

Quarterly economic review

In August 1970 three reviews were published on economic developments during the year ended June 1970, namely in the Budget Speech of the Minister of Finance, the Reserve Bank's Annual Economic Report and the Governor's Address at the Bank's Annual General Meeting. Little new information has become available since then and this review will be confined mainly to a discussion of developments during the second quarter of 1970, and the months July and August.

Most of the general observations made in the Annual Economic Report also apply to the period covered in this review and will therefore not be repeated here. The following developments were, however, observed more recently and should be viewed in conjunction with the general observations made in the Annual Report.

1. The Minister of Finance in his 1970/71 Budget introduced anti-inflationary fiscal measures directed mainly at curbing private consumption expenditure. Further impetus to increased consumption expenditure may, however, be given by the several salary and wage increases announced during July and August.

2. The rates of increase in consumer and wholesale prices continued to accelerate during the first seven months of 1970, owing mainly to sharp rises in the prices of food and agricultural products.

3. Despite a sustained net inflow of capital, the gold and foreign exchange reserves declined further during July and August, largely as a result of the very high level of merchandise imports.

4. The liquidity of the private non-banking sector continued to rise at a relatively high rate up to July and

monetary conditions remained conducive to inflation.

5. After the Reserve Bank had released the banks and building societies from their undertaking to maintain a maximum rate of interest of 7 per cent on deposits, and upward adjustments had simultaneously been made to the Bank's pattern of interest rates on medium- and long-term government stocks, borrowing and lending interest rates of banks and building societies were generally raised by approximately $\frac{1}{2}$ per cent.

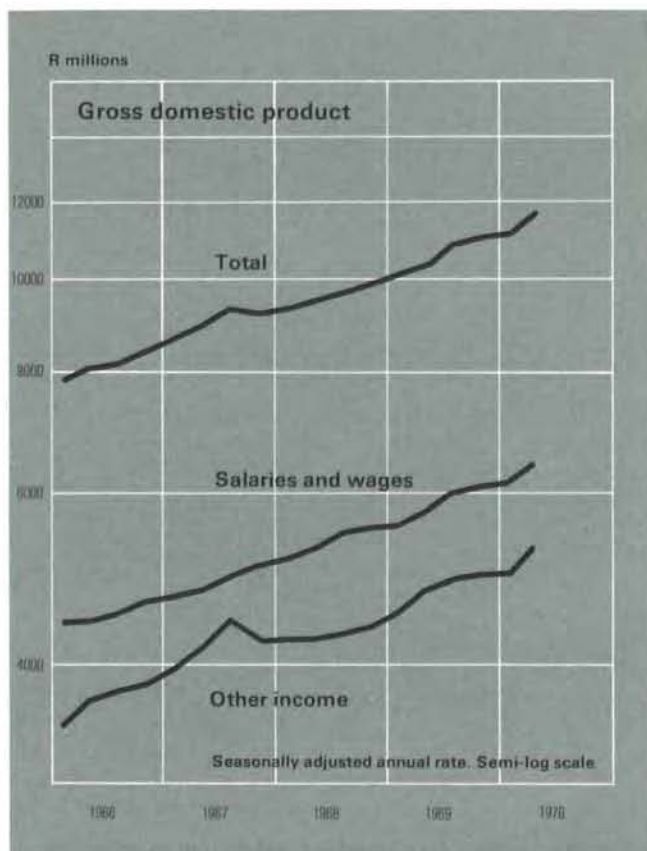
6. In order to discourage an interest rate war and to make competition among banks more equitable, the Reserve Bank introduced a credit ceiling also for the non-monetary banks with which they must comply from the end of September 1970.

National accounts¹

Faster rate of increase in gross domestic product

After slowing down during the fourth quarter of 1969 and the first quarter of 1970, the rate of increase in the gross domestic product at current prices increased sharply during the second quarter of 1970. Although this increase was mainly attributable to a substantial rise in the contribution of agriculture, significant increases were also observed in manufacturing, transport and communication and general government and

¹The analysis in this section of the Review is largely based on the Reserve Bank's quarterly estimates of the national accounts, *after adjustment for seasonal tendencies*. Since these figures are not yet judged reliable enough for publication, the analysis of quarterly developments is confined to pointing out broad tendencies.



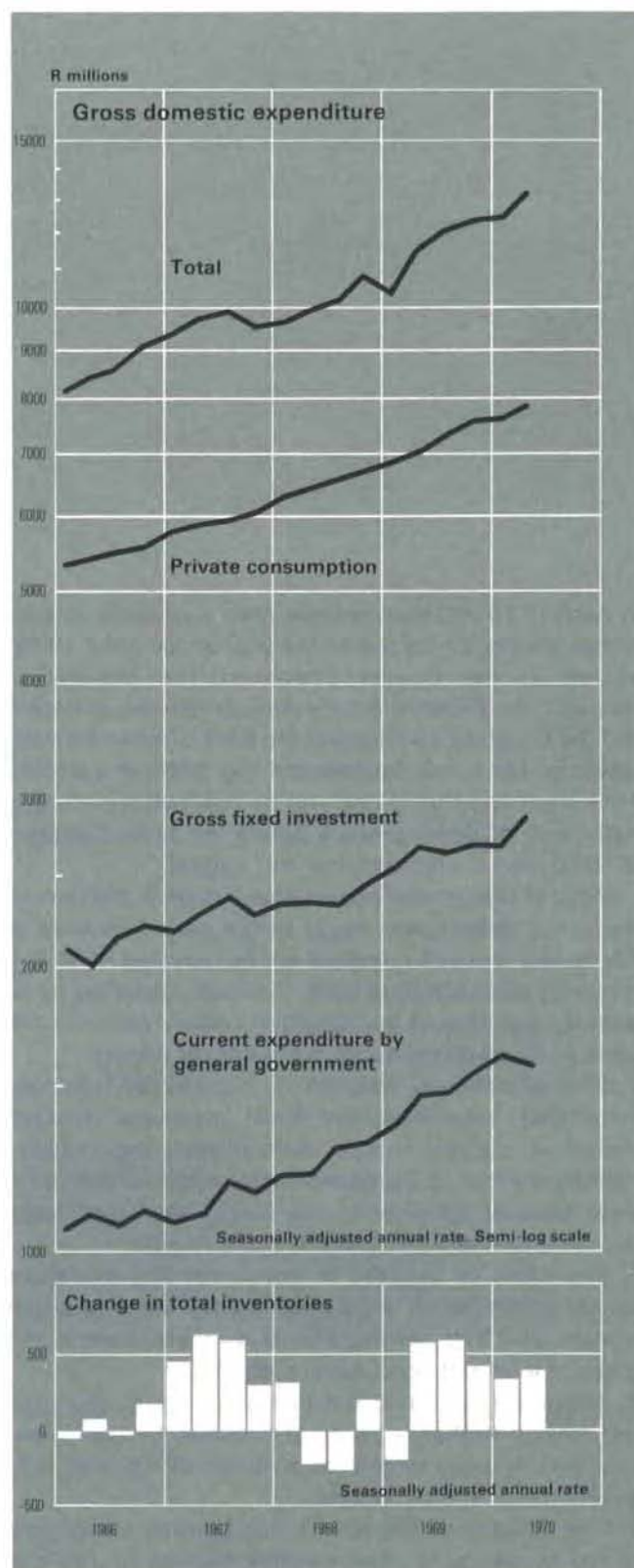
private services. Salaries and wages once again increased relatively rapidly while "other income" (i.e. profits and net interest and rent payments), which had tended to level off during the two previous quarters, also increased substantially owing to the higher output of agriculture.

Pronounced further increase in gross domestic expenditure

Gross domestic expenditure showed similar quarterly changes as the gross domestic product, but rose faster than the latter during the second quarter of 1970. This resulted in a substantially bigger deficit on the current account of the balance of payments. Except for current expenditure by general government, which declined somewhat during the second quarter of 1970, all the major components of gross domestic expenditure, namely private consumption expenditure, capital expenditure on plant, machinery, equipment, building and construction by both the public and private sectors, and inventory accumulation, contributed to the faster rate of increase in gross domestic expenditure.

After levelling off during the first quarter of 1970, private consumption expenditure accelerated markedly during the second quarter of 1970 mainly as a result of increased expenditure on durable goods (in particular on new motor cars) and on services. In an endeavour

to curb the excessive rate of increase in private consumption expenditure, the Minister of Finance in his 1970/71 Budget announced certain measures such as an increase in the loan levy and higher sales duties on



certain articles. At the same time, however, salary and wage increases were announced by the South African Railways Administration, the central government and provincial administrations and certain branches of the private sector, which will, of course, tend to stimulate private consumption expenditure.

Gross domestic fixed investment likewise recorded a substantial increase during the second quarter of 1970. Although outlays on machinery, plant and equipment rose significantly, the larger part of the increase in fixed investment was confined to building and construction. Capital expenditure by public authorities increased substantially mainly as a result of increased outlays by local authorities and the South African Railways Administration. The pronounced increase in fixed investment by the latter, in fact, represented a reversal of the downward trend which had started in the first quarter of 1969.

Capital expenditure by public corporations, which increased markedly during the first quarter of 1970, recorded only a small further increase during the second quarter, while fixed investment by all the sub-sectors of the private sector increased only moderately during the second quarter of 1970.

For the fifth consecutive quarter, a relatively large net addition to inventories was recorded during the second quarter of 1970. This accumulation was mainly confined to industrial and commercial inventories, including noticeable additions to agricultural stocks in trade.

Insufficient domestic saving

According to preliminary indications all the main sources of domestic saving, in particular personal and corporate saving, increased markedly during the second quarter of 1970. Nevertheless, gross domestic saving was still insufficient to finance total investment, i.e. gross domestic fixed and inventory investment. Foreign funds were consequently once again employed extensively in the financing of domestic investment.

General economic indicators

Most of the more important indicators which are available for the months after March 1970 confirm the impression gained from the national accounts statistics that general economic activity increased at a faster rate during the second quarter of 1970 than during the preceding two quarters. The seasonally adjusted index of the physical volume of manufacturing production, which tended to level off during the second half of 1969 and the first quarter of 1970, increased fairly sharply during April and May 1970. This tendency was also reflected in the total hours worked and unfilled orders in manufacturing. Mainly owing to a further increase in other mining production, the index of the physical volume of mining production showed a substantial increase during the second quarter of 1970.

Developments during the second quarter of 1970 were accompanied by a sharp increase in total employment, in particular in construction, mining, manufacturing and the Post Office. In conformity with the upward trend in employment, the seasonally adjusted number of unemployed Whites, Coloureds and Asiatics declined further during the first six months of 1970 to reach the very low figure of 8,520 in June. A consequence of the further tightening in the labour situation is the large number of salary and wage increases announced during the past few months, especially in the public sector.

The acceleration in economic activity during the second quarter of 1970 was further reflected in substantial increases in merchandise imports, wholesale sales, sales of new motor cars and commercial vehicles and an increase in retail sales after a sharp decline towards the end of 1969. Possibly as a result of a scarcity of certain types of building materials, the tight labour situation and insufficient transport facilities, the construction industry tended to be less active. This was reflected in the value of building plans passed, wholesale sales of building materials and shipments of rolled and drawn steel products. The seasonally adjusted index of transactions in fixed property would also seem to indicate that the sharp increase in activity in this sector from the beginning of 1968 onwards is now levelling off. The equity market, however, continued to be sluggish.

Prices

During the first seven months of 1970 the rate of increase in consumer prices accelerated noticeably. Thus, after increasing by 3.3 per cent (2.6 per cent if the influence of the sales tax is excluded) in 1969, the seasonally adjusted index of consumer prices increased at an annual rate of no less than 4.1 per cent during the first seven months of 1970. This higher rate of increase is, to a large extent attributable to a substantially higher rate of increase in food prices, namely from an increase of 1.0 per cent in 1969 to as much as 5.1 per cent at a seasonally adjusted annual rate during the first seven months of 1970. Further substantial increases were also recorded in the prices of certain services and in "housing and related items".

The acceleration in the rate of increase in wholesale prices was even more pronounced. After rising by 2.3 per cent (1.4 per cent if the influence of the sales duty is excluded) in 1969, the seasonally adjusted index of wholesale prices rose at an annual rate of 3.8 per cent

during the period from December 1969 to July 1970. It is also significant that the acceleration in prices was reflected in all the components of the index and was particularly evident in the prices of agricultural products.

Balance of payments

Record deficit on current account

During the second quarter of 1970 a deficit of no less than R171 million was recorded on the current account of the balance of payments. At a seasonally adjusted annual rate this deficit amounted to a record of R618 million, compared with R535 million during the first quarter of the year. This further deterioration of the balance on current account was due in particular to a substantial increase in merchandise imports.

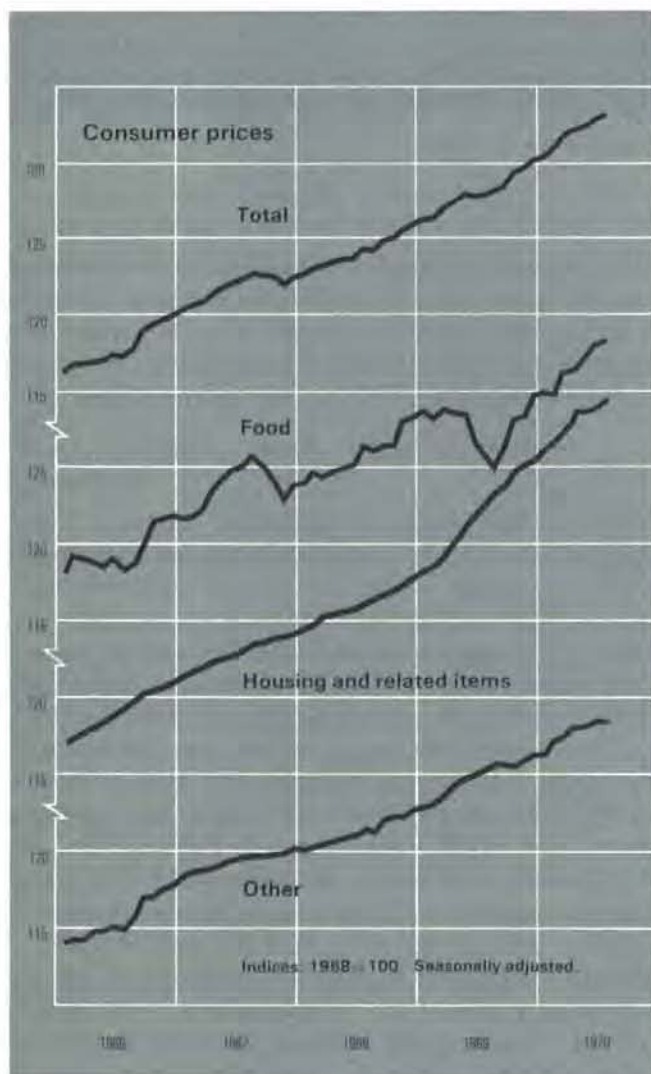
After declining to a seasonally adjusted annual figure of R2,320 million during the first quarter of 1970, merchandise imports rose to R2,608 million during the second quarter. According to the monthly figures of the Department of Customs and Excise, which are not adjusted for balance of payments purposes and are therefore not strictly comparable with the quarterly figures mentioned above, imports reached a seasonally adjusted annual level of R2,701 million during July, before declining to R2,527 million in August partly as a result of the dock strikes in the United Kingdom.

