



# ECONOMIC Bulletin YEAR 2017

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**FRANSABANK**

# ECONOMIC Bulletin

## YEAR 2017

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## II. Output and Demand

The leading fields of the real sector of the Lebanese economy continued to record an improved performance in 2017 relative to 2016, thus expanding the overall economic activity in this year.

### 1- Agriculture and Industry

The amount of industrial and agricultural exports dropped by a 5% from 2016 to reach USD 2.6 billion at the end of 2017.

Agricultural exports decreased in value by 3.3% in 2017, relative to a lower decrease of 3.2% in 2016. Agricultural imports, on the other hand, jumped by 35.1% in 2017, relative to a drop of 6% in 2016.

Concerning industrial imports, its value progressed by 25.3% in 2017, relative to an increase of 4.7% in 2016. However, industrial exports declined by 4.5% in 2017, relative to a rise of 1.1% in 2016.

Lebanon's trade was affected negatively by the transitional closing of the Jordanian-Syrian crossing.

Electricity production, an indicator of industrial activity, increased by 14.6% from November 2016 to reach 13,727 million kwh at the end of November 2017.

### 2- Real Estate and Construction

Construction permits, an indicator of future construction activity and future supply in the real-estate sector, regressed by 4.1% from 2016 to reach 11.7 million square meters at the end of 2017.

Cement deliveries, an indicator of current construction activity, dropped by 4.9% relative to the corresponding period last year to reach 4.72 million tons at the end of November 2017.

On the other hand, the number of real-estate transactions increased by 14.5% from 2016 to reach 73,541 transactions at the end of 2017. Also, the amount of real-estate transactions grew by 18.5% to reach USD 9.95 billion during the same period. These figures reflect a relatively growing real-estate sector in 2017.

### 3- Trade and Services

The trade and services activities improved during 2017 when considering its leading indicators. Concerning the activity of Hariri International Airport, which is also an indicator of the tourism activity, the total number of passengers increased by 8.3% from 2016 to reach 8.23 million passengers at the end of 2017.

The hotel occupancy rate, an indicator of hotel activity and tourism as well, increased from 59.1% in November 2016 to 64.8% in November 2017. This rate reflects the curbed hotel-sector growth primarily due to the weaker touristic activity of the Gulf citizens towards Lebanon.

As regards to the Port of Beirut activity, an indicator of maritime transport and trade, the number of ships declined by 5.2% from 2016 to reach 1,909 ships in 2017. However, the number of containers was 4.9% higher to reach 897,779 containers; but the quantity of goods decreased by 1.2% to reach 8,629 thousand tons during the same period. The revenues of the Port grew from 2016 by 0.4% to nearly USD 240 million by end-2017.

The tourism activity was better in 2017 relative to 2016, with the number of tourists jumping by 10% on annual basis to reach nearly 1.9 million in 2017. Tourist spending increased by 5.5% in 2017 relative to a decrease of 9% in 2016.

As for the car industry, the new car sales were greater in number by 2.5% from 2016 to reach 37,222 cars at the end of 2017.

### 4- Demand

The aggregate demand in the Lebanese economy, in 2017, remained highly affected by private consumption spending, the major motivator of GDP growth, which contributes to more than two-thirds of the nation's GDP. Consumer spending is mainly fueled by that of the Lebanese, Syrians and Iraqis. Also, government spending remains a significant contributor to the growth of GDP. Net exports contributes negatively to the growth of GDP.

## Lebanon's Macro Economy in 2017

### I. General Introduction

Lebanon's macro economy recorded a better performance during 2017 relative to 2016 due mainly to a more favorable domestic political environment and a deceleration of regional turmoil. This was accompanied by an improving real-estate sector and monetary as well as financial conditions, and strong capital inflows.

Economic growth was recorded at 2-3% in 2017 according to the estimates of IMF and Institute of International Finance (IIF) respectively, relative to nearly 1.1-1.4% in 2016 and 1.1-1.2% in 2015, despite the negative spillovers of the continued Syrian crisis on the domestic economy.

The leading fields of the real sector recorded an enhanced activity in 2017 relative to 2016 with a positive growth in the indicators of most productive and services sectors, thus reflecting a better aggregate demand (spending) in the national economy.

The monetary authorities have maintained its monetary stabilization policy in 2017. The country recorded an inflation in 2017 relative to a deflation in 2016.

The financial markets of the country recorded a better activity in 2017 relative to 2016, with a growing banking sector and expanding activity of the financial institutions.

The balance of payments achieved a deficit due to greater trade deficit in 2017 which was not offset by the growing capital inflows.

The fiscal conditions, however, remain highly unfavorable due to continued fiscal deficits and growing public indebtedness and its service.

Economic growth is expected to continue in 2018, with an enhanced real growth rate and controlled inflation rates. Economic reforms must be the major priority of domestic authorities in order to support economic growth rates in the years to come. This should be accompanied by special efforts to address the continued negative repercussions of the Syrian crisis on the domestic economy and society.

## Real-Sector Indicators

Indicators	2017	2016	Variation (%)
Construction Permits (SQM, million)	11.7	12.2	(4.1)
Cement Deliveries (tons)*	4,722,072	4,966,941	(4.9)
Real-Estate Transactions (USD, million)	9,954	8,402	18.5
Real-Estate Transactions (number)	73,541	64,248	14.5
Number of Tourists (million)	1.86	1.69	10.0
Tourist Spending growth (%)	5.5	(9.0)	---
Number of Passengers at HIA	8,235,845	7,610,231	8.3
Cleared Checks (USD, billion)	68.2	68.0	0.3
New Car Sales (number)	37,222	36,326	2.5
Hotel Occupancy Rate (%)*	64.8	59.1	9.5
Electricity Production (kwh, million)*	13,727	11,974	14.6
Number of Containers at Beirut Port	897,779	855,631	4.9
Number of Ships at Beirut Port	1,909	2,014	(5.2)
Quantity of Goods at Beirut Port (tons, 000)	8,629	8,737	(1.2)
Revenues of Beirut Port (USD, million)	240	239	0.4
Amount of Kafalat Loans (USD, million)	66.4	92.9	(28.5)

\* First 11 months.

Sources: Official and Related Directorates.

## IV. Fiscal Policy and Indebtedness

The fiscal conditions remain highly unfavorable in light of continued fiscal deficits and growing public indebtedness and the crowding-out effect of private investment initiated and fueled by public borrowing.

### 1- Fiscal Deficit

The fiscal figures for the first ten months of 2017 reveal that the public deficit, which mirrors internal deficit in the economy, declined by 25% from the corresponding period last year to reach USD 2.5 billion.

The observed economic improvement in the domestic economy caused an increase of 13.7% in public revenues, and a lower growth in public spending by 2.8% during the period mentioned above.

As a result of these fiscal conditions on the revenues-spending front, the deficit-to-spending ratio reached 20.6% against 28.2% for the same period indicated above.

Total tax revenues increased by 17.8% to reach USD 7.3 billion for the first ten months of 2017, relative to USD 6.2 billion for the same period last year; while treasury expenditures dropped by 23.3% for this period.

