

Note on the output of the finance, insurance, real estate and business services sector

by E Botes and K Kuhn¹

1 The views expressed in this note are those of the authors and do not necessarily reflect the views of the SARB. The authors are indebted to Mr M Kock for his valuable inputs.

2 FISIM is an indirect measurement of service charges levied by financial institutions on loans and deposits. This depends on the level of loans and deposits of financial institutions and the difference between the interest rate received and paid relative to the reference rate. This is based on the premise that both borrowers and depositors pay a fee to the financial intermediary for services provided, with the depositor receiving a lower rate of interest than that paid by borrowers – the difference being the combined fees implicitly charged by the financial intermediary to depositors and borrowers.

Introduction

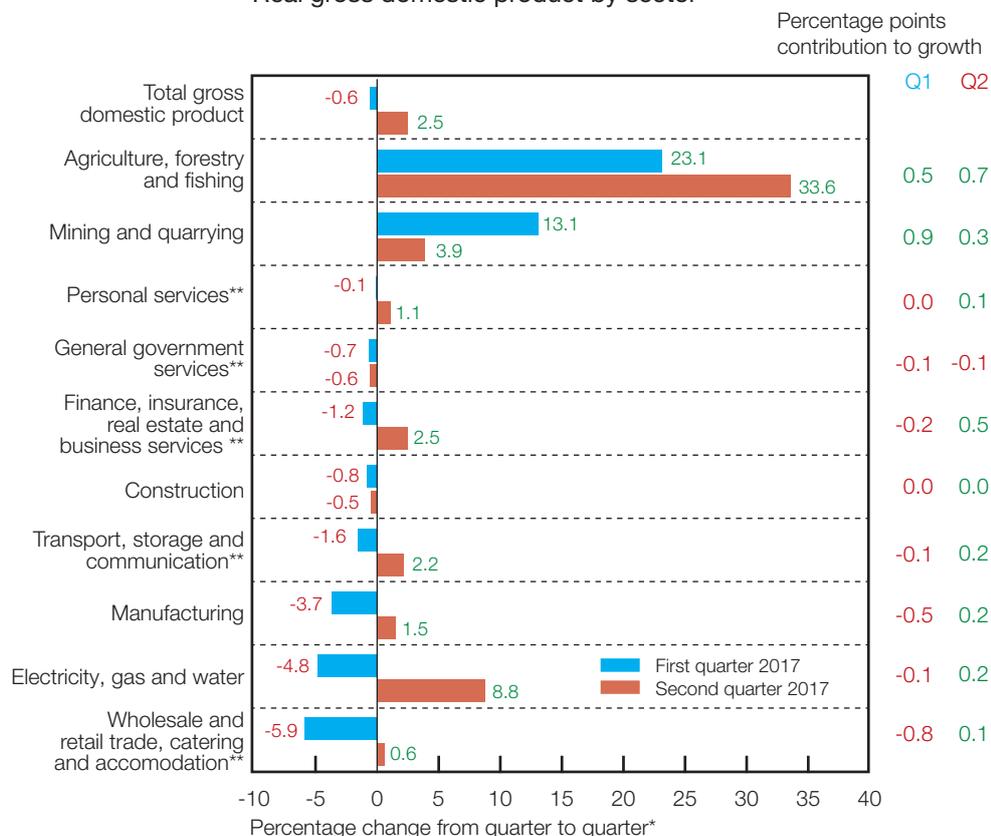
The largest sector in the South African economy – the finance, insurance, real estate and business services sector – contributed 20.2% to nominal output in 2016 and 29.4% to the output of the tertiary sector. In 2016, the latter contributed 68.6% to the nominal gross domestic product (GDP) while the finance and insurance subsector accounted for just less than half of the nominal output of finance, insurance, real estate and business services. Commercial banks contributed most to the output of the finance and insurance subsector, with financial intermediation services indirectly measured (FISIM)² constituting the largest portion of the total output of commercial banks.

This note analyses the recent changes in real output and the relative contribution of the finance, insurance, real estate and business services sector to real output in the South African economy. It also describes the methodology applied to measure the output of commercial banks.

Recent changes in real output and relative contributions

South Africa's real GDP increased at an annualised rate of 2.5% in the second quarter of 2017 following two consecutive quarters of contraction. The tertiary sector's real value added increased by 1.2% in the second quarter of 2017 following a contraction in activity in all the tertiary subsectors in the first quarter.

