Box 1 Did the national lockdown distort the composite leading business cycle indicator?

The composite leading business cycle indicator for South Africa, as compiled by the South African Reserve Bank (SARB),[1] is intended to anticipate changes in the direction of aggregate economic activity. This composite leading indicator has a proven track record of shifting direction in advance of a change in the business cycle.[2] Since 1960, turning points in this indicator have occurred, on average, 7 months in advance of business cycle troughs and 13 months in advance of business cycle peaks.[3]

The focus of this box is on the impact of the coronavirus disease 2019 (COVID-19) pandemic, through the national lockdown restrictions, on 2 of the 11 component time series[4] of the leading indicator which displayed counter-intuitive movements. These indicators are the real M1 money supply[5] and the interest rate spread.[6] However, these distortions were not visible in the composite leading business cycle indicator, which attests to the robustness of combining a number of individual leading economic indicators that measure different economic processes in a composite indicator.

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1 The composite leading, coincident and lagging business cycle indicators for South Africa are published monthly by the South African Reserve Bank. See https://www.resbank.co.za/en/home/publications/composite-business-cycle-indicators

2 South Africa's business cycle is measured in terms of the growth cycle definition and therefore represents fluctuations around the long-term trend of overall economic activity.

3 See page S–159 in this edition of the *Quarterly Bulletin* for a chronology of the business cycle phases of South Africa since 1945, which reflect the reference turning points and the duration of the upward and downward phases.

4 For more detail on the most recent revision of the component time series, see 'Box 1: Revision to the composite leading and coincident business cycle indicators', published by the South African Reserve Bank in the June 2015 *Quarterly Bulletin*.

5 The real M1 money supply comprises the nominal value of banknotes and coin in circulation outside the monetary sector as well as cheque, transmission and other demand deposits of the domestic private sector with the monetary sector, deflated with the consumer price index. The six-month smoothed growth rate of this indicator is used as a component of the composite leading business cycle indicator.

6 The interest rate spread is the difference between the yield on 10-year South African rand-denominated government bonds traded in the domestic bond market and the tender rate on 91-day Treasury bills.

Component time series of the composite leading business cycle indicator

- Commodity price index of South Africa's main export commodities (US dollar)
- Composite leading business cycle indicator of South Africa's major trading-partner countries (percentage change over 12 months)
- Rand Merchant Bank/Bureau for Economic Research (RMB/BER) Business Confidence Index
- BER*: Volume of orders in manufacturing (half weight)
- BER*: Average hours worked per factory worker in manufacturing (half weight)
- Real M1 money supply (deflated with the consumer price index and six-month smoothed growth rate)
- Interest rate spread (yield on 10-year government bonds minus the rate on 91-day Treasury bills)
- Number of building plans approved (flats, townhouses and houses larger than 80 m²)
- Number of new passenger vehicles sold (percentage change over 12 months)
- Job advertisement space in the *Sunday Times* (percentage change over 12 months)
- Gross operating surplus as a percentage of gross domestic product

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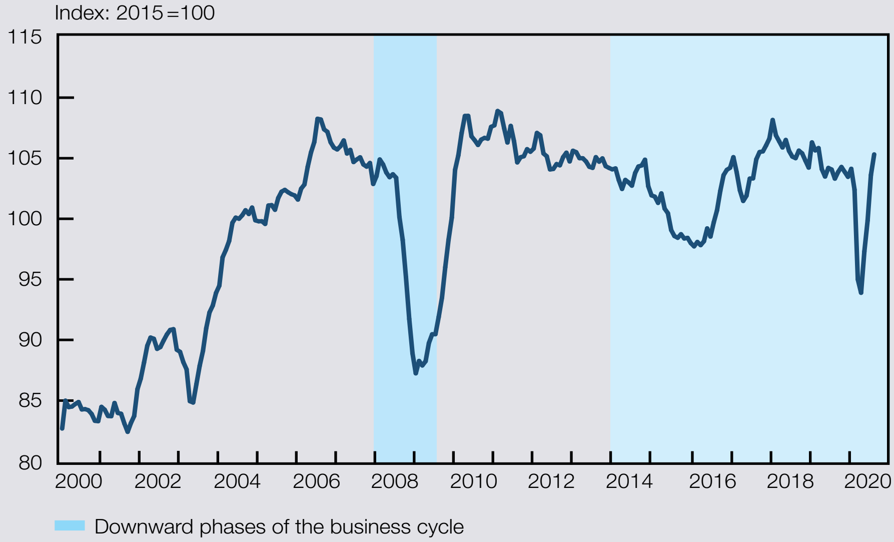
The composite leading business cycle indicator has trended lower since March 2018 and the prediction of a slowdown in real economic growth was later confirmed by the economic recession which commenced in the third quarter of 2019. However, the leading indicator could not have anticipated the collapse in economic activity in the second quarter of 2020 due to the exogenous nature of the national lockdown brought about by COVID-19, and hence the sharp drop from March to May 2020 rather coincided with the lockdown. This was followed by a rebound up to September 2020 as the lockdown restrictions were gradually lifted.