The total primary surplus was higher by 37% from end-October 2016 and reached USD 2 billion at end-October 2017. This represents nearly 18% total expenditures.

### 2- Public Indebtedness

As a result of these developments on the fiscal front, public indebtedness continued its growth during 2017, with an increase of 6.5% in gross debt figures over November 2016 to reach USD 79.4 billion at the end of November 2017.

Excluding the public sector's deposits at the Central Bank and commercial banks from the gross debt figures, the net public debt surged by 7.1% on annual basis to reach USD 69.8 billion at end-November 2017.

Private demand remains highly affected by Lebanon private investment which is relatively stagnant. It is also partially affected by the Syrian investments. As the Syrian turmoil endures, Syrians in Lebanon are gradually shifting their economic role from being mainly consumers to becoming income earners in the informal sector. This includes establishing micro and small business that sell goods (including those produced in Syria) at lower prices targeting the Lebanese and Syrian communities.

The total value of cleared checks, mirroring private investment (and consumption) spending, was 0.3% higher in 2017 relative to 2016, recording USD 68.2 billion at the end of 2017.

The amount of Kafalat loans, an indicator of the activity of SMEs and startups as well as private investment spending, decreased by 28.5% from 2016 to reach USD 66.4 million at the end of 2017. On the other hand, the Economic and Social Fund for Development guaranteed 534 loans for a total value of USD 9.2 million for SMEs in 2017.

### III. Labor Markets and Social Conditions

#### 1- Labor Supply

Lebanon's inability to generate sufficient jobs, due mainly to weak economic growth rates in the last years, has acute socio-demographic repercussions. Historically, real estate, construction, finance and tourism have been the real drivers of economic activity. Since these sectors either are not labor intensive nor attract lower skilled and cheaper

foreign labor, growth in Lebanon does not adequately generate employment for the Lebanese nationals. Some 22,000 new Lebanese entrants to the labor market are expected each year until 2019 (excluding the Syrian refugees) according to the World Bank.

#### 2- Unemployment

The unemployment rate in 2011, still not yet affected by regional hostilities, was nearly 11% (10% for the MENA region), and reflecting insufficient job opportunities. Unemployment has certainly worsened during the last years, reaching more than 20% nowadays.

According to the figures of the Lebanese General Labor Union, one out of three young persons with university education does not find a job opportunity. Half the young persons between 15 and 24 years who have secondary education are unemployed.

This development in the Lebanese labor market is changing the socio-demographic profile of the country: educated Lebanese citizens are seeking jobs in countries that require high skilled labor, increasing the Diaspora; while the non-Lebanese citizens dominate the unskilled labor market.

#### 3- Social and Economic Pressures

The Lebanese General Labor Union estimates that 28.5% of the Lebanese live today under the poverty line, and more than 300 thousand citizens are unable to ensure their food.

## 2- BTA – Fransabank Retail Index



There is no doubt that the last quarter of 2017 was full of developments – some of them negative, but some others positive as well.

The turbulence on the political scene proved once again to be the prime and most essential engine of the local markets' level of activity during this last quarter – especially regarding what relates to the propensity for consumption in main sectors such as the Food Products or the Clothing sectors, proving once again that political developments have always a much stronger impact than seasonal factors.

Thus, the resignation of the Prime Minister from outside the country, the tactful governance of this crisis by the President of the Republic, the ensuing negotiations, the return of the Prime Minister to Lebanon and the withdrawal of the resignation, were perceived as a very wise and smart management of the crisis that allowed the authorities to keep the country's fate under strict control, and to avoid any harmful subjective political or economic repercussions.

This has softened the impact of this turbulent episode and allowed the retail trade markets to regain some positive momentum during the remaining period till the end of the year.

However, the consolidated results in terms of turnover for the entire fourth quarter remained relatively weak as compared to the last quarter of 2016 bearing in mind that the last quarter of each year is considered as crucial by retail traders.

In other terms, it appears that the regain in momentum was not sufficient to reverse the downtrend that most sectors of the retail markets have been experiencing for too long now, including not only the Food Products, the Clothing and the Shoes sectors, but also the Construction Materials and the Furniture sectors.

Such results thus come as a reflection of the great impact that the combination of political turmoil with the negative pressures that the new and revised tax laws did have on market activity – especially their direct impact on the Lebanese households' purchase power (a purchase power that has been steadily receding because of the crisis in the Lebanese labour market) and their direct impact on the consumption levels that are highly influenced by the absence of foreign visitors and Lebanese visiting immigrants – bearing in mind that the weight of the consumption of those in the local markets used to represent no less than the third of the total annual turnover figures.

It must also be noted that the Consumer Price Index has continued to rise simultaneously, with a + 5.01 % increase between the CPI levels of December 2016 and December 2017, as posted by the Central Administration of Statistics.



Domestic debt increased by 5.5% to USD 48.9 billion at end-November 2017, as compared to USD 46.35 billion at end-November 2016. External debt, on the other hand, increased by 8% to USD 30.4 billion, relative to USD 28.12 billion during the same period.

Domestic debt accounted for 61.6% of gross public debt in November 2017 compared to 62.2% a year earlier, while foreign-currency denominated debt represented 38.3% of the gross debt at the end of November 2017 relative to 37.7% a year earlier.

### 3- Fiscal Ratios

When deflated by GDP, the public deficit is estimated to reach nearly 5.6% in 2017, relative to nearly 6.2% in 2016, thus reflecting an upward debt trajectory trend.

On the other hand, the gross debt-to-GDP ratio surged upwards over the past three years, from 133% in 2014, to 137% in 2015, 143% in 2016, and is estimated to reach 148% by the end of 2017. These ratios are very high by international standards and clearly reflect the deep fiscal imbalances in Lebanon.

## Public-Finances Indicators

Indicators	2017	2016	Variation (%)
Public Revenues (USD, billion) (10 months)	9.6	8.5	13.7
Public Expenditures (USD, billion) (10 months)	12.1	11.8	2.8
Fiscal Deficit (USD, billion) (10 months)	2.5	3.3	(25.0)
Deficit / Expenditures (%) (10 months)	20.6	28.2	---
Primary Surplus (USD, million) (10 months)	1,987	1,450	37.0
Gross Public Debt (USD, billion)*	79.4	74.5	6.5
Net Public Debt (USD, billion)*	69.8	65.2	7.1
Domestic Debt (USD, billion)*	48.9	46.35	5.5
Foreign Debt (USD, billion)*	30.4	28.12	8.0

\* First 11 months.

Sources: Ministry of Finance and Central Bank of Lebanon.

## V. Inflation and Monetary Policy

The monetary authorities have maintained its monetary stabilization policy during 2017. Growth was maintained during 2017, while inflation was recorded in 2017.

### 1- Inflation

Due to the moderate growth rate recorded, Lebanon has experienced inflation in 2017 relative to deflation in 2016. Inflation was 4.5% in 2017, against a deflation rate of

0.8% in 2016. In this sense, inflation remains moderate in Lebanon, but its rate is higher than the economic growth rate.

