



South African Reserve Bank

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Composite business cycle indicators for South Africa

- The composite **leading** business cycle indicator¹ *increased* further by 1.7% in March 2021. Increases in six of the nine available component time series outweighed decreases in the remaining three components. The largest contributors to the increase in the composite leading business cycle indicator in March 2021 were an acceleration in the 12-month percentage change of the composite leading business cycle indicator for South Africa's major trading-partner countries and an increase in the US dollar-denominated export commodity price index. The largest detractors were the decrease in the number of residential building plans approved and a deceleration in the six-month smoothed growth rate of job advertisement space.
- The composite **coincident** business cycle indicator remained broadly *unchanged* in February 2021.
- The composite **lagging** business cycle indicator *decreased* at a month-to-month rate of 0.3% in February 2021.

The next release is scheduled for 22 June 2021, at 09:00 A.M.

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¹ The format of two component time series of the composite leading indicator has changed. See the methodological note included in this release for a description of the change.

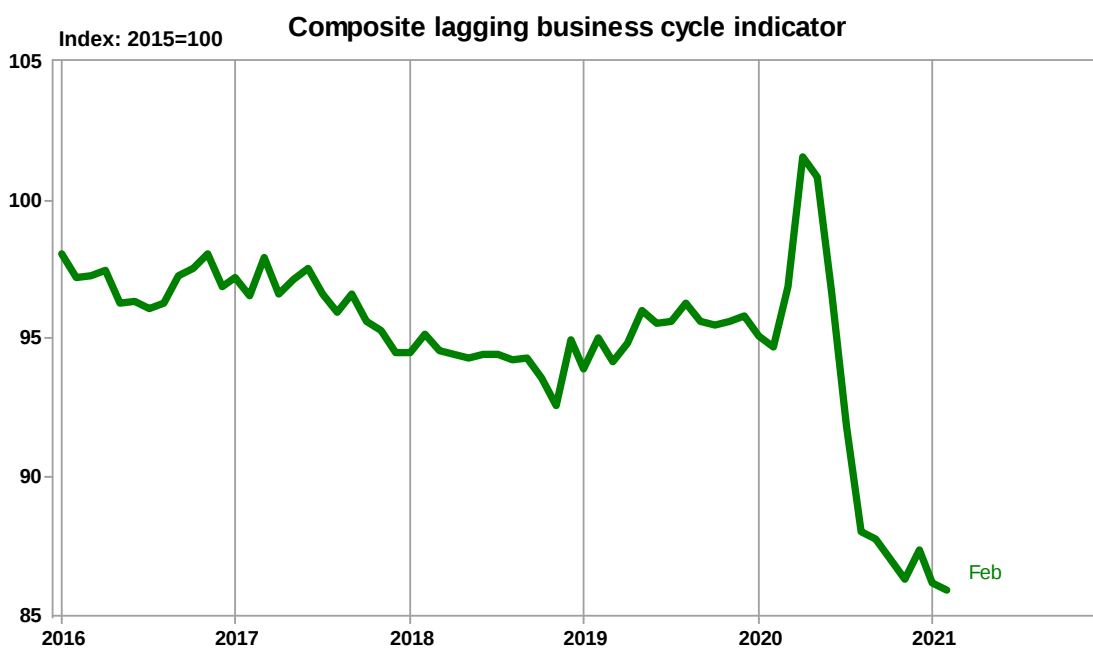
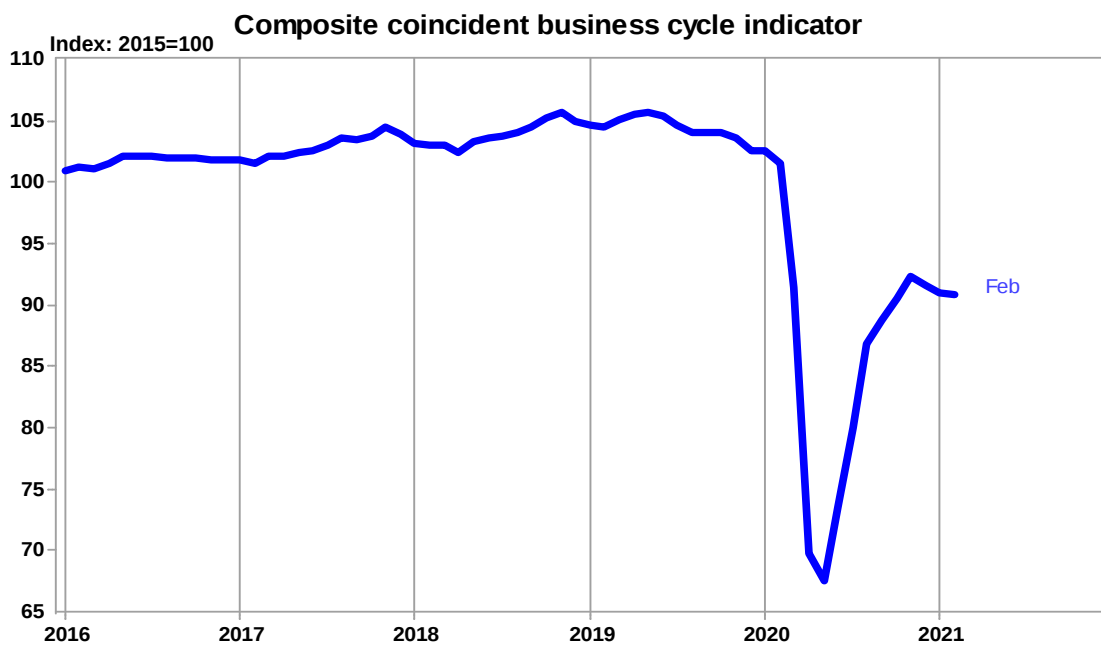
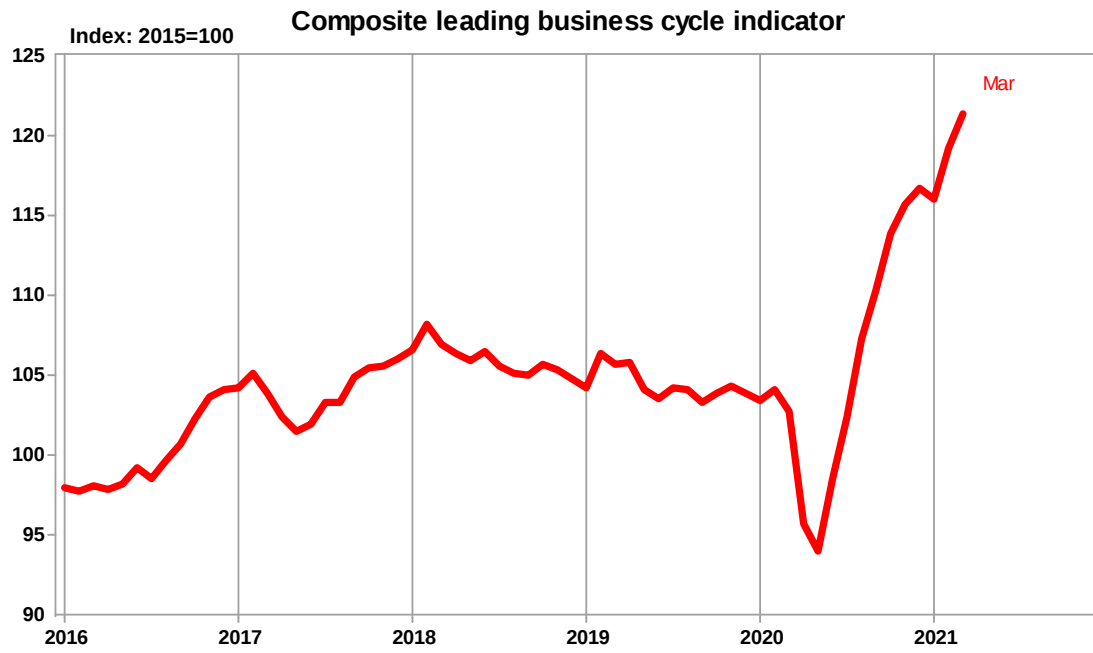