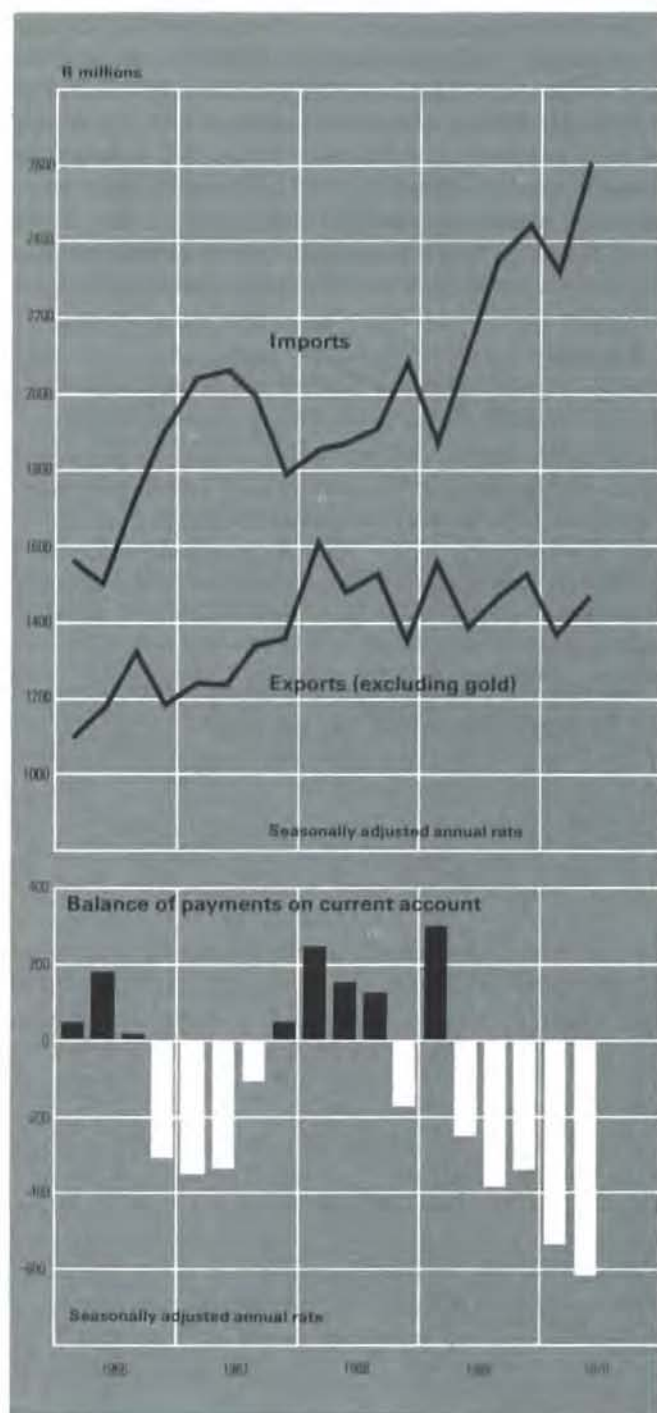
Net invisible payments to the rest of the world amounted to R343 million (at a seasonally adjusted annual rate) during the second quarter, compared with R363 million in the previous quarter. This decline occurred despite increased payments of interest, dividends, freight and insurance on merchandise and was the result of an increase in net transfer receipts and higher income from foreign carriers in South African harbours. Net gold output also increased considerably during the second quarter, while merchandise exports rose from a seasonally adjusted annual figure of R1,375 million in the first quarter to R1,475 million in the second quarter of 1970, mainly as a result of a revival in agricultural exports. During July and August exports showed little change.

Substantial net capital inflow

A further net capital inflow of R156 million was recorded during the quarter ended June 1970, which brought the total net capital inflow during the first six months of the year to no less than R253 million. The net capital inflow to the private sector contributed R116 million and that to the central government and banking sector R40 million to the total net inflow during the second quarter.

The large inflow of capital to the private sector consisted mainly of loans obtained abroad as a result of the tight domestic capital market conditions and an increase in trade credits associated with the sharp rise in merchandise imports. The net inflow to the private sector was divided about equally between long-





and short-term capital, namely R60 million and R56 million, respectively.

Gold and foreign exchange reserves

As the large deficit on the current account was largely offset by the substantial net capital inflow referred to above, the total gold and foreign exchange reserves declined by only R15 million during the second quarter

of the year and were still on a relatively high level of R1,008 million at the end of June. During July, however, the gold and foreign exchange reserves of the country declined by R46 million to R962 million, and the gold and foreign exchange holdings of the South African Reserve Bank decreased further by R61 million in August.

Monetary and banking situation

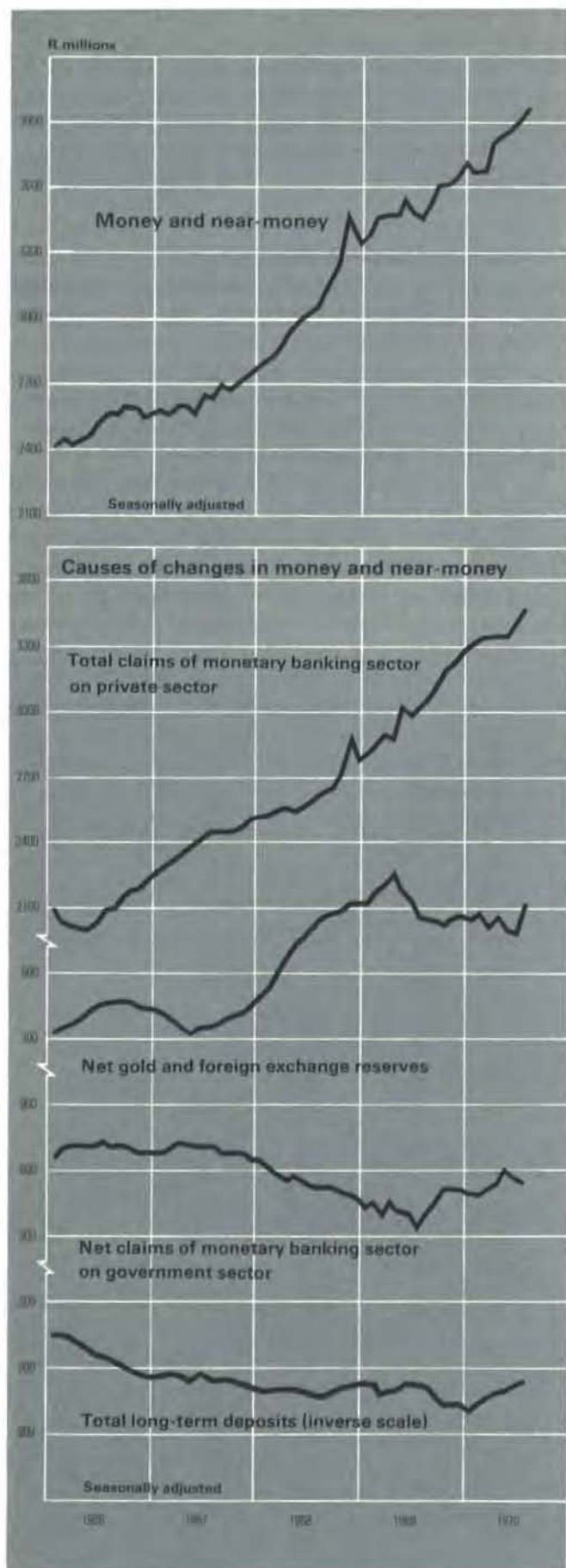
The seasonally adjusted quantity of money and near-money increased by R116 million during the second quarter of 1970 and by a further R53 million during July. The increase during these four months thus represented an annual rate of increase of 13.4 per cent, compared with 14.2 per cent during the first quarter of 1970 and 10.3 per cent during 1969.

As the accompanying table shows, the causes of change in money and near-money during the second quarter of 1970 strongly resembled the pattern of the first quarter, if allowance is made for seasonal movements which are usually more pronounced during the first quarter. The net gold and foreign exchange reserves continued to decline, *net* bank credit to the government sector (mainly as a result of a decline in government deposits) and bank credit to the private sector showed further increases and private sector long-term deposits declined substantially. The latter was probably caused by the relatively narrow interest rate margins between rates on medium-term (up to 6 months) and long-term (12 months and longer) deposits.

Main causes of changes in money and near-money

(R millions)

	Not seasonally adjusted			Seasonally adjusted		
	1st qtr.	2nd qtr.	July	1st qtr.	2nd qtr.	July
Net gold and foreign exchange reserves	-43	-39	-44	-56	-24	-75
Claims on the government sector:						
Gross claims	-45	51	49	...	...	...
Government deposits (increase —, decrease +)	-63	82	-113	...	...	...
Net claims	-107	133	-63	10	49	-17
Claims on the private sector	99	51	57	76	68	57
Long-term private deposits (increase —, decrease +)	-1	60	6	28	71	16
Other assets and liabilities (net)	-22	-4	46	...	...	...
Total	-74	200	2	106	116	53



The excess liquid assets of monetary banking institutions, which had recovered from only R85 million at the end of January 1970 to R263 million at the end of June, declined again to R141 million, or 2.9 per cent of their liabilities to the public, at the end of July. This decline mainly reflects a loss of actual liquid asset holdings associated with the mid-year flow of tax and loan funds to the government and the sharp decline during July in the gold and foreign exchange reserves.

In this connection, the Governor of the Reserve Bank announced in his Chairman's Address on the 25th August that a number of factors would make it difficult to relax credit controls and liquidity requirements to the same extent during the coming year as during the past year. He mentioned the existence of inflationary pressure at a time when the liquidity of the private sector was still relatively high. The strong upward movement in imports and the fact that a relaxation of credit could stimulate it further, was also mentioned as a factor in this regard.

The discount houses increased their indebtedness to the Reserve Bank, which had decreased to R17 million at the end of June, to a record amount of R178 million at the end of July, before reducing it to R117 million at the end of August. Although call deposits with the discount houses declined by R158 million during July, they nevertheless managed to maintain their portfolio at a total value of over R400 million by means of Reserve Bank credit. To discourage the continued heavy reliance on Reserve Bank credit, the Bank from the beginning of July began to charge penalty rates on a regular basis. The penalty was increased progressively during August and by the middle of September, it reached a level of two per cent above Bank rate.

The Treasury bill tender rate showed little change after March 1970 and fluctuated between 4.34 and 4.38 per cent. The discount houses at times during July and early September 1970 quoted call money rates higher than the Treasury bill tender rate. At the same time, the rate on 90- and 180-day negotiable certificates of deposit reached new high levels of 7.00 and 7.15 per cent, respectively, on 31st July, before declining during August.

On the 12th August 1970, banks and building societies were released by the Reserve Bank from their undertaking to maintain a maximum interest rate of 7 per cent per annum on deposits and simultaneously the Reserve Bank's pattern of interest rates on long-term government stock was increased from 7 to $7\frac{3}{4}$ per cent. Following this announcement, the main commercial banks increased their rate on deposits of 12 months from 7 to $7\frac{1}{2}$ per cent between 19th August and 8th September, after several hire-purchase and general banks (including subsidiaries of commercial banks) had increased their rate somewhat earlier. On 1st September the building societies increased their rate on 12-

months' deposits from 7 to $7\frac{1}{2}$ per cent and on indefinite period paid-up shares from 7 to $7\frac{3}{4}$ per cent, and re-introduced their fixed period shares at a rate of $8\frac{1}{4}$ per cent for a seven-year period and $8\frac{1}{2}$ per cent for ten years.

Lending rates of building societies and banks were also raised. Thus, the building societies increased their mortgage rate in respect of dwelling houses from $8\frac{1}{2}$ to 9 per cent effective from 1st September 1970. The commercial banks kept their minimum overdraft rate at $7\frac{1}{2}$ per cent but increased their so-called prime rate from 8 to $8\frac{1}{2}$ per cent. The minimum overdraft rate is applicable when stocks of the South African Government, the Reserve Bank, municipalities or public corporations are tendered as security or when fixed deposits or deposits subject to notice held at the lending bank are pledged by the borrower. The prime rate, on the other hand, refers to the rate quoted on first-class secured overdrafts as well as on unsecured overdrafts to undoubted customers and to municipalities and other local authorities, hospitals, schools and other similar charitable and non-profit institutions.

Little change had been observed in the rates officially quoted by banks on deposits of original maturities or periods of notice of less than one year. A widening of the margin between the highest and lowest rates quoted on 31-day, 91-day and six-months' deposits was evident, however, among hire-purchase banks. Rates of between 6 and $6\frac{3}{4}$ per cent are being quoted on deposits of six months.

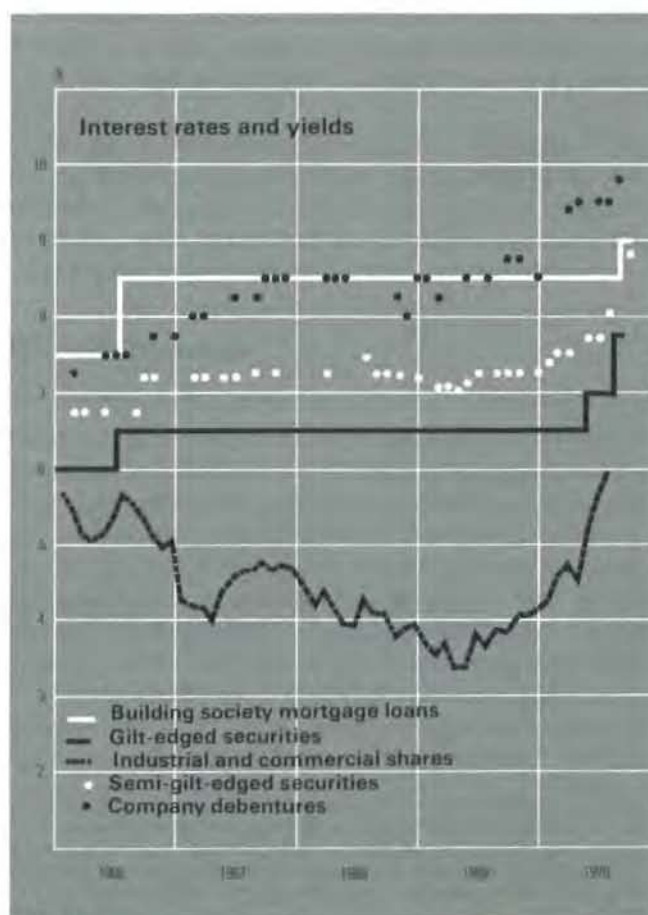
In conjunction with the releasing of the banks from their undertaking to maintain a maximum interest rate of 7 per cent on deposits and as a further step to discourage a possible interest rate war, it was announced by the Governor of the Reserve Bank in his Chairman's Address of 25th August 1970 that non-monetary banks would also be required to ensure that their discounts and advances to the private sector and certain investments with the private sector would not, as from the end of September, exceed the total of the relevant asset items as at the end of June 1970 by more than 5 per cent. The margin of 5 per cent was allowed "in order to give these institutions some scope and also because the credit extended by the monetary banks as at the end of June, was about five per cent below their ceilings".

Capital market

Developments in the capital market during the second quarter of 1970 and July were largely a continuation of the trends that characterised the market during the earlier part of the year. The share market remained sluggish, deposit-receiving institutions still experienced large inflows of funds, and conditions in the market for fixed-interest securities continued to be tight.

In the share market the confidence of investors had not yet been restored and share prices continued their

downward slide, and although a marked decline still occurred during the second quarter, the rate of decrease tended to be smaller during July. During August and September a slight improvement was noticeable in the equity market. Accompanying these share movements, the number of shares traded on the Johannesburg Stock Exchange fell further during the second quarter, and in July registered its lowest level in 31 months, even though the number of new share listings had increased substantially during recent years. The continued downward movement of share prices coupled with increased dividend payments produced a further increase in share yields. The average yield on industrial and commercial shares, which had declined to 3.4 per cent in May 1969, rose to 4.7 per cent in March and reached a level of 5.9 per cent in July, while the average yield on gold mining shares increased to 11.1 per cent in July. Unit trust figures reflected the general trend on the Stock Exchange and the trusts experienced a further outflow of funds in the second quarter and in July, as was also the case during the preceding eight months. The average monthly outflow of R6 million was, however, considerably less than the record figure of R16 million recorded during the first quarter of 1970.



Interest rates in the market for fixed-interest securities, which had been rising steadily from the second half of 1969, increased further after the middle of 1970. The long-term loan floated by the Government in July at a rate of 7 per cent met with limited response from investors in the private non-banking sector, who subscribed only R7 million. When releasing the banks and building societies from their undertaking to maintain interest rates on deposits at a maximum of 7 per cent, the Reserve Bank also raised its rate quoted for transactions in long-term government stock with a maturity of 20 years and longer from 7 to $7\frac{3}{4}$ per cent with effect from 13th August, and long-term yields on new issues of semi-gilt-edged securities were increased subsequently from about 8 to 8.9 per cent. The private sector also followed suit and the yield on new issues of company debentures is presently about 10.1 per cent, compared with a previous level of about 9.5 per cent.

Although share yields are available only up to July, it would appear that the developments during August and September resulted in interest rate relationships in the capital market which were similar to those existing in the middle of the year. At that stage the "reverse" yield gap between long-term government stock and industrial and commercial shares stood at 1.3 per cent, the difference between yields on long-term gilt- and semi-gilt-edged stock amounted to 1.0 per cent, and the gap between the yield on company debentures and gilt-edged stock was 2.5 per cent.

Kwartaallikse ekonomiese oorsig

In Augustus 1970 is drie oorsigte van ekonomiese ontwikkelings gedurende die jaar geëindig Junie 1970 gepubliseer, naamlik in die Begrotingsrede van die Minister van Finansies, die Reserwebank se Jaarlikse Ekonomiese Verslag en die Presidentsrede tydens die Algemene Jaarvergadering van die Bank. Min nuwe inligting het sedertdien beskikbaar gekom en hierdie oorsig sal hoofsaaklik tot 'n bespreking van ontwikkelings gedurende die tweede kwartaal van 1970 en die maande Julie en Augustus beperk word.

Die meeste van die algemene opmerkings wat in die Jaarlikse Ekonomiese Verslag gemaak is, het ook op die tydperk wat deur hierdie oorsig gedek word, betrekking en sal gevolglik nie hier herhaal word nie. Die volgende ontwikkelings is egter meer onlangs waargeneem en moet saam met die algemene opmerkings wat in die Jaarlikse Verslag gemaak is, beskou word.

