



C L O S E T O Y O U

## Communication on Progress

### UNGC

November 2018

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## Statement by the Chairman General Manager



الاعتماد اللبناني  
CREDIT LIBANAIS

رأس المال: ٢٦٨ ٤٠٠ ٠٠٠ ٠٠٠ ل. مذكور بالكامل - لائحة المصارف رقم ٣٣ - سجل تجاري بيروت ١٠٧٤٢  
CAPITAL: 268 400 000 000 LBP FULLY PAID LIST OF BANKS No. 53 C.R.: BEIRUT 10742

HEAD OFFICE

الإدارة العامة

Beirut, October 31, 2018

To our stakeholders:

I am pleased to confirm that Credit Libanais reaffirms its support of the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labor, Environment and Anti-Corruption.

In this annual Communication on Progress, we describe our actions to continually improve the integration of the Global Compact and its principles into our business strategy, culture and daily operations. We also commit to sharing this information with our stakeholders using our primary channels of communication.

Sincerely yours,

Dr. Joseph Torbey  
Chairman General Manager  
Credit Libanais Group

PAP 12 R2 10.000 (2/2017)




## Overview of Credit Libanais Group

Credit Libanais SAL was established in 1961 as a Lebanese joint stock company; it is registered on the Lebanese list of banks under number 53 and in the Beirut Commercial Registry under number 10742. Credit Libanais' head office address is at Corniche El Nahr, Adlieh Roundabout, P.O Box: 16-6729, Beirut, Lebanon.

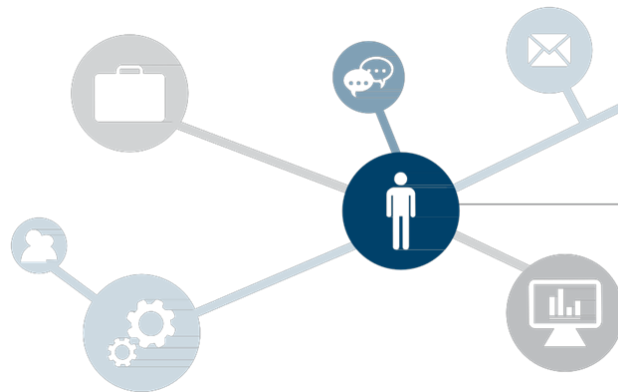
Credit Libanais is one of the top ten banks in Lebanon that remains deeply rooted in the country. With a landmark reference Head Office Tower in the banking sector, the Bank has a network outreach of 79 branches including local and international presence in Cyprus, Bahrain and Iraq, a representative office in Canada and a subsidiary bank in Senegal. The latter, Credit International sa (CISA) is the only Lebanese bank currently present in the West African Monetary Union ("WAMU") which inaugurated its first branch in Dakar in 2011 and opened its second branch in 2015. CL Group encompasses an investment bank, an Islamic bank, a financial institution, a leasing company, an insurance company, and a real estate company, and reaps the benefits of a large network of international correspondents around the globe.

Leveraging on the extensive branch network outreach, the Bank's principal activities include retail banking services (including consumer lending, credit cards and lending to small businesses and sole proprietorships), corporate banking services (including various forms of credit facilities, loans and overdrafts to medium-size and large corporations), trade finance services (including letters of credit and letters of guarantee), capital markets services (including trading and sales of various types of financial instruments and products) and private banking and asset management services (including portfolio management, securities trading, mutual funds, alternative investments and structured products). The Bank also holds a dominant position in e-banking and e-commerce through several of its affiliates. The Bank provides systems, logistics and marketing for ATM and POS networks and payment gateway solutions for e-commerce. Through its majority owned subsidiary, Credit Libanais Investment Bank SAL, the Bank offers its customers medium and long-term financing and investment banking services (including funding for project finance, housing loans and direct equity participation) and other complementary services (including equipment leasing and bancassurance products through its subsidiaries). Through its seat on the Beirut Stock Exchange, the Bank offers its customers trading in local stocks.

