

Appendix A

Feature List

[Table A.1](#) shows the list of features that were used for this research. The data was accessed from the South African Reserve Bank (SARB). The SARB mostly collects and reports its own data, however, a few features are sourced from Statistics South Africa. Therefore, this data is reliable and the data generating process is transparent and accessible on the SARB website: this referred to as the Special Data Dissemination Standard (SDDS). The data has coverage of a number of key economic sectors in South Africa: real, fiscal, financial, and external sector as well as population data.

It is also worth noting that economic data is typically available in constant prices or current prices. Constant prices are prices as at a given date, therefore, the value today is not affected by economic changes that would not make a non-financial difference to it. For example inflation causes prices to change, not because anything has changed about the goods or services but because time has passed. Current prices are those that incorporate these financial changes such as inflation. For this research we elected to use constant prices to avoid inflation being a confounding variable across our data. Inflation (CPI) is itself a feature that was used for this research.

Table A.1: List of features that sourced from the South African Reserve Bank

Feature	Data Frequency			Date Range	Literature Use
	Monthly	Quarterly	Annual		
Gross value added at basic prices of agriculture, forestry and fishing		X		1960 to 2020	
Value added at basic prices of mining and quarrying		X		1960 to 2020	
Gross value added at basic prices of manufacturing		X		1960 to 2020	
Gross value added at basic prices of electricity, gas and water		X		1960 to 2020	
Gross value added at basic prices of construction (contractors)		X		1960 to 2020	
Gross value added at basic prices of wholesale and retail trade, catering and accommodation		X		1960 to 2020	
Gross value added at basic prices of transport, storage and communication		X		1960 to 2020	
Gross value added at basic prices of finance, insurance, real estate and business services		X		1960 to 2020	
Gross value added at basic prices of other community, social and personal services		X		1960 to 2020	
Gross value added at basic prices of general government services		X		1960 to 2020	
Gross value added at basic prices of all industries		X		1960 to 2020	
Gross domestic product at market prices		X		1960 to 2020	
Final consumption expenditure by households: Total		X		1960 to 2020	
Final consumption expenditure by general government		X		1960 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Gross fixed capital formation		X		1960 to 2020	
Change in inventories		X		1960 to 2020	
Residual item		X		1960 to 2020	
Gross domestic expenditure		X		1960 to 2020	
Exports of goods & services		X		1960 to 2020	
Imports of goods & services		X		1960 to 2020	
Final consumption expenditure by households: Total		X		1960 to 2020	
Final consumption expenditure by general government		X		1960 to 2020	
Gross fixed capital formation		X		1960 to 2020	
Change in inventories		X		1960 to 2020	
Residual item		X		1960 to 2020	
Gross domestic expenditure		X		1960 to 2020	
Exports of goods & services		X		1960 to 2020	
Imports of goods & services		X		1960 to 2020	
Physical volume of manufacturing production: Total	X			1963 to 2020	
The leading business cycle indicator is a composite index comprising of time series, which tend to shift direction in advance of the business cycle	X			1960 to 2020	Used by the SARB for the unemployment leading indicator [Davies <i>et al.</i> 2009].
Non-agricultural employment: Total		X		1970 to 2020	
Remuneration per worker in non-agricultural: Total		X		1970 to 2020	
Remuneration per worker in non-agricultural: Total		X		1970 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
CPI Headline	X			1922 to 2020	Commonly used in economics, the inverse relationship between CPI (inflation) and unemployment is referred to as Philips Curve [Marinkov and Geldenhuys 2007 ; Vermeulen 2017])
Domestic output: All groups	X			1970 to 2020	Commonly used in economics, the relationship between GDP (Domestic output) and unemployment is referred to as Okun's Law [Marinkov and Geldenhuys 2007 ; Vermeulen 2017])
Consolidated general government: Revenue		X		1991 to 2020	
Consolidated general government: Expense		X		1991 to 2020	
Consolidated general government: Expense: Interest		X		1991 to 2020	
Net cash-flow from operating activities		X		1991 to 2020	
Consolidated general government: Non-financial assets - Net		X		1960 to 2020	
Consolidated general government: Non-financial assets - Net		X		1991 to 2020	