The inflation recorded in 2017, was translated into moderate growth in money supply M3, which grew by more than USD 5.6 billion in 2017.

Such results do translate an increasing weakening of the activity in most sectors of the retail markets, and reflect a continued decline in the consumption levels for many consecutive quarters. This situation calls for an immediate intervention by all concerned parties to implement efficient economic rescue policies aiming at reviving the purchasing power, curbing the inflationary trend, and luring new local and international investments, in addition to voting a public expenditure program that would inject fresh liquidity in the markets to reinforce and complement the efficient monetary programs that are being implemented by the Central Bank.

Until such rescue policies take place, retail traders will still be facing all kinds of financial and fiscal burdens that are threatening their solvency, and these will continue facing illegal competition – with a strong hope that the new customs administration measures will gradually put an end to such unorthodox situation.

At the same time, and while analyzing the results for every sector separately, it appears that while some sectors continued to experience a slowdown in activity, other sectors were able to achieve relatively better results. The main sectors that continued to post weaker real results in comparison to their figures as compared to the fourth quarter of 2016:

- Musical Instruments (- 40.22 %)
- Building Materials and Equipment (- 36.43 %)
- Shoes and other Leather products (- 29.69 % after a - 10.93 % drop in the previous quarter)
- Furniture (- 18.76 %)
- Silverware and Decorative Items (- 16.09 %)
- Clothing (- 15.70 % after a - 5.13 % drop in the previous quarter and - 8.25 % in the second quarter)
- Toys (- 13.70 %)
- Optical Instruments (- 8.71 %)
- Supermarkets and Food Shops (- 8.61 % after a - 8.17 % drop in the previous quarter)
- Medical Equipment (- 5.41 %)
- Sports Items & Equipment (- 3.95 %)
- Liquor & Spirits (- 4.10 %)
- Home Accessories (- 3.29 % after a - 4.61 % drop in the previous quarter and - 3.62 % in the second quarter)
- Cellular Phones (- 2.99 % after a - 33.90 % drop in the previous quarter)
- Restaurants and Snacks (- 2.48 %)

- Pharmaceuticals (- 1.93 %)
- Building Equipment (- 1.13 %)

On the other hand, some sectors (in addition to Malls where an improvement of + 6.00 % was registered and to the Fuels sector where a + 3.43 % increase in volumes sold was reported) did witness better real turnover figures, and included mainly:

- Tobacco (+ 8.96 %)
- Household Electrical Equipment (+ 4.88 % after a decline of - 5.07 % in the previous quarter)
- Bakeries & Pastries (+ 4.00 %)
- Used Cars Dealers (+ 2.98 %)
- Perfumes and Cosmetics (+ 2.23 %)
- Watches and Jewelry (+ 1.76 %)
- Books & Stationery & Office Supplies (+ 1.60 %)

Further to witnessing weaker results in comparison to the same quarter of last year, it is also necessary to look into the sectorial variations details between the third and the fourth quarters of 2017, whereas it appears that the political events were stronger than the traditional seasonal factors, and the real results in only some sectors posted better figures, while others continued to report decreasing turnovers. As a result, real figures indicated a slight decrease between the third and the fourth quarter of 2017.

There is also no doubt that the CPI level increase that reached + 2.78 % between the third and the fourth quarter of 2017 (according to official CAS results), and the declining purchase power of Lebanese households – in the absence of foreign visitors and visiting immigrants, did not help the prevailing weakness in the markets' activity this year.

Hence, it should be noted that while most sectors posted poorer results in their turnover figures, other sectors managed to have a better performance, as detailed below:

- Shoes and Leather Products (- 51.20 % after an improvement of + 33.70 % in the previous quarter)
- Toys (- 26.41 %)
- Optical Instruments (- 25.49 % after an improvement of + 5.94 %)
- Pharmaceuticals (- 17.23 % after an improvement of + 15.36 %)

<b>CPI (as per CAS official results)</b>	
Q4 '14 / Q4 '13	- 0.71 %
Q1 '15 / Q1 '14	- 3.38 %
Q2 '15 / Q2 '14	- 3.37 %
Q3 '15 / Q3 '14	- 4.67 %
Q4 '15 / Q4 '14	- 3.40 %
Q1 '16 / Q1 '15	- 3.57 %
Q2 '16 / Q2 '15	- 0.98 %
Q3 '16 / Q3 '15	+ 1.03 %
Q4 '16 / Q4 '15	+ 3.14 %
Q1 '17 / Q1 '16	+ 5.12 %
Q2 '17 / Q2 '16	+ 3.48 %
Q3 '17 / Q3 '16	+ 4.15 %
<b>Q4 '17 / Q4 '16</b>	<b>+ 5.01</b>
Q4 '14 / Q3 '14	- 1.49 %
Q1 '15 / Q4 '14	- 0.98 %
Q2 '15 / Q1 '15	- 1.12 %
Q3 '15 / Q2 '15	- 1.18 %
Q4 '15 / Q3 '15	- 0.16 %
Q1 '16 / Q4 '15	- 1.15 %
Q2 '16 / Q1 '16	+ 1.54 %
Q3 '16 / Q2 '16	+ 0.82 %
Q4 '16 / Q3 '16	+ 1.93 %
Q1 '17 / Q4 '16	+ 0.74 %
Q2 '17 / Q1 '17	- 0.04 %
Q3 '17 / Q2 '17	+ 1.47 %
<b>Q4 '17 / Q3 '17</b>	<b>+ 2.78 %</b>

Thus, and despite the relative stability at the political and security levels, the combination of all the above developments resulted in a decline of – 4.22 % in the real turnover figures of the last quarter of 2017 as compared to the figures of the last quarter of 2016 (i.e. after the application of the CPI weight for the period under review).

If the fuel sector (where a decrease of – 3.02 % was registered in terms of volume for this same period) is excluded from the consolidation, the real consolidated turnover figure decline reaches – 5.07 % between the Q4 of 2016 and the Q4 of 2017.

### Yearly Variation between 4th Quarter '16 and 4th Quarter '17

	<b>Q4 - 2016</b>	<b>Q4 - 2017</b>	
Nominal Year to Year Variation (incl. Liquid Fuels)	100.00	100.83	
Nominal Year to Year Variation (excl. Liquid Fuels)	100.00	99.94	
CPI between Dec '16 and Dec '17 (as per the official CAS figures)		<b>+ 5.01%</b>	
Real Year to Year Variation (incl. Liquid Fuels)	100.00	95.78	<b>- 4.22 %</b>
Real Year to Year Variation (excl. Liquid Fuels)	100.00	94.93	<b>- 5.07 %</b>

The persisting state of weakness that is still affecting the retail trade market, and the weakness of the main engines that are needed to revitalize the markets, are becoming heavier quarter after quarter, and their impact is becoming harder to bear.