## Credit Libanais Identity

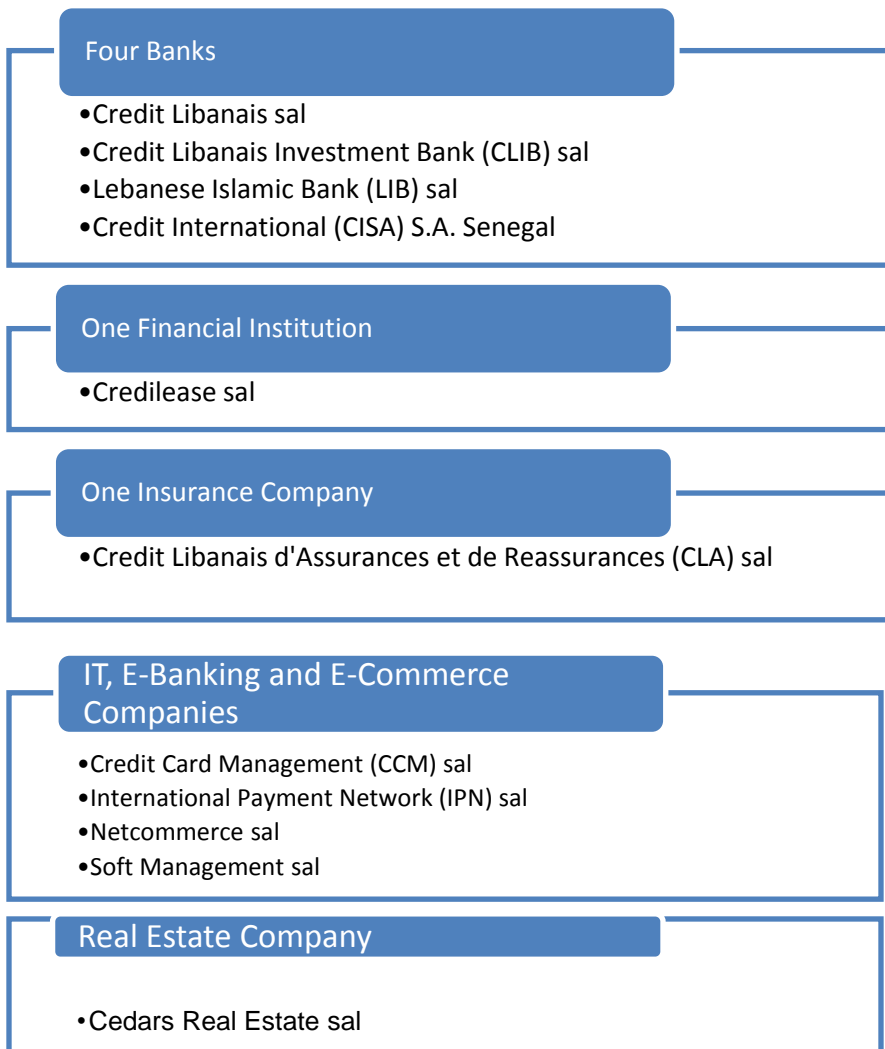
<p>Vision</p> 	<p>Credit Libanais' purpose is to enhance shareholder, customer, employees and CSR value.</p>
<p>Mission</p> 	<p>Credit Libanais is the preferred bank in Lebanon for customers and employees.</p> <p>Credit Libanais is primarily a retail bank and serves selected corporate customers.</p>
<p>Core Values</p> 	<p>Credit Libanais core values are customer focus, innovation, teamwork, ethics, transparency and integrity as well as reward for performance.</p>

## Credit Libanais' Business Principles



We deliver superior customer service. We gain customer satisfaction with service that exceeds customers' expectations.	<b>We Serve</b>
We are action-oriented and encourage personal initiative. Can Do and Will Do are basic attitudes of all employees.	<b>We Act</b>
We increase productivity each year. Ethics and Profit per Employee are key measures for Bank performance.	<b>We Perform</b>
We embrace change. We continuously seek better solutions to problems for the customer and the Bank.	<b>We Improve</b>
We function as a team. Cooperation among individuals and units is fundamental in delivering the whole Bank to the customers.	<b>We Cooperate</b>
We are open. We encourage continual dialogue across all units and levels.	<b>We Communicate</b>
We emphasize delegation. Acceptance of personal accountability permeates our corporate culture.	<b>We Empower</b>
We continuously upgrade our skills. Commitment to self-development and training are the cornerstones of our competitive advantage.	<b>We Build</b>
We value each other's ideas. We treat colleagues fairly, sincerely and courteously regardless of differences in background.	<b>We Respect</b>

