

Monitoring business cycles in Lebanon: Is economic growth cyclical?

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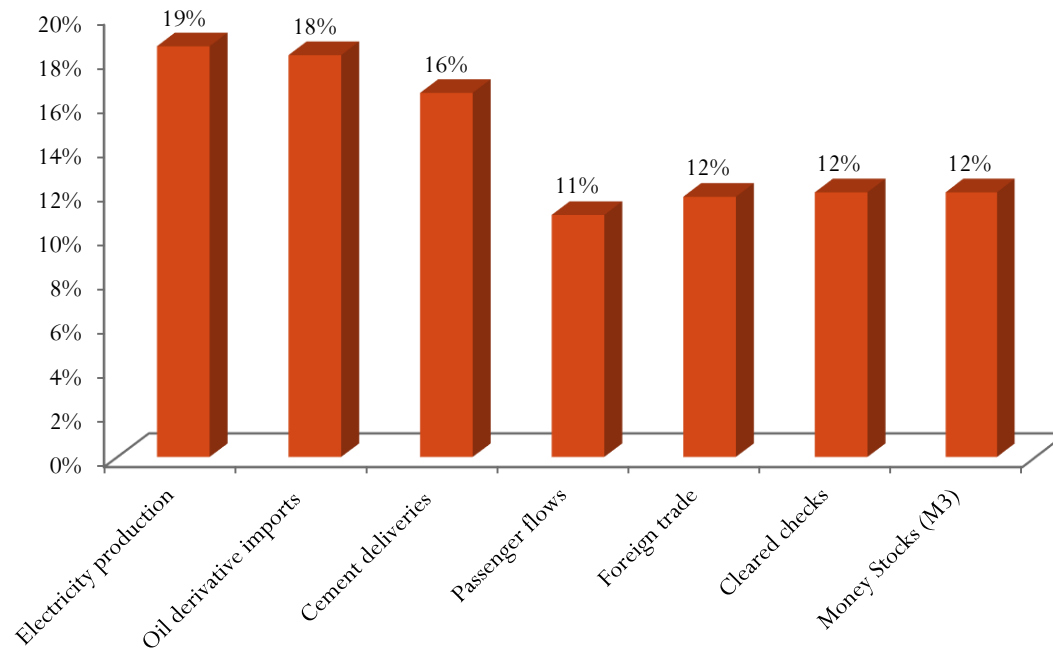
Problem statement

- This paper focuses on the Banque du Liban coincident indicator and the possibility to explore this composite indicator to explain short-run economic fluctuations and business cycles in Lebanon.
- The different phases of Lebanese expansions and recessions with their respective downturns and upturns durations for the period 1993-2016 are presented in this study

BDL coincident indicator

- The BDL adopted in 1994 a composite indicator named “Coincident Indicator” which is a monthly approximation to the GDP
- The CI is computed based on quantitative variables covering the main sectors of the economy, as weighed according to their importance in the GDP, and has consequently a similar performance to economic activity

Main components



BDL Coincident indicator and GDP

- The BDL Coincident Indicator is strongly correlated with real GDP growth as shown by the national account. The econometric relationship between these two variables is the following:

$$\frac{\Delta GDP}{GDP} = 0.8 \frac{\Delta IND}{IND}$$

Reliability and coherence

- Some variables in the business survey (such as Industrial Production, Demand and Sales) have similar performance to the coincident indicator and their coincident character has been proved and tested over years
- Over the past years, it has been proved that CI trend gives an accurate estimate of GDP
- The BDL Coincident Indicator remains a reliable proxy of economic growth in Lebanon

Methodology

- First, the monthly BDL Coincident indicator is transformed into quarterly data
- Second, the quarter-to-quarter growth of the BDL coincident indicator is calculated
- Finally, the cycles in a three-quarter moving average are identified.

Assumptions for the quarterly Bry & Boschan procedure

A peak (trough) must be followed by a trough (peak)