Consolidated general government: Cash surplus / deficit		X		1991 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Consolidated general government: Net cash-flow from financing activities		X		1991 to 2020	
Consolidated general government: Net acquisition of financial assets other than cash		X		1991 to 2020	
Domestic Loans		X		2002 to 2020	
Other domestic financial assets		X		2002 to 2020	
Foreign		X		2002 to 2020	
Consolidated general government: Liabilities		X		1991 to 2020	
Consolidated general government: Liabilities: Domestic		X		1991 to 2020	
Consolidated general government: Liabilities: Domestic: Currency and deposits		X		1991 to 2020	
Consolidated general government: Liabilities: Domestic: Securities other than shares		X		1991 to 2020	
Consolidated general government: Liabilities: Domestic: Loans		X		1991 to 2020	
Agriculture, forestry and fishing		X		1960 to 2020	
Consolidated general government: Liabilities: Domestic: Other domestic liabilities		X		2005 to 2020	
Consolidated general government: Liabilities: Foreign		X		1991 to 2020	
Consolidated general government: Liabilities: Foreign: Currency and deposits		X		1991 to 2020	
Consolidated general government: Liabilities: Foreign: Securities other than shares		X		1991 to 2020	
Consolidated general government: Liabilities: Foreign: Loans		X		1991 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Consolidated general government: Net change in the stock of cash		X		1991 to 2020	
National government revenue adjusted for differences in timing between the recording of transactions and bank clearances.	X			1960 to 2020	
National government expenditure adjusted for differences between the recording of transactions and bank clearances, and late departmental requests/surrenders of funds.	X			1960 to 2020	
The difference between cash-flow revenue and cash-flow expenditure.	X			1960 to 2020	
Cost/profit of revaluation of foreign loans	X			1960 to 2020	
Plus: Accrual adjustment	X			2000 to 2020	
The net borrowing requirement of national government equals the net result of the cash-flow deficit/surplus and the cost of revaluation of foreign loans at redemption.	X			1960 to 2020	
Cash received from the issuance of Treasury bills less cash payments made to redeem Treasury bills.	X			1960 to 2020	
Cash received from the issuance of domestic government bonds less cash payments made to redeem domestic government bonds	X			1984 to 2020	
Cash received from the issuance of other debt instruments less cash payments made to redeem other debt instruments, including non-marketable bills and bonds, and debt of the former TBVC-countries, self-governing territories and the Republic of Namibia that were assumed by the national government	X			1960 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Financing by non-marketable bonds	X			1960 to 2020	
Total cash-flow revenue	X			1960 to 2020	
Including changes in the Exchequer and Paymaster-General Account balances with the South African Reserve Bank and other banks.	X			1960 to 2020	
The net result of all financing activities of national government.	X			1984 to 2020	
Total gross loan debt (nsa)	X			1960 to 2020	
Total outstanding domestic marketable debt	X			1960 to 2020	
Total outstanding domestic marketable bills	X			1960 to 2020	
Total domestic marketable bonds	X			1960 to 2020	
Total outstanding domestic marketable bonds: Not exceeding 1 year (incl SA housing trust loans i.e marketable SP05 bonds)	X			1855 to 2020	
Total outstanding domestic marketable bonds: Exceeding 1 but not 3 years	X			1986 to 2020	
Total outstanding domestic marketable bonds: Medium term	X			1986 to 2020	
Total outstanding domestic marketable bonds: Total exceeding 10 years	X			1986 to 2020	
Total outstanding domestic marketable loan levies	X			1989 to 2020	
Total outstanding domestic non-marketable debt	X			1960 to 2020	
Total outstanding domestic non-marketable bills	X			1960 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Total outstanding domestic non-marketable bonds	X			1960 to 2020	
Domestic non-marketable bonds by instrument type: Floating/variable rate bonds		X		1987 to 2020	
Total outstanding domestic non-marketable loan levies	X			1960 to 2020	
Total foreign debt	X			1960 to 2020	
Total foreign marketable debt	X			1960 to 2020	
Total outstanding foreign marketable bonds by unexpired maturity: Not exceeding 1 year	X			1960 to 2020	
Total outstanding foreign marketable bonds by unexpired maturity: Exceeding 1 but not 3 years	X			1960 to 2020	
Total outstanding foreign marketable bonds by unexpired maturity: Exceeding 3 years	X			1960 to 2020	
Total foreign non-marketable debt	X			1960 to 2020	