1. Die Minister van Finansies het in sy 1970/71-Begroting anti-inflasioneëre maatreëls ingestel wat hoofsaaklik op die beperking van private verbruiksbesteding gemik is. 'n Verdere aansporing tot groter verbruiksbesteding kan egter deur die verskeie salaris- en loonsverhogings wat gedurende Julie en Augustus aangekondig is, teweeggebring word.

2. Die koerse van toename in verbruikers- en groothandelspryse het gedurende die eerste sewe maande van 1970 voortgegaan om te versnel, hoofsaaklik as gevolg van skerp stygings in die pryse van voedsel en landbouprodukte.

3. Nieteenstaande 'n volgehoue netto invloeiing van kapitaal, het die goud- en buitelandse valuta-reserwes gedurende Julie en Augustus verder gedaal, hoofsaaklik as gevolg van die baie hoë peil van goedere-invoer.

4. Die likwiditeit van die private nie-banksektor het voortgegaan om teen 'n betreklik hoë koers toe te neem

en die monetêre toestand was nog steeds bevorderlik vir inflasie.

5. Nadat die Reserwebank die banke en bouverenigings onthef het van hul onderneming om 'n maksimum rentekoers van 7 persent op deposito's te handhaaf en opwaartse aanpassings terselfdertyd aan die stel rentekoerse vir middel- en lang-termynstaatseffekte gemaak is, is die leen- en uitleenkoerse van banke en bouverenigings in die algemeen met ongeveer $\frac{1}{2}$ persent verhoog.

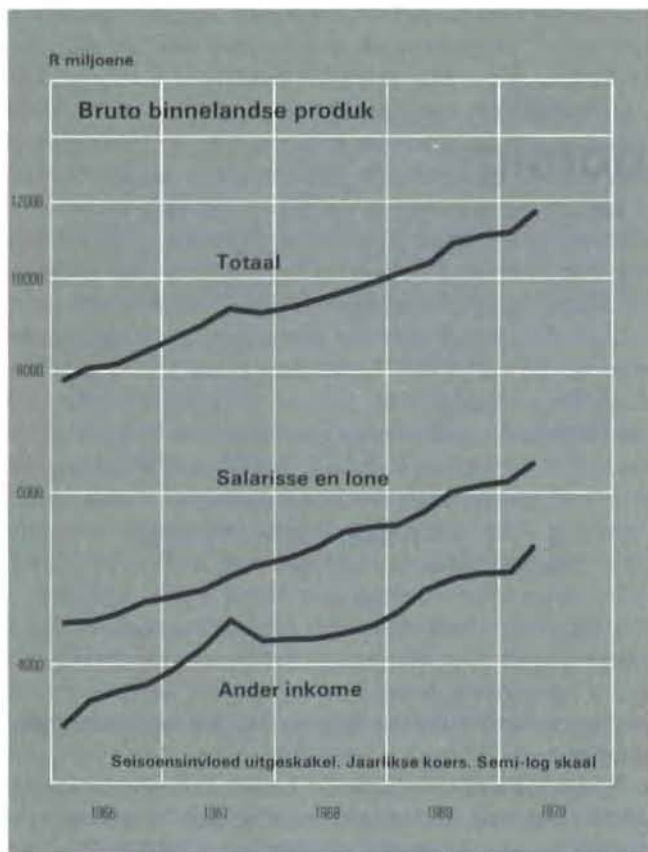
6. Ten einde 'n rentekoersoorlog te ontmoedig en om die mededinging tussen banke op 'n meer gelyke voet te plaas, het die Reserwebank ook vir die nie-monetêre banke 'n kredietplafon ingestel, waaraan hulle vanaf die einde van September 1970 moet voldoen.

Nasionale rekeninge¹

Vinniger koers van toename in bruto binnelandse produk

Nadat dit gedurende die vierde kwartaal van 1969 en die eerste kwartaal van 1970 verlangsaam het, het die koers van toename in die bruto binnelandse produk teen heersende pryse gedurende die tweede kwartaal van 1970 vinnig toegeneem. Ofskoon hierdie toename hoofsaaklik aan 'n aanmerklike styging in die bydrae van die landbousektor toegeskryf kan word, is beduidende toenames ook deur fabriekswese, vervoer en kommunikasie en algemene regerings- en private dienste aangeteken. Salarisse en lone het weer eens betreklik vinnig toegeneem, terwyl „ander inkome” (d.w.s.

¹Die ontleding in hierdie deel van die oorsig is hoofsaaklik gebaseer op die Reserwebank se kwartaallikse ramings van die nasionale rekeninge, *ná uitskakeling van die seisoensinvloed*. Aangesien hierdie syfers nog nie as betroubaar genoeg vir publikasie beskou word nie, word die ontleding van die kwartaallikse verwickelinge tot die beskrywing van breë tendense beperk.



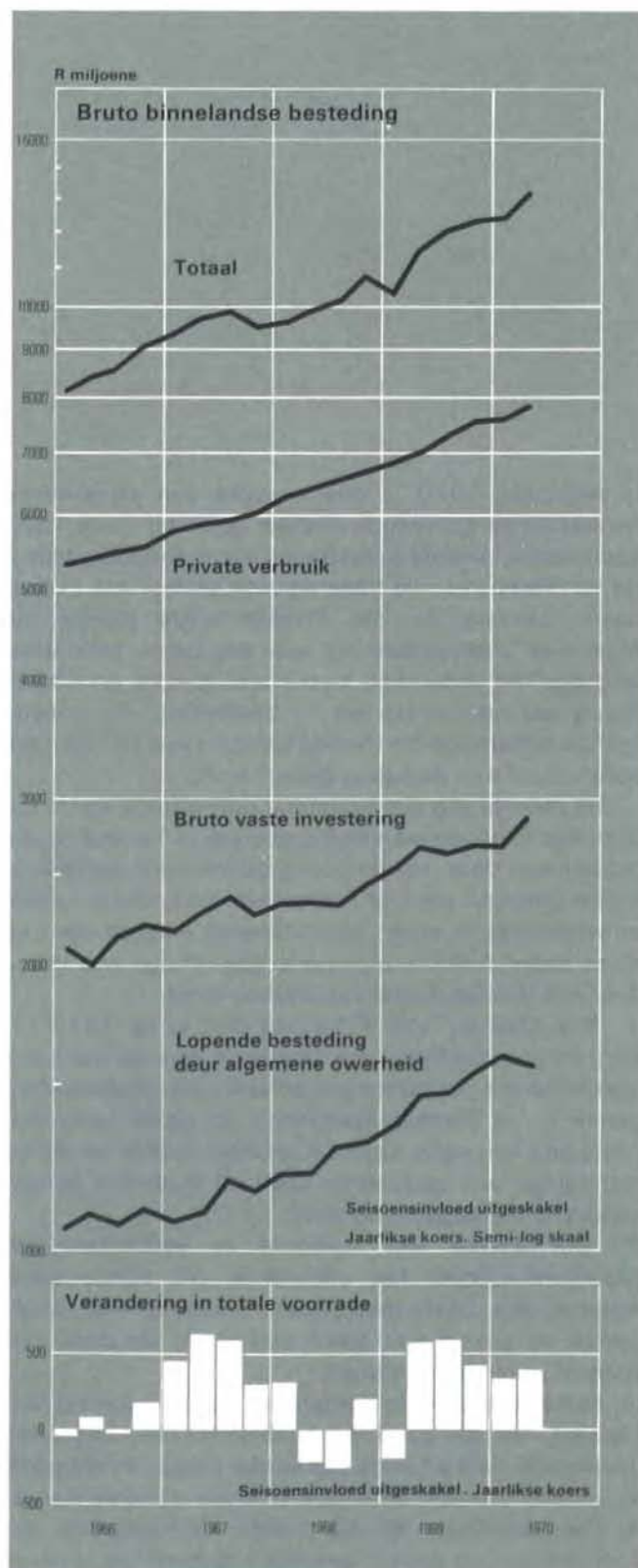
winste en netto rente- en huurbetalings), wat gedurende die vorige twee kwartale geneig het om gelyk te verloop, ook aansienlik gestyg het as gevolg van die hoër landbouproduksie.

Skerp verdere styging in bruto binnelandse besteding

Bruto binnelandse besteding het soortgelyke kwartaal-lyke veranderinge as die bruto binnelandse produk getoon, maar het gedurende die tweede kwartaal vinniger as laasgenoemde gestyg. Dit het 'n aansienlik groter tekort op die lopende rekening van die betalingsbalans tot gevolg gehad. Behalwe die lopende besteding deur die algemene owerheid, wat gedurende die tweede kwartaal van 1970 ietwat gedaal het, het al die belangrikste komponente van bruto binnelandse besteding, naamlik private verbruiksbesteding, kapitaalbesteding aan installasies, masjinerie, toerusting, geboue en konstruksiewerke deur beide die openbare en die privaatsektor en voorraadinvestering, tot die vinniger koers van toename in die bruto binnelandse besteding bygedra.

Nadat dit gedurende die eerste kwartaal van 1970 gelyk verloop het, het private verbruiksbesteding gedurende die tweede kwartaal van 1970 weer aansienlik versnel, hoofsaaklik as gevolg van verhoogde besteding aan duursame goedere (veral aan nuwe motors) en aan dienste. In 'n poging om die oormatige koers van toe-

name in private verbruiksbesteding te bekamp, het die Minister van Finansies in sy 1970/71- Begroting sekere maatreëls soos 'n toename in die leningsheffing en 'n



hoër verkoopreg op sekere artikels aangekondig. Terselfdertyd is egter salaris- en loonsverhogings deur die Suid-Afrikaanse Spoorwegadministrasie, die sentrale regering, die provinsiale administrasies en sekere vertakings van die privaatsektor aangekondig, wat natuurlik sal neig om private verbruiksbesteding te stimuleer.

Bruto binnelandse vaste investering het eweneens 'n aanmerklik toename gedurende die tweede kwartaal van 1970 getoon. Hoewel die besteding aan masjinerie, installasies en toerusting betekenisvol gestyg het, was die grootste gedeelte van die toename in vaste investering tot geboue en konstruksiewerke beperk. Kapitaaluitgawes deur openbare owerhede het aansienlik toegeneem, hoofsaaklik as gevolg van die groter besteding deur plaaslike owerhede en die Suid-Afrikaanse Spoorwegadministrasie. Die skerp styging in die vaste investering deur laasgenoemde het inderdaad 'n ommeswaai verteenwoordig in die afwaartse neiging wat vanaf die eerste kwartaal van 1969 begin het.

Kapitaalbesteding deur openbare korporasies, wat gedurende die eerste kwartaal van 1970 aanmerklik toegeneem het, het gedurende die tweede kwartaal van 1970 slegs 'n klein verdere toename getoon, terwyl die vaste investering van al die subsektore van die privaatsektor gedurende die tweede kwartaal van 1970 slegs matig toegeneem het.

Vir die vyfde opeenvolgende kwartaal is 'n betreklik groot netto toevoeging tot voorrade gedurende die tweede kwartaal van 1970 aangeteken. Hierdie opbouing was hoofsaaklik beperk tot nywerheids- en handelsvoorrade, insluitende merkbare toevoegings tot landbouvoorrade in die handel.

Onvoldoende binnelandse besparing

Volgens voorlopige aanduidings het al die vernaamste bronne van binnelandse besparing, in die besonder persoonlike en maatskappybesparing, gedurende die tweede kwartaal van 1970 aansienlik toegeneem. Desnieteenstaande was bruto binnelandse besparing nog onvoldoende om totale investering, d.w.s. bruto binnelandse vaste en voorraadinvestering, te finansier. Buitelandse fondse is gevolglik weer eens op groot skaal vir die finansiering van binnelandse investering aangewend.

Algemene ekonomiese aanwysers

Die meeste van die meer belangrike aanwysers wat vir die maande ná Maart 1970 beskikbaar is, bevestig die indruk verkry uit die nasionale rekeninge statistiek dat algemene ekonomiese aktiwiteit gedurende die tweede kwartaal van 1970 teen 'n vinniger koers toegeneem het as gedurende die voorafgaande twee kwartale. Die seisoensaangesuiwerde indeks van die fisiese volume van fabrieksproduksie, wat gedurende die tweede helfte van 1969 en die eerste kwartaal van 1970 'n meer gelyke verloop getoon het, het gedurende

April en Mei 1970 redelik skerp toegeneem. Hierdie neiging is ook in die totale ure gewerk en onvoltooide bestellings in die fabriekswese weerspieël. Hoofsaaklik as gevolg van 'n verdere toename in ander mynbouproduksie, het die indeks van die fisiese volume van mynbouproduksie 'n aansienlike toename gedurende die tweede kwartaal van 1970 getoon.

Ontwikkelings gedurende die tweede kwartaal van 1970 is deur 'n skerp toename in totale werkverskaffing vergesel, veral in konstruksie, mynbou, fabriekswese en die Poskantoor. In ooreenstemming met die opwaartse neiging in werkverskaffing, het die seisoensaangesuiwerde aantal werklose Blankes, Kleurlinge en Asiëse gedurende die eerste ses maande van 1970 verder gedaal om die besonder lae syfer van 8,520 in Junie te bereik. 'n Gevolg van die verdere vernouing in die arbeidstoestand, was die groot aantal salaris- en loonsverhogings wat gedurende die afgelope paar maande aangekondig is, veral in die openbare sektor.

Die versnelling in ekonomiese aktiwiteit gedurende die tweede kwartaal van 1970 is verder weerspieël in die aansienlike toename in goedere-invoer, groot-handelsverkope, verkope van nuwe motors en handelsvoertuie, en 'n toename in kleinhandelsverkope ná 'n skerp daling teen die einde van 1969. Moontlik as gevolg van 'n skaarste aan sekere soorte boumateriaal, die stram arbeidstoestand en onvoldoende vervoerfasiliteite, was die konstruksiebedryf geneig om minder bedrywig te wees. Hierdie neiging is weerspieël in die waarde van bouplanne goedgekeur, groothandelsverkope van boumateriale en die versending van gewalste en getrokke staalprodukte. Aan die hand van die seisoensaangesuiwerde indeks van transaksies in vaste eiendom, wil dit voorkom asof die aansienlike toename in aktiwiteit in hierdie sektor vanaf die begin van 1968 nou ook begin verlangsaam. Die aandele-mark het egter traag gebly.

Pryse

Gedurende die eerste sewe maande van 1970 het die koers van toename in verbruikerspryse merkbaar versnel. Na 'n toename van 3.3 persent (2.6 persent as die invloed van die verkoopreg uitgesluit word) in 1969, het die seisoensaangesuiwerde indeks van verbruikerspryse teen 'n jaarlikse koers van nie minder nie as 4.1 persent gedurende die eerste sewe maande van 1970 toegeneem. Hierdie hoër koers van toename kan egter in 'n groot mate toegeskryf word aan 'n aansienlik hoër koers van toename in voedselpryse, naamlik vanaf 'n toename van 1.0 persent in 1969 tot soveel as 5.1 persent teen 'n seisoensaangesuiwerde jaar koers gedurende die eerste sewe maande van 1970. Verdere aansienlike toenames is ook in die pryse van sekere dienste en in „behuising en verwante items” aange-teken.

Die versnelling in die koers van toename in groot-handelspryse was nog meer opvallend. Na 'n toename van 2.3 persent (1.4 persent as die invloed van die verkoopreg uitgesluit word) in 1969, het die

siesoensaangesuiwerde indeks van groothandelspryse teen 'n jaar koers van 3.8 persent gedurende die tyd-perk vanaf Desember 1969 tot Julie 1970 toegeneem. Dit is ook betekenisvol dat die versnelling in pryse in alle komponente van die indeks weerspieël is, en dat dit in besonder opvallend was in die pryse van landbouprodukte.

Betalingsbalans

Rekord tekort op lopende rekening

Gedurende die tweede kwartaal van 1970 is 'n tekort van nie minder nie as R171 miljoen op die lopende rekening van die betalingsbalans aangeteken. Teen 'n seisoensaangesuiwerde jaar koers het hierdie tekort R618 miljoen bedra, vergeleke met R535 miljoen gedurende die eerste kwartaal van die jaar. Die verdere verswakking van die saldo op lopende rekening was veral aan 'n aansienlike toename in goedere-invoer te wyte.