Table 1 Summary of the composite business cycle indicators*

Indices: 2015 = 100	2020						2021		
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Leading indicator	102.4	107.3	110.3	113.8	115.7	116.7	116.0	119.3	121.3
12-month percentage change	-1.7	3.1	6.8	9.6	11.0	12.4	12.1	14.5	18.1
Coincident indicator	80.1	86.9	88.7	90.6	92.4	91.6	90.9	90.9	-
12-month percentage change	-23.5	-16.5	-14.7	-13.0	-10.9	-10.7	-11.3	-10.5	-
Lagging indicator	91.8	88.1	87.8	87.0	86.3	87.4	86.2	86.0	-
12-month percentage change	-3.9	-8.5	-8.2	-8.9	-9.7	-8.8	-9.3	-9.2	-

* The composite business cycle indicators are revised continuously following revisions to underlying component time series data.

Table 2 Component time series of the composite leading business cycle indicator and their contribution to the March 2021 data point:

Positive contributors (ranked from largest to smallest)	
Composite leading business cycle indicator for South Africa's major trading-partner countries (percentage change over 12 months)	
Commodity price index for South Africa's main export commodities (US dollar based)	
Number of new passenger vehicles sold (six-month smoothed growth rate)	
BER*: Average hours worked per factory worker in manufacturing (half weight)	
Interest rate spread: 10-year government bonds minus 91-day Treasury bills	
BER*: Volume of orders in manufacturing (half weight)	
Negative contributors (ranked from largest to smallest)	
Number of building plans approved: Flats, townhouses & houses larger than 80m ²	
Job advertisements: The Sunday Times (six-month smoothed growth rate)	
Real M1 (six-month smoothed growth rate)	
Unavailable component series	
RMB/BER* Business Confidence Index	
Gross operating surplus as a percentage of gross domestic product	

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Note on the methodological change to two component time series of the composite leading business cycle indicator

Due to the exogenous nature of the COVID-19 pandemic and the resultant national lockdown measures implemented at the end of March and during April 2020, some component time series of the composite leading business cycle indicator have shown unprecedented year-on-year rates of increase in April 2021 due to the low base values resulting from the lockdown. The use of year-on-year rates of change in the number of new passenger vehicle sales and job advertisement space in March and April 2021 will accordingly lead to significant distortions in the composite leading business cycle indicator. Consequently, in an effort to minimize the impact of base effects and improve the cyclical significance of the leading indicator, the six-month smoothed annualised growth rate (SMSAR) in both new passenger vehicle sales and job advertisement space was used as from this release of the composite indicator, instead of the percentage change over 12 months.

The SMSAR (S_t) of a time series (X_t) is calculated as follows:

$$S_t = \{[X_t / ((\sum_{i=1}^{12} X_{t-i}) / 12)]^{(12/6.5)} - 1\} * 100$$

The SMSAR is already applied to another component time series of the composite leading business cycle indicator, namely the real M1 money supply. This growth rate has the advantage that the denominator utilised in a particular month refers to the average of the preceding 12 months, thereby suppressing extreme outcomes in any individual month in the base period and smoothing the base. Furthermore, because the change is measured roughly over a six-month period compared to a 12-month span, it reflects a cyclical upswing or downswing more promptly than the annual percentage change, while being less volatile than the percentage change over 12 months. Although the change to the two component time series was applied over their full history it did not result in significant changes to the composite indicator, specifically in terms of the trend and the timing of turning points. Consequently, the composite leading business cycle indicator was only revised from March 2020.