The remedies to this crisis is well known, and the concerned authorities are bound to start applying them – firstly at the local level by alleviating the fiscal burdens, restoring the balance in the labour market, re-consolidating the Lebanese households purchase power and addressing the various constraints imposed by the presence of refugees, and also at the international level, by developing a clear vision for the future of the Lebanese economy, a vision that is in harmony with the latest world developments in terms of knowledge economy, and that would support the perspectives in the upcoming international conferences to be held in support of the Lebanese economy, in addition to paving the way to having the appropriate environment to attract new investments and lure again tourists and visitors to Lebanon.

## Monetary Indicators

Indicators	2017	2016	Variation (%)
USD/LBP Exchange Rate	1507.5	1507.5	0.0
Central Bank's Assets in FX (USD, billion)	42.0	40.7	3.1
Central Bank's Gold Reserves(USD, billion)	12.0	10.74	11.7
Inflation Rate (%)	4.5	(0.8)	---

Sources: Central Bank of Lebanon, Association of Banks in Lebanon, and Central Directorate for Statistics.

### 3. Monetary Stabilization Policy

The Central Bank of Lebanon has continued its monetary stabilization policy during 2017, just like in the previous years. The stability in the exchange rate (USD1 = LBP 1507.5) persists, thus contributing to overall economic stability.

To support this monetary stability, the monetary authorities have maintained their policy of moderating growth in money supply. This is crucial also for keeping inflation down.

Within this stabilization context, the Central Bank's foreign-currency denominated assets enhanced by nearly 3.1% from 2016 to reach USD 42 billion at the end of 2017. Also, the Central Bank's gold reserves remain at a relatively high level, at USD 12 billion at the end of 2017, relative to USD 10.74 billion at the end of 2016, with an annual growth of 11.7%.

- Clothing (- 16.70 % after an improvement of + 16.14 %)
- Musical Instruments (- 16.67 %)
- Tobacco (- 15.22 % after an improvement of + 17.15 %)
- Restaurants and Snacks (- 18.95 % after an improvement of + 15.49 %)
- Bakeries & Pastries (- 4.49 % after an improvement of + 13.67 %)
- Sports Items & Equipment (- 6.49 %)
- Building Material (- 2.84 %)

- Watches and Jewelry (+ 16.40 %)
- Furniture (+ 11.13 %)
- Used Cars Dealers (+ 7.13 %)
- Supermarkets and Food Shops (+ 3.88 %)
- Home Accessories (+ 3.41 %)
- Medical Equipment (+ 2.95 %)
- Household Electrical Equipment (+ 1.11 %)
- Perfumes and Cosmetics (+ 0.48 %)

Sectors witnessing an improvement in their real sales (mainly because of seasonal factors) included:

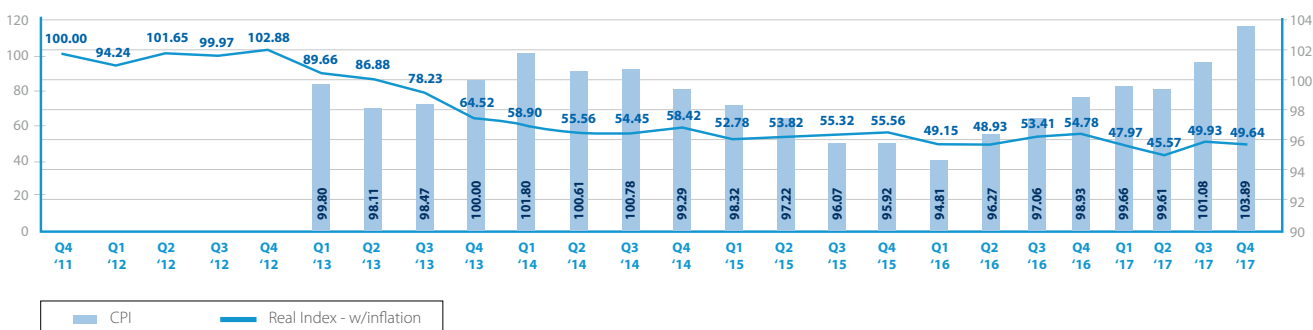
- Books & Stationery & Office Supplies (+ 32.23 %)
- Liquors (+ 25.14 %)
- Building Equipment (+ 23.95 %)
- Construction Materials (+18.68%)

As a result, with the base index 100 fixed at the fourth quarter of 2011, and with a quarterly inflation rate of + 2.78 % for the fourth quarter of 2017, as per the official CAS report, the “BTA-Fransabank Retail Index” is (with all sectors included) 49.64 for the fourth quarter of the year 2017. This figure compares to the level of 49.93 for the third quarter of 2017, and means that the index remained below the 50 mark.

## BTA - Fransabank Retail Index for Q4 - 2017 (Base 100 : Q4 - 2011)

	2011				2012				2013				2014				2015				2016				2017			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Real Index - w/out inflation	100	95.77	100.55	108.54	112.66	90.83	87.85	78.60	65.87	59.68	55.30	55.22	57.57	51.51	51.94	52.77	52.911	46.27	46.79	51.49	53.86	47.51	46.76	52.00	53.17			
Real Index - w/ inflation	100	94.24	101.65	99.97	102.88	89.66	86.88	78.23	64.52	58.90	55.56	54.45	58.42	52.78	53.82	55.32	55.56	49.15	48.93	53.41	54.78	47.97	45.57	49.93	<b>49.64</b>			
CPI						99.80	98.11	98.47	100.00	101.80	100.61	100.78	99.29	98.32	97.22	96.07	95.92	94.81	96.27	97.06	98.93	99.66	99.61	101.08	103.89			

## Evolution of the BTA - Fransabank Retail Index (Base 100 : Q4 - 2011)



## 2. Financial Institutions

The consolidated balance sheet of financial institutions in Lebanon, an indicator of the activity of these institutions, increased by 8.3% on from the end of 2016 to reach USD 1.53 billion at the end of 2017.

Claims on the private sector grew by 5% to reach USD 762.5 million, and those on the public sector declined by 17.6% to reach USD 112.7 million during the same period.

Liabilities to the private sector, on the other hand, fell by 17.7% to reach USD 181 million during the above-mentioned period.

The capital base of these financial institutions increased by 1.6% to reach USD 475.8 million at the end of 2017.

Over the past five years, the consolidated balance sheet of financial institutions developed continuously from USD 1249 million in 2012 to USD 1426 million in 2013, USD 1675 million in 2014, and to USD 1721 million in 2015. The amount was only USD 481 million in 2005.

## Financial Institutions' Indicators

Indicators	2017	2016	Variation (%)
Total Assets (USD, million)	1,579	1,410	12.0
Liabilities to Private Sector (USD, million)	155.6	220.1	(29.3)
Capital Base (USD, million)	480.8	468.5	2.6
Claims on Private Sector (USD, million)	754.1	726.3	3.8
Claims on Public Sector (USD, million)	122.3	136.7	(10.5)

Source: Central Bank of Lebanon.