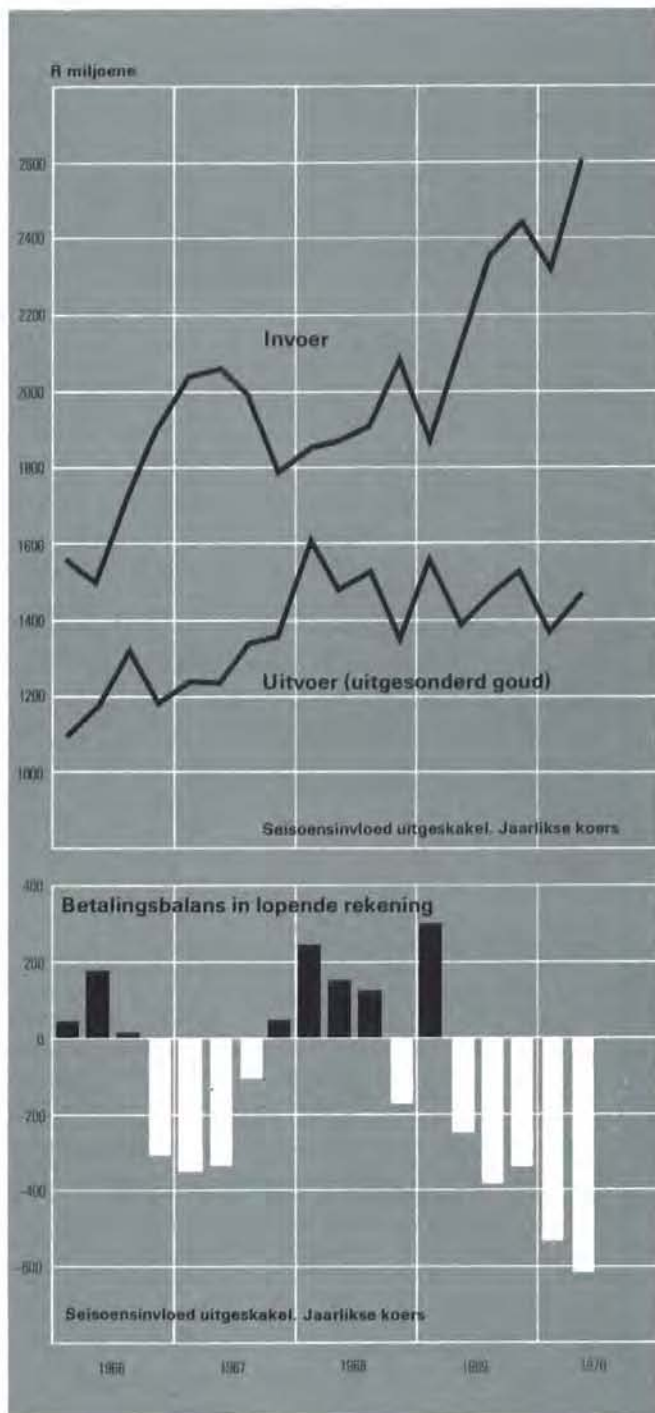
Nadat dit teen 'n seisoensaangesuiwerde jaar koers tot R2,320 miljoen gedurende die eerste kwartaal van 1970 afgeneem het, het goedere-invoer tot R2,608 miljoen gedurende die tweede kwartaal gestyg. Volgens die maandsyfers van die Departement van Doeane en Aksyns, wat nie vir betalingsbalansdoeleindes aangepas is nie en dus nie streng met bogenoemde kwartaalsyfers vergelykbaar is nie, het invoere gedurende Julie 'n seisoensaangesuiwerde jaar koers van R2,701 miljoen bereik, voordat dit tot R2,527 miljoen in Augustus afgeneem het, gedeeltelik as gevolg van die dokstakings in die Verenigde Koninkryk.

Netto onsigbare betalings aan die res van die wêreld het gedurende die tweede kwartaal R343 miljoen (teen 'n seisoensaangesuiwerde jaar koers) beloop, vergeleke met R363 miljoen in die voorafgaande kwartaal. Hierdie afname het voorgekom ten spyte van verhoogde betalings aan rente, dividende en vrag en versekering op handelware, en was die resultaat van 'n toename in netto oordragontvangstes en hoër inkomste verdien uit buitelandse skepe in Suid-Afrikaanse hawens. Netto goudproduksie het gedurende die tweede kwartaal ook aansienlik gestyg, terwyl goedere-uitvoer vanaf 'n seisoensaangesuiwerde jaar koers van R1,375 miljoen in die eerste kwartaal tot R1,475 miljoen in die tweede kwartaal van 1970 gestyg het, hoofsaaklik as gevolg van 'n toename in die uitvoer van landbouprodukte. Gedurende Julie en Augustus het uitvoere min verandering getoon.

Aansienlike netto kapitaalinvloeiing

'n Verdere netto kapitaalinvloeiing van R156 miljoen is gedurende die kwartaal geëindig Junie 1970 aange-teken, wat die totale netto kapitaalinvloeiing gedurende die eerste ses maande van die jaar op nie minder nie as R253 miljoen te staan gebring het. Die netto kapitaal-invloeiing na die private sektor het R116 miljoen en





dié na die sentrale regering en banksektor het R40 miljoen tot die totale netto invloeiing gedurende die tweede kwartaal bygedra.

Die groter invloeiing van kapitaal na die private sektor het hoofsaaklik bestaan uit lenings wat in die buiteland verkry is as gevolg van die stram toestande op die binnelandse kapitaalmark, en 'n toename in handelskrediet wat in verband staan met die skerp styging in goedere-invoer. Die netto invloeiing na die private sektor was

ongeveer gelyk tussen lang- en korttermynkapitaal verdeel, naamlik R60 miljoen en R56 miljoen onderskeidelik.

Goud- en buitelandse valuta-reserwes

Aangesien die groot tekort op lopende rekening hoofsaaklik vergoed is deur die aansienlike netto kapitaalinvloeiing waarna hierbo verwys is, het die totale goud- en buitelandse valuta-reserwes met slegs R15 miljoen gedurende die tweede kwartaal afgeneem en was teen die einde van Junie nog op 'n relatief hoë vlak van R1,008 miljoen. Gedurende Julie het die goud- en buitelandse valuta-reserwes van die land egter met R46 miljoen afgeneem tot R962 miljoen, terwyl die goud- en buitelandse valuta-reserwes van die Suid-Afrikaanse Reserwebank gedurende Augustus met 'n verdere R61 miljoen gedaal het.

Monetêre en banktoestand

Die seisoensaangesuiwerde hoeveelheid geld en kwasi-geld het gedurende die tweede kwartaal van 1970 met R116 miljoen en gedurende Julie met 'n verdere R53 miljoen toegeneem. Die toename gedurende hierdie vier maande het daardeur 'n jaarlikse koers van toename van 13.4 persent verteenwoordig, vergeleke met 14.2 persent gedurende die eerste kwartaal van 1970 en 10.3 persent gedurende 1969.

Hoofboorsake van veranderings in geld en kwasi-geld

(R miljoene)

	Seisoensinvloed nie uitgeskakel nie			Seisoensinvloed uitgeskakel		
	1e kw.	2e kw.	Julie	1e kw.	2e kw.	Julie
Netto goud- en buitelandse valuta-reserwes	-43	-39	-44	-56	-24	-75
Eise teen die regeringsektor:						
Bruto eise	-45	51	49	...	...	...
Regeringsdeposito's (toename -, afname +)	-63	82	-113	...	...	...
Netto eise	-107	133	-63	10	49	-17
Eise teen die private sektor	99	51	57	76	68	57
Langtermyn private deposito's (toename -, afname +)	-1	60	6	28	71	16
Ander bates en laste (netto)	-22	-4	46	...	...	...
Totaal	-74	200	2	106	116	53

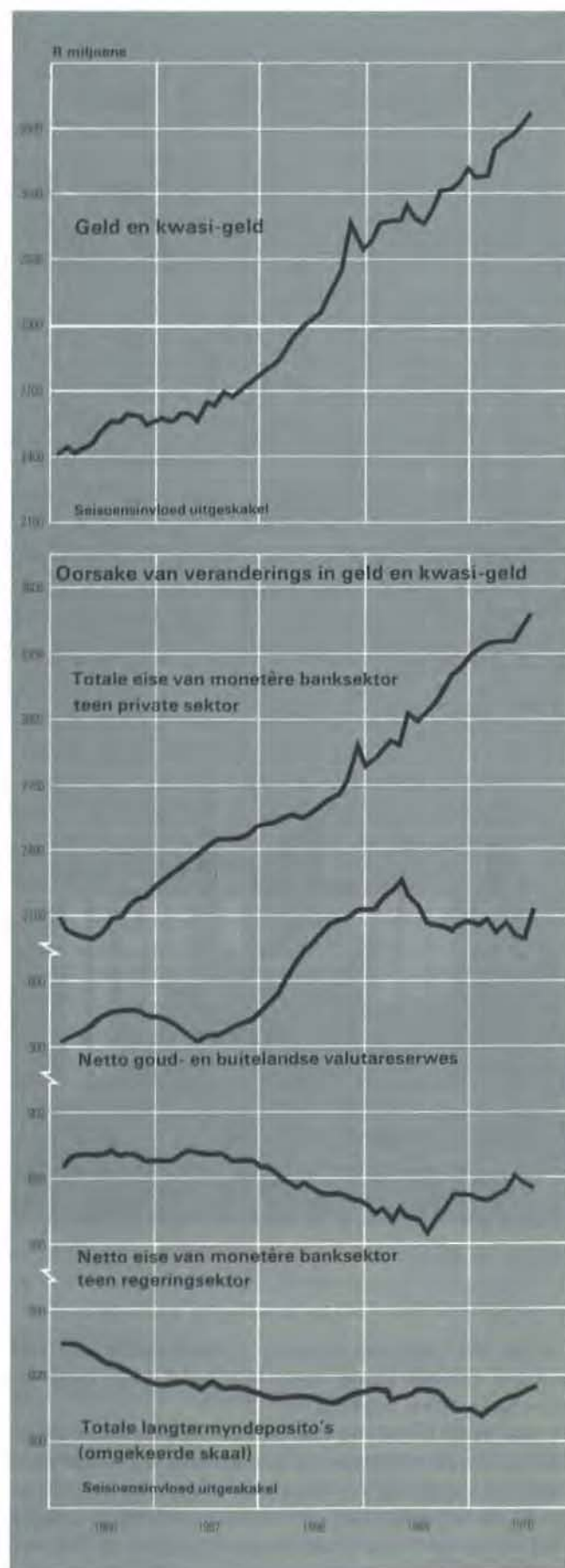
Soos die bygaande tabel toon, het die oorsake van verandering in geld en kwasi-geld gedurende die tweede kwartaal van 1970 baie ooreengekom met die patroon van die eerste kwartaal indien seisoensbewegings, wat gedurende die eerste kwartaal gewoonlik meer opmerklik is, in aanmerking geneem word. Die netto goud- en buitelandse valuta-reserwes het aangehou om te daal, *netto* bankkrediet aan die regeringsektor (hoofsaaklik as gevolg van 'n daling in regerings-deposito's) en bankkrediet aan die private sektor het verdere toenames getoon, en die langtermyndeposito's van die private sektor het aansienlik gedaal. Laasgenoemde daling is waarskynlik veroorsaak deur die betreklik geringe rentekoersmarges tussen die koerse op middeltermyn- (tot ses maande) en langtermyndeposito's (van 12 maande en langer).

Die oorskot likwiede bates van monetêre bankinstellings, wat herstel het vanaf slegs R85 miljoen aan die einde van Januarie 1970 tot R263 miljoen aan die einde van Junie, het daarna weer tot R141 miljoen, of 2.9 persent van hul verpligtings teenoor die publiek, aan die einde van Julie gedaal. Hierdie daling weerspieël hoofsaaklik 'n afname in die werklike besit aan likwiede bates, wat verband gehou het met die stroom van belasting- en leningsfondse na die regering in die middel van die jaar en met die skerp daling in die goud- en buitelandse valuta-reserwes gedurende Julie.

In hierdie verband het die President van die Reserwebank in sy Voorsittersrede op 25 Augustus aangekondig dat 'n aantal faktore dit moeilik sal maak om gedurende die komende jaar kredietbeheer en likwiditeitsvoorskrifte in dieselfde mate as gedurende die afgelope jaar te verslap. Hy het melding gemaak van die bestaan van inflasionistiese druk op 'n tydstop wanneer die likwiditeit van die private sektor nog betreklik hoog is. Die sterk opwaartse beweging van invoer en die feit dat 'n verslapping van krediet dit verder kan stimuleer, is ook in hierdie verband as 'n faktor genoem.

Die diskontohuise het hul skuldposisie teenoor die Reserwebank, wat tot R17 miljoen aan die einde van Junie gedaal het, tot 'n rekordbedrag van R178 miljoen aan die einde van Julie vermeerder voordat hulle dit weer tot R117 miljoen aan die einde van Augustus verminder het. Hoewel die daggelddeposito's by die diskontohuise gedurende Julie met R158 miljoen gedaal het, het hulle nietemin daarin geslaag om die totale waarde van hul portefeulje met behulp van Reserwebankkrediet op 'n peil van meer as R400 miljoen te handhaaf. Ten einde die voortdurende grootskaalse steun op Reserwebankkrediet te ontmoedig, het die Reserwebank vanaf die begin van Julie daartoe oorgegaan om op 'n gereelde basis strafkoerse toe te pas. Die strafkoers is gedurende Augustus progressief verhoog en het teen die middel van September 'n peil van twee persent bo die bankkoers bereik.

Die skatkiswissel-tenderkoers het ná Maart 1970 min verandering getoon en tussen 4.34 en 4.38 persent



geskommel. Die diskontohuise het gedurende Julie en in die begin van September 1970 by tye koerse op daggeld gekwoteer wat hoër was as die skatkiswissel-tenderkoers. Terselfdertyd het die koers op verhandelbare depositosertifikate van 90 en 180 dae op 31 Julie nuwe hoogtepunte van onderskeidelik 7.00 en 7.15 persent bereik voordat dit gedurende Augustus gedaal het.

Op 12 Augustus 1970 is banke en bouverenigings deur die Reserwebank onthef van hul onderneming om 'n maksimumkoers van 7 persent per jaar op deposito's te handhaaf, terwyl die stel rentekoerse van die Reserwebank op langtermynstaatseffekte tegelykertyd vanaf 7 tot $7\frac{3}{4}$ persent verhoog is. Ná hierdie aankondiging het die belangrikste handelsbanke tussen 19 Augustus en 8 September hul koers op deposito's van 12 maande vanaf 7 na $7\frac{1}{2}$ persent verhoog, nadat verskeie huurkoop- en algemene banke (met insluiting van filiale van handelsbanke) hul koers reeds ietwat eerder verhoog het. Op 1 September het die bouverenigings hul koers op deposito's van 12 maande van 7 na $7\frac{1}{2}$ persent, en dié op opbetaalde onbepaalde-termyn-aandele van 7 na $7\frac{3}{4}$ persent, verhoog, en het hul vaste-termyn-aandele heringestel teen 'n koers van $8\frac{1}{4}$ persent vir 'n tydperk van sewe jaar en teen $8\frac{1}{2}$ persent vir tien jaar.

Uitleenkoerse van bouverenigings en banke is ook verhoog. So het die bouverenigings hul verbandkoers ten opsigte van woonhuise met ingang van 1 September 1970 van $8\frac{1}{2}$ na 9 persent verhoog. Die handelsbanke het hul minimum oortrekkingskoers op $7\frac{1}{2}$ persent gehou maar hul sogenaamde primakoers van 8 na $8\frac{1}{2}$ persent verhoog. Die minimum oortrekkingskoers is van toepassing indien effekte van die Suid-Afrikaanse Regering, die Reserwebank, plaaslike owerhede of openbare korporasies as onderpand aangebied word of wanneer vaste deposito's of deposito's onderhewig aan kennisgewing van onttrekking wat deur die lener by die bank wat uitleen gehou word, as onderpand dien. Hierteenoor verwys die primakoers na die koers wat gekwoteer word op eersterangse versekerde oortrekkings, asook op ongedekte oortrokke rekeninge van ontwyfelbare kliënte en van munisipaliteite en ander plaaslike owerhede, hospitale, skole en ander soortgelyke wel-syns- en nie-winssoekende instellings.

Min veranderinge kon opgemerk word in die koerse wat amptelik gekwoteer is op deposito's met oorspronklike looptye of kennisgewingperiodes van minder as een jaar. 'n Verruiming van die marge tussen die hoogste en laagste koerse wat op deposito's van 31 dae, 91 dae en ses maande aangebied is, het egter onder huurkoopbanke voorgekom. Koerse tussen 6 en $6\frac{3}{4}$ persent word tans op deposito's van ses maande gekwoteer.

In samehang met die ontheffing van die banke van hul onderneming om 'n maksimum koers van 7 persent op deposito's te handhaaf en as 'n verdere stap om 'n

moontlike rentekoersoorlog te ontmoedig, is op 25 Augustus 1970 deur die President van die Reserwebank in sy Voorsittersrede aangekondig dat nie-mone-têre banke ook verplig sou word om te verseker dat hul diskonteringe en voorskotte aan die private sektor en sekere beleggings by die private sektor vanaf die einde van September nie die totaal van die betrokke bateposte soos aan die einde van Junie met meer as 5 persent oorskry nie. Die marge van vyf persent is toegelaat „ten einde hierdie instellings 'n klein speling te laat en ook omdat die krediet verleen deur die mone-têre banke soos aan die einde van Junie, ongeveer vyf persent onder hulle plafonne was”.

