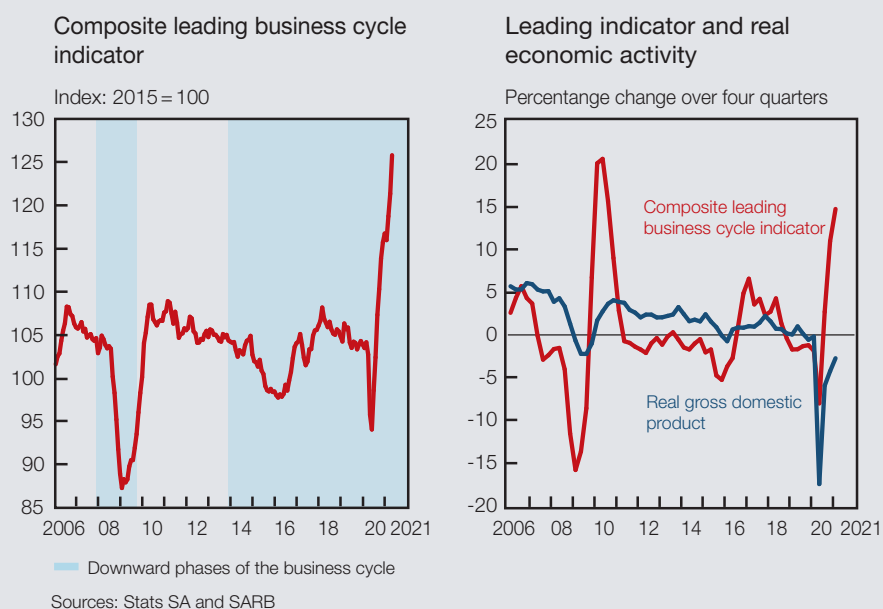




Box 2 Unpacking the recent strong increase in the composite leading business cycle indicator^{1,2}

The composite leading business cycle indicator, as compiled by the South African Reserve Bank (SARB),³ has increased markedly in recent months following a trough in May 2020. The drivers of this strong increase and the interpretation thereof are discussed and analysed in this box.



1 This box relates to the statistics published on pages S-149 and S-159 in this edition of the *Quarterly Bulletin (QB)*.

2 For the business cycle phases of South Africa, see page S-161 in this edition of the *QB*.

3 The composite leading, coincident and lagging business cycle indicators are published monthly by the South African Reserve Bank (SARB). See <https://www.resbank.co.za/en/home/publications/composite-business-cycle-indicators>

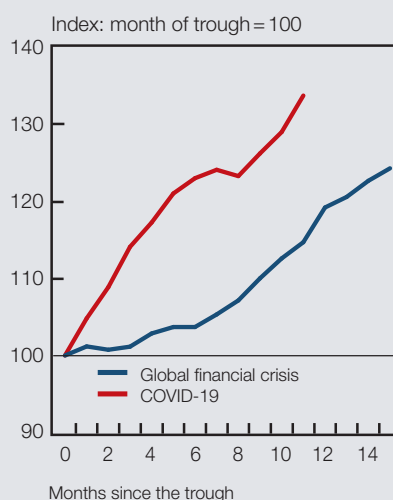
The trough in the leading indicator in May 2020 was preceded by a gradual decline from March 2018 as an early indication of the economic recession which had commenced in the third quarter of 2019, and then by a sharp fall from March 2020 when the initial strict coronavirus disease 2019 (COVID-19) lockdown restrictions were imposed. This sharp drop in the leading indicator coincided with the marked contraction in the real gross domestic product (GDP), as the leading indicator could not and did not predict the severe contraction in real economic activity due to the exogenous nature of the COVID-19 shock.

The peak-to-trough decrease in the leading indicator of 13.4% from February 2018 to May 2020 was less than the 19.4% decrease from July 2006 to January 2009, before and during the global financial crisis (GFC). The smaller decrease during the period which included the impact of COVID-19 reflected the already fairly low levels of many of the component time series before the advent of COVID-19, unlike during the run-up to the GFC. In addition, the decrease in the leading indicator was also slightly more broad-based during the GFC. Furthermore, some of the component time series of the leading indicator also moved counter-intuitively during the COVID-19 lockdown period.⁴

Peak-to-trough comparison of the leading indicator



Trough-to-peak comparison of the leading indicator



The trough-to-peak increase in the leading indicator of 33.8% from May 2020 to April 2021, as the lockdown restrictions were gradually eased, was much more than the increase of 24.4% from January 2009 to May 2010 in the aftermath of the GFC. The increase in the leading indicator was fairly broad-based during both periods.

