strategic alliances with international card industry leaders, CCM delivers a card solution plan including:

- Strategic Consulting and Business Planning;
- Card Program Development;
- Cards Issuing and Acquiring;

- Assistance in applying for all VISA/MasterCard/Amex mandate certifications;
- Host to Host connections;
- Settlement and reconciliation to all IPN member banks and other switching hosts.

IPN is PCI DSS certified since 2011 assuring the highest level of security and compliance with the latest IT security trends and international standards as imposed by VISA and MasterCard.

IPN has a back-up disaster recovery site offering nonstop continuous availability of services to its member banks even in case major incident or disaster. A full simulation is carried out quarterly to test this disaster recovery site and in addition, readiness is sustained through daily backup of critical media and scheduled maintenance.

IPN uses microwave links to connect to its member banks and back up sites with different internet service providers insuring total redundancy to its network. IPN maintains its excellent quality of service by being ISO 9001:2008 certified since 2012. IPN is now expanding abroad with ATMs now being serviced in Bahrain, Iraq and Gulf regions.

3.2.4.3 Centre de Traitement Monétique (CTM)

Centre de Traitement Monétique (CTM) was established in 2001 by Société General Bank Lebanon and Libano-Française Bank, CTM manages the electronic transactions made on both banking cards and electronic payment terminals. The business model is around charging banks a switching fee and a separate commercial arrangement for processing. CTM's members are currently negotiating their own ATM Interchange rate on a bilateral basis. Services include:

- Issuance and personalization of cards;
- Management of ATM and POS networks;
- Authorization management;
- Clearing and settlement services between banks and local and international networks;
- Direct customer and merchant assistance through a dedicated hotline 24/7 service.

3.2.4.4 Credit Card Management (CCM)

CCM operates a hosted credit card and merchant acquiring platform that are used by several banks. CCM is the largest processor for card payment acceptance and issuance in Lebanon. CCM offers hosted card management platforms, a single point of contact for all merchants looking to accept international card brands such as Visa, MasterCard and Amex on all point of sale solutions, in store counter-top POS to wireless and mobile POS. CCM also offer merchants proprietary loyalty and gift card programs that are customized to their needs and businesses.

Founded in 1994 at the initiative of Credit Libanais and the participation of two other banks, CCM has grown to become one of the most dynamic leaders of the card industry in Lebanon and the Middle East, delivering services to banks, institutions, and over 10,000 merchants across the country, while handling the full range of card business activities in various set ups and telecommunication environments.

Based on the latest in high-tech equipment and programs, elaborated in strategic alliances with international card industry leaders, CCM delivers a card solution plan including:

- Strategic Consulting and Business Planning;
- Card Program Development;
- Cards Issuing and Acquiring;

- Loyalty Programs;
- Reporting;
- Smart Card Technological Innovations (EMV chip);
- NFC Acceptance;
- Other POS services;
- Online services are made available to existing customers;
- Mobile payment service application on the POS network.

CCM has a disaster recovery site which is reviewed and tested on a quarterly basis. This recovery site can be online almost instantly in case a disaster or major incident occurred at CCM main site insuring continuous availability of all CCM services.

The number of participants and services offered by these entities are tabulated below.

Table 6. Entities involved in payment cards market			
Entities	Ownership	Participants	Services
CSC Bank	Structured as a bank, owned by Lebanon & Gulf Bank Group (39.3%); Marwan S. Kaddoura (30.5%); Dina Itani (25.1%). Other (5.1%) Has an ATM Switching License from BDL	41	- ATM Switch - Hosted card payments Platform - Merchant Acquiring - Card issuance and personalization
IPN	Banque du Liban et d’Outre-Mer (BLOM); Bank Audi ; Fransabank ; Credit Libanais and Byblos Bank Has a ATM Switching License from BDL	17	- ATM Switch
CTM	Societe General Bank Lebanon (SGBL) and Libano-Française Bank (BLF) Has an ATM Switching License from BDL	2	- ATM Switch - Card issuance and personalization
CCM	Credit Libanais Bank; Fransabank; Lebanon and Gulf Bank; Soft Management (IT company) No specific license from BDL	14	- Hosted credit card platform - Merchant acquiring

Source: BDL

3.2.5 Other Mechanisms and Recent Developments in Payment Media

3.2.5.1 Internet and mobile payments

The recent regulatory changes allow inter-bank transfers through internet and mobile though no services have been launched yet. The new regulations require any transaction initiated using mobile and internet banking to be processed in the systems of the originating bank and sent to the recipient bank through the existing SWIFT inter-bank arrangements. Bill payments are available through internet banking and mobile banking, but get structured as intra-bank payments.

3.2.5.2 Mobile Payments

Mobile Payments is at a nascent stage in Lebanon. The mobile payments offerings that are emerging in Lebanon are all linked to existing bank accounts. There are currently two offerings of mobile payments, each with a different business model – Pinpay and ViaMobile; a third offering CSC Mobile (CMO) has commenced lately. PinPay received a permission from the BDL to offer inter-bank transfers, bill payments, merchant payments and remittances and

currently is focused on Bill Payments and offers these services to BankMed and Bank Audi customers.

These two banks also leverage the offering of PinPay through other transactional channels—ATM, Internet banking and Branches. ViaMobile offers bill payments and person-to-person transfer services to Fransa Bank customers. CSC intends to offer CMO to all the participants in the CSC ATM switch. The service offered through CMO includes P2P transfers, Bill Payments, Mobile Topup and Merchant payments.

3.2.5.2.1 Pinpay

PinPay is a mobile payment and bill aggregation platform. The service provider application enables the customers to pay various bills, purchase vouchers and gift cards as well as carry out other transactions.

PinPay is registered on the Beirut Commercial registry and licensed by the BDL under decision number 20/35/12 dated 14/11/2012. It is currently owned by two of the biggest banks in Lebanon and the Middle East, Bank Audi and Bank Med. Currently only these two banks avail services from PinPay.

Pinpay offers mobile payment services that enable making payment from mobile phone:

- Telecommunications and utilities
- Government services
- Education and professional services
- Healthcare and wellness
- Banks and online payments
- Transportation and logistics
- Media, gaming and entertainment
- Retail
- Donations
- Trading
- Tickets for entertainment
- Insurance

3.2.5.2.2 Viamobile

The platforms were developed with ease-of-use in mind, while paying utmost attention to security, protecting personal information and financial transactions data. Speed and availability of services were also a focal point in development. The technology is compatible with the majority of mobile devices, including iPhone, Android, Blackberry, Java and other smart phones in development. It supports most protocols used in mobile phones, namely USSD, SMS and Internet Mobile. The range of Mobile Financial Services offered includes:

- Mobile Ticketing
- Mobile Recharge
- Internet Recharge
- Loan Payment
- Bill payment
- Parking Payments
- Banking Account Transactions
- Loyalty Programs

In addition to the Mobile Payment Solutions, Viamobile offers professional consultancy and support services to corporations and clients dealing with the world of electronic money. This consultancy is based on a focused approach tailored to each client's individual objective and needs. The range of solutions and strategies offered cater to banks, financial institutions, mobile operators and server providers.

3.2.5.3 *E-money*

3.2.5.3.1 *Simba*

A virtual wallet downloaded to mobile devices, allows users to perform a wide array of financial services easily and securely. Simba saves time and allows users to conduct vital and daily financial actions, such as paying for goods and services with just a few easy clicks on their mobile device.

3.3 NON-CASH GOVERNMENT PAYMENTS

One of the high-volume end users of non-cash payment instruments are the public-sector workforce and their public-sector employers. Government payments are predominantly handled through account transfers and cheques; these are intended to be migrated to electronic payment instructions processed through the BDL-PayGov.

Until the end of the last century, cash was the main instrument used by public sector workforce, but after a decision by the Prime Minister at the beginning of the century, public institutions and government administrations have stopped paying their retail payments especially salaries by using cash. Now it is mandatory for every public-sector employee to have a bank account in order to receive his salary or benefits. That procedure pushed all the public sectors employees to banks and eventually banks promoted their non-cash payment instruments to those employees.

All public institutions transfer salaries of their employees through the BDL. These transfers are executed by the Transfers Section within the Payment System Department (PSD), by debiting the related institution account and crediting the respective bank account. Remittance information is sent through the BDL to the designated banks attached with a list of the employees and their salaries or benefits. Later, some of these institutions will be members of the BDL-PayGov system. In the new system, the banks will be able to post the salaries of employees directly in the same value date since it will receive distribution batches electronically rather than waiting for receiving tables of names separately.

Besides their payments, the public institutions and ministries are transforming their collection procedures from cash, in their premises, into collection through bank accounts using non-cash instruments. The ministry of finance for example is collecting all types of taxes through banks. Public utility companies are collecting a high volume of their bills through banks.

The Government revenue collection is predominantly through cheques and cash at a variety of channels, though there is an ongoing effort to offer additional online payment mechanisms. Income taxes declarations have already moved online, however the payments have begun their transition to online means only recently. Currently taxes can be paid in cash or cheques at bank branches, offices of the Ministry of Finance (MoF), and, at select money transfer companies like Online Money Transfer (OMT). The most preferred channel is bank branches. The MoF

has recently launched a portal where Value Added Tax and property tax payers can pay their taxes, through credit card or if they are customers of participating bank through the internet banking accounts with those banks. Customs duties and fees can currently be only paid in cash or cheques (required to be a Banker's cheque or endorsed by payee bank that good funds are blocked). Several banks in addition offer online payments for taxes – primarily property taxes at their internet banking and other online channels.

4. PAYMENTS: INTERBANK PAYMENT SYSTEMS

4.1 EVOLUTION OF THE MAIN INTER-BANK PAYMENT SYSTEMS

4.2 LOW-VALUE PAYMENT SYSTEMS

4.2.1 Automated Clearing House (BDL-CLEAR)

The new BDL - Retail Payment System is intended to contribute to the efficient operation of the financial system in Lebanon. The system increases security of payment processing, reduce associated risks, and promote efficiency in terms of speed and cost in addition to better liquidity management

The BDL-CLEAR is a multi-currency Automated Clearing House (ACH) operated by the BDL; it clears and settles credit transfers, direct debits and cheques and settles in Deferred Net Settlement (DNS) mode across the participants account in the BDL-RTGS. The BDL-CLEAR became operational in November 2013. It offers clearing and settlement services for these instruments in LBP, USD, Euro and GBP.

Table 7. BDL Clear Statistics (4Q, 2016)

Instrument and Currency	Volume	Value (in respective currency)
LBP Cheques	1 119 323	8 055 Bn
USD Cheques	1 978 116	12 Bn
GBP Cheques	689	9 Mn
Euro Cheques	25 927	349 Mn
LBP Credit Transfers	50 397	105 Bn
USD Credit Transfers	50 693	105 Mn
GBP Credit Transfers	131	0.21 Mn
Euro Credit Transfers	397	1 Mn
LBP Debit Transfers	7 543	6 Bn
USD Debit Transfers	59 086	22 Mn
GBP Debit Transfers	44	0.047 Mn
Euro Debit Transfers	333	0.51 Mn

Source. BDL

The BDL - Retail Payment System provide participants an electronic platform for presenting retail payments instructions individually and in batches. It provides clearing for all retail payment instruments in Lebanon whereby each payment instrument will follow different stream and different clearing cycle. The provider (BDL) has the ability to define and add as many clearing streams as required.

In addition, the system provides clearing facilities for paper based payment instruments such as Cheques, and clearing facilities for non-paper based instruments such as direct debits, direct credits, and cards transactions in the currencies specified for each product.

