QPM assumptions summary table January 2023 MPC

Summary tables of quarterly projection model projections

Summary of assumptions

** Figures below the assumption in parentheses represents the previous MPC assumption*

1. Foreign sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast			
	2019	2020	2021	2022	2023	2024	2025
1. Real GDP growth in South Africa's major trading partner countries	2.3%	-2.5%	7.0%	*3.4%*	*1.6%*	*2.6%*	*3.1%*
	(2.3%)	(-2.5%)	(6.9%)	*(3.3%)*	*(1.9%)*	*(2.4%)*	*(3.1%)*
2. Output gap in South Africa's major trading partner countries	0.4%	-2.7%	-0.9%	*-0.2%*	*-1.1%*	*-0.7%*	*0.1%*
	(0.4%)	(-2.7%)	(-0.9%)	*(-0.2%)*	*(-0.9%)*	*(-0.7%)*	*(0.0%)*
3. International commodity prices in US$ (excludes oil but includes petroleum products)	-1.2%	25.5%	45.6%	*1.4%*	*-18.0%*	*-12.2%*	*-1.5%*
	(-1.2%)	(25.5%)	(45.6%)	*(1.2%)*	*(-18.1%)*	*(-11.1%)*	*(-1.5%)*
4. Brent crude (US$/barrel)	$64.4	$41.8	$70.7	*$100.4*	*$89.0*	*$85.0*	*$80.0*
	($64.4)	($41.8)	($70.7)	*($102.0)*	*($92.0)*	*($85.0)*	*($80.0)*
5. World food prices (US$)	-0.8%	3.2%	28.1%	*14.3%*	*-7.9%*	*0.6%*	*3.2%*
	(-0.8%)	(3.2%)	(28.1%)	*(14.7%)*	*(-7.7%)*	*(0.2%)*	*(3.2%)*
6. International consumer prices	1.4%	0.7%	3.3%	*7.3%*	*4.0%*	*1.8%*	*1.9%*
	(1.4%)	(0.7%)	(3.3%)	*(7.3%)*	*(4.1%)*	*(2.1%)*	*(2.0%)*
7. International policy interest rate	1.1%	0.2%	0.1%	*1.1%*	*3.7%*	*3.4%*	*2.4%*
	(1.1%)	(0.2%)	(0.1%)	*(1.1%)*	*(3.6%)*	*(3.4%)*	*(2.4%)*

2. Domestic sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast			
	2019	2020	2021	2022	2023	2024	2025
1. Electricity price	9.6%	9.1%	10.2%	*10.7%*	*12.9%*	*14.5%*	*10.9%*
	(9.6%)	(9.1%)	(10.2%)	*(10.7%)*	*(9.0%)*	*(10.0%)*	*(10.0%)*
2. Fuel taxes and levies	5.8%	5.7%	6.1%	*3.3%*	*7.7%*	*1.1%*	*4.4%*
	(5.8%)	(5.7%)	(6.1%)	*(2.7%)*	*(5.3%)*	*(1.2%)*	*(4.5%)*
3. Potential growth	0.3%	-3.1%	3.4%	*0.7%*	*0.0%*	*0.6%*	*1.0%*
	(0.3%)	(-3.1%)	(3.4%)	*(0.4%)*	*(0.5%)*	*(1.1%)*	*(1.5%)*
4. Inflation target midpoint	4.5%	4.5%	4.5%	*4.5%*	*4.5%*	*4.5%*	*4.5%*
	(4.5%)	(4.5%)	(4.5%)	*(4.5%)*	*(4.5%)*	*(4.5%)*	*(4.5%)*
5. Neutral real interest rate	2.1%	2.0%	2.0%	*2.3%*	*2.4%*	*2.4%*	*2.5%*
	(2.1%)	(2.0%)	(2.1%)	*(2.3%)*	*(2.3%)*	*(2.4%)*	*(2.4%)*