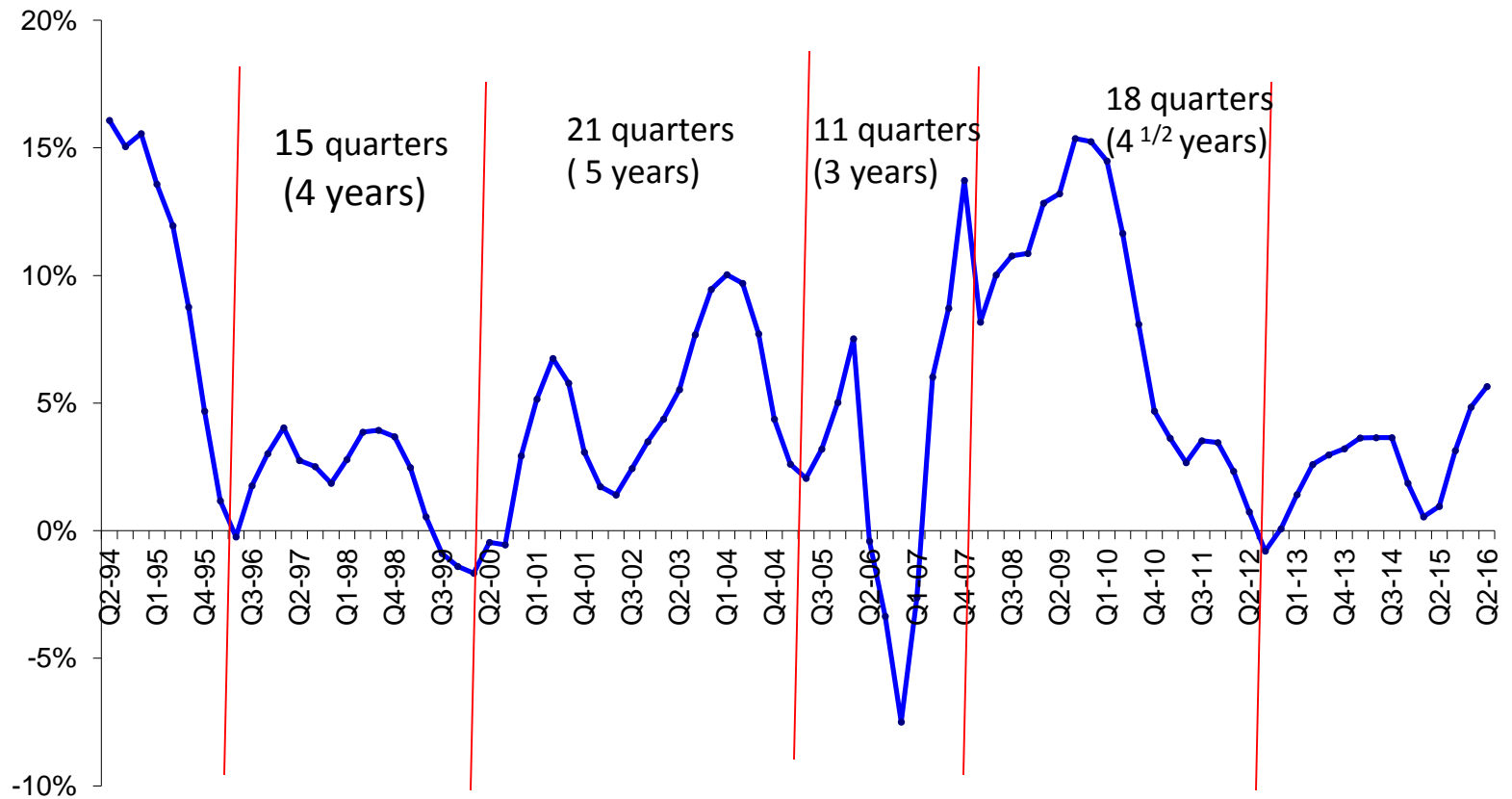
A cycle (from peak to peak or from trough to trough) must have a duration of at least 5 quarters

A phase (from peak to trough or from trough to peak) must have a duration of at least 2 quarters

Turning points are not to be situated within the first or last 2 quarters of a time series

The first (last) peak and trough must be higher respectively lower than values closer to the beginning (end) of the data series

BDL Coincident indicator evolution: 1994-2016



Business cycle duration

Business cycles- Reference dates (quarterly dates)		Duration in Months		
Turning points Peaks	Turning points Troughs	Cycle (from trough to trough)	Expansion (Trough to peak)	Contraction (Trough from previous peak)
Q3-98	Q2-96	45	27	18
Q1-04	Q1-00	63	48	15
Q4-07	Q2-05	33	30	3
Q4-09	Q1-08	54	21	33
	Q3-12			
Average duration in years		4 years	2 years and a half	1 year and a half

Business cycle analysis

- By monitoring the evolution of the BDL coincident indicator during the last twenty years, the different phases and turning points of the Lebanese business cycles are detected and summarized as follows:
- There were nine turning points consisting of five troughs and four peaks.
- The minimum duration of the Lebanese cycle is three years and the maximum is five years. The average duration of the cycle is four years (Kitchin cycle).
- The average length of expansion periods is two years and a half and the average length of recession periods is one year and a half.
- Since 2005, exogenous factors (war and political turmoil) are affecting Lebanese cycles.

Conclusion and Limitations

- Small countries with an open market economy, such as Lebanon, differ considerably from industrialized ones in the nature and characteristics of short-run macroeconomic fluctuations. Cycles are generally shorter.
- The average duration of business cycles in developing countries is three years while in industrialized ones between six and eight years.
- Based on their four years average duration, Lebanese cycles could be attributed to Kitchin inventory cycle of forty months.
- The overall picture of Lebanese business cycles will be clearer with longer series and less exogenous and unpredictable factors.

Thank you