## Credit Libanais Group Structure



## Facts and Figures (CL GROUP)

### Large Network

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- ❖ 8<sup>th</sup> largest network in Lebanon
- ❖ 79 total branches

### Extensive E-Outreach

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- ❖ 9.500 electronic POS
- ❖ 143,000 banking cards distributed
- ❖ 96 ATMs
- ❖ A state-of-the-art customer service
- ❖ 24/7 online banking services

### 6 Countries of Geographical Outreach

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- ❖ Lebanon
- ❖ Bahrain
- ❖ Canada
- ❖ Cyprus
- ❖ Iraq
- ❖ Senegal



## **In 2015, Credit Libanais officially joins the UN Global Compact**

On November 6, 2015, Credit Libanais officially joins the United Nations Global Compact, the world's largest corporate responsibility initiative with over 9800 business and 3300 non-business participants in 161 countries.

The UN Global Compact Ten Principles encompass the following areas that touch the day-to-day operations.

### **The UN Global Compact's ten principles**

#### **HUMAN RIGHTS**

**Principle 1:** Businesses should support and respect the protection of internationally proclaimed human rights; and

**Principle 2:** make sure that they are not complicit in human rights abuses.

#### **LABOUR**

**Principle 3:** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

**Principle 4:** the elimination of all forms of forced and compulsory labour;

**Principle 5:** the effective abolition of child labour; and

**Principle 6:** the elimination of discrimination in respect of employment and occupation.

#### **ENVIRONMENT**

**Principle 7:** Businesses should support a precautionary approach to environmental challenges;

**Principle 8:** undertake initiatives to promote greater environmental responsibility; and

**Principle 9:** encourage the development and diffusion of environmentally friendly technologies.

#### **ANTI-CORRUPTION**

**Principle 10:** Businesses should work against corruption in all its forms, including extortion and bribery

## CL Sustainable Development Goals (SDGs)

On September 25, 2015, all 193 member states of the United Nations adopted 17 new Sustainable Development Goals (SDGs) as a plan to tackle the economic, social, environmental and governance-related challenges by 2030.



At Credit Libanais, we are committed to safeguarding the interests of all stakeholders and thus have corporate responsibility and sustainability embedded in the greater part of our work, ever since the beginning of operations back in 1961. As for the SDGs, we have adopted the following 3 goals to focus on in coming 3 years and shall focus on them in our action plans and strategy. Those include:

Goal 8 – Decent Work and Economic Growth - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Goal 4 – Quality Education - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Goal 9 – Industry, Innovation and Infrastructure – Fostering innovation to promote inclusive sustainable economic growth

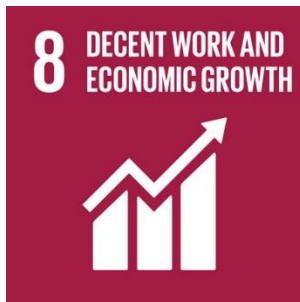
Year after year, our Bank reaffirms its commitment to contributing to a sustainable future for all stakeholders in the markets where it operates.

#### Goal 4: Quality Education



- ❖ Our employees benefit from school and college tuition allowance for their children.  
We provide advancement education and training programs for our employees through a diversified learning platform.
- ❖ CL employees are encouraged to enroll and successfully complete the Banking and Financial Qualifications certifications in Lebanese Financial Regulations, CAMS, Combating Financial Crime, Investments and Risks, Financial Derivatives, Risk in Financial Services, Global Securities and International Introduction to Investment as per BDL 103 and other regulatory requirements.
- ❖ The Bank grants facilities to a considerable number of schools and universities in Lebanon, thus reinforcing its role in the education sector of the country.

#### Goal 8: Decent work and Economic Growth



Credit Libanais Group promotes economic growth through its responsible financing activities, facilitating access to capital through lending partnerships, building capacity through micro-finance and offering attractive facilities to SMEs.

#### Goal 9: Industry, Innovation and Infrastructure



Lebanese economy.