The system provides clearing for all types of retail payments whereby, each payment instrument will follow an independent stream.

The system is composed of two payment schemas (pay and collect) and each schema is divided into streams that are divided according to two criteria's: Payment Instrument criteria and Business Reason criteria.

Payment instructions that are similar in terms of their nature, risk and processing requirements, and typically subject to the same legal framework, are grouped together as a separately identifiable clearing stream. Each stream includes its own operating rules and schedules in addition to the technical requirements.

Currently, the BDL-CLEAR caters for clearing in four currencies (LBP, USD, EUR and GBP) as defined in the BDL-RTGS. The BDL-CLEAR does not maintain any account.

4.2.1.1 Clearing and Settlement Process

The clearing process entails the exchange of payment instructions between participants. More precisely, it is the process of transmitting and, in some cases, confirming payment orders prior to settlement, including the netting of instructions and the establishment of final positions for settlement, followed by the distribution of payment orders to the beneficiary banks.

The cycle is completed once the beneficiary customer receives notification that the transfer of value has taken place. This means that the payment is final and irrevocable and, therefore, the payment portion of the trade is completed.

The system calculates the net position for each bank and automatically submits the resulting concurrent batch of funds settlement instructions to the BDL-RTGS, based on the selected algorithm for the involved clearing stream agreement.

The operating hours of BDL-CLEAR are 8 am to 3 pm Monday to Thursday; 8 am to 12.30 pm on Fridays; and, 8 am to 12 pm on Saturday. The number of clearing cycles, settlement time-frame and schedule for returns varies across instruments and currency (see table 8). There is a separate Liquidity Optimizing Mechanism (LOM) in the BDL-RTGS for cheques; credit transfers and direct debit settle in the general LOM. The MICR information read from the cheques is used for clearing; the physical instruments themselves however still need to be exchanged amongst the participants.

Table 8. BDL-CLEAR: Clearing and Settlement parameters				
Instrument	Clearing Cycles	Settlement Time-frame	Timeline Decline	Amount Thresholds
LBP cheques	1	T+1	T+1	No upper limit
USD, Euro and GBP Cheques	1	T+2	T+2	No upper Limit
Credit Transfers	2	T+0	T+3 (Only for Returns)	LBP: 30 million USD: 20,000 GBP: 5,000 Euro: 10,000
Direct Debit	1	T+5	T+5	LBP: 30 million USD: 20,000 GBP: 5,000 Euro: 10,000

Source: BDL

Pre-clearing process

Participants prepare credit and debit instruction batch messages, which should be valid in terms of predefined rules and message formats. These files are delivered to the system via network infrastructures.

The system validates messages received according to several syntax, semantics, and business rules. In addition, validations are performed on the batch file and the records in the file. The system notifies the instructor of rejected messages received.

Clearing and Netting process

At the clearing and netting stage, the system performs netting according to the preset algorithm for the messages accepted for the applicable clearing stream and applicable cycle. Net positions of each participant are calculated according to one of the three algorithms, as defined per each clearing stream:

- Gross Bilateral Totals;
- Gross Totals versus Group;
- Multilateral Net Totals.

Settlement Procedures

The system submits netted results for settlement in the BDL-RTGS.

Post-settlement process

Upon confirmation of successful settlement in the BDL-RTGS system, the system delivers the details of the settled instructions to the receiving participants in distribution batches and optionally to the payer party.

Participants will be able to reconcile the details of the distribution file with the settlement notifications received by the BDL-RTGS system related to the clearing file.

4.2.1.2 Risk Management Mechanisms

Risk management in retail payment systems involves technical, procedural and legal measures. These measures seek to ensure that the transaction is valid. Risk management mechanisms are set to mitigate the amount of errors by minimizing fraud and operational risks.

These measures attempt to allocate responsibility among all parties involved. Each type of payment instrument will have its own specific set of measures to provide some degree of certainty concerning the respective roles and responsibilities of the parties involved.

There are a variety of technical measures used to address risk. They include monetary and time limits (per transaction, per payment instrument, per client), personal authorization codes.

Measures aimed at limiting operational risks are also adopted in clearing and settlement arrangements for retail payments. BDL ensures an adequate degree of operational reliability for timely completion of the daily processing through a detailed logs and detailed timetable and very flexible transaction management by participants and system administrators. In addition to internal controls, backup facilities, business continuity plans are adopted.

BDL-CLEAR is based on ISO 20022 using the SWIFT MX (XML) formats for the standard messages supported by the system

4.2.1.3 Pricing Policy

BDL had set the following pricing policy for Retail Payment instruments cleared via BDL-CLEAR:

- 500 LBP per cheque submitted for collection;
- 1000 LBP per each returned cheque;
- 250 LBP per credit transfer transaction;
- 250 LBP per direct debit transaction.

4.3 LARGE VALUE PAYMENT SYSTEMS

4.3.1 Real Time Gross Settlement System

The Real Time Gross Settlement System – the BDL- RTGS is the only real time electronic multi-currency interbank gross payment and settlement system in Lebanon. It is in operation since July 9, 2012. The system is owned and operated by the BDL and provides real time final settlement on a gross basis in four currencies – the LBP, USD, GBP and the EUR.

There are 74 direct members in the BDL-RTGS. As laid down in Circular 127 of the BDL, participation in BDL-RTGS is mandatory for all banks operating in Lebanon, the central securities depository – MIDCLEAR, and the domestic ATM switches. Participation of financial institutions in BDL-RTGS system is not mandatory, but those financial institutions wanting to become members of BDL-RTGS should necessarily have a current account with BDL. Moreover, all participants in BDL-RTGS should be members of SWIFT.

Circular 127 of June 2012, provides the basic operating framework for the functioning of the BDL-RTGS system. The circular contains the rules and procedures governing the operations of the system, such as membership, connectivity to the system, role of BDL, accounts structure, settlement currencies, operational guidelines, charges and fees, credit extension rules, and contingency arrangements. as well as 10 appendices that includes the List of participating banks and financial institutions, Message Routing Codes, Nomination of BDL-RTGS administrators and users, Standard operating Schedule, System Windows, Events, LOM accounts, REC Codes and Contingency mode and operations.

4.3.1.1 Clearing and Settlement Process

Each participant of the BDL-RTGS has one settlement account (current account) per currency in the BDL General Ledger. Each such settlement account has sub-settlement accounts in the BDL-RTGS system known as LOM sub-accounts per currency and for different types of transactions.

It settles bilateral credit transfers amongst the participants of the system, funds leg of the government securities transactions (BDL-CSD), funds leg of the corporate securities transactions (MIDCLEAR), funds leg of the BDL Core Banking System, net funds settlement from the automated clearing house (BDL-CLEAR), net funds settlement received from three domestic ATM switches and from VISA and MasterCard for the POS transactions. The volume and value of transactions settled in the four currencies during the years 2013 till 2016 are given in the Table 9 below.

Table 9. Volume and value of transactions settled in BDL-RTGS								
(Value of transactions, in billions)								
	2013		2014		2015		2016	
Currency	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Lebanese Pound (LBP)	623,844	379,507	495,039	385,193	480,434	420,181	503,042	1,048,348
Us Dollars (USD)	527,843	202,60	479,329	264,32	427,301	312,74	401,749	370,62
EURO (EUR)	39,283	11,18	40,593	18,74	42,891	9,40	44,348	12,50
Pound Sterling (GBP)	5,277	0,59	5,218	0,36	5,826	0,59	6,779	0,71

Participants connect to the BDL-RTGS through SWIFT, as their primary connection. As a contingency and back-up measure, participants can connect to the BDL-RTGS through the Secure Information Technology Infrastructure (SITI) network, owned and operated by the BDL. The rules also provide for the BDL to act as an Authorized Settlement Agent (ASA) which enables the BDL to generate and submit fund settlement instructions and concurrent batches on behalf of participants in the BDL-RTGS. If for any reason, the operations of BDL-RTGS are affected in a contingency situation, the rules permit the BDL to act as a Technical Infrastructure Agent (TIA). In such situations, instructions are issued via web-client using SITI.

Any transaction settled in BDL-RTGS is deemed final and irrevocable, according to the rules of the BDL RTGS system, though finality and irrevocability are not defined in the legal framework.

The BDL-RTGS has five LOM subaccounts: General LOM, Cheque Clearing Settlement LOM, MIDCLEAR Local Market LOM, POS Settlement LOM, and ATM Clearing Settlement LOM, with each of the LOMs earmarked for settling specific types of transactions. While a bilateral fund transfer instruction between two participants is settled in the General LOM, the net settlement batches emanating from different settlement streams settle in the respective designated LOMs. The LOM accounts are funded at the beginning of the day and during the operating hours of the system. Participants can transfer funds between their own accounts; using system generated Intra-Account Transfer Instructions (IATIs) at any specified time or event during the operating hours of the BDL-RTGS. The rules provide for IATIs in respect of funds transfer between (i) between a participant's settlement account and its LOM accounts; and/ or (ii) between LOM accounts of a participant. In both instances, the transfers can be made only between accounts of the same currency. Outstanding balances in the LOM accounts at the end of the day are transferred back to the settlement account.

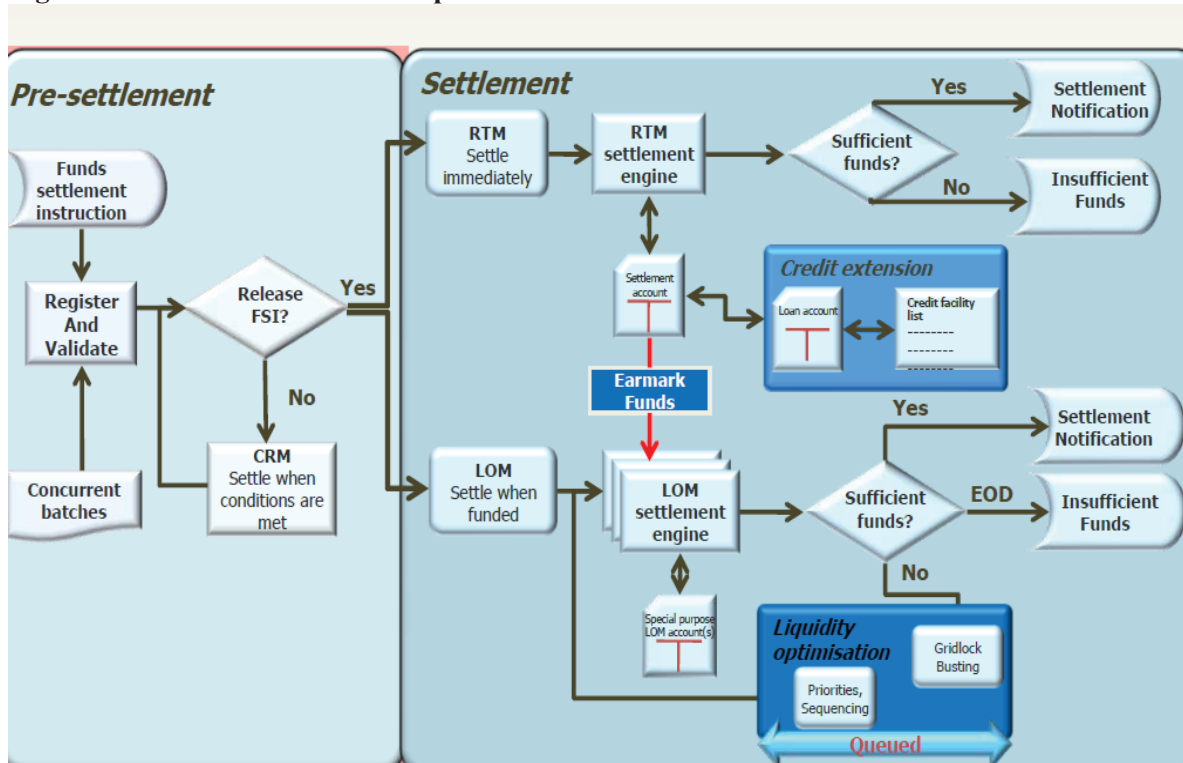
There are two settlement streams in the BDL-RTGS system known as Real Time Settlement Mechanism (RTM) and LOM. The RTM stream has the ability to settle transactions on an immediate real-time basis, using first-in-first-out (FIFO) mechanism. If, however, there are insufficient balances or credit extension (intra-day liquidity) is not available, such instructions are rejected by the system.