## 3. Beirut Stock Exchange

The activity of the Beirut Stock Exchange (BSE), which mirrors the activity of the capital market, was inferior in 2017 relative to 2016. The total trading volume of BSE regressed by 27.8% on annual basis to reach USD 86.99 million at end-2017. The aggregate turnover decreased by 21.6% to reach USD 762.1 million.

Market capitalization also dropped by 3.6% on annual basis, from USD 11.9 billion in 2016 to USD 11.47 billion in 2017. Its ratio to GDP reached 21.5% in 2017, reflecting a narrow capital market in Lebanon. Market capitalization continues to be dominated by banking stocks, followed by real-estate stocks, and industrial stocks.

## Beirut Stock Exchange Indicators

Indicators	2017	2016	Variation (%)
Market Capitalization (USD, billion)	11.47	11.9	(3.6)
Total Trading Volume (Shares, million)	86.99	120.5	(27.8)
Aggregate Turnover (USD, million)	762.1	971.6	(21.6)
Market Liquidity Ratio (%)	6.6	8.2	---

Sources: BSE and Central Bank of Lebanon.

## VI. Financial Markets

The banking sector has maintained its growth in 2017, but the Beirut Stock Exchange (BSE) experienced a regressed activity, while the activity of financial institutions expanded.

### 1. Commercial Banking Sector

The Lebanese banking sector is liquid, profitable, and well regulated, but highly exposed to the public sector. Banks are well capitalized and resilient to difficult conditions and crises in the domestic economy and the region, owing to prudent investments and conservative actions by banks, in a highly controlled environment. The liquidity ratio is high well above 70%. The capital adequacy is strong, with capital-to-assets-ratio in excess of 8.6% in 2017. The commercial banks have maintained their regional presence, despite unfavorable conditions in several markets, in order to keep activity and income diversification.

The banking activity, as provided by the consolidated balance sheet of commercial banks in Lebanon, has improved during 2017, recording USD 219.9 billion, as of end 2017, an increase of 7.6% from the end of 2016. The

sector's assets is estimated to represent nearly 411.2% of GDP in 2017 relative to 393% in 2016, one of the highest ratios worldwide.

The deposits of the private sector grew by 3.8% from end-2016 to reach USD 168.7 billion at the end of 2017.

On the other hand, private sector lending increased by 5.5% to reach USD 60.3 billion during the same period.

The aggregate loans-to-deposits ratio was 35.8% at end-2017, relative to 35.2% in 2016. This reflects the relatively slow lending opportunities in the economy under current conditions.

The commercial banks' capital base rose by 4.9% from the end of 2016 to reach USD 19.13 billion at end-2017, reflecting a growing capitalization of the sector.

The dollarization rate in private-sector lending was 71.0% relative to 72.6% during the same period. Also the dollarization rate of deposits was 68.7% relative to 65.3% during the period under consideration.

## Banking-Sector Indicators

Indicators	2017	2016	Variation (%)
Total Assets (USD, billion)	219.9	204.3	7.6
Total Deposits of Private Sector (USD, billion)	168.7	162.5	3.8
Total Loans to Private Sector (USD, billion)	60.3	57.2	5.5
Ratio of Private Sector's Loans to Deposits (%)	35.8	35.2	---
Dollarization of Private Sector Lending (%)	71.0	72.6	---
Dollarization of Private Sector Deposits (%)	68.7	65.3	---
Bank's Capital Base (USD, billion)	19.31	18.24	4.9

Sources: Central Bank of Lebanon and Association of Banks in Lebanon.

## VIII. Economic Prospects

Lebanon's real economic growth rate is estimated at 2% for 2017 according to the IMF figures, and 3% according to the Institute of International Finance (IIF) for the same year. This growth is expected to continue in 2018 at nearly 2.5% and 3.5% according to the estimates of IMF and IIF respectively. Real growth was estimated at 1.1% and 1.4% in 2016 according to the IMF and IIF respectively.

Future growth will be largely motivated by the expected increase in private consumption, government spending, and private investments.

Strong economic growth could be achieved in the years to come if the domestic authorities maintain its monetary stabilization policy, develop a credible policy mix to restore fiscal sustainability and halt the growth of public indebtedness, and implement structural reforms to reduce infrastructure bottlenecks and the crowding-out effect of public borrowing on the private sector. Structural reforms are necessary to support consumer and investor confidence. The government of Lebanon should also seek to reduce the spillovers of the Syrian crisis on the national economy. Lebanon should undertake serious steps and measures to exploit the oil and gas wealth, which could put the country on a robust growth trajectory and income diversification and growth.



## VII. Foreign Sector

The balance of payments, mirroring the aggregate foreign sector activity, was in deficit in 2017 relative to a surplus in 2016. The capital inflows recorded in 2017 were not enough to offset the high trade deficit and produced a deficit in the balance of payments.

### 1. Foreign Trade

The trade deficit widened by 29% on annual basis to reach USD 20.3 billion in 2017, thus reflecting a radical and continued foreign deficit which represents nearly 38% of GDP in 2017, relative to 31.5% in 2016.

This surge in the trade deficit was the result of a decrease in exports of 4.5% on annual basis to reach USD 2.8 billion at end-2017, and an increase in imports of 23.7% to reach USD 23.1 billion during the same period.

In this sense, net exports (the difference between exports and imports) increased from USD 15.77 billion in 2016 to USD 20.3 billion in 2017, mirroring a weaker foreign-sector performance.

### 2. Capital Inflows

The year 2017 experienced a substantial level of capital inflows reaching nearly USD 20.14 billion relative to a level of USD 16.94 billion in 2016, an increase of 18.9%

on annual basis. These capital inflows were induced by a lowering regional turmoil and political tension in Lebanon.

These capital inflows recorded in 2017 represent nearly 37.7% of GDP in 2017 relative to 32.6% in 2016. Hence, they contributed to the economic growth achieved in 2017.

### 3. Balance of Payments

The balance of payments (BOP) realized a deficit in 2017, recording a level of USD 155.7 million relative to a substantial surplus of USD 1.2 billion in 2016. The surplus of BOP recorded in 2016 was the first annual surplus since 2010, where the period 2011-2015 experienced deficits.

When considering the aggregate banking system (Central Bank, Commercial banks, and financial institutions), the cumulative surplus in the BOP in 2017 resulted from an increase of nearly USD 1.61 billion in net foreign assets of the Central Bank and a decrease of USD 1.77 billion in those of banks and financial institutions.

In this sense, the balance-of-payments deficit represented nearly 0.3% of GDP in 2017, while its surplus in 2016 was nearly 2.5% of GDP.

## Foreign Sector Indicators

Indicators	2017	2016	Variation (%)
Trade Deficit (USD, billion)	20.3	15.74	29.0
Exports (USD, billion)	2.8	2.93	(4.5)
Imports (USD, billion)	23.1	18.7	23.7
Capital Inflows (USD, billion)	20.14	16.94	18.9
Balance of Payments (USD, billion)	(0.1557)	1.2	---

Sources: Higher Customs Council and Central Bank of Lebanon.