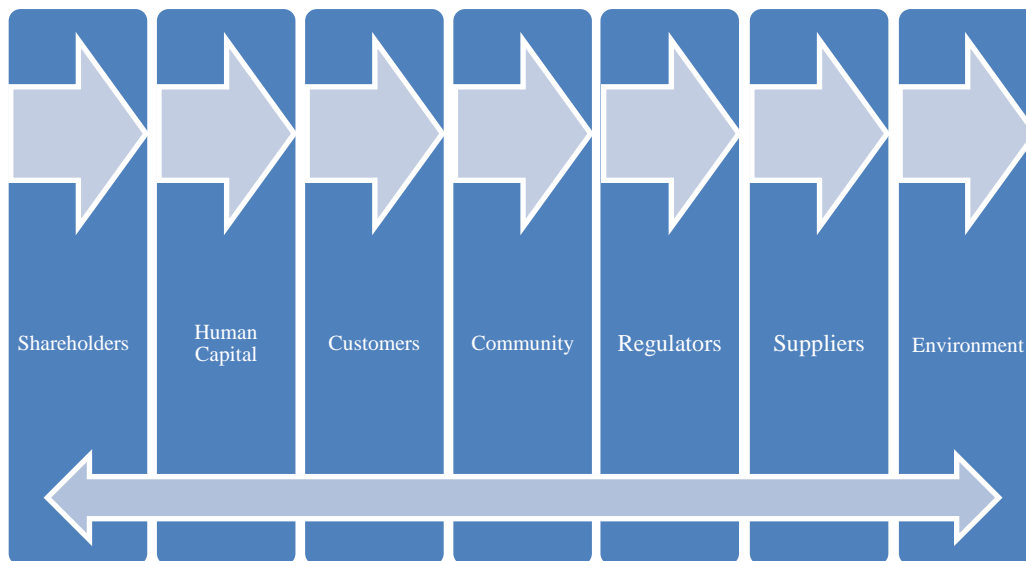
CL constantly undertakes initiatives that lead towards the country's modernization. By pioneering the launching of e-payment services related to some agencies and bodies, such as paying taxes and memberships online, we contribute to our country's transformation thus rendering services to customers more efficient and less time consuming. Moreover, we believe that small loans are the building blocks on which people rely to earn their living. To this end, we partner with numerous local, regional and international agencies to make the financing of very small businesses also possible within the

## CL Strategy

We are conscious of our important role in the communities where we operate, and are committed to creating value to all our stakeholders.

Our long-term corporate responsibility relies on balancing the needs of people, planet and profits to ensure the continued success and sustainability of the Group.

Our Core Values are defined by high standards of ethics, integrity and transparency, and are based on a solid compliance with national and international banking regulations and best practices.



**Embedded CR Strategy**

## Corporate Responsibility and Corporate Governance



Credit Libanais Group recognizes the importance of good Corporate Governance for its sustainable success. In this respect, CL Group reviewed its Code of Corporate Governance aiming at complying with the changing local and international Corporate Governance standards. The Code is disseminated to all staff and made available on the Bank's website.

The Board of Directors oversees the implementation of the Bank's governance framework and periodically reviews that it remains appropriate, in the light of any material changes to the Bank's size, complexity, geographical footprint, business strategy, markets and regulatory requirements.

As part of the overall corporate governance framework, the Board and Senior Executive Management establish and make decisions related to the Bank's strategy and risk approach, articulate and monitor adherence to risk appetite and risk limits, capital and financial plans and remuneration policy, and identify, measure, manage and control risks. Therefore, CL Group continued to increase focus on risk and the establishment of effective risk governance framework, which includes identifying the responsibilities of CL Group concerned parties for addressing and managing risk. This is referred to as the "three lines of defence": Business lines, Risk Management and Internal Audit.

### **Board of Directors' Own Structure and Practices**

The Board defines appropriate governance structures and practices for its own work, and puts in place the means for such practices to be followed and periodically reviewed for ongoing effectiveness. The Board structures itself in terms of leadership, size, frequency of meetings and the use of its committees to effectively carry out its oversight role and other responsibilities.

### **Board Committees**

The Board is supported by the Corporate Governance, Nominations, Human Resources and Remuneration Committee (CGNHRR Committee), the Audit Committee, the Risk Committee, and the Credit Policy Committee. Each Committee has an approved charter that sets out its mandate, scope and working procedures in order to support the Board in its duties.