Foreign Sector Assumptions

1. **Trading partner GDP growth:** is broadly determined via the Global Projection Model “GPM” which is adjusted to aggregate the GDP growth rates of South Africa’s major trading partners on a trade weighted basis. Individual projections are done for the six largest trading partners (Eurozone, China, United States, Japan, Great Britain and India). Other countries considered, although with small weights, are Mexico, Brazil and Russia. The remaining trading partners are grouped into the Rest of Countries bloc. Since Sub-Saharan Africa (SSA) is also a major trading region for South Africa (but does not have a bloc in the GPM), it is modelled separately then combined with the aggregate of all countries in the GPM to make up total trading partner GDP growth. The assumption takes account of country specific “consensus” forecasts as well as regional growth prospects.
2. **Output gap:** as with GDP growth the output gap is determined via the GPM and is similarly adjusted. The output gap is driven by a combination of country-specific domestic factors, external factors, and financial-real linkages (beyond interest rate and exchange rate effects). Domestic factors include expectations of future demand and medium-term interest rates. External factors include exchange rate impacts on demand, direct spillovers through trade with trading partner countries, and foreign demand.
3. **Commodity price index:** is a weighted aggregate price index of the major South African export commodities based on 2015 prices. The composite index represents the total of the individual commodity prices multiplied by their smoothed export weights. Commodity price prospects generally remain commensurate with global liquidity as well as commodity demand/supply pressures as reflected by the pace of growth in the trading partner countries.
4. **Brent crude oil price:** is expressed in US Dollars per barrel. The assumption incorporates the analysis of factors of supply, demand (using global growth expectations) and inventories of oil (of all grades), as well as the expectations of the US Energy Information Administration (EIA), OPEC and Reuters.
5. **World food prices:** is the composite food price index of the Food and Agriculture Organization of the United Nations (FAO) in US dollars. It is weighted via average export shares, and represents the monthly change in the international prices of a basket of five food commodity price indices (cereals, vegetable oil, dairy, meat and sugar). World food price prospects incorporate selected global institution forecasts for food prices as well as imbalances from the anticipated trend in international food supplies relative to expected food demand pressures.
6. **International consumer prices:** are also broadly determined via the GPM, the index is an aggregate of the consumer price indices of the G3 countries (euro area, United States and Japan) weighted by their global trade-export weights. Consumer prices are determined for each region discussed above by accounting for expected future price inflation, demand pressures, and pass-through from changes in the relevant exchange rate. Other institutional forecasts for international consumer prices are also considered.
7. **International policy interest rate:** is again broadly determined via the GPM. Interest rates are an aggregate of the policy rates of the G3 countries (euro area, United States and Japan). They are individually determined by a “Taylor-type” monetary policy rule. The communications of the relevant central banks and other institutional forecasts are also considered.

Domestic Sector Assumptions

1. **Electricity price:** is an administered price measured at the municipal level with a weight of 3.75 per cent in the headline CPI basket. Electricity price adjustments generally take place in the months of July and August of each year, and the assumed pace of increase over the forecast period reflects the multi-year price determination (MYPD) agreement between ESKOM and NERSA with a slight adjustment for measurement at the municipal level.
2. **Fuel taxes and levies:** are the total domestic taxes and costs included in the price of fuel paid at the pump. They include the Road Accident Fund (RAF), the fuel levy, retail and wholesale margins, slate levy, and other minor levies. The two major taxes, which are set by the Minister of Finance in the annual budget, are the RAF and fuel levy. Income generated by the RAF levy is utilised to compensate third party victims of motor vehicle accidents while the fuel levy is used to provide funding for road infrastructure.
3. **Potential growth:** the pace of potential growth is derived from the SARB’s semi-structural potential output model. The measurement accounts for the impact of the financial cycle on real economic activity and introduces economic structure via the relationship between potential output and capacity utilisation in the manufacturing sector (South African Reserve Bank, Working Paper Series, WP/18/02).
4. **Inflation target midpoint:** is the middle of the official target range of 3 to 6 percent.
5. **Neutral real interest rate (NRIR):** The NRIR is the policy rate, minus inflation, which prevails when the economy is fully in balance, with inflation at target and output at potential. The policy stance is measured as either tight or loose based on whether actual rates are above or below this neutral rate, respectively. The steady state NRIR is calculated as the sum of the respective steady states for the G3 neutral real interest rate (0.5%), South Africa’s risk premium (2.0%), and the change in the real effective exchange rate REER (0.0%). Before the steady state is reached it is possible for the REER equilibrium to appreciate or depreciate, so this value can have a non-zero value over the medium term. It is nonetheless always zero in the long run.