Currently the participants are using the LOM streams more than the RTM for settling their transactions. In the LOM stream, FSIs are queued and are settled on a FIFO basis. The LOM stream employs an optimisation scheme at pre-determined intervals to settle queued transactions. The system allows participants to assign priorities to fund instructions and change the sequencing of the queued fund settlement instructions. The total available balances of the

LOM accounts of a participant are automatically transferred to the participant's settlement account by the BDL-RTGS at the end of the day or cut-off event of a LOM.

BDL-RTGS is operational on all days of the week with the exception of Sundays and Holidays. The operating hours from Monday to Thursday are from 8 am to 4 pm. On Fridays, the system closes at 1.00 pm and on Saturdays it closes at 12.30 pm.

Figure 2. BDL-RTGS settlement process



4.3.1.2 Risks Management Mechanisms

The credit extension facility will be operationalized by the BDL, in the near future. However, none of the participants requested credit extension since the Go Live date of BDL-RTGS in July 2012. Banks in Lebanon are highly liquid, and BDL circulars forces banks to have high liquidity to meet their obligations.

4.3.1.3 Pricing Policy

The rules provide for charges and fees to be collected from the participants by the BDL. These include an operational fee per fund settlement instruction (in addition to the SWIFT message fees payable to SWIFT). Since the Go Live date, the BDL continued collecting a fixed fee per instruction equivalent to 2000 LBP (USD 1.33). And, in January 2013, the BDL issued an announcement setting a fixed fee of 5,000 LBP this announcement also states that the fees on instructions sent after 14:00 is 10,000 LBP (twice) –to encourage banks not to delay payments per FSI (USD 3.33) via BDL-RTGS. However, no membership fee is set either for the BDL-RTGS or for the BDL-CLEAR. The set fixed fees as follows: Cheques (USD 0.33 per cheque) Credit transfer and Direct Debit (USD 0.16 per transaction). No fees are set for ATM and POS clearing and Settlement.

4.4 MAIN PROJECTS AND POLICIES UNDER IMPLEMENTATION

The future plans of the BDL include operationalizing the credit extension facilities in the BDL-RTGS system. The BDL also intends to review at a later stage the pricing policies in terms of levels and structure of membership and transaction fees. Moreover, BDL is in the final stage of implementing the Government Payment System, BDL-PayGov.

5. SECURITIES, MARKET STRUCTURE AND TRADING

5.1 FORMS OF SECURITIES

The Securities that are held at BDL are in dematerialized form. They are held at BDL through Book entry. MIDCLEAR admits both physical and dematerialized securities.

5.2 TYPES OF SECURITIES

The Lebanese debt market comprises of: (i) Lebanese Treasury bills in Lebanese pounds; (ii) Lebanese Treasury bonds in foreign currencies (Eurobonds); and (iii) domestic certificates of deposit (CDs) and euro CDs issued by the private sector. The Public Debt Directorate law No.17 of September 2008, institutionalized the debt management functions with the Public Debt Directorate at the MoF, and given the mandate for public debt management. The MoF undertakes Eurobond issuances in the international capital markets. Articles 85 and 99 of the Law of Money and Credit provide for the BDL to be a banker to the public sector and act as its financial agent. It is based on these provisions that BDL acts as a debt manager to the Government in respect of Lebanese Treasury Bills. In accordance with the existing legal framework, currently, the front office and back office functions are divided between the MoF and the BDL respectively. The Equity market comprises: Common stock, priority stock, rights, warrant, preferred stock, GDR.

5.2.1 Shares and Subscription Rights

By law all Lebanese banks' shares are dematerialized and must be held at MIDCLEAR. MIDCLEAR also admits common shares of other institutions either on a book entry basis or on a physical basis.

5.2.2 Short-Term and Long-Term Government Debt Instruments

T Bills are denominated in LBP and are issued for various tenors ranging from 3 months to 12 years. The BDL has been endeavoring to lengthen the average time to maturity of the Lebanese T Bill market by issuing longer tenor T Bills. As at end of April 2016 the average time to maturity of the Lebanese T Bills was 3.47 years.

The T Bills are dematerialized and issued through book entry. These are held in custody at the BDL- CSD. The BDL- CSD provides securities accounts to the banks, while the banks in turn hold the details of the beneficial owners (retail investors and institutions) of the securities. Banks are the major players in the market and participate in competitive bidding for T Bills. Banks account for around 90 percent of the market share in the Government securities market.

5.2.3 CDs

CDs are issued in both Lebanese Pounds and US Dollars for various maturities ranging from 3 months to 5 years. In March 2015, the BDL issued Lebanese Pounds and USD CDs for 15, 20 and 30 years. The Lebanese pounds CDs are held in custody in MIDCLEAR starting July 2014. Prior to that, Lebanese Pounds CDs were held at BDL-CSD. LBP and USD CDs are held in a dematerialized form at MIDCLEAR. A physical certificate of deposit with the total issued amount is printed by MIDCLEAR. CDs can be issued in paper form upon investors' request.

5.2.4 Mutual Funds

By February 2016, there were 490 mutual funds available in Lebanon with total subscription of 1.945 million USD. Tables 10 and 11 shows the mutual fund by type and type of institution.

Table 10. Mutual Funds by Type						
Type	N°	%	Subscribers	%	Subscription (million USD)	%
Alternative	27	5.51	53	0.56	17.39	0.89
Commodity	1	0.2	1	0.01	0.04	0
Diversified	4	0.82	55	0.58	5.17	0.27
Equities	297	60.61	1208	12.84	238.44	12.26
Fixed Income	90	18.37	696	7.4	111.25	5.72
Hedge funds	1	0.2	438	4.65	62.88	3.23
Mixed Allocation	35	7.14	1215	12.91	205.46	10.56
Money Market	5	1.02	39	0.41	196.67	10.11
Real Estate	1	0.2	3	0.03	0.04	0
Securities	27	5.51	5701	60.58	1,107.77	56.94
Specialty	2	0.41	2	0.02	0.3	0.02
Total	490	100	9411	100	1,945.41	100

Source: CMA

Table 11. Mutual Funds by Institutions						
Institutions	N°	%	Subscribers	%	Subscription (million USD)	%
Domestic	23	5	5478	58	1,043.27	54
<i>Banks</i>	<i>22</i>	<i>4</i>				
<i>Financial Institutions</i>	<i>1</i>	<i>0</i>				
Foreign	467	95	3933	42	902.14	46
<i>Banks</i>	<i>348</i>	<i>71</i>				
<i>Financial Institutions</i>	<i>119</i>	<i>24</i>				
Total	490	100	9411	100	1,945.41	100

Source: CMA

5.3 SECURITIES IDENTIFICATION CODE

MIDCLEAR was appointed by BDL on the 2nd of July 2003 as the sole national numbering agency for securities issued in Lebanon. This means that MIDCLEAR is the sole organization entitled to allocate International Securities Identification Numbers (ISIN codes) for all Lebanese securities issued in Lebanon. On 14th November 2003 MIDCLEAR became a full member of the Association of National Numbering Agency (ANNA) this membership helps in making available all Lebanese ISIN's to all ANNA members worldwide. The BDL also uses the ISIN code for the identification and numbering of securities issuances.

5.4 TRANSFER OF OWNERSHIP

MIDCLEAR holds securities in certificated or un-certificated (dematerialized) form, however ownership is transferred only through a book entry rather than the transfer of physical certificates. This allows brokers and financial companies to hold their securities at one location where they can be available for clearing and settlement. For bearer securities that are certificated the transfer happens on a fungible book entry basis. For registered securities that are certificated transfer of ownership is not allowed.

The ownership of T-Bills is recorded in the BDL-CSD. The details of BDL-CSD are in the earlier paragraphs.

5.5 PLEDGE OF SECURITIES AS COLLATERAL

Pledging of Securities in some cases is subject to Basic Circular 7776 dated 21/02/2001. The participant representing the pledger delivers to MIDCLEAR the original copy of the Pledge Agreement and waits for a confirmation from MIDCLEAR stating that the Pledge was executed. MIDCLEAR S.A.L does not release the Pledged Shares without prior written approval of the Beneficiary of the Pledged Shares.

Securities deposited at BDL-CSD are treated as tangible and can be transferred or pledged by bookkeeping entry without physical delivery of the securities. BDL provides lending facility to Banks and Financial Institutions through Repos on Government securities

Annex 6, of the CMA Business Conduct Regulation asks the custodians to provide periodic statements to investors which include the following on Pledging of Securities:

- Details of any securities that have been pledged as collateral for or charged to secure borrowings on behalf of the portfolio, and the identity of the institution or the person the securities are pledged to.
- Total amount of any commission or other payments made in respect of such borrowings during the period.

5.6 TREATMENT OF LOST, STOLEN OR DESTROYED SECURITIES

In case the security is uncertificated, it is virtually impossible to have lost, stolen or destroyed securities because integrity checks are performed daily. In case of integrity between the balance and the journal it will be investigated and the cause of the discrepancy will be resolved on a daily basis.

They are stored in MIDCLEAR's vault with maximum security and a vault check is carried out twice a year.

In case it was detected when doing a physical count that a certain security was lost, stolen, or destroyed, MIDCLEAR will contact the issuer in order to reissue the lost, stolen or destroyed securities. MIDCLEAR assumes liability for direct losses resulting from theft or destroyed securities if the loss is caused by MIDCLEAR's own actions.

5.7 LEGAL MATTERS CONCERNING CUSTODY

BDL-CSD:

Participants are required to segregate assets held for their own benefit from those they hold for their clients by sub-accounts within a single participant account. Participants are not permitted to maintain more than one account at BDL.

MIDCLEAR:

By law number 308 all Lebanese banks shares are dematerialized. All MIDCLEAR clients have to segregate their holdings between their own and their clients'. In addition, all MIDCLEAR's participants' assets are protected in case of insolvency of the CSD by law number 139.

BDL-CSD/MIDCLEAR:

The Business Conduct Implementing regulation to be issued by the CMA ensures that an approved institution that is licensed to provide custody or management services must have an internal audit unit available. In order to hold client assets, the approved institution must segregate all client assets from its own assets. For registered securities, client assets must not be used for the institution's own account, or for the account of a different client. However, for bearer securities the client account is in effect an omnibus account.

5.7.1 Segregation of accounts

BDL-CSD/MIDCLEAR

If a client's asset is recorded in an account of an approved institution, the approved institution must ensure that the title to the account makes it clear that such asset belongs to a client and is segregated from the approved institution's assets.

If a client's asset is recorded in an account with a custodian or with a foreign custodian, an approved institution must require the custodian or foreign custodian to make it clear in the title of the account that the client asset belongs to one or more clients of the approved institution and that the assets are segregated.