SENIOR COMMITTEES AT MANAGEMENT LEVEL	
Management Committee	
Foreign Entities Committee	Asset and Liability Committee
Human Resources and Training Committee	Credit Committees
Sales and Business Development Committee	Financial Institutions and Country Credit Committee
Information Technology Steering Committee	Compliance, Anti-Money Laundering and Counter-Financing of Terrorism Committee
Business Continuity Planning Committee	Information Security Committee
The Bank's various committees are established with clear missions, authorities and responsibilities.	Recommendations made by any committees that require the Board of Directors' approval are submitted through the Chairman General Manager for review, decision-making or ratification.

## Corporate Responsibility and Responsible Inclusive Financing



### *Building Capacity through Micro-Finance*

Very small loans are the building blocks on which people rely to earn their living. To this end, Credit Libanais partners with numerous local, regional and international agencies to make the financing of very small businesses also possible within the Lebanese economy.

### *Preventing Financial Crime*

Credit Libanais is firmly committed to fighting crimes of money laundering and financing terrorism in accordance with national and international rules and regulations. We believe that financial crime prevention is not only the responsibility of the Group's dedicated compliance officers, but also the duty of every staff member in each area of activity. We have clear policies, procedures and rules of good conduct in place, to prevent money laundering and the financing of terrorism in all jurisdictions where the Bank operates, to protect our reputation.

### *Fighting Corruption*

CL Group strives to be an open and honest business and values the free flow of information. As stated in CL's Employee Handbook, the Bank encourages all stakeholders to report any dishonest or illegal activity (violation of a law, rule, regulation, fraud and corruption) occurring at the Bank. CL prohibits retaliation of any kind against individuals who made reports in good faith or complaints of violation of the business ethics and conduct or other known or suspected illegal or unethical conduct.

### *Transparency in Procurement*

Purchases are made based on a bidding call, which are presented to bid committees, screening committees, compliance committees and delivery acceptance committees. The installation of this purchasing system several years ago allowed the Bank to give equal opportunities to suppliers based on the quality of their goods and services, while ensuring that we receive best quality over price ratios. Suppliers must therefore have sound implementation strategies and conduct their business responsibly.

### *Financial Consumer Protection*

The Financial Consumer Protection is a fully independent function from the operations and business lines of the Bank. In accordance with BDL Circular 134 and related BCC Circular 281, Financial Consumer Protection covers all branches of the Bank in Lebanon, directly reports to the Chairman - General Manager, and sends its reports to Senior Executive Management and the Board of Directors in matters related to the implementation of the Policy, Charter, and Action Plan, and puts forth suggestions for improvements of the Principles of Banking and Financial

Operations with customers as per regulatory requirements in place, to promote a better customer experience.

Moreover, Financial Consumer Protection is entrusted with spreading awareness among staff and customers in matters of customers' Rights and Duties, as well as standards of suitability, transparency, fairness and equitability. To ensure a direct access of customers to the Bank in matters of suggestions or complaints, Financial Consumer Protection established a clear complaints handling mechanism across CL branches, website and social media channels, and continuously ensures awareness spreading through training, capacity building and enhancement of professional experience including the implementation of the provision of the Basic Circular # 103 dated March 9, 2006.

At Credit Libanais, we support BDL efforts in spreading financial literacy and banking awareness, and believe that it is our main responsibility to foster financial inclusion by targeting various categories of customers, including those with special needs.



## Corporate Responsibility and the Modernization of Lebanon



CL undertook a number of initiatives towards the country's modernization, by pioneering the launching of the e-payment services related to the following bodies:

- Beirut Bar Association: for the online settlement of lawyers' annual subscription fees on [www.bba.org.lb](http://www.bba.org.lb)
- Order of Engineers and Architects in Beirut: for the online settlement of annual subscription and insurance fees on [www.oea.org.lb](http://www.oea.org.lb)
- Order of Pharmacists in Lebanon: for the online settlement of annual subscription fees on [www.opl.org.lb](http://www.opl.org.lb)
- Establishment of the Water of Beirut and Mount Lebanon: for the online settlement of water bills on [www.ebml.gov.lb](http://www.ebml.gov.lb)
- General Directorate of Land Registry and Cadastre: for viewing and printing the title register and pay related fees through [www.lrc.gov.lb](http://www.lrc.gov.lb)
- Ministry of Finance: for the online settlement of built property taxes through [www.finance.gov.lb](http://www.finance.gov.lb)

Other public entities will follow, such as municipalities, in terms of online payment services. All payments are made in a highly secure manner through the Group subsidiary, NetCommerce payment gateway.