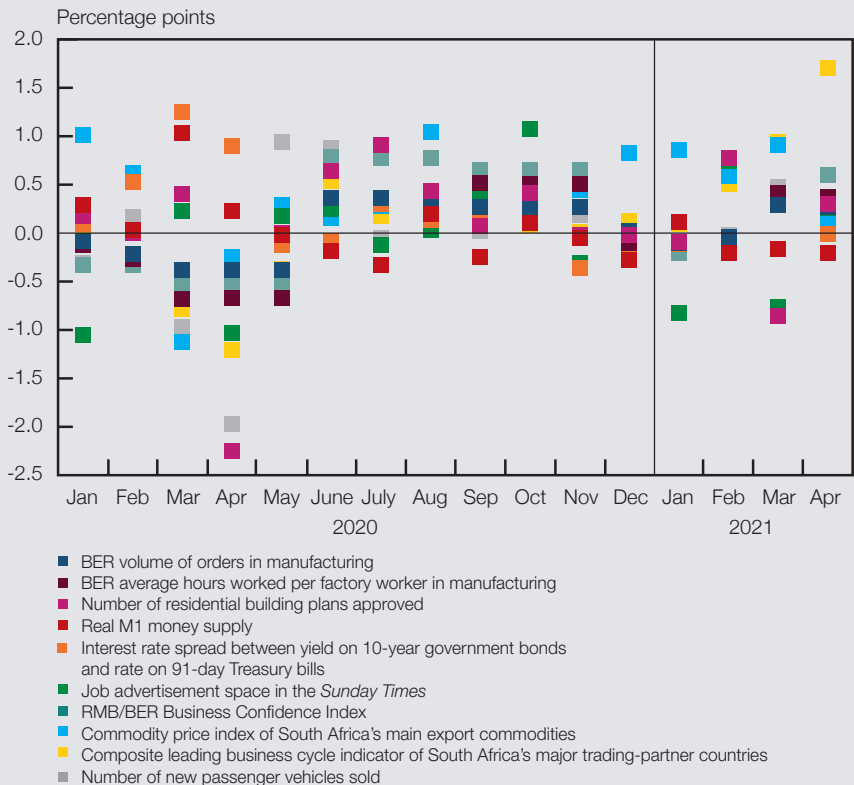
The post-COVID-19 lockdown recovery in the leading indicator was driven by very strong base effects from the historically lower level of many component time series due to the impact of the national lockdown restrictions, which prohibited certain economic activities. Component series such as the number of residential building plans approved, the Rand Merchant Bank (RMB)/Bureau for Economic Research (BER) Business Confidence Index, and the number of new passenger vehicles sold were already at much lower levels before the advent of COVID-19 than during the pre-GFC period. This explains the smaller decline in the leading indicator during COVID-19 compared to the GFC, when most of the component series declined from comparatively high levels.

⁴ For a more detailed discussion of the movement in the composite leading business cycle indicator over this period, see 'Box 1: Did the national lockdown distort the composite leading business cycle indicator?' published by the SARB in the December 2020 *QB*, available at <https://www.resbank.co.za/en/home/publications/publication-detail-pages/boxes/2020/December2020Didthenationallockdowndistortthecompositeleadingbusinesscycleindicator>



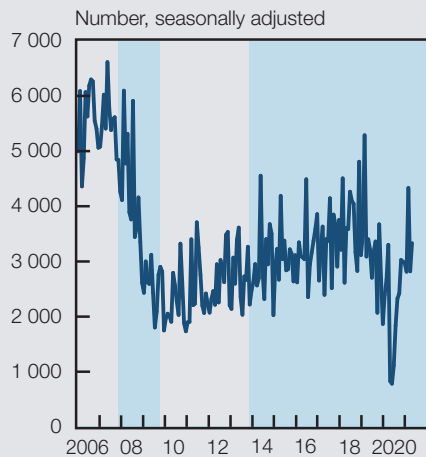


Contributions to monthly change in the leading indicator

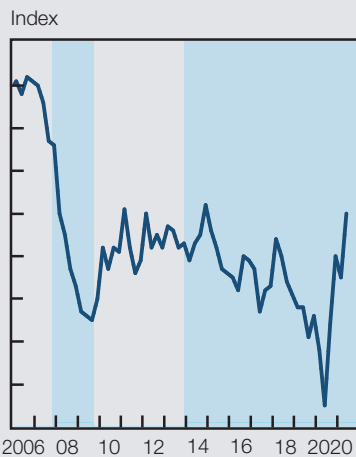


Sources: BER, Bloomberg, [naamsa](#) | The Automotive Business Council, RMB, Stats SA, *Sunday Times* and SARB