5.7.2 Registration of client assets

MIDCLEAR:

Securities that are required by law to be held by MIDCLEAR for safekeeping must be held in an account in the relevant client's name with MIDCLEAR.

An approved institution must hold a document of title to a client asset in its physical possession, or hold the asset with a custodian in an account designated for client assets.

BDL-CSD:

The jurisdiction of Treasury Bills in Lebanon operates under an indirect holding system whereby investors are identified at the level of their intermediary. Therefore, the BDL CSD provides securities accounts for banks own account and a sub-account for bank's customers. Moreover, it provides securities accounts for the public that subscribes directly to the BDL.

5.7.3 Client Agreements

At MIDCLEAR, before an approved institution holds client assets with a custodian, it must agree in writing with the custodian appropriate terms of business, which must cover the following:

- The title of any account for client assets indicates that the assets credited to the account do not belong to the approved institution,
- The custodian must not permit withdrawal of any client assets from the account other than to the approved institution or to another person as directed by the approved institution,
- The custodian will hold or record a client asset belonging to the approved institution's client separately from any securities or other assets of the custodian, and that it will treat the assets in the account as client assets,
- The custodian will deliver to the approved institution a statement as at a date or dates specified by the approved institution that details the description and amounts of all the securities credited to the account. The statement must be delivered to the approved institution within 7 days of the date of the statement.
 - The custodian will not claim any lien, right of retention or sale over the securities in any client account covered by the agreement, except if the prior written consent of each client has been obtained, or
 - To cover charges to that specific client for the custody services covered by the agreement.

5.8 PRIMARY MARKET

5.8.1 Treasury Bills

BDL-CSD:

T Bills are issued on a weekly basis through a competitive bidding process. Usually a small portion of the issue size is reserved for non-competitive bidding by retail individuals and other institutional players. Allotment to the non-competitive bidders takes place at the weighted average rate discovered in the competitive bidding process. Banks are the major players in the market and participate in competitive bidding for T Bills.

The auction process is paper-based with the banks submitting their bids in paper form. Settlement takes place on a T+3 basis. The cash pay-in for the securities take place through the BDL-RTGS. On verification of the pay-in details by the Financial Operations Department (FOD), the allotment of securities takes place. Currently, this process is manual with the BDL contemplating to go in for an automated CSD-SSS interface with the BDL-RTGS system.

The issuance process is spread over a week. The BDL issues a circular to the banks on the Thursday announcing the auction. On Friday, the BDL follows up by sending an application form with the details of issuance and the ISIN code to the banks. Banks have to submit their bids by 11 am on the following Monday. The bids are compiled, both on BDL operational system and on excel spreadsheet, within 30 minutes and a detailed analysis of the bids received is done and submitted to the MoF and the Governor. The MoF decides on the cut-off yield/discount rates as applicable and also decides on the issue size based on this analysis. The MoF has the right to reject bids and go in for a lesser issue size. The results of the auction can

be announced either on the same day (Monday) afternoon or on Tuesday morning. The results of the auction are published on Bloomberg and Reuters. The details of the successful bids are transferred into the BDL operational system by the FOD. One working day before the issuance day, i.e. on Wednesday morning, FOD in co-ordination with the IT Department executes a program to transfer accepted offers into subscriptions on the BDL-CSD operational system.

5.8.2 Government Bonds and BDL's CDs

CDs are issued in both Lebanese pounds and USD for various maturities ranging from 3 months to 5 years. In March 2015, BDL issued Lebanese pounds and USD CDs for 15, 20 and 30 years. The Lebanese pounds CDs are held in custody in MIDCLEAR starting July 2014. Prior to that, Lebanese Pounds CDs were held at BDL-CSD. LBP and USD CDs are held in a dematerialized form at MIDCLEAR. A physical certificate of deposit with the total issued amount is printed by MIDCLEAR. CDs can be issued in paper form upon investors' request.

5.9 SECONDARY MARKET

5.9.1 Treasury Bills

Secondary market trades in T bills take place between banks and between banks and the BDL. In the case of inter-bank secondary market trades, based on the SWIFT messages received, the BDL-CSD debits the seller's securities account and credits the buyer's securities account in the BDL CSD. The payment leg of the transaction is not verified. However, in the case of a deal where one leg of the transaction involves BDL, a system of DvP is in place. BDL acts as the depository and clearing agent for LBP denominated Government securities.

5.9.2 Government Bonds and BDL's CDs

Secondary market trades in government bonds and BDL CDs take place between members of Midclear. Settlement is effected on a DvP basis. The relevant securities accounts are debited for the seller and credited for the buyer. At the same time, the relevant cash accounts at BDL-RTGS are debited for the buyer and credited for the seller. Please see the section on Shares below for further details on settlement. Furthermore, repo transactions take place between members of Midclear on BDL CDs.

5.9.2 Shares

Executed orders on the Beirut Stock Exchange (BSE) are irrevocable and are sent for settlement on T+3. In addition, all matched deliveries and receipts against payment due to be settled on T+3 are sent for settlement as well.

BSE and OTC trades in shares are settled in Midclear based on the settlement Model 3 (Net on securities and net on cash).

There are three settlement cycles in a business day except on Friday which has only two settlement cycles.

In the Real Time Gross Settlement (RTGS) system of the Central Bank, the main member's cash account balance at the beginning of a business day, is transferred to a subaccount called the General Liquidity Optimizing Module (General LOM) of this member's account.

There is also another subaccount to the main member's cash account called Midclear LOM. This is true for every member of the RTGS that requires Midclear to clear and settle its trades. Midclear has the authority to debit or to credit all such Midclear LOM accounts.

In order for a member to deposit or withdraw from Midclear LOM account, it must make transfers from or to their general LOM account.

In a settlement cycle Midclear LOM is first locked in order to freeze any change in the balances of these subaccounts and the balance of each member in Midclear LOM is obtained.

Next, settlement instructions are attempted to be settled by checking the security balance and the cash balance on a net basis.

Settlement instructions that show a deficient security balance or a deficient cash balance are removed from settlement and retried on the next settlement cycle. It should be noted that Midclear does not execute partial settlement. This means that if the deficiency of securities or cash is partially covered, Midclear does not settle the covered part.

Settlement instructions that have sufficient security and cash balances are settled both in Midclear books for securities and in the BDL RTGS Midclear LOM for cash. This results in the settlement of such transactions and is considered final and irrevocable.

At the end of the last settlement cycle, all remaining deficient BSE orders are suspended. All remaining settlement instructions that did not settle on the last settlement cycle and that are not BSE trades, are retried on the next business day. Following that, Midclear LOM is unlocked.

All suspended BSE trades are notified to BSE in order for it to take further action.

If a participant of Midclear does not have enough funds or securities at the settlement time, the trade will be removed from the settlement cycle and both counterparties will be informed. Failed trades will be retried in the next cycle. If at the end of the last cycle in the business day the transaction did not settle:

- If it's an OTC trade, it will be retried in the next business day
- If it's a BSE trade, it will be suspended, reported to the Beirut Stock Exchange (BSE) and the concerned participants
- If the deficiency is in the security leg, a buy-in may be initiated by the BSE and both trades (the original trade and the buy-in) are all settled in the same settlement cycle. It is important to note that a suspension cannot be solved via a normal trade.
- If the deficiency is in the cash leg, a sell-out may be initiated by the BSE and both trades (the original trade and the sell-out) are all settled in the same settlement cycle. It is important to note that a suspension cannot be solved via a normal trade.

It is important to note that it's up to Midclear's discretion to decide which trades to fail in a way to minimize the domino effect of the trades.

5.10 STOCK EXCHANGE TRADING

The trading hours of the BSE are from 9.30 am to 12.30 pm Monday to Friday. Trades are settled on a T+3 basis, with the securities and funds settlement happening in DVP model 3. The securities are held in custody and settled through MIDCLEAR, while funds settlement happens in central bank money in BDL. Transfer of ownership of securities takes place once the funds settlement happens in the books of the BDL.

As part of the risk management framework, once a trade is confirmed on the BSE, it is deemed as final and irrevocable. In the event that there are insufficient securities or funds, MIDCLEAR informs BSE which then initiates action for either a buy-in (in case of securities shortfall) or a sell-out (in case of cash deficiency). These actions are initiated on the next business day. An attempt to settle both will be carried out on the next business day. In addition, the BSE takes a bank guarantee of LBP 200 million renewed on annual basis from each broker. In case the bank guarantee is invoked, it has to be replenished within a maximum of three days. The BSE has the discretion to increase the amount of bank guarantee based on the trading volumes of a member.

5.10.1 Trading Procedures

There are three different phases to a trading day:

- Pre-opening phase: During the period referred to as the pre-opening phase, orders entered by members and transmitted to the BSE trading platform are automatically recorded in the central order book without giving rise to trades.
- Opening auction: in this phase, the BSE trading platform seeks to match orders for each financial instrument.
- The main trading session: Once the price determination phase for each security is completed, continuous trading in that Security begins and orders can be entered, maintained, modified and deleted.

All orders entered into the BSE trading platform are acknowledged and assigned a sequential order number per Financial Instrument. For each trade, members receive an execution message showing the quantity traded and the execution price. In the event of partial execution, the unfilled order quantity is shown in the execution message. In the event of cancellation of trades or orders by BSE, the member will receive a notice.

Each new incoming order is immediately checked for execution against orders on the other side of the order book. A trade takes place whenever a buying order is entered at a price equal to or higher than a corresponding selling order, or whenever selling orders is entered at a price equal to or lower than a corresponding buying order. Orders in the central order book will be executed according to the price/time priority principle. Orders can be executed in full, in one or more steps, partially or not at all. Thus, each new incoming order may generate none, one or several trades. Orders or parts thereof, which have not been executed, are sorted in the order book according to price/time priority.

5.10.2 Trade Confirmation

Once an order is matched and executed a trade will be formed and a confirmation will be sent to each counterparty.

5.10.3 Settlement Cycles

MIDCLEAR:

There are three settlement cycles per day at 9.45, 11.45 and 13.45 on all days, with the exception of Friday which has two settlement cycles at 9.45 and 11.45. MIDCLEAR has the authority to debit and credit all member LOM accounts [Brokers bank] as part of the cash settlement. Members have to fund their accounts with designated bank with the requisite balances prior to the settlement timings. The obligations can be ascertained electronically

through MIDCLEAR's extranet site. Once cash settlement is successful at the BDL- RTGS the securities settlement is carried out immediately and the details are made available on MIDCLEAR's extranet site.

5.11 OVER THE COUNTER MARKET

For Lebanese companies with a capital equivalent to USD 100,000 at least, the shares of such companies are traded without being listed on the Beirut Stock Exchange.

6. SECURITIES CLEARING AND SETTLEMENT SYSTEMS

6.1 ORGANIZATIONS AND INSTITUTIONS

6.1.1 BDL CSD

The BDL-CSD is owned and operated by the BDL. It is critical to helping the BDL conduct monetary policy and maintains financial stability in Lebanon. The BDL CSD acts as the official securities registrar of TBills and plays an important role in maintaining the definitive record of the legal ownership for those instruments.

6.1.2 MIDCLEAR

MIDCLEAR was established as a CSD by Law no. 139 of October 1999. Law No. 308 of April 2001 designates MIDCLEAR as the Central Registrar for all Lebanese banks shares. It is established as a joint stock company with a capital of LBP 2.8 billion, with the BDL owning 99.79 percent of its share capital.