## Corporate Responsibility and our Human Capital



### Employees

#### CL employees' composition by gender and seniority

Years of experience	Male	Female	Total	Percentage
0-10	318	268	586	38.0%
11-20	245	235	480	31.1%
21-30	153	144	297	19.3%
Above 30	125	54	179	11.6%
Total	841	701	1542	100.0%

#### CL number and percentage of new hires by gender

Gender	Number of new hires	%
Male	45	63.3
Female	26	36.7

#### CL total number of women in senior management position according to their group distribution

Age	<30	30-50	>50
	N/A	N/A	2

**CL total number of woman in middle management position**

Age	<30	30-50	>50
	N/A	10	20

Total number of employees who took maternal leave	Total number of employees who returned to work after maternal leave
43	38

Our human development policy consists of improving the capability and commitment of our strongest assets, our employees, to drive sustainable high performance while helping them thrive and achieve their goals as well.

A review of the code of conduct and ethics was made during 2017 and communicated to all employees. This review has increased the confidence of employees who showed more interest in working for a Bank that reflects high ethical values in practices, resulting in a reduced turnover rate that reached 1.85% in comparison to the previous year.

A culture of transparency, responsibility, accountability and fairness is implemented across all functions of the Bank. CL fully abides by the Lebanese Labor Law, which prohibits child labor and employment before the age of 18. We strive to support diversity at the banking Group and ensure equal opportunities for all staff. This policy governs all aspects of employment and career advancement.

All our employees also benefit from health insurance coverage and tuition allowance for their children. During 2017, CL attracted more than 3.700 candidates, who sent their CVs through a variety of channels: stakeholders, local job fairs and the career online portal. The hiring ratio reached 5.25% catering to the expansion of business.

**Learning and Development**

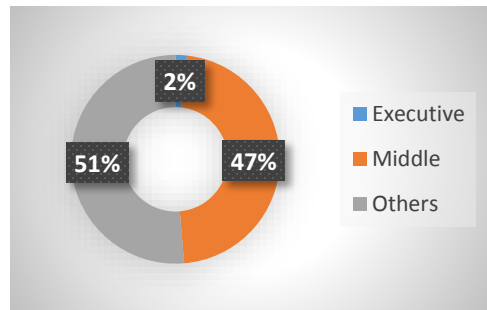
CL uses a diversified learning platform through “*E-Learning, Functional Schools and Focused Training*” to support the Bank strategy. An integrated “Blended Portal of Product Knowledge and Teller Operations” customized to CL branch staff is embedded in the eLearning Portal. Operations are presented through a video and a voice-over to facilitate the understanding, workflow and application of each operation, making it easy for staff to understand and better execute daily operations.

In addition, Credit Libanais is proudly the first Bank in Lebanon to apply the e-learning mobile App known as mobile learning (M-Learning). All CL staff can install the mobile app on their Android or IOS and start learning and watching videos from their devices at their own pace.

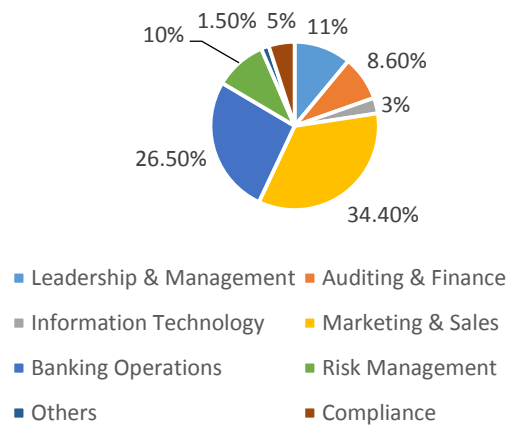
In 2017, the main focus was on Marketing and Sales (515 Hrs.) including intensive Bancassurance Products trainings and aggressive Sales Fundamentals techniques. In addition emphasis was given to Banking Operations (396 Hrs.) including “Proper Handling of ATMs”, “Tellers Operations Focused Training” and on New BDL circulars.