Number of residential building plans approved



RMB/BER Business Confidence Index

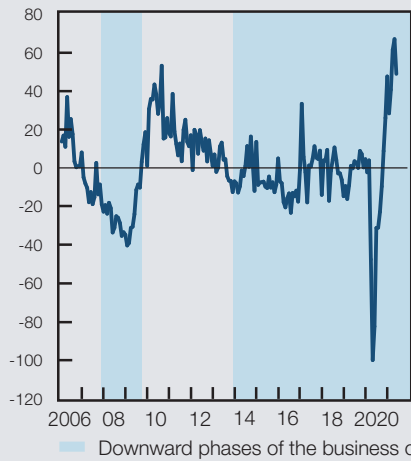


Sources: BER and Stats SA

The magnitude of the subsequent recovery in the leading indicator as the lockdown restrictions were eased was boosted by these base effects, despite the smaller decrease in the leading indicator at the time of COVID-19 than at the time of the GFC. This is visible when comparing the movement in selected component time series of the leading indicator from their troughs during COVID-19 and the GFC. In addition, the strong increase in international commodity prices also supported the post-lockdown recovery in the leading indicator.

Number of new passenger vehicles sold

Six-month smoothed annualised growth rate



Sources: naamsa | The Automotive Business Council and SARB

South African export commodity price index

Index: 2010 = 100



Number of new passenger vehicles sold

Six-month smoothed annualised growth rate



RMB/BER Business Confidence Index

Index



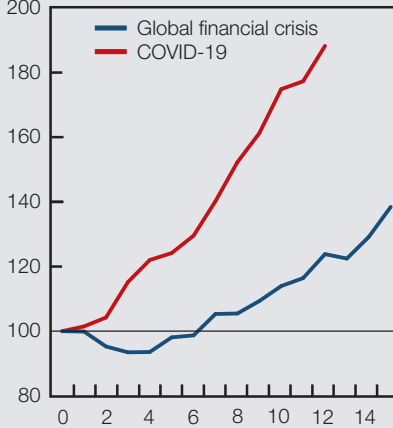
Number of residential building plans approved

Index: month of trough in leading indicator = 100



South African export commodity price index

Index: month of trough in leading indicator = 100



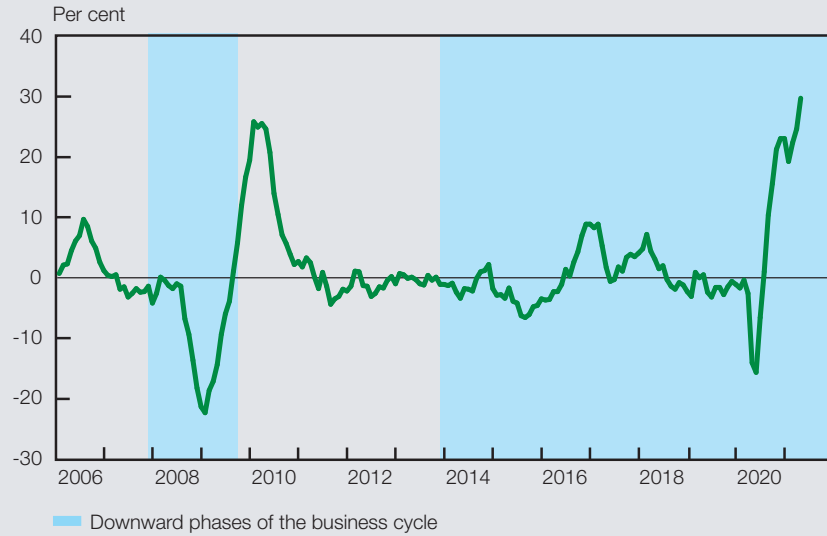
Sources: BER, naamsa | The Automotive Business Council, RMB, Stats SA and SARB



Movements in the composite leading business cycle indicator can be evaluated in terms of how pronounced, pervasive and persistent they are. These three measures gauge the strength of a cyclical turning-point signal.⁵

The six-month smoothed annualised growth rate in the leading indicator measures how pronounced the movement is. This measure confirms that the decrease in the leading indicator was less pronounced during COVID-19 than during the GFC, with the subsequent recoveries being more similar in magnitude.