Real gross domestic product by sector



* Seasonally adjusted annualised rates

** Tertiary sector

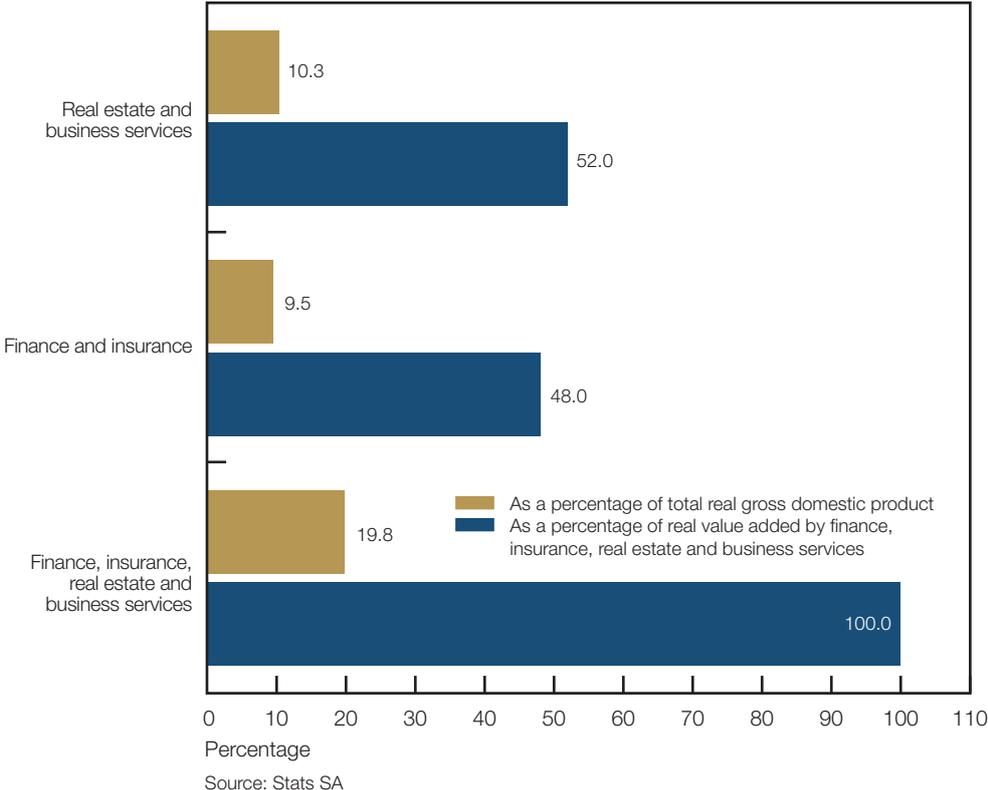
Source: Stats SA

Growth in real economic activity in the finance, insurance, real estate and business services sector accelerated from -1.2% in the first quarter of 2017 to 2.5% in the second quarter, adding 0.5 percentage points to overall growth in GDP. The expansion reflected an improvement in commercial banking activity as well as increased activity in the equity market.

The finance, insurance, real estate and business services sector contributed 19.8% to total real GDP in 2015, of which 10.3% came from the real estate and business services subsector and 9.5% from the finance and insurance subsector.³ Of the 9.5%, commercial banks contributed about 4% and insurance around 2%.

³ These numbers are based on the latest available official statistics of Stats SA.

Share in real output in 2015



The finance and insurance subsector contributed 48% of the real value added by the finance, insurance, real estate and business services sector in 2015, while the real estate and business services subsector contributed 52%.

Methodology followed to measure the output of commercial banks

Commercial banks are the biggest single contributor to the output of the finance and insurance subsector in South Africa. Data for the compilation of the nominal gross value added (GVA) by commercial banks are sourced from the monthly income statements and the monthly balance sheets, as surveyed by the South African Reserve Bank (SARB).

The nominal output of commercial banks comprises FISIM, fees and charges, as well as rentals and other income. In the national accounts, the nominal GVA by commercial banks is calculated by subtracting total nominal intermediate consumption from total nominal output.