**TRAINING ACTIVITY REPORT PER CATEGORY FOR THE YEAR 2017**

- ✓ Internal/External and Overseas Seminars: **1479 Hrs.**
- ✓ Total Trainees by course session: **2624**



**Training Activities per Category-year 2017**



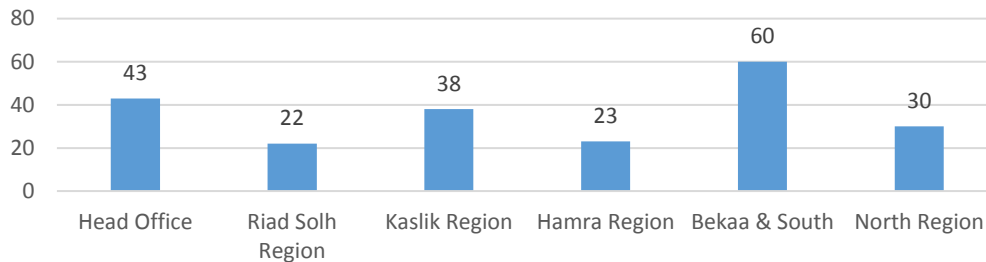
**Career Management Program**

In 2017, tailored developmental trainings and projects were implemented related to initiative and innovation. 50% of the ICP2 candidates were promoted to higher positions. Under the Career Management Program, potential leaders are recognized and identified for future managerial roles.

**Summer Internship**

A quality internship program is developed and maintained every year, whereby the Bank collaborates with top universities and facilitates the internship of students by organizing “Intern Orientation Sessions” for accepted applicants.

Number of Interns in Head Office and Regions-Year 2017



Our community projects give employees opportunities to engage in volunteer work. For the fourth year in a row, Credit Libanais hosted a Blood Drive in partnership with “Donner Sang Compter”, a non-governmental Lebanese organization and “Hotel Dieu de France” Hospital. This campaign took place at the Bank’s Headquarters and involved its staff from all branches, departments and sister companies and aimed at encouraging employees to give blood and join forces for a good cause. Under the slogan “Donate and save a life”, Credit Libanais’ employees participated in large numbers and donated generously.

Similarly, to encourage staff participation in sports events, CL sponsors many events including marathons in various Lebanese regions, triathlons, rallies, as well as a variety of tournaments. In 2017, CL staff ran for the NGO "Kunhadi" during the "BDL Beirut Marathon 2017" to increase awareness on matters of road safety and safe driving in Lebanon.

## Corporate Responsibility and our Communities



Credit Libanais Group believes in its fundamental role in creating long-term value for all stakeholders. Safeguarding our culture and protecting our heritage and family values is vital to maintaining our unique identity.

To materialize our sustainability strategy, we support:

- Economic growth in communities where we do business.
- Initiatives that help build well-being, wealth and capacity.
- Resources to promote economic self-sufficiency.

### *Educational and Academic Events*

We constantly contribute to university and school events that aim at offering professional guidance and presenting different employers to students. CL is regularly present at major events such as job fairs and forums that are held in various universities across Lebanon.

### *Professional Conferences*

To encourage exchange of new developments among peer professionals and reinforce channels of communication in various industries, we sponsor many a conference over the course of the year, encompassing a variety of sectors such as banking, economic, medical, social, financial and many other aspects of the Lebanese dynamic society.

### *Cultural and Heritage Events*

CL supports music and cultural festivals organized in various Lebanese cities and towns throughout the seasons, in view of encouraging arts, reviving traditions and preserving our unique heritage. We sponsor several cultural activities that bring us closer to our communities and enable us leverage our partnerships with them, thereby doubling the rewards. By helping them prosper, Credit Libanais prospers as well.

### *Philanthropy*

Our selected contributions to professional, educational, sports, cultural and social activities have positively impacted the communities we work in and by the same token, boosted CL's image in various Lebanese regions and towns.

## Corporate Responsibility and the Environment



Credit Libanais weighs the importance of regularly reviewing and updating its lending strategies to align them with industry standards in terms of Social and Responsible Investment (SRI). Our strategy centers around three priorities:

- ✓ Reducing the intensity of our environmental footprint.
- ✓ Promoting environmentally responsible business activity.
- ✓ Offering environmental products and services.

In line with the Central Bank's recommendations and recently issued circulars, we provide green facilities to fund projects that have a positive environmental impact. Projects encompass eco-friendly initiatives in Lebanon, such as green architecture and ecological ventures, implementation of renewable energy, wind power, solar water heating panels, energy saving lighting systems, tiles cladding, and eco-bricks. Loans are granted at competitive interest rates and for long terms, as a token of Credit Libanais' commitment to the planet and a step towards green banking.