Composite leading business cycle indicator

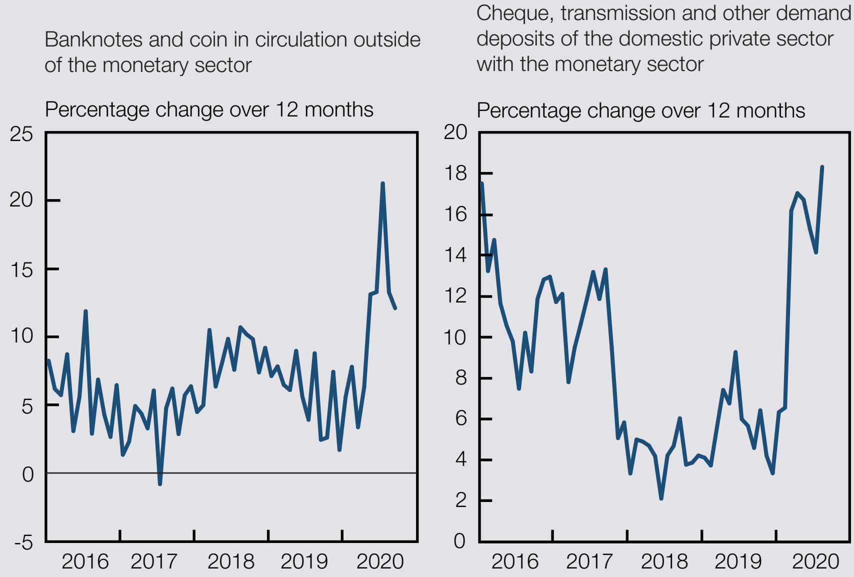


Source: SARB

During the lockdown, both the six-month smoothed growth rate in the real M1 money supply, which accelerated strongly, and the interest rate spread, which widened considerably, behaved counter-intuitively as both of these developments are usually associated with an upward phase of the business cycle.

The COVID-19 shock to the economy distorted the conventional cyclical behaviour of money supply, and during the lockdown, growth in the real M1 money supply accelerated markedly from March 2020, despite the sharp contraction in real economic activity in the second quarter of the year. Strong growth in notes and coin in circulation outside the monetary sector as well as in cheque, transmission and other demand deposits of the domestic private sector with the monetary sector initially reflected consumers' inability to purchase non-essential goods and services. Later on, it reflected both households and companies' continued cautiousness given the uncertainty surrounding COVID-19 as well as expectations of severe job losses and an extended period of weak demand. In addition, support measures such as payment holidays offered by banks as well as enhanced social grant and Unemployment Insurance Fund (UIF) payments also contributed to the increase in real M1 money supply.

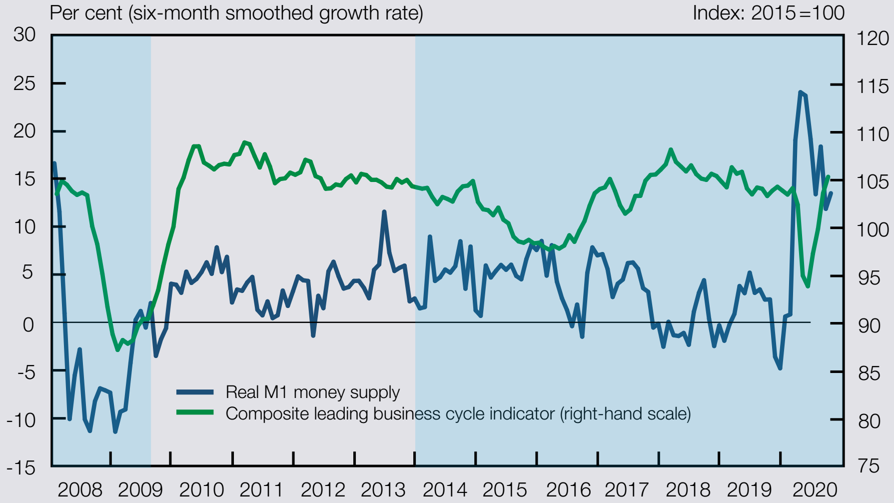
Growth in the components of real M1 money supply



Source: SARB

The demand for money usually moderates during downward phases of the business cycle and starts to increase when the cycle nears a lower turning point, as economic agents require more money for transactional purposes. As the upward phase progresses, the demand for money usually continues to increase as economic activity expands.