MIDCLEAR governance structure consists of a board. The board comprises - Five delegates of the BDL, whereas, two members are elected by the General Assembly.

The main functions of MIDCLEAR include:

- Safekeeping of securities for participants;
- Immobilization of physical securities;
- Book-entry clearing and settlement of transactions in a secure and cost-effective environment;
- Accurate, timely and cost-effective means of collecting, distributing and accounting for dividend and interest payments;
- Maintaining shareholders registers. By Law No 308 of April 3rd, 2001, MIDCLEAR was appointed Central Registrar for all Lebanese banks shares;
- Administering Mutual Funds;
- Official numbering agency for Lebanon (ANNA member);
- Repo and reverse Repo transactions.
- In addition, MIDCLEAR acts as the custodian for foreign securities in Euroclear and Clearstream.

6.2 SECURITIES REGISTRATION AND CUSTODY PROCEDURES

6.2.1 BDL CSD

The BDL acts as the depository and clearing agent for LBP denominated Government securities. The ownership of Treasury Bills in Lebanon operates under an indirect holding system whereby investors are identified at the level of their intermediary. Therefore, the CSD provides securities accounts for banks own account and for bank's customers. Moreover, it provides securities accounts for the public that subscribes directly at the BDL. CSD entity at FOD also acts as the issuer of CDs but not as the official securities registrar since this latest function has been transferred to MIDCLEAR as per the BDL Announcement no 902.

The BDL-CSD has three different functions:

- Central Security Depository for Treasury Bills;
- Security settlement system for Treasury Bills and Certificate of Deposits. The settlement is provided on a Delivery versus Payment (DvP) basis and applies to primary market T-Bills and CDs issuances and to secondary market T-Bills' transfers when the BDL is a party. In cases of T-Bills secondary market operations for Bank's own account and/or Bank's customers the settlement is done on a free of payment basis;

Participation in T-Bills subscriptions is open to: (i) All banks and financial institutions that are licensed by the BDL; (ii) All Public Entities that hold an account at the BDL and (iii) Foreign Financial Institutions which were accredited an account at the BDL; and Public at the BDL.

Accepted offers for T-Bills are registered as subscriptions one working day before the issue value date, through an automated computer program managed by the IT department which transfers all subscription applications on the TB operational system.

T-Bills maturities transactions are created one working day before the maturity date, on the operational system for all subscribers that have portfolios in the circular/categories that will mature or have coupons that will mature on our requested date. This is completed through an automated program. Accounting vouchers that are produced from the subscriptions, maturities and coupon payments transactions are then checked for any errors or mismatch with the accounting system. Accounting vouchers that must be produced in the special queue-file, with value date equal to issue date, maturity date, coupon maturity date, are then created with entry date equal to the first working date. The IT department runs a pre-scheduled program early morning on Thursday to post the accounting vouchers prepared for the requested entry date (i.e Thursday) in the accounting system, running maturity vouchers prior to subscription, to ensure enough funds per subscriber.

For CDs, applications for short term LBP CDs are sent by Banks on Tuesdays with value date Friday. Long term LBP and USD CDs are issued depending on the BDL policy, on Thursday and Tuesday respectively. Deals are taken by phone in the dealing room and banks confirmation letter are sent by hand to FOD department. Accounting and Back Office units manage the execution of operations. All CD's applications are accepted and the FOD department issue a certificate with the total amount for MIDCLEAR and send a physical certificate along with an excel sheet to show the name of the institutions, and all related data like date of issuance, maturity date, ISIN No., category, the interest rate and the interest payment type.

6.1.2 MIDCLEAR

MIDCLEAR accepts under its custody all types of securities either on a physical or book entry, and on a fungible and non-fungible basis. For that purpose, MIDCLEAR's vaults comply fully with all securities measures, namely, door sensors, twenty-four-hour video recording, and an insurance policy covering loss, theft, fire, computer fraud, and employees' errors or frauds.

Among the services that MIDCLEAR provides is the management of the shareholders registry, according to Law number 308 enacted by the Lebanese Parliament on 03/04/2001. This Law stipulates in its Article 1 that all bank shares shall be registered and its shareholder register managed by MIDCLEAR. In addition, MIDCLEAR acts as registrar for some commercial companies and some Common Placement Funds, either listed or not listed on the Beirut Stock Exchange.

The Registrar function includes the following responsibilities:

- Transfer of Ownership as a result of trading:

Non-Listed shares:

MIDCLEAR receives Form 2 (transfer of Ownership) duly signed by the member who is representing the seller in the Transfer of Ownership contract. MIDCLEAR executes the order after taking into consideration the legal aspect concerning the trading of the bank's shares with regards to the seller and buyer.

Listed shares:

The trades on listed shares are settled on the books of MIDCLEAR on T+3 provided that there are no failures in either security or cash.

MIDCLEAR will report any violation of the provisions of Paragraph 1 of Article 4 of Law 308 to the BDL Governor.

- Transfer of Ownership as a result of Inheritance or Will:

MIDCLEAR receives an original copy of the official documents issued by the court, and transfers the shares to the heirs or beneficiaries accordingly.

- Pledging and Un-pledging of shares:

The member representing the pledger delivers to MIDCLEAR the original copy of the Pledge Agreement and waits for a confirmation from MIDCLEAR stating that the Pledge was executed. The shares shall only be unpledged when the beneficiary of the Pledge (pledgee) instructs MIDCLEAR to free the shares.

- Freeze initiated by the Court:

MIDCLEAR receives direct instruction from the court to freeze the shares and executes the order according to the procedures defined by the Law. According to Article 889 of the Law, MIDCLEAR reports directly to the court the details of the freeze.

- Freeze of Shares for guarantee purposes:

MIDCLEAR is able to freeze any account if it relates to a certain guarantee, especially the Locked- In shares placed in guarantee for the responsibility of members of the Board of Directors. MIDCLEAR issues a statement confirming the freeze of the shares upon the member's request, and after submitting the required documents.

- Statement of Ownership of Nominal Shares:

MIDCLEAR issues a Statement of Ownership upon the member's request, in some cases; the shareholder's original request may be required by MIDCLEAR.

- Attendance List for General Assembly Meetings:

MIDCLEAR provides a list of the shareholders to the issuer for the attendance of the General Assembly Meetings stating the names and number of shares and votes for each shareholder.

6.3 SECURITIES CLEARING AND SETTLEMENT PROCESS

6.3.1 BDL CSD

The system settles transfer instructions for both securities and funds on a trade-by-trade basis, with final (irrevocable and unconditional) transfer of securities from the seller to the buyer (delivery) occurring in a short duration timing. The securities settlement system maintains securities accounts and funds accounts for participants. Transfer of securities and cash are made by book-entry.

For T-Bills' subscription funds settlement, the detailed subscription accounting vouchers are first credited from the subscriber's current accounts to the transitory MOF subscription account, then the total subscription amount per circular/category is transferred from the transitory account to the MOF account as one accounting voucher. The Ministry of Finance has a special account at BDL only for T Bills maturities and subscriptions.

For T-Bills' maturity funds settlement, one accounting voucher for each circular/category transfers the total maturity amount from the MOF account to the transitory MOF maturity account. Then the detailed maturity accounting vouchers transfer the maturity amounts per subscriber from the transitory MOF to the subscriber's current accounts and for public at BDL-branches.

6.3.2 MIDCLEAR

MIDCLEAR performs clearing and settlement for all securities admitted in its system on a book entry basis. Whatever the market (BSE & OTC), trades between MIDCLEAR members are settled on a DVP model 3 basis:

- Cash settlement happens in Central Bank money
- Settlement of Local Markets transactions: All confirmed BSE trades sent to MIDCLEAR are settled on their settlement date using DVP model 3 with cash settlement happening in BDL-RTGS through the MIDCLEAR LOM accounts of banks designated by the members. The settlement of trades is final and irrevocable
- Brokers allocate the shareholder number to trades from MIDCLEAR's extranet website on T+0. Trades are settled on T+3 in DVP model 3, with funds settlement happening in BDL-RTGS through the MIDCLEAR LOM accounts of banks designated by the members.

There are three settlement cycles per day at 9.45, 11.45 and 13.45 on all days, with the exception of Friday which has two settlement cycles at 9.45 and 11.45. MIDCLEAR has the power to debit and credit all banks LOM accounts designated by the members, as part of the cash settlement. Members have to fund their accounts with the requisite balances prior to the settlement timings. The obligations can be ascertained electronically through MIDCLEAR's extranet. Once cash settlement is successful at the BDL-RTGS the securities settlement is carried out immediately and the details are made available on MIDCLEAR's extranet.

- Other operations settlement: when both counterparties to a trade on foreign security are local, their settlement happens at MIDCLEAR. Members have to transfer funds to MIDCLEARs account in the BDL-RTGS General LOM. MIDCLEAR will transfer any cash proceeds as a result of settlement, to accounts of bank designated by member in the BDL-RTGS General LOM.

MIDCLEAR allows certain members who do not have or cannot open a BDL-RTGS account to make arrangements with another BDL-RTGS member to provide them with settlement services.

6.4 GUARANTEE SCHEMES

6.4.1 Settlement Guarantee Fund

The BSE takes a bank guarantee of LBP 200 million renewed on annual basis from each broker. In case the bank guarantee is invoked, it has to be replenished within a maximum of three days. The BSE has the discretion to increase the amount of bank guarantee based on the trading volumes of a member.

6.5 SECURITIES LENDING

BDL provides lending facility to Banks and Financial Institutions through Repos on Government securities.

6.6 INTERNATIONAL LINKS AMONG CLEARING AND SETTLEMENT INSTITUTIONS

MIDCLEAR has links with Euroclear and Clearstream for internationally traded securities. Members send SWIFT deliveries or receipts free or against payment to Midclear where the underlying security is admitted at Euroclear or Clearstream. Midclear acts as the custodian agent and sends in turn corresponding deliveries or receipts free or against payment as the case may be to these ICSD institutions. Once these institutions settle the instructions, Midclear sends SWIFT settlement confirmation messages to its corresponding members. Furthermore, Midclear's extranet is updated accordingly to enable its corresponding members to get online reports on such settlements.

7. THE ROLE OF THE CENTRAL BANK IN PAYMENT, CLEARING AND SETTLEMENT SYSTEMS

The BDL powers over payment systems have been established by Law 133 of 1999, which covers the BDL powers to: a) develop and regulate payment systems, especially with regard to ATM and payment cards; b) develop and regulate payment transfers, including electronic transfers; and, c) develop and regulate clearing and settlement for both payments and financial instruments.

7.1 SETTLEMENT

The BDL- RTGS payment system is based on continuous bilateral daily settlement taking place on a gross basis. Unfunded FSIs sent for settlement via RTM are automatically discarded. But, unfunded FSIs sent for settlement in the General LOM are discarded at the end of the day if the respective account is not funded. The paying bank that sent the FSI is always aware of the pending FSIs in General LOM. At present, there is netting system for concurrent batch files uploaded or sent to the system from core banking or BDL-CLEAR systems.

Each participant in the BDL-RTGS has one Settlement Account (Current Account at BDL) per currency. The settlement account also includes sub-settlement accounts known as LOM accounts, which help in the management of liquidity during the course of a business day. These accounts are not reflected on the BDL General Ledger and will zero-out at their designated cut-off times. Currently, there are five LOM subaccounts at BDL-RTGS: General LOM, Cheque Clearing Settlement LOM, MIDCLEAR Local Market LOM POS Settlement LOM, and ATM Clearing Settlement LOM.