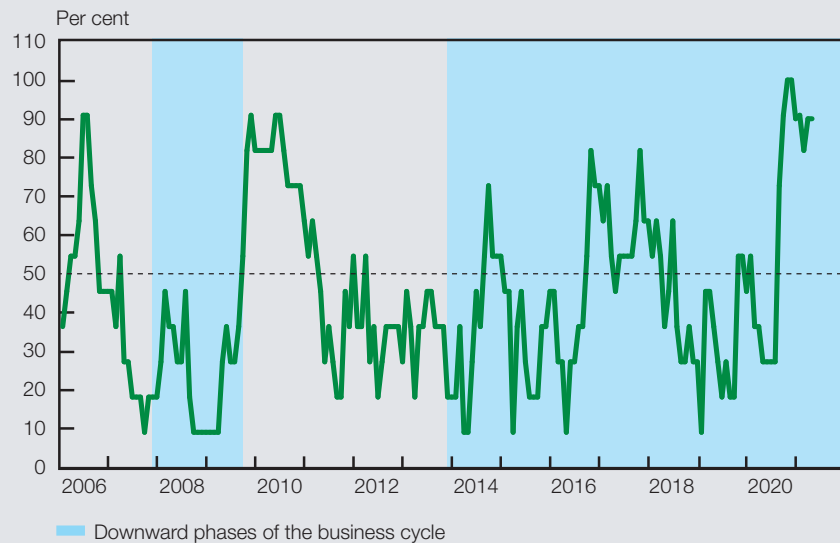
Six-month smoothed annualised growth rate in the leading indicator



Source: SARB

The 12-month smoothed diffusion index of the leading indicator's component time series indicates how pervasive a particular movement is. This diffusion index reflects the proportion of the component time series that is at a higher level than 12 months earlier as a percentage of the total number of available component series. The diffusion index confirms that the decrease in the leading indicator during COVID-19 was not as pervasive as during the GFC. By contrast, it shows that the post-lockdown recovery in the leading indicator was very pervasive, as it reached a high of 100% in October and November 2020, with all of the component time series being at a higher level compared to a year earlier, indicative of the strong base effects. This compares to a slightly less pervasive high of 90.9% in November 2009 during the GFC recovery.

Twelve-month smoothed diffusion index of the leading indicator's component series

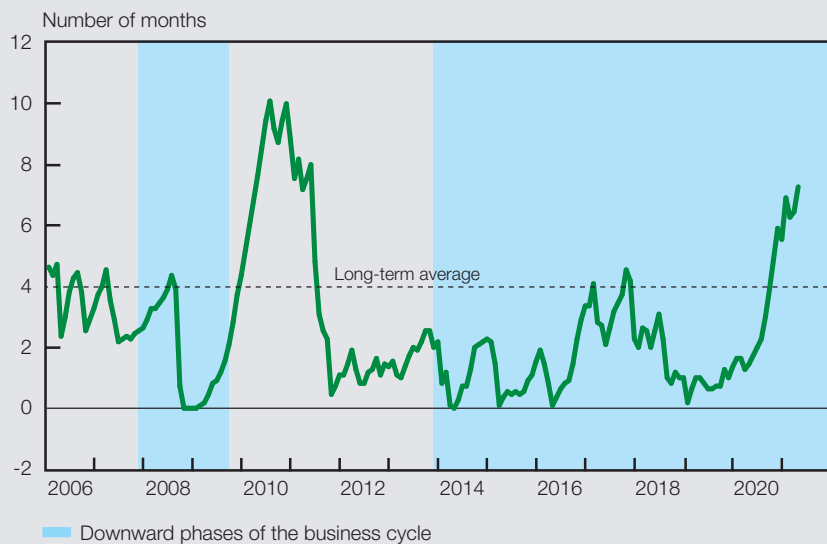


Source: SARB

⁵ For a more detailed explanation, see J C Venter, 'Assessing the 2013 and 2017 business cycle turning points signalled by the SARB's composite leading business cycle indicator', *Business Cycles and Structural Change in South Africa: An Integrated View*, edited by W H Boshoff, 2020, pp 265–284.

The smoothed average duration over which the component time series of the leading business cycle indicator has been higher than their respective average levels over the preceding 12 months indicates the degree of persistence. This measure reached a high of 10.1 months in July 2010 after the GFC. Although this measure has remained very low throughout the current downward phase of the business cycle, it surpassed the long-term average of 3.9 months in October 2020 and reached a high of 7.3 months in April 2021.

Smoothed average duration of run of increases in the leading indicator's component series



Source: SARB

Although these measures confirm the strength of the cyclical turning-point signal, as suggested by the recent strong increase in the leading indicator, they do not predict the magnitude of the recovery in real GDP, as was also evident during the post-GFC recovery.