Composite leading business cycle indicator and real M1 money supply

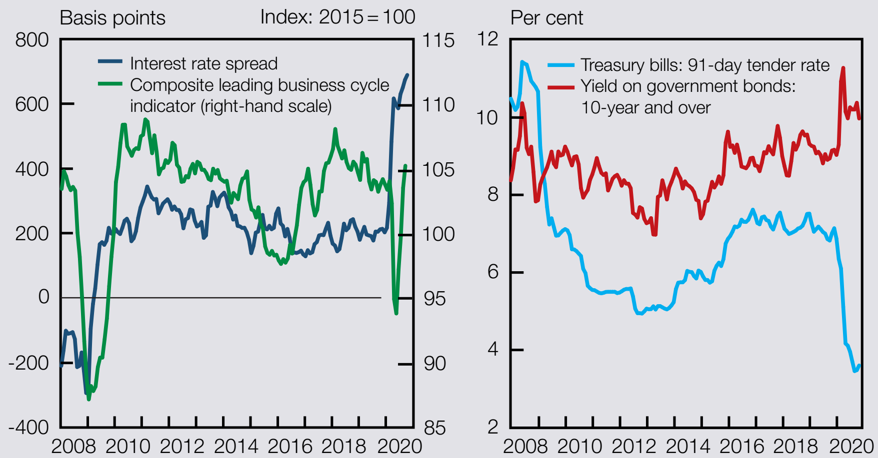


Shaded areas indicate downward phases of the business cycle

Source: SARB

The significant widening in the interest rate spread from February 2020 reflected a marked decline in the tender rate on 91-day Treasury bills (TBs) and a notable increase in the yield on 10-year South African government bonds. This came about as the TB rate followed the repurchase rate lower as the Monetary Policy Committee of the SARB eased monetary policy, whereas bond yields increased as the COVID-19 uncertainty resulted in large-scale non-resident net sales of government bonds, exacerbated by the further deterioration in South Africa's fiscal position.

Composite leading business cycle indicator and the interest rate spread



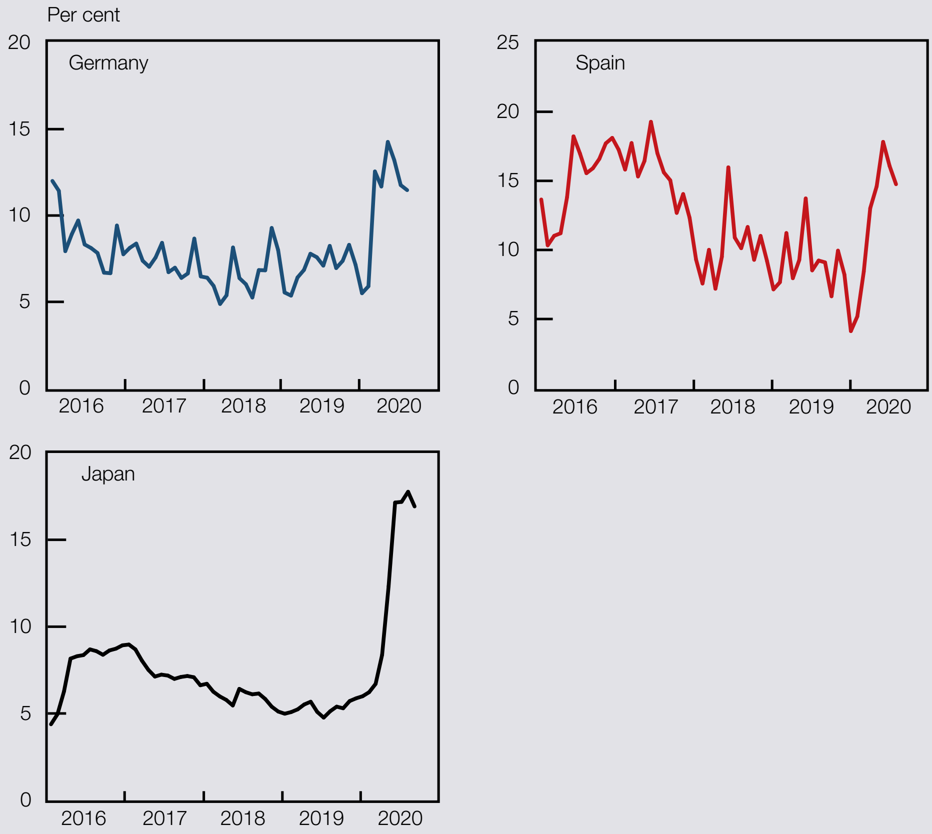
Sources: IRESS, JSE and SARB

A widening in the interest rate spread usually represents either lower short-term interest rates, which reflect an easing in monetary conditions, or an increase in bond yields, which usually points to rising longer-term inflation expectations in line with an acceleration in real economic growth, or a combination of these two factors. By contrast, a narrowing in the interest rate spread points to a slowdown in economic activity. The spread might even become negative, reflecting an inverted yield curve, which could point to an impending economic recession.