As a firm believer of the paramount importance of environmental protection, the Bank ensures effective Social and Environmental practices in all lending activities and seeks to effectively manage and mitigate environmental and social risks in projects financed.

The Bank developed the Social and Environmental Management System (SEMS) with the basic objective of ensuring that the environmental and social implications of a potential customer are identified and assessed early in the Bank's planning and decision-making process and that these environmental considerations are incorporated into the preparation and approval of facilities. In this context, CL continuously endeavors to ensure effective Social and Environmental practices in all lending activities and seeks to effectively manage and mitigate environmental and social risks in projects financed. Moreover, the Bank is directed by its agreement with IFC to adhere to sound banking principles and promote the full range of activities in environmentally and socially reliable developments.

Internally, Credit Libanais also implemented a plan to reduce the Bank's carbon footprint; in fact, CL departments and branches became greener with reduced paper consumption and responsible recycling for glass, plastic, electronic consumables and others. Special care is also given to eliminate the printing of unnecessary e-mails exchanged among various parties.

Last year, some 50 tons of papers were sent to a local recycling factory. In this perspective, Credit Libanais is extending support to local NGOs who benefit from the recycled material to finance awareness campaigns or acquire medical support equipment to patients across Lebanon. These initiatives contribute to cultivating a greener culture throughout CL Group. Moreover, some 139 IT equipment (Pc, Screen, Servers) were sent to a local NGO that uses them to finance awareness campaigns on road safety programs.

### *An Ecofriendly Working Environment*

CL Group's landmark 32-story Head Office Tower in Adlieh responds to the latest trends in construction and utilization sustainability.

At CL Group Head Office Tower, special attention has been given to using environmentally friendly construction materials, taking into account the use of renewable energy sources for future daily utilization. Considerations such as efficiently using energy, water, and other natural resources, reducing waste, pollution and environmental degradation were also given broad attention in all phases of the project, from design to commissioning. Those considerations are reflected in the green :

- Architecture
- Landscape
- Interior and Lighting: All offices and restrooms have electric lights equipped with automated light sensors, which work only if occupied, thus eliminating electric wastage.
- Recycled, Reused and Sustainable Mechanics and Materials
- Reduced Water Usage: Water taps in the Headquarters have automatic sensors to help in rationalizing water usage.



### A green Tier III Certified Data Center

CL's Group main data center is about 450 m<sup>2</sup> with 120 kW of net IT load and is designed to handle all the functions of the Bank. An additional 350-m<sup>2</sup> space hosts the sister company Credit Card Management (CCM), which has a dedicated server room within CL data center.

The main data center environment is water cooled at relatively high temperatures, which greatly increases the efficiency and reduces cost.

CL Tier III data center features are summarized as follows:

- ♦ Chilled water-cooled white space. The chilled water system significantly increases efficiency and running costs.
- ♦ The chiller compressors and pumps optimize energy consumption based on actual demand.
- ♦ A special variable primary chilled water system further reduces energy expenditures.
- ♦ Computer room air conditioning units reduce energy consumption.
- ♦ Cold air containment enhances the overall system efficiency.
- ♦ The fresh air for the data center is centrally pre-treated with an energy recovery unit.
- ♦ Associated office space is air conditioned by a VRV (variable refrigerant flow) system for high efficiency and lower energy expenditures. The system interfaces with the BMS (building management system) for scheduling and centralized parameterization to avoid operation during unoccupied periods.
- ♦ The latest VRV system technology provides cooling to the office space.
- ♦ Re-circulated air from offices ventilates the UPS/battery room through transfer fans, which reduces the amount of treated fresh air.
- ♦ Modular UPS systems adjust capacity to actual IT loads. The lighting is switched by a lighting control system that includes automatic motion sensors and centralized parameterization and scheduling to avoid operation during unoccupied periods.
- ♦ The BMS (Building Management System) integrates all subsystems, either directly or via SNMP (Simple Network Management Protocol), KNX, and data center infrastructure (DCIM) controls. The system allows an overall insight on the operations of the data center, monitoring all energy expenditures, faults, and alerts.
- ♦ DCIM optimizes operations and increases overall efficiency.