## Major Water Indicators for Lebanon (average year)

Indicator	Level
- Per-capita renewable water resources (2015)	839 cubic meters
- Total rainfall and snow	8.6 billion cubic meters
- Evapo-transpiration	4.5 billion cubic meters
- Total renewable water resources	4.1 billion cubic meters
- Water flowing across boundaries	1.0 billion cubic meters
- Water flowing to sea	0.4 billion cubic meters
- Resources remaining in Lebanon	2.7 billion cubic meters
- Resources in groundwater	0.5 billion cubic meters
- Resources in surface flow	2.2 billion cubic meters

Source: Ministry of Energy and Water.

It is not clear if water from springs are included in the above estimates. In fact, there are over 2000 springs with a flow of 1.15 billion cubic meters every year, according to FAO estimates. Springs and groundwater remain the main sources of drinking water supply in Lebanon.

The main rivers that flow entirely inside Lebanon are the Litani River (annual flow of 0.79 million cubic meters per year), the Ibrahim River (0.51 million cubic meters), the Awali River and Damour River (both 0.3 million cubic meters).

Besides, there are some transboundary rivers that rise in Lebanon and shared with neighbouring countries. Two important rivers, the Orontes (Asi) River (annual flow of 0.48 million cubic meters) and El-Kebir River (0.19 million cubic meters) are shared with Syria according to agreements between the two countries. Also, the Hasbani River, a tributary of Jordan River, is shared with Israel, with no agreement between them.

In fact, water resources in Lebanon are polluted by inappropriate treatment of household, industrial, agricultural, hospital wastewaters, besides the discharge of motor oil. The Ghadir River in the South of Beirut is probably the most polluted river, contrary to the Wazzani River in South Lebanon which maybe the least polluted river due to lower economic activity in its area.

In addition, the Qaraoun Lake is polluted because of factories and agricultural wastes. The national Council of Scientific Research of Lebanon, estimates that 60-70% of all natural sources of water were affected by bacterial contamination. An example of this is the Jeita Spring.

Concerning the water use in Lebanon, estimates of the Ministry of Energy and Water indicate that total water use in 2010 was at 1.59 billion cubic meters. In 2005, the FAO estimated water withdrawal at 1.31 billion cubic meters or 63% of economically exploitable water resources. Of this, nearly 61% was for agricultural purposes, 30% for domestic use, and 9% for industry. An earlier estimate by the Ministry of Environment put water use at 1.29 billion cubic meters in 1994. Households that are connected to public water network only 53% of them drink its water. This is because households perceive this water as unsafe and has poor taste.

According to the estimates of the Ministry of Energy and Water, the level of non-revenue water stood at nearly 48% in 2010. This is high by international standards, but similar to the level observed in Syria, Jordan and Turkey. The loss is due to inefficient and poorly maintained systems and networks, leading to high losses and supply interruptions. In fact, 50% of transmission and distribution networks are past their useful life.

## Study - The Policies and Actions Needed to Face the Growing Water Security Challenges in Lebanon

### Introduction

This study sheds light on the current problems which are facing the water sector in Lebanon, its significant water wealth, estimates of total supply and demand for water resources and future water shortages. It also determines the required strategies, policies and actions, on the legal-legislative-practical levels which are necessary to ensure the proper management of water resources, conservation and development. Special focus is given to the significance of public-private partnership in the water sector, and the effective cooperation between Arab Countries for ensuring a growing and sustained water security for the whole region.

### I. Access to Water Supply

It is widely known that access to an improved water sources in Lebanon is not universal. It is estimated by the World Bank and Ministry of Energy and Water that the average connection rate of the Lebanese population to the public water network does not exceed 80%, varying from 96% in Beirut to 55% in the North.

Even if we consider improved water sources to include protected wells and springs, besides piped water connections, it is still unlikely that water access in Lebanon is universal. One can clearly notice that many households in some urban regions are not connected to the public water network and rely heavily on water bought from tanker trucks.

On the other hand, the share of sewer wastewater connection stands at nearly 60% according to the World Bank and the Council for Development and Reconstruction. The wastewater connection was highest in Beirut and Mount Lebanon (nearly 74%) and lowest in the South (nearly 35%). The remaining buildings either use cesspools, septic tanks, or direct release to the environment. The treated wastewater share of total water consumed stands at nearly 8% (against 32% for the MENA region).

Furthermore, it is widely acknowledged that water service provision in Lebanon is poor. There is not a single village or city in Lebanon that receives an uninterrupted supply of water. Water shortage is very strong in summer. The average Lebanese household receives water six hours per day in summer and nine hours per day in winter. Only one quarter of the Lebanese households receive water every day. Buying water from trucks and purchase of bottled water for drinking is common in all Lebanon. Low pressure and intermittent water supply are caused partially by intermittent electricity supply.

The Lebanese water supply and sanitation sector has not achieved service provision in line with Lebanon's level of economic development. The opportunity costs of inadequate public water supply provision amount to nearly 1.3% of GDP every year. The environmental degradation caused by the inappropriate discharge of wastewater is estimated to cost an additional 1% of GDP every year in Lebanon, according to the World Bank estimates.

### II. Water Resources and Use

It is widely known that Lebanon is rich in water compared to Jordan, and the Damascus region in Syria. However, the country's per capita renewable water resources are below the threshold of water poverty set at 1000 cubic meter per capita and year.

The level was 926 cubic meter per person per year in 2009, and dropped to 839 cubic meter in 2015, according to the Ministry of Energy and Water. Only part of the floodwater in rivers can be captured economically in dams, and some groundwater flows unused to the sea.

It is estimated by the Ministry of Energy and Water that total renewable water resources in an average year stand at nearly 4.1 billion cubic meters, of which 1 billion flows across boundaries, 0.4 billion flows to the sea, making the water resources remaining for Lebanon 2.7 billion distributed between 0.5 billion in groundwater and 2.2 billion in surface areas.

## Estimated Water Deficit 2015 – 2035 (million cubic meters)

Year	Supply	Demand	Deficit
2015	1,192	1,483	291
2020	1,192	1,499	307
2025	1,192	1,602	410
2030	1,192	1,703	511
2035	1,192	1,802	610

Source: Ministry of Energy and Water.

Hence, the water sector needs heavy investments in the water sector in the coming years to cope with the growing demand. The Ministry of Energy and Water, in its “National Water Sector Strategy” of 2012 estimates the value of capital expenditures requirements for Lebanon’s water sector for the period 2011-2020 at nearly USD 8.4 billion.

## Capital Expenditure Requirements for Lebanon’s Water Sector (2011-2020) (USD, million)

Term	Amount
1- Short Term (2011-2012)	1,973
2- Medium Term (2013-2015)	3,772
3- Long Term (2016-2020)	2,661
<b>Total (1+2+3)</b>	<b>8,406</b>

Source: Ministry of Energy and Water.

With such investments, the Ministry of Energy and Water estimates the value of total revenues of the water sector for the 2011-2020 period to grow from USD 232 million to USD 2.7 billion.