An international comparison of growth in real M1 money supply confirms a notable acceleration in this indicator in most countries, similar to that in South Africa. It appears that the combination of stimulus measures and caution resulted in a marked increase in money supply globally, irrespective of the strictness of the global lockdown measures.

Six-month smoothed growth rate of real M1 money supply in selected countries

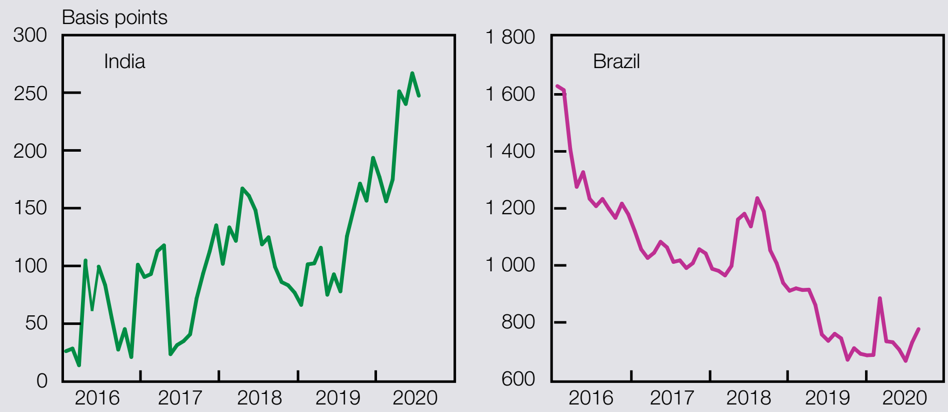
Six-month smoothed growth rate of real M1 money supply in selected countries



Source: Haver Analytics

An international comparison of the interest rate spread of almost all the selected countries reflected a narrowing over the lockdown period, with the exception of India and, to a lesser extent, Brazil where the spread widened, similar to South Africa. This illustrates the difference in the drivers of short-term money market interest rates and bond yields between countries. In the advanced economies, in particular, short-term interest rates were already at historically low levels before the onset of the pandemic, while bond yields decreased as these assets are perceived as low-risk investments during times of global risk aversion, and as continued quantitative easing by major central banks supported demand for such bonds.

The interest rate spread in selected countries



The interest rate spread in selected countries

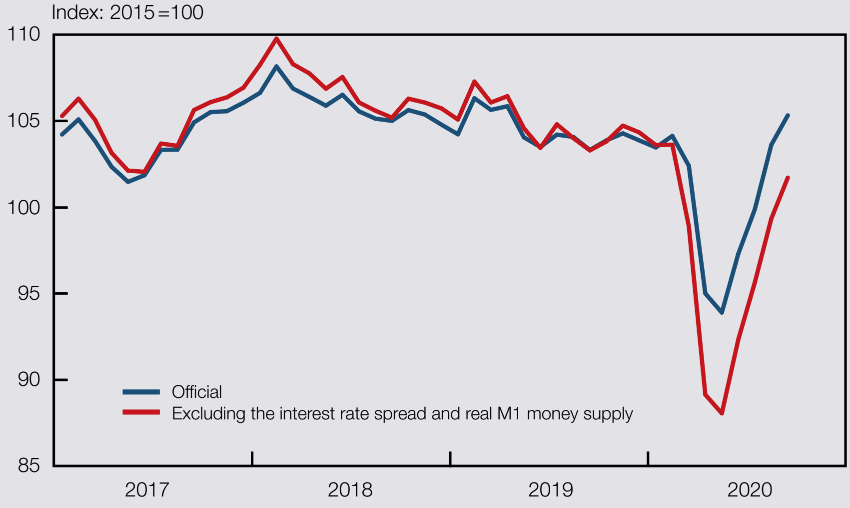
Basis points

Source: Haver Analytics

Given the ongoing economic uncertainty following the COVID-19 pandemic, the current narrow interest rate spreads in most countries could be associated with expectations of weak real economic activity. However, in the case of emerging markets such as India, Brazil and South Africa, the widening interest rate spreads are currently behaving in a countercyclical manner and should therefore be interpreted with circumspection.

When excluding the interest rate spread and the real M1 money supply from the composite leading business cycle indicator, the resultant narrower composite leading indicator displays a steeper downward trend from early 2018 to May 2020 and a slightly less pronounced recovery thereafter. Importantly, the turning points in the narrower indicator are exactly the same as those in the officially published composite leading indicator, showing that the countercyclical movement in the two excluded component series did not detract from the leading indicator's ability to indicate cyclical turning points in the economy.

Composite leading business cycle indicator



Source: SARB