The nominal values of fees and charges, rentals and other income as well as total intermediate consumption are deflated with appropriate price deflators to obtain the real values for these variables. The constant (real) value of FISIM is calculated as the product of the interest margins



(i.e. the difference between the lending rate and the reference rate; and the difference between the reference rate and the deposit rate in base year 2010) and the respective stocks of loans and deposits as deflated by a general price index in the specific period. The real GVA by commercial banks is the result of total deflated output (i.e. the sum of real fees and charges, rentals and other income as well as real FISIM) less the deflated intermediate consumption for the period.

FISIM is the implicit financial services fee derived by financial institutions, such as banks, from paying interest on deposits and receiving interest on loans. The calculation of FISIM requires a reference rate of interest. The reference interest rate applies to both loans and deposits and is required to impute indirect service charges inclusive of all loans and deposits. The reference rate facilitates the calculation of imputed interest payments on loans and interest receipts on deposits. Such an interest rate that applies to both loans and deposits is necessary as the amount of funds lent by financial institutions seldom matches deposits, as some funds on deposit may not yet have been used to fund loans, and some loans may have been financed from banks' own funds. In addition, depositors receive and borrowers pay interest and utilise services irrespective of the funding of loans. A single reference rate of interest, as recommended in the System of National Accounts 2008, is calculated as follows:

$$rr_s = 0.5 \left(\frac{R_L}{Y_L} + \frac{R_D}{Y_D} \right)$$

where

rr_s = single average reference rate

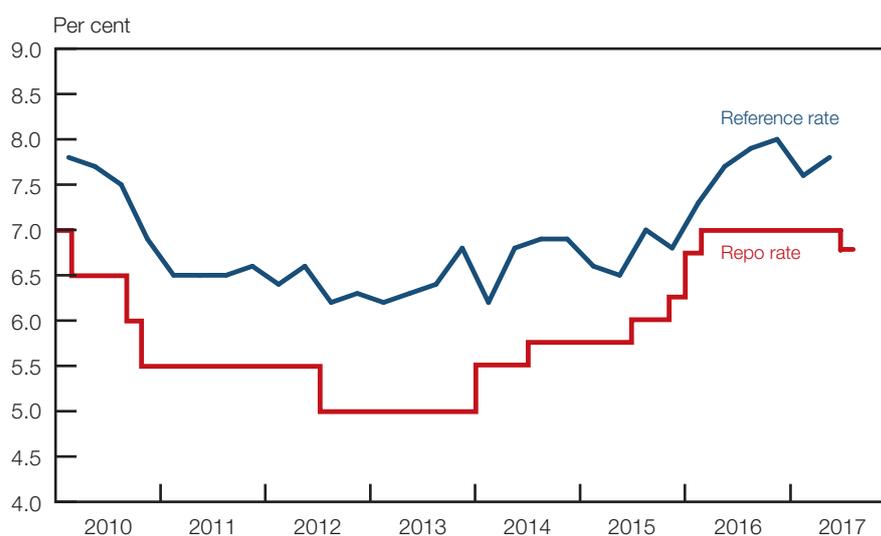
R_L = interest receivable on loans with financial institutions

R_D = interest payable on deposits held with financial institutions

Y_L = loan balance

Y_D = deposit balance

FISIM reference rate and repo rate



Source: SARB

The reference rate is closely correlated with, and consistently higher than, the repurchase rate, as can be expected.

FISIM is calculated as the sum of the outstanding loan balance of banks, multiplied by the difference between the rate paid to banks by borrowers and the reference rate, and the deposit balance of banks multiplied by the difference between the reference rate and the rate paid to depositors. Mathematically, the calculation can be expressed as follows:

$$\begin{aligned}\text{FISIM} &= \text{FISIM}_L + \text{FISIM}_D \\ &= (r_L - rr) Y_L + (rr - r_D) Y_D\end{aligned}$$

where

FISIM_L = FISIM on loans made by financial institutions

FISIM_D = FISIM on deposits held by financial institutions

r_L = lending rate of interest

r_D = deposit rate of interest

rr = reference rate of interest

Y_L = loan balance

Y_D = deposit balance

FISIM constitutes almost half of the total output of commercial banks at constant 2010 prices, followed by fees and charges, and a small portion of rentals and other income. The seasonally adjusted real GVA by all these components decreased in the first quarter of 2017, as did the total intermediate consumption expenditure by commercial banks. However, in the second quarter of 2017, the real output of commercial banks expanded as both FISIM and fee income increased.