Fund Settlement Instructions (FSIs) settled in the BDL – RTGS are all final and irrevocable, according to rules set by BDL (circular 127), this basic decision also states that Participants may not cancel their funds settlement instructions, once they are executed in the BDL-RTGS”. But, the point at which settlement is final is not defined nor documented. However the new finality law that is currently being studied by the Parliament members together with the BDL representatives takes care of this issue and defines settlement finality and irrevocability. In the draft finality law, payments are set to be final once the relevant accounts have been appropriately debited and credited. Currently, the courts decide when payments are considered final.

7.1.1 Use of Reserve Requirements for Payment Purposes

The current system allows the use of central bank money and reserve deposits at the BDL for settlement. The required reserve ratio is currently 15 percent. Since required reserves deposits are calculated as the average daily level of deposits in the commercial banks during a given week, required reserves deposits may be drawn down to settle payment transactions.

7.2 OPERATOR OF PAYMENT AND SETTLEMENT SYSTEMS

According to the Code of Money and Credit, the BDL has the power to operate Payment and settlement systems in Lebanon.

7.3 THE OVERSIGHT FUNCTION OF THE BDL

The BDL has embarked on a process of reform of the NPS to enhance the safety and efficiency of the NPS in order to reduce systemic risk.

International standards and best practices, including in particular, the General Guidance for National Payment System Developments, the CPMI-IOSCO PFMI and the World Bank Retail Payments package have been taken into consideration by the BDL. The process of reform includes the implementation of the oversight function; nowadays a strategic framework for the implementation is under discussion in the BDL. In this section a summary of the strategic framework is described.

7.3.1 Legal Foundations of the Oversight Function

The BDL has regulatory and oversight powers over payment systems and instruments as established by Law 133/1999. The role of the BDL is articulated in the Code of Money and Credit (in particular article 70), which dates from 1963 and has been amended several times. The BDL powers over payment systems have been established by Law 133 of 1999, which complements the BDL's mandate pursuant to Article 70, covering the BDL functions to: a) develop and regulate payment systems, especially with regard to ATM and payment cards; b) develop and regulate payment transfers, including electronic transfers; and, c) develop and regulate clearing and settlement for both payments and financial instruments. Based on these powers, the BDL adopted various regulations, called Basic Decisions, on systems and instruments, with a special focus on electronic means and on the standards that financial institutions need to comply with when offering services by electronic means.

7.3.2 Objectives and Scope

One of the goals of the BDL is to ensure the safety and efficiency of payment and settlement systems operating in Lebanon, in order to fulfill with this goal, the Oversight function will have the objectives of:

- Ensure the safety and efficiency of payment and settlement systems operating in Lebanon.
- Ensure that operators, issuers and service providers maintain sound risk management policies;
- Promote an effective legal and regulatory framework;
- Promote financial stability;
- Establish adequate protection of consumer, fair and transparent access criteria and market competitiveness;
- Expand the range of electronic payment services;
- Promote confidence and trust in electronic payments;
- Promote financial inclusion.

The Scope of Oversight Function includes:

- Large-Value Payment System (LVPS): The BDL-RTGS system is a systemically important and the CPMI-IOSCO PFMI are applicable to assess this system and shall be under the oversight function giving its importance and possible effects of systemic risk.
- Securities Settlement Systems (SSS): The Financial operations department at the BDL operates a depository for government securities. This will be under the scope of the oversight. Currently MIDCLEAR, is not overseen by any authority. The BDL and CMA plan to include specific clarifications regarding the operations of in the SSS in the cooperative agreement that is under discussion. This system is considered systemically important and the CPMI-IOSCO PFMI are applicable to assess this system.

- Retail Payment Systems: The retail payment systems BDL-CLEAR shall be under the scope of the oversight. The ACH may or may not be considered as systematically important payment systems. The card payments networks; payments instruments and payment service providers will be also under the scope of the oversight. Any new payments, remittances or payment service providers introduced in Lebanon, ATM switches and Government Payment System (BDL-PayGov) will be also under the scope of the oversight. The BDL intends to use the PFMI as the framework and apply specific principles and key considerations for the retail payments systems.

7.3.3 Activities

The BDL, as overseer of the payment and settlement systems, will perform a set of activities on a routine basis:

- Monitoring activities, through which the BDL monitors the daily operations of the system and runs all reviews for abnormalities and sources of risk. Adequate technical and human resources must be devoted to these activities, which require timely and continuous contacts with the market, and a full understanding of the mechanics of the system. Risk or crisis prevention is the core of the overseer's responsibility. In crises, such as large-scale technical or financial failures that halt or break the payment circuits, the overseer is involved immediately and will be part of the crisis management process, whereby emergency procedures are activated and decisions taken to reestablish orderly conditions in the system. Strict coordination and fluid information exchange with system participants and providers are essential.
- The BDL will carry out ongoing research and analysis on payment-system-related issues ranging from operational to institutional, technological, and long-term development areas of interest. These activities include the structural activities aimed at building the foundations of the payment systems, and shaping the quality and quantity of services it delivers to the economy. Its role in designing the system's rules and incentive structure clearly belongs to the structural dimension of public policy. The overseer will also catalyze resources for external technical assistance from experts, institutions, and specialized agencies to address problems including use of new infrastructure, legal and regulatory innovations, personnel training and technical and institutional capacity building.

7.3.4 Instruments

The Oversight tools that are used by the BDL or will be used in the near future include:

- Collecting, processing and analyzing data and other information in order to provide inputs to the oversight activities and also help in monitoring the effectiveness of the current oversight arrangements. The BDL will periodically review systems integrity by collecting and processing information regarding the functioning of the technical and risk-management infrastructure. The overseer may request service providers and participants to submit selected information on the various stages and phases of the payment process. Information may cover payment volumes and values by types of instrument, data on costs, pricing, capacity use, breaches of credit/debit caps, settlement and payment delays, length of queues, gridlock, liquidity shortfalls, back-office problems, and technical or operational failures. The overseer will receive information through regular (off-site) data reporting by participants, complemented if necessary by on-site inspections. For systemically important systems, the overseer may also adopt online monitoring of real-

time payment and settlement flows and of risk levels across the payment circuit, and use automatic warning signals to detect abnormalities. Where such systems are privately run, the overseer should be provided by the owners with access to timely and relevant information on daily operations. During operational periods, contact points should be established in all relevant entities that could be readily activated in the event of emergencies. The BDL will also request the result of a self-assessment of the systems and the submission of information on any significant changes in operational and governance aspects.

- Through analysis of data and information, the BDL plans to develop full awareness of the weaknesses and any action plan for the system. The analysis should cover a broad spectrum of topics including: (i) interpretations of the results of the statistics; (ii) new development in the payment system in the country or abroad; (iii) determination of new payment systems that will be overseen by the BDL; (iv) analytical reporting on the different payment systems and adequacy of risk management procedures and discussion of special situations that may affect the smooth functioning of the payment system and (v) result of assessment or self- assessment of the different systems according to the specific methodologies.
- Issuing Regulations (Circulars) is a typical tool used by overseers. The exercise of regulatory powers may involve administrative acts of general application and specifically addressed provisions. Regulations may be aimed at defining organizational, functional, and technical features of payment systems. For LVPS, regulations could establish infrastructure security standards (such as for information transfer, use of intraday liquidity and queues, cancellation of payments, and account reconciliation). Regulations for retail payment systems (which are usually characterized by lower levels of systemic risk) may determine minimum reliability and efficiency requirements for service providers. Regulations may also be used to set criteria for technical security and interoperability of payment instruments and services. Competitive conditions in the market could be supported by regulation to ensure transparent and full cost-recovery pricing policies by service providers.
- Regulations will cover access criteria, business conduct, sanctions for rule noncompliance, and commitments from participants. Rules on access should define objective and transparent criteria for access to payment and settlement systems. Sanctions should be gradual and proportional to misconduct, and should provide offending parties with enough incentives for self-correction, including threats to suspend and revoke business licenses.
- Special mention is needed for regulations regarding the licensing of non-bank payment system providers; this is relevant in the oversight of the retail payment systems given the innovations and new products that can be offered in the market by service provider different than banks or financial institutions that are under the supervision of the BDL.
- On –site inspections. Throughout on - site inspections the BDL can make a full assessment of the systems and payment service providers that are under the scope of oversight. The results of on-site inspections are an important source of information for the appropriate oversight of the NPS. To conduct inspections the Oversight Division should: (i) be supported by a comprehensive regulatory framework that gives powers to conduct inspections, (ii) have cooperative arrangements with the BCC and IT Department of the BDL and (iii) have the staff trained in this type of activity.

- Policy dialogue and cooperation. Regulations will be complemented by the overseer's capacity to maintain a continuous policy dialogue with all the actors of the payment system, including users. This is necessary to secure a fair representation of the public and private interests involved in payment activities, and to create consensus for policy choices. The dialogue, which can take place at both formal and informal levels, offers multiple channels for the overseer to provide participants and the public with indications on its policy orientation and to exert moral suasion; to shape its policy agenda by using feedback from the market; and to check through the users on the efficiency, reliability, and fairness of the payment services delivered by the system. A dialogue between the overseer and the participants may also ensure that rules, standards, and collective actions are designed in ways that optimize system efficiency and induce participants to internalize the overseer's public objectives within their own decisional functions.

7.4 MONETARY POLICY AND PAYMENT SYSTEMS

BDL is aware of the importance of efficient payment systems and its effect in conducting the monetary policy, and promoting financial stability. A developed and secure payment system would reduce risks, including exchange rate risk, and improve liquidity management. The newly developed payment systems in Lebanon facilitated the timely availability of critical information for the BDL Central Council that is responsible for setting the monetary and banking policies. And the prompt and smooth settlements enhanced the overall conduct of monetary policy. The PSD provides timely information and statistical reports to the BDL Governor and Central Council regarding payment transactions, including interbank transfers, low value payments, Cheques, Direct Debits, Credit Transfers, as well Cards and POS payments. PSD also oversee the payment systems in Lebanon in order to mitigate future risks that may affect monetary policy decisions and the stability of financial markets in Lebanon. Moreover, BDL is also aware that Innovations in payment systems which will facilitate economic transactions and may affect monetary and financial stability.

7.5 COOPERATION

The BDL acknowledges that cooperation between the overseer and other regulatory authorities or departments inside the BDL will guarantee the mutual exchange of information and the coordinated action necessary for each agency to intervene promptly and appropriately, when necessary. The BDL will foster this cooperation through the formalization of appropriate mechanisms (e.g. Memorandum of Understanding, working groups, etc.) with CMA as well as the BCC. This cooperation is aimed at helping in minimizing the regulatory costs to participants of complying with various forms of control and of duplication of control, and ensuring consistency of all public interventions and rules pertaining to the payments system.

7.6 THE ROLE OF THE CENTRAL BANK IN CROSS-BORDER PAYMENTS

Lebanon has historically been a regional business hub and its financial structure has always been sound, backed by foreign currency capital influx for investments and especially from expatriates of the Lebanese immigrants. In order to have a sound decisive role and being able to face all financial and political turmoil, and in particular to serve better the local financial sector especially that Lebanon is dollarized at a high level, account holders in BDL were allowed to open multi-currency accounts. Therefore, a main feature in the NPS is its multi-currency feature which allows the FXD to handle any foreign currency transfer and treat it on STP basis.

Debiting and crediting accounts in the STP environment require a high speed efficient connection between the BDL-RTGS, where local participants settlement accounts are managed along with our foreign correspondents internal accounts managed in the CBs. This “leg-in, leg-out” approach was successfully implemented in BDL systems.