Kapitaalmark

Ontwikkelings in die kapitaalmark gedurende die tweede kwartaal en Julie 1970 was hoofsaaklik 'n voortsetting van die neigings wat die mark vroeër die jaar gekenmerk het. Die aandelemark het traag gebly, deponisionemende instellings het nog 'n groot toevloeiing van fondse ondervind, en toestande in die mark vir vaste-rentedraende effekte was nog steeds stram.

In die aandelemark het beleggers nog nie hul vertroue herwin nie en aandelepryse het hul afwaartse gang voortgesit, en hoewel 'n aanmerklike daling nog gedurende die tweede kwartaal voorgekom het, het die koers van afname gedurende Julie laer geneig. Gedurende Augustus en September was 'n geringe verbetering in die aandelemark waarneembaar. Gepaardgaande met hierdie aandeleprysbewegings, het die getal aandele op die Johannesburgse Effektebeurs verhandel, gedurende die tweede kwartaal verder gedaal en gedurende Julie die laagste peil in 31 maande bereik, hoewel die aantal nuwe aandelenoteringe gedurende onlangse jare aansienlike toegeneem het. Die afwaartse neiging in aandelepryse, tesame met verhoogde dividendbetalings, het tot 'n verdere styging in die opbrengskoerse op aandele gelei. Die gemiddelde opbrengskoers op nywerheids- en handelsaandele, wat tot 3.4 persent in Mei 1969 gedaal het, het tot 4.7 persent in Maart en 5.9 persent in Julie 1970 gestyg, terwyl die gemiddelde opbrengskoers op goudmynaandele tot 11.1 persent in Julie toegeneem het. Effektetrustsyfers het die algemene neiging op die Effektebeurs weerspieël en die trusts het, net soos in die voorafgaande agt maande, 'n verdere uitvloeiing van fondse gedurende die tweede kwartaal en in Julie ondervind. Die gemiddelde maandelikse uitvloeiing van R6 miljoen was egter aansienlik minder as die ooreenstemmende rekordbedrag van R16 miljoen wat gedurende die eerste kwartaal van 1970 aangeteken is.

Rentekoerse in die mark vir vaste-rentedraende effekte, wat 'n volgehoue styging vanaf die tweede helfte van 1969 getoon het, het na die middel van 1970 verder gestyg. Die langtermynlening wat in Julie deur die Regering teen 'n rentekoers van 7 persent uitgeskryf is, het beperkte belangstelling van beleg-



gers in die private nie-banksektor, wat slegs R7 miljoen opgeneem het, geniet. Toe die banke en bouverenigings onthef is van hul onderneming om rentekoerse op deposito's op 'n maksimum van 7 persent te handhaaf, het die Reserwebank ook sy koers gekwoteer vir transaksies in langtermynstaatseffekte met 'n looptyd van 20 jaar en langer, vanaf 7 tot $7\frac{3}{4}$ persent met ingang vanaf 13 Augustus verhoog, terwyl die langtermyn-opbrengskoers op nuwe uitgiftes van semi-prima-effekte daarna ook vanaf ongeveer 8 tot 8.9 persent verhoog is. Die private sektor het ook gevolg en die opbrengskoers op nuwe uitgiftes van maatskappyskuldbriewe is tans ongeveer 10.1 persent, vergeleke met 'n vorige peil van ongeveer 9.5 persent.

Alhoewel opbrengskoerse op aandele slegs tot Julie beskikbaar is, wil dit voorkom asof ontwikkelings gedurende Augustus en September tot rentekoersverhoudings in die kapitaalmark gelei het, soortgelyk aan dié wat in die middel van die jaar gegeld het. Op daardie stadium was die „omgekeerde” rendementsgaping tussen langtermynstaatseffekte en nywerheids- en handelsaandele 1.3 persent, die verskil tussen opbrengskoerse op langtermynprima- en -semiprima-effekte 1.0 persent en die marge tussen die opbrengskoerse op maatskappyskuldbriewe en prima-effekte 2.5 persent.

Business cycles in South Africa during the post-war period, 1946 to 1968

by D. J. Smit and B. E. van der Walt*

Introduction

The Reserve Bank has for some time been doing research on business cycles and for this purpose a large number of economic time series has been accumulated and analysed. Although many of the series have been used in the past to assess the course of economic activity, no formal attempt has thus far been made to establish the turning points of the business cycle in the post-war period. In view of the large number of series now available it has become possible to determine these turning points with a reasonable measure of certainty.

The first part of this article contains an exposition of the statistical procedure employed in determining the so-called reference turning points. Three methods are described and a comparison of the results is presented. In the second part of the article the various phases of the business cycle are discussed against the background of economic developments with a view to throwing more light on the actual turning points, especially in the cases where the three methods yield different results.

Part I

The turning points of the business cycle

The components of an economic time series

Changes in economic activity are reflected in the behaviour of practically all economic time series, and particularly in well-known series such as the quarterly national accounts figures, balance of payments and money and banking statistics, indices of manufacturing and mining

production, employment and retail and wholesale sales. A time series may be defined technically as a set of ordered observations on a quantitative characteristic of an individual or collective phenomenon made at different points of time [6].

The following components can be meaningfully distinguished in an economic time series: (a) long-term trend, (b) business cycles, (c) seasonal variations, and (d) irregular fluctuations.

The long-term trend reflects the growth and development of an economy over time and is related to a sustained increase of the working population, the application of innovations, qualitative transformations and increased productivity. Over a long period of time "long" waves, defined as waves with periods which are longer than those of the business cycle, may also be distinguished from the other components of a time series. As the period since 1946 is too short to allow proper identification of such waves, they have been considered as part of the long-term trend in this study.

A business cycle consists of a consecutive expansion and contraction of general economic activity. According to Burns and Mitchell "Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration, business cycles vary from more than one year to ten or twelve years" [2]. Although the term "cycle", as used in mathematical terminology, refers to a strictly periodic movement, it will be used in this article to reflect its "accepted" economic meaning.

*The views expressed and conclusions drawn in this article are those of the authors and do not necessarily represent those of the South African Reserve Bank.

Seasonal variations signify the pattern of variation of a time series within a year. These fluctuations, which usually recur at particular times of the year, are caused primarily by weather conditions, e.g. in the case of agricultural seasons, and certain conventions, e.g. Christmas and Easter.

The fourth component of a time series referred to above, viz. irregular fluctuations, is caused largely by fortuitous factors or events, such as exceptional weather conditions, strikes, political events and errors of observation. From a statistical point of view they may be regarded as "residual" elements in the broad picture of economic movements.

Methods of identifying the turning points of the business cycle

Before discussing the methods of identifying the turning points of the business cycle, it is important to note that a distinction is drawn between a "specific" and a "reference" turning point. The former refers to a turning point of a particular time series, while a reference turning point is a turning point of total economic activity.

There are several approaches to the problem of determining the turning points of the business cycle. The most generally employed methods make use of composite series, cluster of turning points of individual series, and diffusion indices. Factor analysis has also been applied in this field.

Composite series

The most commonly used composite series in general economic analyses are probably the gross domestic product and the index of industrial production. Gross domestic product at current prices reflects the total monetary value of production, while at constant prices, it presents the physical volume of all goods and services produced in a particular period. It is accordingly a useful overall measure of the level of economic activity. Other examples of composite series are the physical volume of manufacturing production, employment in non-agricultural sectors and personal income. Harberler says that "... a combination of the three indices—(1) employment, (2) real income consumed and (3) real income produced—can be regarded as the criterion of the existence, and measure of the degree, of prosperity and depression and changes in the same" [5].

Cluster of turning points

The method which is based on the clustering of turning points, embraces the determination of the specific turning points of each of an adequately large number of time series representing as many aspects of economic activity as possible. Concentrations of peaks and troughs at specific points of time are used as indications of

reference turning points. The cyclical component of a time series, or of total economic activity, is normally used as a basis for determining these turning points. The reference dates determined by an eminent institution such as the National Bureau of Economic Research, are based mainly on the clustering of specific turning points [1]. Bush and Cohen used this method to obtain preliminary estimates of reference dates, which were thereafter revised with the aid of a reduced number of time series selected on the basis of their particular characteristics [3].

Diffusion indices

A diffusion index may be defined as a measure of the dispersion of the increases in a number of time series as at a particular date. The value of the index for a particular period (say a month) is obtained by expressing the number of time series which increase, as a percentage of the total number of series considered. In the case of each series which remains unchanged, $\frac{1}{2}$ is added to the number of series which increase. A variation of this method consists of the calculation of a composite series by subtracting the percentage of series which decrease from the percentage of series which increase. By accumulating the result of this calculation, a series is obtained which normally gives a clear indication of changes in total economic activity.

In general, two types of diffusion indices are used, namely the historic and the current. In the case of the historic index, the turning points of the cyclical component of each series are determined. For each period subsequent to a trough up to and including the following peak, the series is regarded as increasing, and for each period subsequent to a peak up to and including the following trough, it is regarded as decreasing. For the calculation of the historic index, therefore, only a set of specific turning point dates is required for each series.

The current diffusion index is calculated without determining specific turning points. It is based on the actual change of individual time series from which the trend and seasonal components have been eliminated. Attempts have been made to reduce the random component of this diffusion index by using methods such as moving averages and the allocation of weights to the changes of individual series.

The extent to which series are selected for use in the construction of diffusion indices varies widely. Burns [8], for example, used approximately 700 time series, representing all types of economic phenomena such as production, prices, interest rates and inventories. He included series which are strongly as well as poorly correlated with the business cycle. Moore [9] compiled a historic diffusion index on the basis of series whose turning points show a correspondence with the National Bureau's reference dates. In this case the size of the sample varied from 83 to 356.

Methods used in South Africa

Du Plessis [4] determined turning points of the South African business cycle over the period 1910-49. His method consisted of the standardisation of the cyclical movements in each of 16 time series by dividing each series by its standard deviation. An average of the standardised time series, without using weights, was then calculated for each month. In a dissertation by van der Walt [11], reference turning points were determined for the post-war period to 1966 by the use of an unweighted diffusion index which was based on 106 series.

Advantages and disadvantages of methods

The major disadvantage of du Plessis's method is that it involves much more computations per series than the diffusion index or the cluster of turning points methods. With the large number of series now available, this becomes an important factor if the results are not more acceptable than the more straightforward methods employed in this study.

The composite series which are particularly useful for the purpose of business cycle analysis, are those referring to national accounting aggregates (e.g. gross domestic product), the physical volume of production (e.g. manufacturing and mining production and electric current generated), and employment in the non-agricultural sectors. Unfortunately these series are available on a monthly or quarterly basis only from about 1960. However, it is not always easy to decide whether more weight should be attached to the behaviour of a few composite series rather than to a large number of general economic indicators, and some of the aggregate series furthermore do not indicate clear cyclical movements. In both cases the degree of correlation with total economic activity has to be taken into account. As aggregate series cannot, therefore, be used as final indicators of reference turning points, the behaviour of other economic data should also be taken into account for this purpose.

The second method of determining reference turning points, viz. the cluster of turning points, suffers from the disadvantage that it is often difficult to obtain clearly demarcated distributions of turning points, each referring to a particular reference turning point. On the other hand, a graph of the frequency of turning points per period gives an indication of the extent of the concentration of turning points around reference dates.

The third method, viz. that of the diffusion index, usually gives a clear indication of the direction of change, and also of the reference dates, but not necessarily of the extent of change. In the extreme case, it may even happen that total economic activity accelerates, while a sufficient number of decreases appear in individual time series to yield a declining diffusion index value. Furthermore, as with an analysis based on the cluster

of turning points, it is difficult to select an unbiased sample of series reflecting total economic activity, and at the same time, to restrict the duplication of economic activity reflected by different series. However, in the case of the diffusion index, this problem can be partially solved by weighting on a sector basis, e.g. in accordance with the contribution to gross domestic product.

Notwithstanding these shortcomings, which are to a certain extent theoretical, it has been found in practice that the diffusion index is a fairly reliable indicator of the course of economic activity. In fact, Moore states that "... this conglomerate is one of the best historical indexes of the cyclical position of our economy that has ever been devised" [8]. It is also known that the cyclical movement of the diffusion index is clearly displayed, the maxima and minima thereof are reached before the corresponding reference peaks and troughs, the 50 per cent values thereof more or less coincide with the reference peaks or troughs, and the maxima and minima of the diffusion index give a reasonable indication of the amplitudes of the cycles in economic activity. The fact that the diffusion index leads general activity, means that it can be used for the forecasting of turning points as well as the intensity of up- and down-swings.

Research has shown that the rate of change in a composite series has the same leading characteristics as the diffusion index which has been compiled from the components of that composite series. The diffusion index which is intended to reflect the course in total economic activity can, however, cover a large number of heterogeneous time series, some of which are not represented in composite series. When it is compiled from a large sample of series, the diffusion index moreover tends to give a better indication of the cyclical movement than the composite series. Individual time series may also become available before the composite series, so that preliminary diffusion index values may be calculated on the basis of partial coverage, as the information becomes available. It has been maintained that, if the intention is to forecast reference dates, the diffusion index is easier to interpret than the rate of change in a number of series.

The historic diffusion index thus provides a useful summary of the course of a number of individual series, but like all composite series, it obscures details and cannot of itself serve as a substitute for detailed analyses. It is therefore necessary to consider also the movements of individual time series, so as to get an indication of which series change, when and by how much they fluctuate.

Some writers are of the opinion that the random fluctuations to which the current diffusion index is subject, reduce its value in the determination of historic reference turning point dates. These fluctuations can, however, be partially evened out by making use of a large sample.

Determination of reference turning points for South Africa

The determination of reference dates was based on the clustering of turning points of time series and on the historic diffusion index. For this purpose use was made of a sample of more than 200 time series, most of which are available for only a part of the period since 1946. These series were originally selected mainly on the basis of their usefulness for economic diagnosis. The only series deliberately excluded were those which do not show clear cyclical movements, such as certain employment, national accounts and interest rate series. As the emphasis is more on changes in real economic activity, the number of price series was restricted, and only the total consumer and wholesale price series were included. In the case of series that include a price factor the assumption can generally be made that in most cases the real component dominates the price component, and that the turning point dates are therefore not unduly affected¹. The Appendix contains a list of the series used in this study.

As indicated above, it was necessary to base the determination of specific turning points on the cyclical component of the time series. The seasonal component was excluded by applying basically the "X-11 Variant of the Census Method II Seasonal Adjustment Program" [10]. In addition, adjustments were made for variations in the number and type of trading days in a particular month. Thereafter, the random component was eliminated by the fitting of smooth curves on the seasonally adjusted series². As the elimination of the trend by a computer programme often gives unsatisfactory results, the trend of each series was eliminated by essentially freehand methods, because a measure of personal judgment was called for.

Where the cyclical component had the same consecutive value in the vicinity of a turning point, the last such value was taken. The value of the product of the cyclical and random component was also taken into account when a poor fitting of a Henderson curve occurred. In the case of some series, such as those relating to unemployment, it was necessary to use the inverse values. Specific turning point dates of quarterly series were allocated to the middle month of the quarter concerned, although it is acknowledged that this procedure may not always reflect the actual turning point.

Cluster of turning points

Graph 1 shows the frequency distribution of the number of specific turning points per month. The larger number

of turning points observed for the more recent years can be attributed to the increased number of series which were available, as shown in Table 1.

Table 1
Variation in the number of available time series

Period	Monthly series	Quarterly series	All series
Jan. 1946-Dec. 1947	31-40	0-0	31-40
Jan. 1948-Dec. 1956	41-53	0-0	41-53
Jan. 1957-Dec. 1959	52-77	0-11	52-88
Jan. 1960-Dec. 1963	83-116	32-61	115-177
Jan. 1964-Dec. 1968	111-122	64-82	175-204

On the basis of the concentration of turning point dates an attempt was made to mark off a number of homogeneous distributions, each belonging to only one reference turning point. This was done separately for upper and lower turning point dates. Table 2 shows the end points, the median³ and the sample size for each of these distributions.