## Total Revenues of the Water Sector For the Period 2011-2020 (USD, million)

Term	Amount
1- Short Term (2011-2012)	232
2- Medium Term (2013-2015)	548
3- Long Term (2016-2020)	1,941
<b>Total (1+2+3)</b>	<b>2,721</b>

Source: Ministry of Energy and Water.

## IV. The Water Sector: Achievements vs. Challenges

The water sector in Lebanon is characterized by a number of achievements and challenges. A major achievement is the reconstruction of water infrastructure after the 1975-1990 Civil War and the 2006 war with Israel, with substantial external financial assistance. However, little investment was made with respect to building the capacity of sector institutions and wastewater treatment. No efforts were made to conserve the water where most untreated wastewater is discharged to the sea and rivers.

A second achievement is the formulation of a 10-year “National Water Sector Strategy” in 2010 for the period 2011-2020 by the Ministry of Energy and Water, which determined the major problems of the water sector and potential solutions. It also set forth the strategies, policies, and actions needed to reform the water sector.

A third achievement is the reform of the water and sanitation sector through the Water Law 221/2000, which merged the 21 water authorities and created four Regional Water Establishments to consolidate numerous smaller utilities. The later Law 337/2001 included wastewater treatment to the responsibilities of the Regional Water Establishments and the Ministry of Energy and Water. In October 2005, some bylaws for these laws were published.

## Surface and Ground Water Resources Indicators (2010)

Indicator	Level (million cubic meters per year)
1- Surface water resources	649
2- Groundwater extraction through private wells	267
3- Extracted water from private wells	438
4- Water through dams	235
<b>5- Total resources used (1+2+3+4)</b>	<b>1,589</b>
6- Number of private wells	42,824
7- Dam capacity as percentage of total renewable water resources (%)	6.0 (Egypt 295%, Syria 117%)

Source: Ministry of Energy and Water.

### III. Water Demand, Supply and Deficit

Lebanon is exposed to experience water shortage in the years to come, given the growing demand for water versus a relatively stagnant supply of water. The major drivers of future demand for water are the following:

- Household Domestic Consumption.
- Industrial Consumption.
- Tourism Consumption.
- Irrigation Consumption.
- Population Growth.

The total water supply in Lebanon is estimated at 1,377 million cubic meters as of 2010. It is distributed among surface water of 633.42 million (or 46%), ground water of 702.27 million (or 51%) and used storage of 41.31 million (or 3%).

### Distribution of Total Water Supply (million cubic meters, 2010)

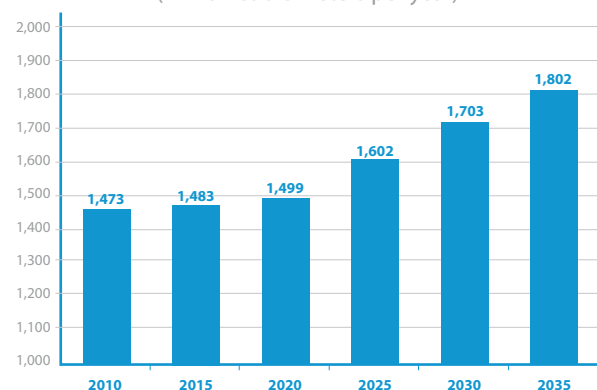
Source	Level	% of total
1- Surface Water	633.42	46%
2- Ground Water	702.27	51%
3- Used Storage	41.31	3%
<b>4- Total Water Supply (1+2+3)</b>	<b>1,377</b>	<b>100</b>

Source: Ministry of Energy and Water.

On the other hand, total water demand in Lebanon is estimated at 1,473 million cubic meters in 2010. This puts the water deficit for this year at nearly 96 million cubic meters.

However, the total demand for water in Lebanon is expected to grow from nearly 1.5 million cubic meters per year in 2015 to nearly 1.8 million in 2035, with an average annual growth of almost 5.4%.

- Total Water Demand in Lebanon 2010 - 2035 -  
(million cubic meters per year)



Source: Ministry of Energy and Water.

With a relatively stagnant supply of water during this period at nearly 1.2 million cubic meters, it is estimated that the water sector is expected to experience a growing deficit in the years under consideration. The deficit is estimated to double from 291 million cubic meters in 2015 to nearly 610 million in 2035.

Water which is in charge of drinking water supply, and the Ministry of Interior which is in charge of sanitation, as well as the Ministry of Finance which is in charge of funding and external cooperation, and the Ministry of Environment. The regional Water Establishments which are in charge of service provision, however, still lack the transfer of actual responsibilities to them, and the water authorities continue to remain in charge of operating infrastructure, despite the Water Law of 2000. Also, these Establishments still lack managerial and financial autonomy and are impeded by limited inter-agency coordination and weak central government oversight.

In addition, there is the challenge of a very low share of metering and the absence of volumetric water tariffs as flat fees are charged regardless of the existence of meters, and limited cost recovery for water supply, and no cost recovery for sewerage and wastewater treatment. The annual water tariff approaches LP 300,000, and has to be paid in full in advance for an entire year which imposes a heavy burden on the poor. The collection rate of annual water tariffs stood at 90% in Beirut – Mount Lebanon in 2010; however, it dropped to nearly 62% as of 2010. These figures revolve around 58% in the North, 52% in the South, and 18% in Bekaa, according to the Ministry of Energy and Water report in 2012 and 2013. This is because households do not receive their proper water allotment; water companies do not pressure them to pay; and households are, thus, reluctant to pay more for better public service. In fact, there is no financial incentive to save water. There is also no wastewater treatment.

Furthermore, there is the problem of weak public investment in the water and wastewater sector. This investment amounted to only 0.4% of GDP in the late 1990s and early 2000s. These investments are financed, to a large extent, by external donors. This is accompanied by gaps in the legal framework delaying the private sector participation.

Moreover, many external donors have supported and continue to support Lebanon's water and sanitation sector with financial and technical assistance. These include the Arab Fund for Economic and Social Development, the European Investment Bank, France, Germany, Italy,

Japan, Kuwait, Saudi Arabia, United States, and the World Bank. These donors tend to focus on particular regions of Lebanon. Most external financial assistance is in the form of loans, while technical assistance is in the form of grants. Most external assistance is channeled through the government, except for U.S. assistance which is provided directly to consulting firms working in cooperation with the government or NGOs. The UN plays an important role in the Lebanese water sector, mainly through UNICEF and UNDP. The problem here lies in donor coordination. This coordination is the responsibility of the "donor coordination unit" in the Ministry of Finance, which itself is supported by UNDP. In Lebanon, there is no proper coordination mechanism between donors to the water sector.