Reducing settlement risk and eliminating processing error risk have always been a priority in executing cross border payments at the central bank. The STP goes from capturing payment orders to the BDL, through executing accounting entries to sending payment orders to the relative correspondents without any manual interference. This decreases the elapsed time for execution especially for time critical payments as well as eliminates any human error and settlement risk.

8. SUPERVISION OF SECURITIES SETTLEMENT SYSTEMS

8.1 SECURITIES REGULATOR SUPERVISORY AND STATUTORY RESPONSIBILITIES

By law, the CMA is mandated to (i) regulate, develop and supervise the capital markets and (ii) protect the investors from any potential fraudulent activities. Therefore, law 161/2011 established within the CMA, a Financial Control Unit which supervises and investigates the activities and levels of compliance among capital market participants, also supervises the compliance of entities which provide clearing and settlement services to CMA regulations, in accordance to Article 5 (b) and (f) in Law 161/2011:

- Article 5 (b): Reducing systemic risks in capital markets;
- Article 5 (f): Regulating and controlling the work of licensed Stock Exchanges, and the persons who provide deposit, clearing or settlement services.

As part of its regular supervisory and control missions to the market, the Financial Control Unit will bring to the CMA Board any documented misconduct or ensuing risk on behalf of any market participant or regulated entity, whereby the Board will assess and deal with all cases, and, if deemed necessary, refer to the Sanctions Committee for further action.

8.2 SELF-REGULATORY ORGANIZATIONS SUPERVISORY AND STATUTORY RESPONSIBILITIES

8.2.1 Beirut Stock Exchange (BSE)

Article 56 (II) of Law 161/2011 specifically addresses the situation of markets established before the promulgation of the Law, i.e. the Beirut Stock Exchange, that is governed by the provisions of Legislative Decree No 120 of September 16, 1983 and its amendments; and asks of the Lebanese Government to adopt the following measures: Turning the BSE into a Lebanese joint-stock company to be established in Beirut and denominated “Beirut Stock Exchange S.A.L.”, within one year from the start of work by the Capital Markets Authority Board. All the rights, obligations and activities of the former Beirut Stock Exchange, including all contracts and agreements with third parties, employees and consultants, shall be immediately and automatically transferred to such new company.

This measure shall transfer the BSE from a Self-Regulatory Organization to a Joint Stock Company Authorized and regulated by the Capital Markets Authority as indicated in Article 11 below.

Article 11 (III) of Law 161/2011 stipulates that the CMA Board is entitled to:

- Authorize Institutions which object is to manage and conduct the business of Stock Exchanges, provided such institutions are established as Lebanese joint-stock companies.
- Approve the regulations set by the Administrations of Stock Exchanges concerning the transactions undertaken on such Stock Exchanges. To become effective, such regulations must be approved by the Board.
- Ratify the decisions taken by the Administration of each Stock Exchange concerning the registration of securities and Financial Instruments. Trading in such securities and

instruments is prohibited until the ratification decision is issued and notified to the said Administration.

8.2.2 Central Securities Depositories

Article 34 of Law 161 stipulates that MIDCLEAR shall be considered as being duly authorized by the CMA to operate as custodian for securities, and as a clearing and settlement center for financial instrument operations, in accordance with the provisions of Law No. 139 of October 26, 1999. Article 35 (2) specifies that MIDCLEAR shall adhere to any reporting requirements by CMA per specific regulations issued by the Authority.

The BDL CSD is operated by the FOD in the BDL and should comply with all internal regulations, as any other department in the BDL.

APPENDIX: STATISTICAL TABLES

The first series of tables (A) are statistics on payments and securities clearing and settlement in Lebanon and were completed following a standard model prepared in the context of the API. The second series (B) are more general statistics related to the financial sector.

SERIES A

Payments and Securities Settlement Statistics

TABLE A1: BASIC STATISTICAL DATA.....	70
TABLE A2: SETTLEMENT MEDIA USED BY NON-BANKS	70
TABLE A3: SETTLEMENT MEDIA USED BY CREDIT/DEPOSIT TAKING INSTITUTIONS	71
TABLE A4: INSTITUTIONAL FRAMEWORK	71
TABLE A5: BANK NOTES AND COINS	72
TABLE A6: ATMS AND EFTPOS TERMINALS	72
TABLE A7: NUMBER OF PAYMENT CARDS IN CIRCULATION.....	73
TABLE A8: INDICATORS OF USE OF VARIOUS CASHLESS PAYMENT INSTRUMENTS	73
TABLE A9: INDICATORS OF USE OF VARIOUS CASHLESS PAYMENT INSTRUMENTS	73
TABLE A10: PAYMENT INSTRUCTIONS HANDLED BY SELECTED INTERBANK TRANSFER SYSTEMS ...	74
TABLE A11: PAYMENT INSTRUCTIONS HANDLED BY SELECTED INTERBANK TRANSFER SYSTEMS ...	74
TABLE A12: SECURITIES AND ACCOUNTS REGISTERED IN CENTRAL SECURITIES DEPOSITORIES.....	74
TABLE A13: SECURITIES HOLDINGS IN CENTRAL SECURITIES DEPOSITORIES.....	74
TABLE A14: TRANSFER INSTRUCTIONS HANDLED BY SECURITIES SETTLEMENT SYSTEMS	75
TABLE A15: TRANSFER INSTRUCTIONS HANDLED BY SECURITIES SETTLEMENT SYSTEMS	75
TABLE A16: PARTICIPATION IN SWIFT BY DOMESTIC INSTITUTIONS	75
TABLE A17: SWIFT MESSAGE FLOWS TO/FROM DOMESTIC USERS	75

SERIES B

General Financial System Statistics

TABLE B1: NUMBER OF FINANCIAL ENTITIES	76
TABLE B2: BANKING SECTOR ASSETS.....	76
TABLE B3: DEPOSITS	76
TABLE B4: EQUITY.....	76
TABLE B5: LOANS.....	76

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

TABLE A1: BASIC STATISTICAL DATA							
	2010	2011	2012	2013	2014	2015	2016
Population (in millions) (*)	4.38	4.42	4.46	n.a	n.a	n.a	n.a
GDP (USD billion) (**)	38.42	40.08	43.87	46.01	47.83	49.46	50.89
GDP per capita (USD)	8,676	9,064	9,580	n.a	n.a	n.a	n.a
Real GDP (annual change in %)	8.00	0.90	2.80	2.60	2.00	0.80	2.00
Consumer price (annual change in % period average)	3.98	4.97	6.58	4.82	1.85	-3.75	-0.82
Exchange rate LBP vs USD							
<i>year end</i>	1,507.50	1,507.50	1,507.50	1,507.50	1,507.50	1,507.50	1,507.50
<i>Average</i>	1,507.50	1,507.50	1,507.50	1,507.50	1,507.50	1,507.50	1,507.50

Source: Banque du Liban.

(*) not available figures due to unestimated number of Syrian refugees.

(**) unofficial estimates.

TABLE A2: SETTLEMENT MEDIA USED BY NON-BANKS							
(year-end, in LBP millions)							
	2010	2011	2012	2013	2014	2015	2016
Total notes and coins issued (1)	3,088,267	3,283,296	3,638,535	3,983,303	4,253,665	4,706,431	5,284,926
<i>Currency in circulation</i>	2,712,904	2,890,988	3,213,182	3,407,540	3,647,089	4,013,798	4,592,343
Transferrable deposits in domestic currency	3,015,435	3,247,363	3,890,389	4,212,851	4,653,930	5,028,580	5,566,721
<i>Individuals</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>Non-banking legal entities</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Narrow money supply M1	5,728,339	6,138,351	7,103,571	7,620,391	8,301,019	9,042,378	10,159,064
Other deposit in domestic currency	53,673,521	52,504,652	57,973,456	61,128,985	65,099,247	69,577,786	72,268,916
Money aggregate M2	59,401,860	58,643,003	65,077,027	68,749,376	73,400,266	78,620,164	82,427,980
Deposits in foreign currency	79,292,823	87,639,661	91,401,779	98,498,841	103,723,629	107,474,845	117,498,914
<i>Individuals</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>Corporate sector</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Money aggregate M3	138,909,760	146,575,586	156,796,980	167,570,866	177,396,562	186,360,431	200,192,420

Source: Banque du Liban.

(1) It excludes the value of notes and coins kept in vaults at the central bank, i.e, in commercial banks' vaults and currency in circulation

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

TABLE A3: SETTLEMENT MEDIA USED BY CREDIT/DEPOSIT TAKING INSTITUTIONS							
(year-end, in LBP millions)							
	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>
Required reserves at the Central Bank:	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Excess reserves at the Central Bank:	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Commercial banks' borrowing from the Central Bank(2)	1,122,310	2,047,185	2,386,288	3,363,250	5,780,655	6,833,793	8,713,098
<i>of which (interbank market-year total):</i>							
<i>intraday</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>overnight</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>longer refinancing operations</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Transferrable deposits at other institutions (3)	706,776	763,996	595,968	508,031	400,230	488,240	565,411

Source: Banque du Liban

(1) Banks' current accounts at the central bank are used for required reserves and settlement operations

(2) Commercial banks borrowing in LBP and foreign currencies

(3) Transferable deposits held at commercial banks in the country by banks and investment banks

TABLE A4: INSTITUTIONAL FRAMEWORK		
(As of end December 2016)		
<i>Categories</i>	<i>Number of institutions</i>	<i>Number of branches</i>
Central Bank	1	9
Commercial banks	50	1056
<i>Of which:</i>		
Foreign Banks	11	26
Investment Banks	17	22
Financial institutions	50	75
Financial intermediaries	13	0

Source: Banque du Liban

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

TABLE A5: BANKNOTES AND COINS ISSUED							
(year-end, in LBP millions)							
	2010	2011	2012	2013	2014	2015	2016
Total banknotes and coins issued	4,066,699	3,284,332	3,625,191	5,197,704	4,247,546	5,915,551	6,411,177
Total banknotes issued	4,007,877	3,224,226	3,561,228	5,126,588	4,172,993	5,834,010	6,325,596
100000	2,507,900	2,015,018	2,246,026	3,345,641	2,751,068	3,845,544	4,285,944
50000	850,059	712,407	799,760	1,055,519	891,066	1,224,452	1,291,009
20000	272,260	194,796	202,969	337,443	253,266	398,947	369,956
10000	179,620	132,077	140,450	173,859	71,792	121,834	117,406
5000	99,615	77,979	77,056	102,564	101,409	121,728	127,440
1000	95,801	89,361	92,389	108,988	104,392	121,505	133,841
500 and less	2,622	2,588	2,578	2,574	0	0	0
Total coins issued*	58,822	60,106	63,963	71,116	74,553	81,541	85,581
Banknotes and coins held by banks (1)	375,363	392,308	425,353	575,763	606,576	692,633	692,583
Banknotes and coins circulating outside banks (2)	2,712,904	2,890,988	3,213,182	3,407,540	3,647,089	4,013,798	4,592,343

Source: Banque du Liban

(1) commercial banks' vault cash

(2) currency in circulation, held by the public

*Note: Central bank accounts for seignorage income on all issued coins

TABLE A6: ATMs, AND EFTPOS TERMINALS							
	2010	2011	2012	2013	2014	2015	2016
Cash dispensers and ATMs							
Number of networks	3	3	3	3	3	3	3
Number of ATMs	1,285	1,326	1,433	1,516	1,603	1,707	1,772
Number of cash dispensers*	n.a	n.a	476	496	509	513	518
Volume of transactions (in millions)	24.1	25.6	27.5	29.6	31.2	32.6	37.0
In foreign currency	-	-	-	8.9	8.9	9.5	7.9
In local currency	-	-	-	20.7	22.3	23.1	29.1
Value of transactions **	5,143	5,659	6,425	6,985	7,594	7,785	9,123
In foreign currency (US\$ million)	-	-	-	2,176	2,378	2,376	2,641
In local currency (LBP million)	-	-	-	7,249	7,863	8,154	9,772
EFTPOS							
Number of networks	3	4	4	4	4	4	4
Number of terminals	19,708	21,471	23,833	23,820	25,781	27,120	29,164
Volume of transactions (in millions)	10.2	12.7	15.9	18.8	20.3	23.86	28.24
Value of transactions (LBP million)	2,062,360	2,571,141	3,092,180	3,489,962	3,809,090	4,208,141	4,736,112

Source: BDL.