Table 2
Medians and sample sizes for concentrations of specific turning point dates

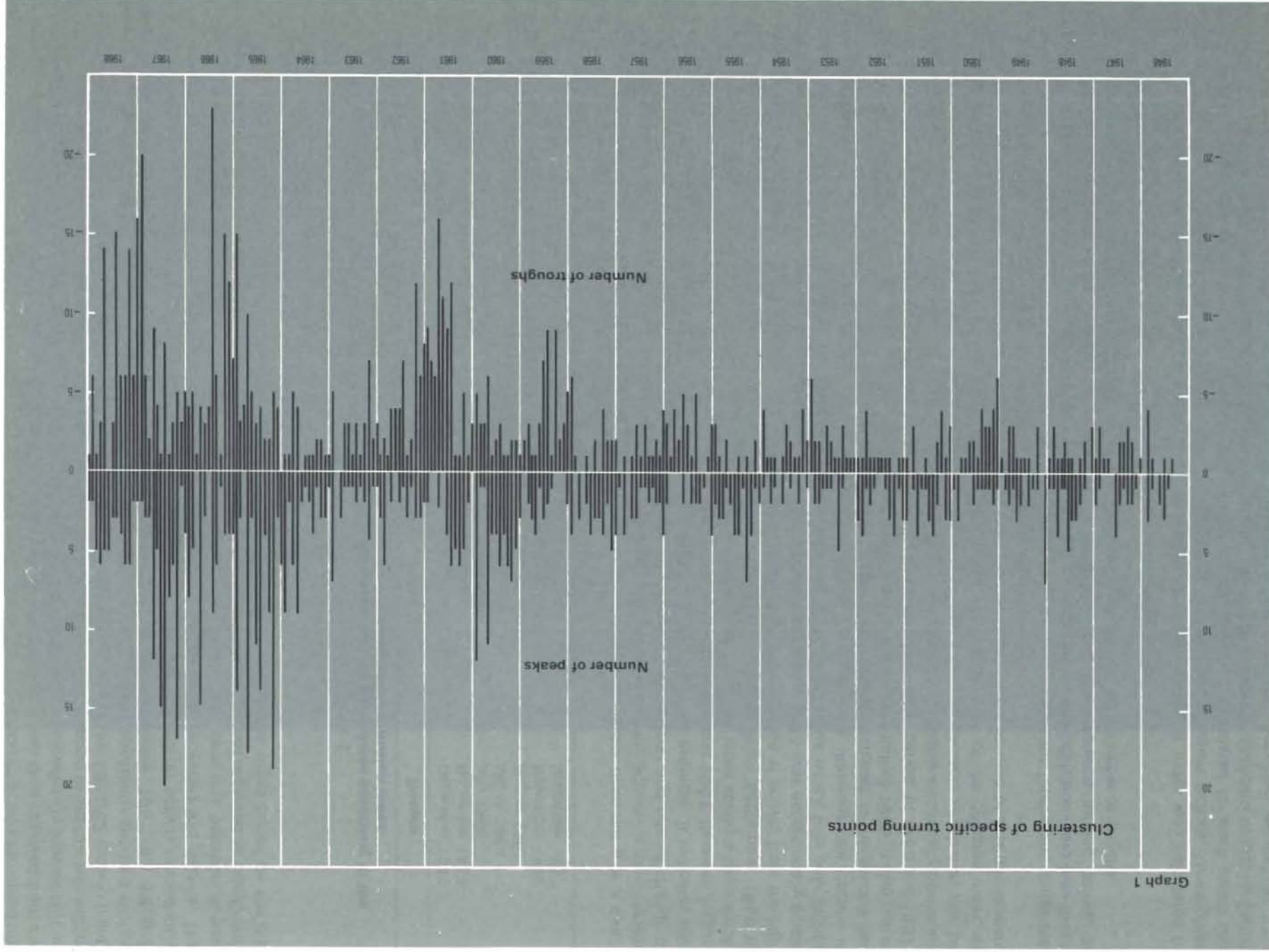
Peaks		
End points of distribution	Sample size	Median
Jan. 1946 - Dec. 1946	10	July 1946
Jan. 1947 - Sept. 1950	67	Sept. 1948
Oct. 1950 - June 1953	57	Nov. 1951
July 1953 - Aug. 1956	60	May 1955
Sept. 1956 - Mar. 1959	62	Jan. 1958
Apr. 1959 - Oct. 1961	109	Aug. 1960
July 1963 - June 1966	187	Apr. 1965
July 1966 - June 1968	144	May 1967
Troughs		
End points of distribution	Sample size	Median
Jan. 1946 - Apr. 1948	28	Apr. 1947
May 1948 - Aug. 1951	61	Jan. 1950
Sept. 1951 - Feb. 1955	64	Sept. 1953
Mar. 1955 - Sept. 1957	53	Aug. 1956
Oct. 1957 - Dec. 1959	68	Mar. 1959
Jan. 1960 - Dec. 1962	164	Aug. 1961
Dec. 1964 - Dec. 1966	146	Jan. 1966
Jan. 1967 - Dec. 1968	150	Dec. 1967

The median should give a good indication of the reference date if the specific turning points of a particular cluster are unbiased in regard to the reference point concerned. Furthermore, the direction of change of the series which have no turning points within a

¹In conformity with accepted practice, the series used involve some duplication through the inclusion in certain cases of both totals and selected major components [1, 3].

²Henderson curves were employed for this purpose. In the case of quarterly series 5 terms were used, while 9, 13 or 23 terms were used for the monthly series, depending on the relative amplitudes of the random and trend-cycle components.

³The median is that month which divides the number of turning points of the particular distribution into two halves.



particular cluster, should cancel out statistically and in terms of importance, and they should also be balanced as far as leaders and laggards are concerned.

Table 2 shows that two periods, namely November 1961 to June 1963 for peaks, and January 1963 to November 1964 for troughs, were not taken into account in the calculations. This was done because with the clear downward cyclical movement in economic activity from about the second quarter of 1960, as shown by the movements of the more important time series of Graph 4 and other economic data, it would have been somewhat unexpected for specific upper turning points, referring to the previous reference peak, to appear to a noticeable extent after 1961. Similarly, with the sharp upward phase after 1961, again evident from the movements of the more important series and other economic data, it is improbable that troughs with a bearing on the previous reference trough could have appeared on a significant scale after 1962. The starting points of these two periods were further refined by considering the clusters of turning points. The end points of the two periods were also determined on the basis of economic data and the observed distributions of turning points. While it is known that specific peaks and troughs are observed even when reference troughs and peaks, respectively, appear, the elimination of specific turning points in these periods can be partially justified because many of the series became available only from about 1960, and possibly also because cyclical movements could have been assigned to some of them which were not significant. Moreover, some of the specific turning point dates falling within the two periods concerned would not have been identified as such, if a knowledge of the reference turning point dates had been available in advance. By excluding these periods, the medians of the adjoining distributions of turning point dates are probably less biased as estimators of the reference turning point dates.

Unweighted diffusion index

The historic diffusion index is shown in Graph 2. In general, observations could be made on more time series for the purpose of this index than in the case of the cluster of turning points method, because the direction of change of a series for a particular period can sometimes be determined while one or both of the adjoining specific turning point dates cannot be definitely fixed. The graph shows a relatively smooth and clear cyclical movement, which can be ascribed mainly to the large samples and the fact that a historic index was calculated.

On the assumption of an unbiased sample of time series, an index value which exceeds 50 per cent in a particular month, indicates an increase in economic activity between the previous month and the month in question. Similarly, an index value smaller than 50 per cent points to a decrease in activity, and a value of 50

per cent means that the tempo in activity remained unchanged. A reference date was thus obtained from the graph as the month which precedes the intersection on the 50 per cent line. An exception to this rule was made, for example, in the case of the 1951/52 turning point. Although economic activity apparently declined slightly between August and September 1951, the diffusion index shows that the increase in activity immediately after September probably exceeded this decline. The intersection of the 50 per cent line between August and September is therefore not regarded as significant. Table 3 shows the reference dates based on the diffusion index.

Table 3
Reference turning point dates according to the unweighted diffusion index

Peaks	Troughs
September 1948	December 1949
December 1951	November 1953
June 1955	July 1956
December 1957	March 1959
June 1960	August 1961
August 1965	November 1965
June 1967	November 1967

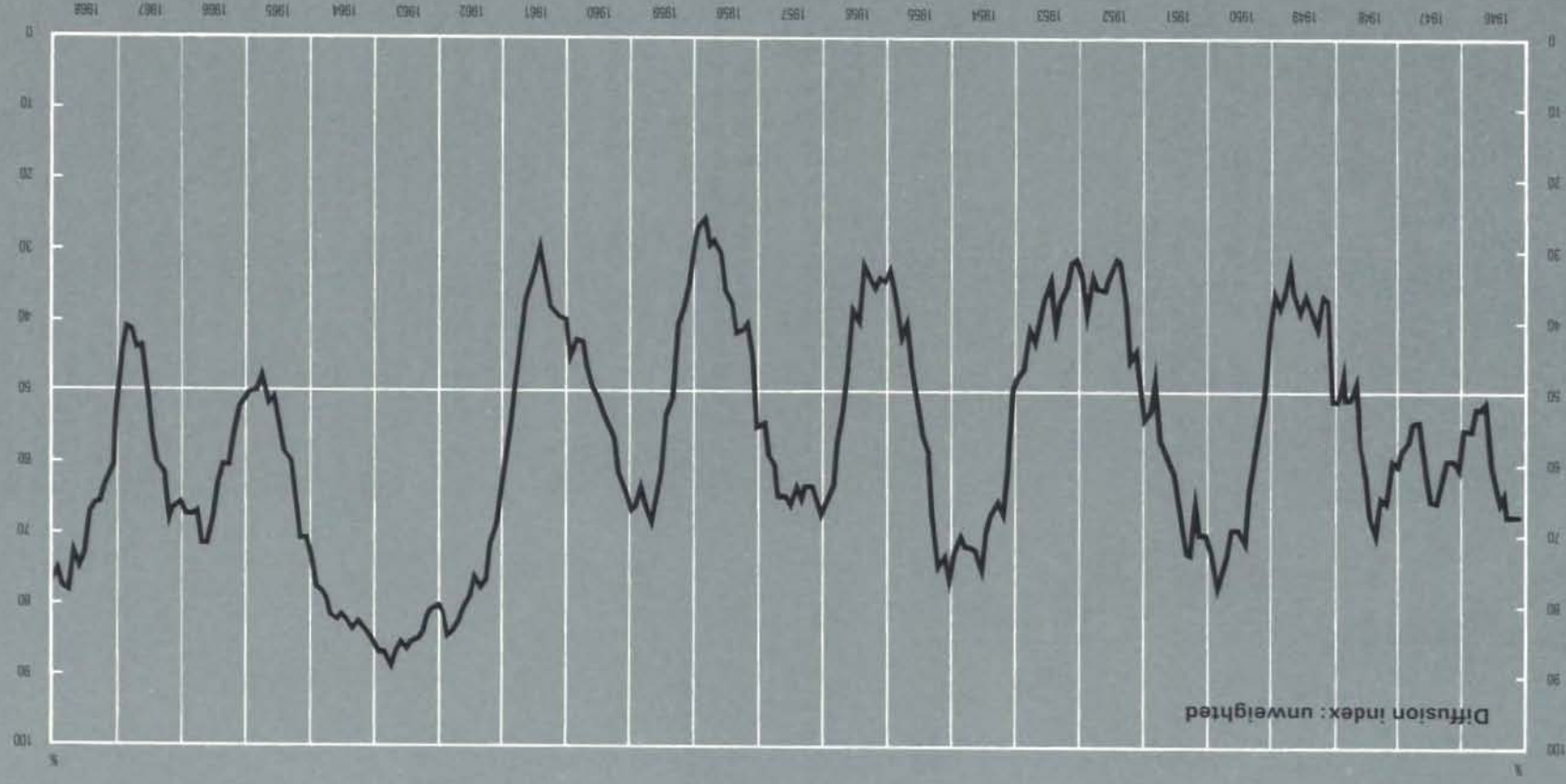
Although the diffusion index does not give a direct reflection of general economic activity, it nevertheless gives an indication of the level and rate of change of economic activity. Thus, for example, it indicates that a strong upturn took place after 1961. Between August 1961 and August 1965 the index shows a large amplitude over a long period. From September 1965 to November 1965 the decrease in activity from the high level attained in August 1965 was exceptionally small, as reflected in an index value which falls only slightly below the 50 per cent line. Although the decline in activity appeared more widespread in the second half of 1967 than in the second half of 1965, it also occurred during a relatively short period. In 1965 and 1967, therefore, two clear and probably statistically significant downward phases are recognisable which may also be considered on the grounds of the diffusion index, as moderate decreases in the course of a strong upward phase after August 1961.

It is interesting to note, for forecasting purposes, that the turning points of the diffusion index (see Graph 2) constantly lead the reference turning points, as indicated by this index, by a number of months.

Weighted diffusion index

A modified historic diffusion index was calculated by weighting the sectoral diffusion indices. Unweighted diffusion indices were calculated for each sector (according to the International Standard Industrial Classification of All Economic Activities) as well as for a

Graph 2



group of sundry series which could not be allocated to any of the eleven sectors. The weight of the sundry group, as against the total weight of the eleven sectors, was determined according to the number of series in relation to the total number of series used. The total weight thus obtained for the eleven sectors was allocated to the individual sectors in relation to their contributions to the gross domestic product. The weights were kept constant within five-year periods (the last period consisting of three years only) in order to restrict the year to year variation in weights.

For a weighted diffusion index to be acceptable it is desirable that the movements in the series of a particular sector must be representative of the course of activity in that sector. The danger exists that relatively large weights may be allocated to certain sector diffusion indices, based on only a few time series for certain periods, which may be biased in respect of the course in activity in these sectors. However, the weighting of the sector indices assures that the different sectors of the economy are balanced in the overall diffusion index. The weighted diffusion index is represented in Graph 3, while the reference dates appear in the following table:

Table 4
Reference turning point dates according to the weighted diffusion index

Peaks	Troughs
December 1948	February 1950
December 1951	November 1953
April 1955	September 1956
December 1957	March 1959
April 1960	July 1961
June 1965	September 1965
June 1967	November 1967

Discrepancy between reference dates

Table 5 shows the difference between the three sets of preliminary reference dates based on the clustering of specific turning points, the unweighted and the weighted diffusion indices.

In view of the fact that under normal circumstances it is not possible to determine a turning point of the business cycle within a short period of time, e.g. within a month, it appears from Table 5 that the results of the three methods do not differ significantly. In fact, the results of the three methods do not differ by more than four months for any one of the reference turning points. The differences between the results of the three methods would also appear to be of a random nature.

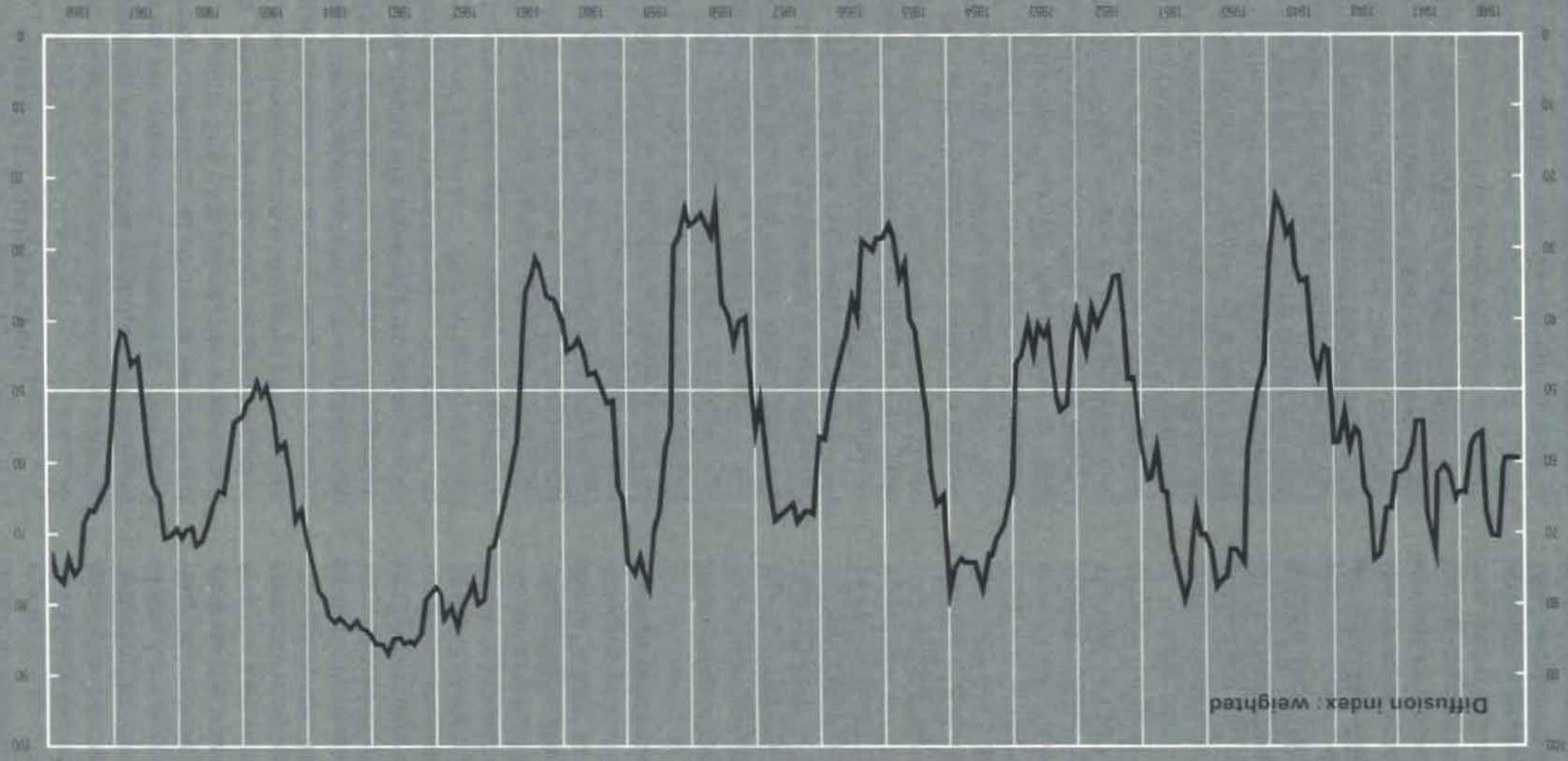
All three methods have shortcomings and it would be difficult to single out any one as better than the others. In order to arrive at "final" reference turning points, the results of all three methods together with the turning points of the more important composite and other

individual series and the consideration of economic events, will therefore have to be taken into account.