Total other debt	X			1993 to 2020	
Gold and Foreign Exchange Contingency Reserve Account	X			2018 to 2020	
Financial guarantees by government		X		2018 to 2020	
Broad monetary credit to the government sector. Net Claims on Government are shown as a counterpart item to the change in M3. It is the total of "gross claims on the government sector" minus "Government deposits".	X			1965 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Claims on the domestic private sector. Domestic credit extended by monetary financial institutions is disaggregated into: (i) Credit extended to the domestic private sector (Claims on the domestic private sector) which is further subdivided into investments, bills discounted, instalment sale credit, leasing finance, mortgage advances and other loans and advances; and (ii) Net credit extended to the government sector (comprising the central government, provincial governments and social security funds); that is, credit extended less government deposits.	X			1965 to 2020	
Net foreign assets after valuation adjustment. Net foreign assets are shown as a counterpart item to the change in M3. It is the total of foreign assets minus foreign liabilities. Deposits of non-residents are not included in the broad monetary aggregate.	X			1960 to 2020	
M2 plus all long term deposit with monetary banking institutions	X			1965 to 2020	
Total claims on the private sector	X			1993 to 2020	
Total claims on the government	X			1983 to 2020	
Total foreign assets minus total foreign liabilities	X			1978 to 2020	
Deposit of banks, mutual banks with the SARB and notes and coins outside the SARB and SA mint	X			1965 to 2020	
Current account (nsa)		X		1960 to 2020	
Goods: exports (nsa)		X		1960 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Goods: imports (nsa)		X		1960 to 2020	
Services: credit (nsa)		X		2015 to 2020	
Services: debit (nsa)		X		2015 to 2020	
Income: credit (nsa)		X		2015 to 2020	
Income: debit (nsa)		X		2015 to 2020	
Current transfers: credit (nsa)		X		2015 to 2020	
Current transfers: debit (nsa)		X		2015 to 2020	
Capital account (nsa)		X		2015 to 2020	
Capital account: credit (nsa)		X		2015 to 2020	
Capital account: debit (nsa)		X		2015 to 2020	
Financial account		X		2015 to 2020	
Direct investment abroad		X		2015 to 2020	
Direct investment in reporting economy		X		2015 to 2020	
Portfolio investment, assets		X		2015 to 2020	
Portfolio investment, liabilities		X		2015 to 2020	
Financial derivatives, assets		X		2015 to 2020	
Financial derivatives, liabilities		X		2015 to 2020	
Other investment, assets		X		2015 to 2020	
Other investment, liabilities		X		2015 to 2020	
Reserve assets		X		2015 to 2020	
Net errors and omissions		X		2015 to 2020	
Gross reserves of the Reserve Bank - US Dollar	X			2018 to 2020	
IMF reserve position	X			2018 to 2020	
Reserve Bank SDR reserves	X			2018 to 2020	
Reserve Bank gold reserves	X			2018 to 2020	
Reserve Bank other foreign exchange reserves	X			2018 to 2020	
Other reserve assets	X			2018 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
Gross gold and other foreign reserves : Amount as at end of period	X			2018 to 2020	
Exports of goods, including gold (SARS)	X			2012 to 2020	
Imports of goods (SARS)	X			2012 to 2020	
Total foreign assets		X		1956 to 2020	
Foreign assets: Total direct investment		X		2015 to 2020	
Foreign assets: Total portfolio investment		X		2015 to 2020	
Foreign assets: Portfolio investment: Equity securities		X		2015 to 2020	
SDDS - Financial derivative assests		X		2015 to 2020	
Foreign assets: Total other investment		X		2015 to 2020	
SDDS - Reserve Assest		X		2015 to 2020	
Total foreign liabilities		X		2015 to 2020	
Foreign liabilities: Total direct investment		X		2015 to 2020	
Foreign liabilities: Total portfolio investment		X		2015 to 2020	
Foreign liabilities: Portfolio investment: Eq- uity securities		X		2015 to 2020	
Foreign liabilities: Portfolio investment: Debt securities		X		2015 to 2020	
SDDS - Financial derivative liabilities		X		2015 to 2020	
Foreign liabilities: Total other investment		X		2015 to 2020	
Net Investment Position		X		2015 to 2020	
Foreign debt of S.A.: Total foreign debt		X		2015 to 2020	
Foreign exchange rate : SA rand per USA dollar		X		2018 to 2020	

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Feature	Monthly	Quarterly	Annual	Date Range	Literature Use
The nominal effective exchange rate is a weighted exchange rate of the rand measured against a basket of the currencies of South Africa's twenty most important trading partners. The calculation is based on trade in and consumption of manufactured goods	X			2018 to 2020	
Total South African population			X	2015 to 2020	
	58	112	1	1922 to 2020	