* Electronic & manual imprinters at Bank's cashiers

**Total LBP & Foreign currencies transactions in Lebanon evaluated in millions of USD

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

TABLE A7: NUMBER OF PAYMENT CARDS IN CIRCULATION							
	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>
Total number of cards (thousands)*	1.676	1.784	1.862	2.183	2.433	2.755	2.764
Cards with a cash function	1.676	1.784	1.862	2.183	2.433	2.755	2.764
Cards with a debit function	1.113	1.162	1.135	1.192	1.223	1.389	1.667
Cards with a credit function	389	430	440	481	520	570	555
Retailer and fidelity cards	-	-	31	49	60	60	53
Stored-value cards	44	52	124	329	516	641	389
Cards with a charge function	129	140	163	181	174	155	152

Source: BDL

* Cards issued in Lebanon for Residents and Non - Residents

TABLE A8: INDICATORS OF USE OF VARIOUS CASHLESS PAYMENT INSTRUMENTS							
(volume of transactions, in thousands)							
	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>
Payments with cards *	10,170	12,699	15,920	18,834	24,249	26,965	30,963
<i>Debit</i>	-	-	-	7,748	8,180	10,932	12,293
<i>Credit **</i>	-	-	-	10,494	12,269	12,702	15,655
<i>Stored-Value</i>	-	-	-	592	3,800	3,331	3,015
Paperless credit transfers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Direct Debits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
E-Money	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	10,170	12,699	15,920	18,834	24,249	26,965	30,963

Source: BDL.

* POS payments inside the country (in LBP & USD) of cards issued locally for residents and non-residents

** Includes Credit and Charge cards

TABLE A9: INDICATORS OF USE OF VARIOUS CASHLESS PAYMENT INSTRUMENTS							
(value of transactions, in LBP million)							
	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>
Payments with cards *	2,062,360	2,571,141	3,092,180	3,489,962	4,231,455	4,421,970	5,012,159
<i>Debit</i>	-	-	-	1,073,318	1,078,000	1,340,808	1,538,838
<i>Credit **</i>	-	-	-	2,353,096	2,705,849	2,792,817	3,128,965
<i>Stored-Value</i>	-	-	-	63,548	447,606	288,345	344,355
Paperless credit transfers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Direct Debits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
E-Money	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	2,062,360	2,571,141	3,092,180	3,489,962	4,231,455	4,421,970	5,012,159

Source: BDL

* POS payments inside the country (in LBP & USD) of cards issued locally for residents and non-residents

** Includes Credit and Charge cards

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

TABLE A10: PAYMENT INSTRUCTIONS HANDLED BY SELECTED INTERBANK TRANSFER SYSTEMS					
(volume of transactions, in thousands)					
	2012	2013	2014	2015	2016
Low value system	n.a.	n.a.	n.a.	n.a.	n.a.
<i>In domestic currency</i>	n.a.	n.a.	n.a.	n.a.	n.a.
Large value system (RTGS)	589	1196	1020	956	956
<i>In domestic currency</i>	312	624	495	480	503
<i>In foreign currency</i>	277	572	525	476	453

Source: BDL.

TABLE A11: PAYMENT INSTRUCTIONS HANDLED BY SELECTED INTERBANK TRANSFER SYSTEMS					
(value of transactions, in LBP million)					
	2012	2013	2014	2015	2016
Low value system	n.a.	n.a.	n.a.	n.a.	n.a.
<i>In domestic currency</i>	n.a.	n.a.	n.a.	n.a.	n.a.
Large value system (RTGS)	339,892,324	709,571,851	818,851,214	908,446,772	1,628,315,189
<i>In domestic currency</i>	339,892,324.	709,571,851	818,851,214	908,446,772	1,628,315,189

Source: BDL.

TABLE A12: SECURITIES AND ACCOUNTS REGISTERED IN CENTRAL SECURITIES DEPOSITORIES							
	2010	2011	2012	2013	2014	2015	2016
Number of securities listed/registered	3	3	3	3	1	1	1
<i>BDL CSD</i>	3	3	3	3	1	1	1
<i>MIDCLEAR</i>	n.a.	n.a.	n.a.	n.a.	n.a.	762	996
Number of participants	74	66	68	68	73	73	69
<i>BDL CSD</i>	74	66	68	68	73	73	69
<i>MIDCLEAR</i>	n.a.	n.a.	n.a.	n.a.	n.a.	129	129
Number of investor accounts	2,839	2,423	1,912	1,370	1,325		
<i>BDL CSD</i>	2,839	2,423	1,912	1,370	1,325		
<i>MIDCLEAR</i>	n.a.	n.a.	n.a.	n.a.	n.a.	42,374	47,067
Number of foreign investors	6	5	10	11	10	8	8
<i>MIDCLEAR</i>	n.a.	n.a.	n.a.	n.a.	n.a.	3,343	3,664

Sources: BDL, MIDCLEAR.

TABLE A13: SECURITIES HOLDINGS IN CENTRAL SECURITIES DEPOSITORIES							
(nominal value)							
	2010	2011	2012	2013	2014	2015	2016
BDL CSD	47,237	48,384	49,334	55,385	60,644	64,112	69,347
MIDCLEAR	n.a.	n.a.	n.a.	n.a.	n.a.	67,444,234	79,957,904

Source: BDL, MIDCLEAR

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

TABLE A14: TRANSFER INSTRUCTIONS HANDLED BY SECURITIES SETTLEMENT SYSTEMS							
(Volume of transactions in thousands)							
	2010	2011	2012	2013	2014	2015	2016
BDL CSD	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
MIDCLEAR	n.a.	n.a.	n.a.	n.a.	n.a.	26,941	31,272

Source: BDL, MIDCLEAR

TABLE A15: TRANSFER INSTRUCTIONS HANDLED BY SECURITIES SETTLEMENT SYSTEMS							
(value of transactions, in LBP million)							
	2010	2011	2012	2013	2014	2015	2016
BDL CSD	5,202,192	5,715,573	5,587,951	5,954,006	7,505,702	14,411,000	16,510,000
MIDCLEAR	n.a.	n.a.	n.a.	n.a.	n.a.	134,222,936	158,077,022

Source: BDL, MIDCLEAR

TABLE A16: PARTICIPATION IN S.W.I.F.T. BY DOMESTIC INSTITUTIONS					
	2010	2011	2012	2013	2014
Domestic S.W.I.F.T. users	70	78	85	87	n.a.
<i>Of which:</i>					
<i>Members</i>	41	43	40	40	n.a.
<i>Sub-members</i>	19	22	21	23	n.a.
<i>Participants</i>	10	13	24	24	n.a.
Worldwide S.W.I.F.T. users	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Users Association of SWIFT

TABLE A17: S.W.I.F.T. MESSAGE FLOWS TO/FROM DOMESTIC USERS					
	2010	2011	2012	2013	2014
Total messages sent	3,641,955	3,702,411	5,127,592	6,283,123	n.a.
<i>Of which:</i>					
<i>Category I</i>	1,564,445	1,575,229	1,675,946	1,742,703	n.a.
<i>Category II</i>	922,991	979,830	1,032,934	1,017,902	n.a.
Total messages received	3,866,635	4,011,138	5,445,967	6,560,529	n.a.
<i>Of which:</i>					
<i>Category I</i>	1,560,424	1,623,569	1,741,509	1,815,373	n.a.
<i>Category II</i>	735,758	797,256	874,055	872,373	n.a.
Domestic Traffic	1,672,466	1,794,383	1,781,166	1,658,495	n.a.
Global S.W.I.F.T. sent traffic	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Users Association of SWIFT

**PAYMENTS AND SECURITIES
SETTLEMENT SYSTEMS IN LEBANON**

SERIES B

Table B1: Number of Financial Entities							
	2010	2011	2012	2013	2014	2015	2016
Central Bank	1	1	1	1	1	1	1
Commercial Banks	54	54	54	56	55	53	50
<i>Of which</i>							
<i>Foreign banks</i>	11	12	12	14	14	12	11
Investment banks	13	15	17	17	16	16	17
Financial institutions	50	53	53	55	55	52	50
Financial intermediaries	11	14	12	12	12	12	13

Source: BDL

Table B2: Banking Sector Assets							
(year-end, in LBP millions)							
	2010	2011	2012	2013	2014	2015	2016
Deposit-taking institutions - Total assets	194,354,692	211,918,200	228,963,499	248,467,868	264,863,319	280,378,536	307,999,171
Deposit-taking institutions - Foreign assets	38,783,942	38,436,316	39,446,903	40,137,330	36,469,987	35,869,834	34,823,914
Loans*	52,656,353	59,358,355	65,504,436	71,426,974	76,730,019	81,743,663	86,198,401

Source: BDL.

* Claims on resident and non-resident private sector

TABLE B3: DEPOSITS							
(year-end, in LBP millions)							
	2010	2011	2012	2013	2014	2015	2016
Deposit –taking institutions (Commercial banks)							
Demand deposits	17,393,565	20,537,777	21,511,168	22,202,482	22,707,776	22,909,403	23,492,141
Time deposits	3,177,680	3,233,801	3,221,375	3,268,325	3,311,783	3,324,020	3,329,281
Savings deposits	141,038,375	150,667,751	163,702,575	179,858,559	191,701,445	202,281,373	218,139,809
Other banking institutions (Investment banks)							
Demand deposits	113,478	181,283	167,276	182,812	163,613	177,444	189,104
Time deposits	82	2	3	2	15	22	2
Savings deposits	4,767,415	3,338,072	3,115,574	2,750,465	2,854,838	3,047,844	2,794,200

Source: BDL.

TABLE B4: EQUITY							
(year-end, in LBP millions)							
	2010	2011	2012	2013	2014	2015	2016
Deposit –taking institutions (Commercial banks)	13,065,577	15,327,482	17,894,938	19,618,693	21,954,088	23,299,626	25,659,903
Other banking institutions (Investment banks)	1,079,918	1,223,326	1,397,216	1,507,212	1,714,573	1,863,809	2,056,187
Financial institutions	393,776	469,603	535,456	596,764	653,635	695,606	706,214

Source: BDL.

صندوق النقد
العربي
ARAB MONETARY FUND



Arab Monetary Fund
Corniche Street
P.O Box 2818
Abu Dhabi, United Arab Emirates
www.amf.org.ae



مصرف لبنان
BANQUE DU LIBAN

Banque du Liban
Masraf Lubnan street
P.O Box 5544-11
Beirut, Lebanon
www.bdl.gov.lb



WORLD BANK GROUP

World Bank Group
1818 H Street N.W.
Washington, D.C. 20433
U.S.A
www.worldbank.org