Table 5
Difference between preliminary reference turning point dates, number of months

Year	Cluster of turning points less		Unweighted diffusion index less weighted diffusion index
	Unweighted diffusion index	Weighted diffusion index	
Upper turning points:			
1946	—	—	—
1948	0	-3	-3
1951	-1	-1	0
1955	-1	1	2
1957/58	1	1	0
1960	2	4	2
1965	-4	-2	2
1967	-1	-1	0
Maximum absolute difference	4	4	3
Average absolute difference	1.4	1.9	1.3
Lower turning points:			
1947	—	—	—
1949/50	1	-1	-2
1953	-2	-2	0
1956	1	-1	-2
1959	0	0	0
1961	0	1	1
1965/66	2	4	2
1967/68	1	1	0
Maximum absolute difference	2	4	2
Average absolute difference	1.0	1.4	1.0

Graph 3



Part II

Economic developments and final turning point dates of the business cycle

In this part a brief survey is given of economic developments during the various phases of the business cycle and attention is drawn to events that may have influenced the behaviour of the various economic indicators.⁴ Against this background, the three sets of preliminary reference turning point dates obtained in Part I are used in conjunction with changes in the more important composite series, such as the gross domestic product and the physical volume of manufacturing production, to establish final reference turning point dates. A selection of the more significant economic indicators are shown on the accompanying graph.

Upswing: The immediate post-war period until July 1946

Mainly as a result of a decline in agricultural and mining production, the real gross domestic product increased only marginally during the last three years of the war. As against the limited increase in domestic supply, a considerable pent-up domestic demand existed at the end of the war. The severely restricted imports and increased gold production during the war years had raised internal liquidity to a very high level. In the immediate post-war years the South African economy was stimulated by increased demand in both domestic and export markets, while discoveries of gold in the Orange Free State and favourable mining developments in the Western Transvaal opened a new era in the gold-mining industry.

Viewed against this background, it was not surprising that when the authorities relaxed import and exchange controls in 1946, certain economic indicators such as merchandise imports, the number of new motor vehicles sold and retail sales increased rapidly. Other indicators, mainly those of a financial nature such as the value of real estate transactions, the value of building plans passed, the number of new companies registered and the discounts and advances of commercial banks increased markedly, largely as a result of the high level of internal liquidity, the general speculative mood and the fact that certain capital goods had now become available. The pent-up demand was so strong, however, that it resulted in a considerable increase in prices. It was therefore not surprising that the Governor of the South African Reserve Bank in August 1946 drew attention to the dangers of inflation and excessive

speculation and warned that a mass speculative fever had developed which caused a large proportion of the public to neglect discretion and discrimination in their investment and buying decisions.

Towards the middle of 1946 a number of important economic indicators registered upper turning points. According to the cluster of turning points a peak was reached in July 1946, while the weighted and unweighted diffusion indices reflected a slower rate of increase towards the middle of 1946 but did not intersect the 50 per cent line. However, an upper turning point round about the middle of 1946 is given by the change in the rate of increase of the gross domestic product. If the contribution of agriculture is excluded, the real production of the rest of the economy increased by $4\frac{1}{2}$ per cent during the year ended June 1946, followed by an increase of only 0.4 per cent during 1946/47. Although imports and sales of motor vehicles continued to increase, upper turning points were also shown in July 1946 by a number of other important time series, and as the evidence of the cluster of turning points is also confirmed by the change in the gross domestic product, this month is accepted as the first post-war reference turning point date.

Downswing: August 1946 to April 1947

The slight hesitancy in economic activity which followed the July 1946 peak, lasted for about nine months and was reflected in a growth rate of only $1\frac{1}{2}$ per cent in real gross domestic product during the year ended June 1947, followed by an increase of $9\frac{1}{2}$ per cent during 1947/48.

In August 1947 the Governor of the Reserve Bank referred to diminished dangers of inflation and speculation, and this was borne out by the relative stability in consumer prices, a decline in gold mining share prices and a more moderate tendency in real estate transactions. Lower turning points were registered in the first half of 1947 by a number of important series, but of the three general statistical methods only the cluster of turning points indicated a trough. In view of the change in the rate of increase in real gross domestic product and the number of lower turning points observed for the more important economic series, it appears that a trough occurred in about April 1947.

Upswing: May 1947 to November 1948

The outstanding feature of this period was the exceptionally high rate of increase in real gross domestic product. During the calendar year 1948, for example, real gross domestic product increased by no less than $8\frac{1}{2}$ per cent, while the corresponding rate for the year ended June 1948 was even higher, namely about $9\frac{1}{2}$ per cent. This marked acceleration in the rate of increase in real gross domestic product was caused by significant increases in almost all types of domestic expenditure and exports. The

⁴The discussion of economic developments is based mainly on the Addresses of the Reserve Bank's Governor to stockholders, the Annual Economic Report and the Quarterly Bulletin of the Bank and other data available in the Economic Department of the Bank.

exploitation of the new gold fields of the Far West Rand, the development of deep-level mining and the discovery of the Free State gold fields also served to enhance optimism in general during this period.

As a result of the high rates of increase in real gross domestic expenditure of no less than 8.8 and 8.5 per cent in 1947 and 1948, respectively, the economy began to show signs of overheating. The consumer price index rose by no less than 5.8 per cent in 1948 compared with 1947, and large deficits appeared on current account of the balance of payments in 1947 and 1948. As a result of a substantial inflow of capital during 1947 and the first quarter of 1948, the Reserve Bank's gold and foreign exchange reserves increased sharply up to March 1948, before it declined markedly. In order to alleviate the inflationary pressure, the Treasury requested government departments, local authorities and other public bodies in August 1948 to curtail capital expenditure and from November 1948 foreign exchange was restricted for imports from non-Sterling countries. In December 1948 the Reserve Bank asked the commercial banks to restrict credit facilities for non-productive purposes.

These measures, together with a measure of political uncertainty as a result of a change of government in April 1948, resulted in a slower rate of increase in economic activity. Domestic economic indicators point to an upper turning point in the business cycle towards the end of 1948. Such a turning point was in fact indicated in September 1948 by both the unweighted diffusion index and the cluster of turning points, while the weighted diffusion index pointed to December 1948 as reference peak. Notwithstanding differences in the turning points shown by various important series, there would appear to be a concentration of the upper turning points of the more strategic series in the fourth quarter of 1948. As some of the series showing an upper turning point in December could reasonably be expected to reflect lags, November 1948 was taken as the reference peak of this phase of the business cycle.

Downswing: December 1948 to February 1950

In February 1949 the Minister of Finance announced general control of imports from the Sterling Area by means of licensing and a system of commodity control on imports from non-Sterling countries, effective from 1st July 1949. Although the announcement led to anticipatory imports from the Sterling Area, total imports started to decline from December 1948 as a result of the various restrictive measures taken during 1948.

During the course of 1949 the rate of increase in general economic activity declined substantially. Compared with an increase of 8½ per cent in 1948, the real gross domestic product increased by only about 3½ per cent during 1949. This marked decline

in the rate of increase was caused by drastic declines in the rate of increase of almost all the components of domestic expenditure as well as exports. The rate of increase in real private consumption expenditure declined from about 8 per cent in 1948 to 3 per cent in 1949; real fixed investment from nearly 30 per cent to 14 per cent; real exports from an increase of nearly 9 per cent to a decline of about 1 per cent; and real imports from an increase of nearly 10 per cent to a decline of nearly 13 per cent.

Despite a large net capital inflow during the second half of 1949, the deficit on the current account of the balance of payments led to a substantial decline in the gold and foreign exchange reserves from a relatively high level in March 1948 to a crisis level of only R108 million in August 1949. On the 18th September 1949 the South African pound was devalued simultaneously with the pound Sterling. This had a stimulating influence on the South African economy, not only through its effect on the overall balance of payments, but also by encouraging foreign investment in South Africa and in particular in helping the gold mining industry. The net outflow of private capital experienced during the first half of 1949 was reversed during the second half and total gold and foreign exchange reserves increased again from October 1949. The liquidity of the private sector also increased after the devaluation, and an environment which was conducive to inflation developed. Bank Rate was, therefore, raised from 3 to 3½ per cent on 30th October 1949.

The economic events depicted above point to a lower turning point in business activity towards the end of 1949 or the beginning of 1950. This impression is confirmed by the results of the three statistical methods which give turning points as follows: the unweighted diffusion index in December 1949, the cluster of turning points in January 1950, and the weighted diffusion index in February 1950. The more important selected indicators registered lower turning points in various months from August 1949 to June 1950. These turning points thus occurred over a period of eleven months, but a concentration was observed towards the end of 1949 and beginning of 1950. Although it is difficult to allocate a reference turning point to a specific month at this stage of the cycle, February 1950 would nevertheless appear to be the most acceptable final reference turning point date.

Upswing: March 1950 to December 1951

The acceleration in economic activity after February 1950 can be ascribed mainly to the stimulating influence of the devaluation and the expansionist conditions created by the Korean War. The devaluation coupled with import and exchange controls, as well as a net capital inflow, resulted in a sharp rise in the gold and foreign exchange reserves and in a financial climate

conducive to economic expansion. Furthermore, the extensive rearmament and stockpiling by several countries as a result of the Korean War caused substantial increases in South African export prices as well as in the volume of exports.

The buoyant economic conditions were reflected in an increase of about 8 per cent in real gross domestic product during the year ended June 1951. If the contribution of agriculture, which showed an exceptionally large increase during that year, is excluded, the production of the non-agricultural sectors increased by about 5 per cent. The main expansionary forces would appear to have been higher exports and a sharp increase in inventories, apparently in part for the purpose of stockpiling in view of the uncertain international political conditions. Thus, imports rose considerably while exports increased until April 1951 before the latter declined. With a large capital inflow in 1950 and 1951, the gold and foreign exchange reserves increased throughout 1950 and the first half of 1951, before it began to decline.

As a result of the rising costs of imports and the prevailing domestic factors, inflationary pressure developed during 1951 when the consumer price index increased by no less than 7.3 per cent compared with the previous year. In both his Budget speeches of March 1950 and 1951 the Minister of Finance warned against the high level of expenditure. The high level of economic activity eventually led to the development of certain bottlenecks, such as insufficient power, transport and communication facilities and a shortage of both skilled and unskilled labour.

The above circumstances and other limiting factors resulted in a slow-down in general economic activity, and a peak in the business cycle thus probably occurred towards the end of 1951. According to the cluster of turning points an upper reference turning point was reached in November 1951, while both the weighted and unweighted diffusion indices showed peaks in December. Most of the important individual series registered turning points around December 1951. A peak towards the end of 1951 is also indicated by the real gross domestic product, which increased at a slower rate during 1952 than during 1951. December 1951 would, therefore, appear to be the best choice of a reference peak date.

Downswing: January 1952 to March 1953

During this period certain imbalances in the economy became evident. As a result of the high rate of development of the private sector during the preceding years, the provision of public services such as transport, water, power, housing, schools and hospitals became insufficient to satisfy the increased demand. The

authorities accordingly adopted a policy of economic consolidation in order to obtain more balanced growth in the economy. To this end, the 1952 Budget contained several restrictive measures such as increases in customs and excise duties, postal tariffs, income tax on companies, stamp duties on bills and on transfer deeds, and a reduction in the primary tax rebate for persons.

The continued high demand for credit led to upward pressure on interest rates and the Bank Rate was increased from $3\frac{1}{2}$ to 4 per cent on 27th March 1952 in conformity with the rising trend of money rates overseas. In July 1952 the Minister of Finance approved a higher pattern of rates for government, municipal and public utility securities. The liquid assets of the private sector showed a decline between March 1951 and September 1952 as a result of the sharp decline in the gold and foreign exchange reserves.

These measures duly had the effect of slowing down the rate of increase in general economic activity. This was reflected in the rate of increase in the real gross domestic product, which declined from 5.4 in 1951 to 3.2 per cent in 1952, before increasing to 4.9 per cent in 1953. Similarly, real gross domestic expenditure declined by 4 per cent in 1952 before rising again by 7 per cent during 1953. However, a closer look at the behaviour of the components of gross domestic product and expenditure reveals divergent tendencies. Excluding agricultural production, the rate of increase in the real gross domestic product showed a decline from 4.9 per cent in 1951 to 3.9 per cent in 1952, and a very moderate increase to 4.2 per cent in 1953. Furthermore, apart from agriculture, commerce was the only major sector which showed a considerable acceleration in the rate of increase, namely from $2\frac{1}{2}$ per cent in 1952 to 8 per cent in 1953. The increase in real value added by manufacturing declined from the very high rate of $8\frac{1}{2}$ per cent in 1951 to $6\frac{1}{2}$ per cent in 1952, and then increased to 7 per cent in the next year. Although the latter represents only a slight acceleration, the rate of production remained high.

The components of gross domestic expenditure also showed divergent tendencies. The rate of increase in private consumption expenditure at constant prices declined from about 4 per cent in 1951 to 2 per cent in 1952, and then increased to 5 per cent in 1953. Private fixed investment at current prices, which had increased by about 13 per cent in 1952, showed a rise of only 2 per cent in 1953, while fixed investment of public authorities accelerated so much that total fixed investment increased by 13 per cent in 1953, compared with 14 per cent the previous year. From the changes in the national accounts data it would appear that economic activity levelled out during 1952 but gained slightly in momentum in 1953. These tendencies thus suggest that a lower turning point in the business cycle was probably reached towards the end of 1952 or early in 1953. However, the

divergent tendencies, in particular the fluctuations in agriculture, indicate that the turning point was not very clear-cut and that the economy probably moved "horizontally" for some time, say from the fourth quarter of 1952 to the second quarter of 1953.

It is therefore not surprising that the three general statistical methods yield different results, all of which appear to be several months away from where the turning points could have been expected according to the national accounts data. The cluster of turning points indicates a trough in September 1953, whereas both the weighted and unweighted diffusion indices give lower turning points as late as November 1953. It is of significance that the weighted diffusion index showed marked fluctuations early in 1953 and actually exceeded the 50 per cent line between February and April 1953. As the substantial difference between the reference dates indicated by the three statistical methods and that suggested by the changes in the real domestic product and expenditure figures is difficult to reconcile, the behaviour of specific series which are sensitive to business cycle influences were investigated.

A series which has generally shown a good correspondence with economic activity is merchandise imports. The seasonally adjusted value of imports showed a lower turning point in September 1952. If this series is adjusted for the imports of government stores and textiles, both categories affected by exogenous factors, lower turning points are indicated in September 1952 and June 1953, with a slight increase between these two dates. As import control policy may have influenced the course of this series, it should be noted that additional restrictions were announced in 1952 but not during 1953.

The behaviour of other cyclically sensitive series may also be noted. Building plans passed showed a distinct lower turning point in December 1952, transactions in fixed property in July 1952, unemployed Whites, Coloureds and Asiatics in September 1952, the number of companies registered in January 1953 and discounts and advances by commercial banks in June 1953.

Examples of series which point to a lower turning point in the second half of 1953 are prices of industrial and commercial shares (December 1953), gold and foreign exchange reserves (January 1954), and the number of new motor vehicles sold (January 1954).

In view of the behaviour of the weighted diffusion index early in 1953 and the turning points in imports and certain other series, and in the light of the known facts about economic policy and the behaviour of the economy in general, it is felt that the trough in economic activity should be fixed in March 1953. This would also be consistent with the changes in the available national accounts aggregates.