The gaps present in the legal regulatory framework which are leading to delays in the water-sector reform and private-sector participation are the following:

- (i) Incomplete implementation of Law 221 of 29 May 2000 and its amendments, and the lack of required bylaws to finalize the implementation of the water sector reform.
- (ii) The need to develop required legislation to avoid delays in private sector participation in the water sector, mainly to allow for BOTs in large capital projects.
- (iii) The need to modernize irrigation laws, thus abolishing the Ottoman law of 1913 in a view to facilitate and organize the use of irrigation water, mainly through the creation of Water Users Associations (WUAs).
- (iv) The need to develop the legal requirements to support strategic priorities in the water sector.
- (v) The need to achieve the ratification of the Water Code.
- (vi) The need to undertake an in-depth gap analysis of all laws and regulations governing the water sector.

The four Regional Water Establishments are responsible for drinking water supply and wastewater treatment. These Establishments are:

- Water of Beirut and Mount Lebanon (head office in Beirut).
- Water of North Lebanon (head office in Tripoli).
- Water of Bekaa (head office in Zahle).
- Water of South Lebanon (head office in Sidon).

However, these four Establishments face major challenges related to their work, including improper business planning, weak performance, insufficient human resources, inadequate, IT skills, gaps in managerial positions, and others.

Now, concerning the challenges, the overall water problems in Lebanon can be attributed to the following:

- (i) Lack of up-to-date information on the quality and quantity of available and potential water resources and of reliable forecasts on water demand.
- (ii) The general absence of comprehensive national planning and well-designed policies for water resource exploitation and use and demand projections with overall socio-economic development plans.
- (iii) Lack of awareness in the public sector of the need for the rational use and management of water resources.
- (iv) Outdated water legislation and non-existent enforcement mechanisms.
- (v) Fragmented water institutions and ineffective coordination of related water activities on the national level.
- (vi) Lack of adequate financial resources to efficiently develop non-conventional water resources, desalination and wastewater reuse facilities, as well as hydraulic structures and distribution system.
- (vii) The absence of technical cooperation between Arab Countries at the regional or sub regional level in

the exploitation and development of new resources, particularly of shared rivers or ground water basins.

However, increasing imbalances between water demands and supply is being experienced by Lebanon. Shortages are attributed to rising demand, the absence of an effective water policy and conservation measures (including pricing systems), and a lack of funds for investment in water infrastructure.

Development programs in the water sector in Lebanon have contributed to increased water consumption and the depletion of water resources. Unfortunately, little efforts have been made to manage water resources or to establish short-or long-term strategies or policies.

Furthermore, decision makers in the public sector have not yet acknowledged the importance of supply and demand management measures as essential tools in the reduction of shortages and the conservation of water for future generations.

Public education, water-saving technology, effective plumbing codes and regulations, and water pricing have been implemented but in a fragmented fashion. Efforts to date have been neither comprehensive nor integrated. The same is true for supply management.

Furthermore, current pricing policies in Lebanon are inefficient, generally contributing to the wastage of water rather than to its efficient use and conservation.

Besides these challenges, there is also the challenge of institutional weaknesses and lack of sustainability in the public sector. The external financing institutions are always concerned with the insufficient capacity to operate and maintain the water infrastructure in Lebanon.

Also, another challenge is the slow implementation of the water reform process; the separation of responsibilities between the various entities such as the CDR which is in charge of the investment function, and the Regional Water Establishments; politicization of decision making; and the absence of an autonomous regulatory agency. In fact, the policy-making process for the water sector is still fragmented between the Ministry of Energy and

Fortunately, unlike many other countries in the region and the world, Lebanon is blessed with a wealth of water resources, given its numerous rivers, underground aquifers and heavy winter rains. Therefore, since Lebanon has this substantial water potential, all must be mobilized to manage this resource effectively.

Lebanon's crucial focus of future plans should be accorded to dams, as they are the ultimate solution to capturing water from winter rains to provide drinking water and irrigation. The government must immediately launch and implement an ambitious plans for a series of small and big dams.

Certainly the public and private sectors need to coordinate and cooperate to promote sustainable management of Lebanon's water resources in the direction which secures economic development in the country and social welfare of the people.

## References

- 1- "National Water Sector Strategy", Ministry of Energy and Water, 27/12/2010.
- 2- "Current Status of the Water Sector in Lebanon", Dr. Fadi Qumair, Al-Difaa Al-Watani Al-Lubnani Magazine, Issue no. 72, April 2010.
- 3- "Water Supply and Sanitation in Lebanon", Wikipedia, December 2013.
- 4- "Lebanon's Water", Wikipedia, 24 June 2016.
- 5- "The Water Crisis in Lebanon... Ineffective Management of Water Resources Quality", The Lebanese Company for Media and Studies, April 8, 2015.
- 6- "The Aggravating Water Crisis in Lebanon", Al-Sayad Magazine, Issue no. 3813, 4-10 December 2017.



## V. Policy Recommendations

To deal with the growing water-sector problems and challenges in Lebanon in the years to come, the following policies, strategies, actions and measures deem necessary:

(i) Strategic plans for meeting future water requirements must include the application of an effective integrated water management approach at all levels. This requires clearly defined long-term policies and strategies set forth in national water plans, as well as institutional and legal tools for the efficient and equitable allocation of resources.

(ii) Creating a favorable investment environment to attract private sector participation in financing and administering the water and sanitation infrastructure, including agricultural projects. Action required in this respect includes the development of a clear and comprehensive policy as well as a flexible and effective administrative and legal framework. The policy must address specific water objectives, strategies, priority areas and the role and mandate of private sector organizations in the development and management of water resources.

(iii) Some improvement in water service efficiency could be realized if water agencies were turned into well-managed businesses in the private sector. The privatization of water utilities may contribute to the optimal development and management of water resources. Privatization may apply in different forms and at different levels; particular consideration should be given to management, contracting, concession, private administration and public ownership.

(iv) The formulation and implementation of comprehensive water legislation and enforcement regulations have not received serious consideration in Lebanon. Lebanon needs to begin the process of updating existing water legislations or of drafting new legislations, and centralize its water institutions.

(v) Lebanon needs to realize that the efficient management of water resources requires water policy reform, with emphasis on supply and demand management measures and improvement of the legal provisions. Accelerated water policy reform must emphasize optimal development and management of water resources.

(vi) Broad-based water legislation is necessary to provide a framework for effective water policy formulation and implementation, emphasizing the rational utilization of water resources, including desalinated water. Such legislation should address water use priorities, water ownership and the jurisdiction of authorities responsible for water distribution and utilization. It should also include provisions for protection, pricing, beneficial uses, the issuance of water use permits, conflict resolution, private sector participation and the abolishment of water ownership rights that are incompatible with the effective management of surface and groundwater resources. Moreover, water legislation should include provisions for ensuring the most equitable, economical and sustainable use of available water resources, taking into consideration socio-economic conditions and the need for national development.

(vii) The Arab Countries are strongly encouraged to openly address the issue of water sharing, assess their cooperation needs and develop the necessary policies in this regard, if none exist.

(viii) For these crucial elements to be fully utilized, full partnership between the public and private sectors is needed in Lebanon. Neither the private sector nor the public sector alone can handle the water problems in Lebanon. Only joint efforts could result in a better and more effective management of water resources.

**To conclude:** Lebanon is a country which has important water resources, but the demand for water is growing year after year.

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