Upswing: April 1953 to April 1955

The upswing from April 1953 was to a considerable extent induced by the increase in fixed investment which started in 1952 and continued during 1953. The recovery was further supported by an increase in gold output from the middle of 1953 as new mines were brought into production, and by an increase in exports. The 1954/55 Budget contained stimulating measures such as the reduction of personal taxes, the abolishment of the savings levy and concessions in the form of initial and investment allowances to industrialists. As a result of the higher exports and a favourable turn in the inflow of capital from the second quarter of 1954, the seasonally adjusted gold and foreign exchange reserves of the Reserve Bank increased sharply from February 1954 to March 1955, and this, together with a general rise in bank credit during most of the upward phase, resulted in easy money conditions which were conducive to a higher level of economic activity and led to a downward movement of interest rates during the second half of 1954.

Mainly as a result of the high rate of increase in fixed investment during 1953 and the sharp increase in exports from the middle of 1953, the rate of increase in real gross domestic product, which had increased by only slightly more than 3 per cent during 1952, rose to nearly 5 per cent in 1953 and further to approximately 6½ per cent in 1954. The main contributing sectors to the increase in 1954, were mining, manufacturing, and electricity, gas and water with increases of 14, 9 and 10 per cent, respectively.

Largely as a result of labour shortages, inflationary tendencies developed towards the end of this period, and the seasonally adjusted index of consumer prices increased at an average annual rate of 3·8 per cent between December 1953 and April 1955. In order to curb these inflationary tendencies the government in its 1955/56 Budget withdrew the tax concessions granted during the previous year, transferred substantial amounts to Loan Account and cut current consumption expenditure back as far as possible. Government current expenditure at constant prices declined, while the rate of increase in total fixed investment decreased markedly. Thus a downswing in economic activity could reasonably be expected to have occurred in the first half of 1955.

Many economic indicators showed a downward change early in 1955. The weighted diffusion index recorded a peak in April, the cluster of turning points in May and the unweighted diffusion index in June 1955. An upper turning point in the first half of 1955 is also reconcilable with a decline in the rate of increase in the real gross domestic product of the non-agricultural sectors from nearly 7 per cent during the year ended June 1955 to 5 per cent in 1955/56. In view of the behaviour of the more important specific economic

indicators a reference peak in April 1955 would appear to be the most acceptable.

Downswing: May 1955 to September 1956

As mentioned above, the 1955/56 Budget was aimed at reducing inflationary pressures. In addition, the Reserve Bank requested the commercial banks in July 1955 to restrict the granting of credit for purposes of consumption expenditure and fixed capital investment. Bank Rate was raised from 4 to 4½ per cent in September 1955, partly to discourage the decline in the capital inflow from abroad. A drop in the prices of agricultural products such as wool and maize and the reduction in the capital inflow also contributed to the moderate decline in domestic economic activity.

Total real fixed investment declined by nearly 4½ per cent in 1955 and by 2 per cent in 1956. Both private and government real consumption expenditure increased at a slower rate during 1956 compared with 1955, while the rate of increase in real exports showed a marked reduction from 12 to 8 per cent during the same period.

The slackening in domestic demand resulted in a moderate decline in the rate of increase in the gross domestic product. If the contribution of agriculture is excluded, the real gross domestic product increased by only 5 per cent in the year ended June 1956, compared with nearly 7 per cent during the preceding year. The contribution to the gross domestic product of manufacturing and mining both increased at lower rates during 1956.

The change in the domestic demand for goods and services was reflected in a marked swing in the current account of the balance of payments from a large deficit during the period from 1953 to 1955 to a balanced position in 1956. As the capital inflow declined to small proportions, the total gold and foreign exchange reserves showed little change during most of 1956, but started to increase moderately from the last quarter of 1956 to the middle of 1957.

The rise in the gold and foreign exchange reserves coupled with an increase in bank credit led to a substantial increase in the liquidity of the private non-banking sector towards the end of 1956 and early in 1957. Mainly owing to a rise in gold and uranium output, exports increased from March 1956 to March 1957, while a marked increase in receipts from foreign carriers visiting South African harbours after the Suez crisis contributed to the improvement in the balance of payments. Furthermore, the Reserve Bank towards the end of 1956 withdrew its request to the commercial banks to restrict credit for consumption and fixed investment purposes. During 1957 import restrictions, particularly on motor cars, and minimum hire-purchase requirements on cars were relaxed.

In the light of the above description of economic developments, a moderate slowing down in general economic activity would appear to have occurred during the second half of 1955 and the first half of 1956. As economic activity apparently began to accelerate slightly again towards the end of 1956, a lower turning point in economic activity is indicated in the second half of 1956. It is thus not surprising that a relatively large number of economic indicators changed direction during the second half of 1956. The three general statistical methods employed gave reference troughs in 1956 as follows: the unweighted diffusion index in July, the cluster of turning points in August and the weighted diffusion index in September. Although it cannot be readily decided which of these three months was the reference turning point, the fact that an important business cycle indicator such as merchandise imports turned in September, appears to make the latter the most acceptable reference trough date.

Upswing: October 1956 to January 1958

As a result of the relaxation of restrictions on imports, hire-purchase and bank credit, and with money relatively freely available, various components of expenditure rose considerably in 1957, while exports remained buoyant. Thus, real gross domestic expenditure increased by 5 per cent in 1957, compared with a rise of only 3 per cent during the previous year. All components of gross domestic expenditure contributed to the acceleration in the rate of increase. The rise in domestic expenditure together with the buoyancy of exports thus led to an acceleration in the gross domestic product from an increase in real terms of about 5 per cent in 1956 to almost 6 per cent in 1957, if agricultural production is excluded. The latter showed a decline in 1957 with the result that the rate of increase in total gross domestic product declined in 1957. The acceleration in economic activity in 1957 appears to have been very mild, as was the previous downswing.

With exports showing an upper turning point early in 1957 and imports rising rapidly, a small deficit appeared again on the current account of the balance of payments in 1957. As a result mainly of the higher interest rate structure abroad, a capital outflow was experienced in 1957, which incidentally was the first outflow since 1946. This resulted in a decline from about the middle of 1957 in the gold and foreign exchange reserves. Notwithstanding this decline, substantial increases in bank credit to both the private and government sectors caused a rise in the liquidity of the private sector which further stimulated expenditure and thus aggravated the pressure on the balance of payments.

In these circumstances, the authorities towards the end of 1957 and early in 1958 began to follow a restrictive policy to safeguard the balance of payments

and to curb excessive spending. In November 1957 the Reserve Bank requested the commercial banks to restrict credit for purposes of consumption and imports. Upward adjustments were made to interest rates in February 1958, the minimum requirements for hire-purchase credit were tightened and borrowing by local authorities restricted. In May 1958 the commercial banks were required for the first time to hold supplementary cash reserves with the Reserve Bank and their ability to extend credit was thus curtailed. In his Budget Speech in July 1958 the Minister of Finance announced substantial increases in certain customs and excise duties and special measures were introduced to obtain additional loan funds from the public for the financing of the government's capital programme.

The above developments indicate that general economic activity, after slowing down somewhat during 1955/56, recovered slightly in 1957, but as a result of excessive spending and a decline in exports, balance of payments problems developed and, as described, economic activity was curbed again towards the end of 1957 and early in 1958. An upper turning point in the business cycle could therefore reasonably be expected at this point of time. This is confirmed by the upper turning points given by the three statistical methods, namely: weighted and unweighted diffusion indices in December 1957 and the cluster of turning points in January 1958. The latter would appear to be the more acceptable reference turning point date as the more important economic indicators also cluster round January 1958.

Downswing: February 1958 to March 1959

Business conditions were sluggish during 1958 and early 1959 due to the measures introduced towards the end of 1957 and beginning of 1958 to curb excessive spending and to relieve pressure on the balance of payments, the decline in exports mainly as a result of lower prices, the decline in agricultural output following unfavourable weather conditions, and the excessively high level of inventories. Thus, the rate of increase in the real gross domestic product declined from about $4\frac{1}{2}$ in 1957 to only $\frac{1}{2}$ per cent in 1958. This was brought about by a lower rate of increase in real private and government consumption expenditure and an absolute decline in real exports. The rate of increase in fixed investment at constant prices, however, continued to increase. The general slow-down in economic activity was also reflected in an easing of labour market conditions.

During the second half of 1958 imports declined while exports and the net gold output increased, with the result that the current account of the balance of payments improved. At the same time, a large capital inflow was recorded and the gold and foreign exchange reserves increased rapidly. In view of the improvement

in the balance of payments position and the relative slack in domestic economic conditions, several measures were taken to ease the availability of credit and to stimulate economic activity. The supplementary reserve requirements imposed on commercial banks were relaxed in November 1958 and again in February 1959. In addition, the Reserve Bank lowered its discount rate from $4\frac{1}{2}$ to 4 per cent in January 1959. The Budget of March 1959 contained various stimulating measures such as the following: the initial allowance for income tax purposes in respect of new industrial machinery was increased from 10 to 20 per cent, a new depreciation allowance of 2 per cent per annum on new factory buildings was introduced, the existing concession to new "ultra deep" gold mines to add 5 per cent interest to the capital expenditure which they were allowed to deduct from profits was extended to all gold mines, an additional amount was voted to assist distressed farmers, the control over the capital expenditure of municipalities was relaxed, hire-purchase restrictions in respect of new and late model vehicles were relaxed in March and May 1959, and personal income tax rates were reduced and the loan levy terminated. A favourable climate was further induced by the announcement that the Government would give preference to local manufacturers of textile and engineering products in official tenders.

As a result of these various measures, activity began to accelerate again early in 1959. The economic upswing in the major industrial countries in 1959 led to increased exports and higher commodity prices and further stimulated the South African economy. These developments indicate that a lower cyclical turning point was probably reached early in 1959. The three general statistical methods confirm this, and all of them show a lower reference turning point in March 1959, which can be accepted as the reference trough date.

Upswing: April 1959 to April 1960

The revival in economic activity in 1959 was reflected in a doubling of the rate of increase in the real gross domestic product between 1958 and 1959. This acceleration was mainly due to a sharp increase in exports and to an increase in agricultural production. Despite the increase in real production, real domestic expenditure declined in 1959. The current account of the balance of payments consequently showed a large surplus, and with a moderate capital outflow, the gold and foreign exchange reserves continued to rise until January 1960.

The expansion was still gaining momentum in the early months of 1960 when the political disturbances which occurred in March, gave rise to a large capital outflow which caused a continued drain on the gold and foreign exchange reserves as well as a reduction of the liquid assets of the public with the banking sector. Notwith-

standing a number of concessions announced by the Minister of Finance in March 1960 to stimulate the economy, the confidence of businessmen was obviously affected and the economy slid into a recession before the upturn had gained momentum.

The three general statistical methods showed three different upper turning points in 1960, as follows: the weighted diffusion index in April, the unweighted diffusion index in June, and the cluster of turning points in August. On the evidence of the upper turning points of the more important individual series, in particular, and the fact that imports started levelling off towards the end of 1959, the turning point of the weighted diffusion index, namely April 1960, was accepted as the reference peak date of the business cycle.

Downswing: May 1960 to August 1961

During this downswing the economic situation was characterised by a general lack of confidence as a result of political disturbances in March 1960. A substantial outflow of private capital occurred, exports declined noticeably and entrepreneurs developed a hesitant attitude towards the undertaking of new capital projects. The resultant sluggishness of fixed investment was aggravated by the carry-over of surplus capacity in certain manufacturing sectors from the previous cyclical "low" and by competition from imports. Other components of gross domestic expenditure, namely private consumption expenditure and inventory investment, also declined or levelled off. At the same time the real gross domestic product increased by about 5 and 3½ per cent in 1960 and 1961, respectively. For the year ended June 1961 the real rate of growth was also only 3½ per cent. The gross national product, nevertheless, exceeded the gross domestic expenditure and this was reflected in a surplus on the current account of the balance of payments. Despite this surplus, the large capital outflow resulted in a substantial decline in the gold and foreign exchange reserves to the very low level of R142 million in June 1961.

In these circumstances, the authorities were faced with the problem that the domestic economy needed stimulation, while the external situation demanded a restrictive policy if a devaluation was to be avoided. In order to alleviate pressure on the balance of payments, import and exchange controls were tightened and control over foreign capital was introduced in June 1961. Customs and excise duties on certain luxury goods were also increased in the Budget of 1961. Furthermore, the Bank Rate was raised from 4 to 4½ per cent in August 1960 and to 5 per cent in May 1961. Thus, although the Budget of 1959 and 1960 contained measures to stimulate fixed investment, the policy was generally directed at the protection of the balance of payments position.

Judged by the prevailing economic conditions in 1961, it would appear that a lower turning point of the business cycle was reached between May and November 1961. Both the cluster of turning points and the unweighted diffusion index show that a lower turning point in economic activity was reached in August 1961, while the weighted diffusion index points to July 1961 as the reference turning point. The former date, however, is confirmed by an analysis of the turning points of important individual series. According to the quarterly national accounts statistics⁵, the rate of increase in the gross domestic product of the non-agricultural sectors declined during 1960 and the first half of 1961. Although the rate increased in the third quarter of 1961, a decline was also registered in the fourth quarter, before it accelerated again in 1962. The fluctuations in the gross domestic product during this period can, therefore, be reconciled with a reference trough in August 1961.

Upswing: September 1961 to April 1965

Although the entire period after the downswing of 1960/61 was characterised by a relatively high rate of growth, and after 1964 also by inflationary tendencies at which policy measures were continuously directed, it was nevertheless possible to identify a short downswing in the second half of 1965 and again in 1967. The upswing from September 1961 to April 1965 may, furthermore, be divided into three sub-periods, namely:

1. the nine months to about the middle of 1962 when a number of factors contributed to the slow but steady increase in economic activity;
2. from the middle of 1962 to about the middle of 1964 when further stimulating factors appeared and a more neutral economic policy was followed; and
3. the remaining 10 months when the economy became overheated and anti-inflationary measures were again introduced.

The first stage: September 1961 to middle 1962

The most important expansionary factors responsible for the initial upturn in economic activity after August 1961 were pronounced increases in merchandise exports and gold output. The balance of payments was further strengthened by a substantial decline in the capital outflow as a result of the tightening of exchange control. Coupled with a decline in imports, these favourable developments resulted in not only a large surplus on the current account, but also a considerable increase in the gold and foreign exchange reserves after June 1961. The latter in turn, led to an increase in the liquidity of the private sector and favourable monetary and banking conditions which were conducive to an upturn

⁵Available from 1960.

in economic activity. These conditions were enhanced by a deliberate expansionist policy adopted by the authorities. The Reserve Bank reduced the Bank Rate from 5 to 4½ per cent on 7th December 1961 and to 4 per cent on 13th June 1962, with the result that short-term borrowing and lending rates moved downwards. Furthermore, an expansionist fiscal policy was announced in the 1962 Budget when income tax allowances for capital outlays and increases in export turnover were introduced and a substantial increase in government expenditure was provided for.

The second stage: Middle 1962 to middle 1964

The marked acceleration in economic activity during this period, as reflected in growth rates of about 8½ per cent in the real gross domestic product during both 1963 and 1964, stemmed from substantial increases in all the components of gross domestic expenditure and in exports.

Up to approximately the end of 1963 the authorities still considered it necessary to assist the recovery in economic activity by stimulating investment and consumption outlays and exports. To this end the Bank Rate was reduced from 4 to 3½ per cent on 27th November 1962, which was the third lowering of the rate in a period of eleven months, while an expansionist fiscal policy followed in the March 1963 Budget. Apart from providing for a substantial increase in expenditure on the Revenue and Loan Accounts, this Budget contained measures to stimulate consumption, private fixed investment and exports. These included a discount of 5 per cent on income tax for individuals and an income tax-free period of eight months from July 1962. In order to encourage private fixed investment, the investment allowances introduced earlier were extended. Exporters received concessions in terms of expenses incurred in the development of export markets.

Although the substantial increase in the demand for both consumer and capital goods during this period could be met partly by increased local production, a considerable increase in merchandise imports was also experienced until late 1965. With exports increasing at a slower rate due to increased domestic demand, the large surplus, at a seasonally adjusted annual rate, of R454 million on the current account of the balance of payments in the second quarter of 1962 declined markedly to a mere R34 million in the second quarter of 1964. Despite a continuation in the net outflow of capital, mainly owing to a relaxation of exchange control, the total gold and foreign exchange reserves continued to rise sharply until September 1963, before it began to decline moderately. With commercial banks' discounts and advances rising strongly in sympathy with the acceleration in total domestic spending, money and near-money increased noticeably. Total monetary demand was therefore strengthened by favourable monetary and banking conditions.

It became obvious that the excess liquidity in the money market would have to be reduced in order to moderate the downward tendency in short-term interest rates. For this purpose the government continued to borrow on the domestic market in excess of its requirements, while the Reserve Bank allowed commercial banks to invest limited amounts of foreign exchange abroad and at the same time exchange control was further relaxed. Additional allocations of import permits were also announced at various stages during the period under review. These measures as well as the continued increase in bank credit and a decline in the gold and foreign exchange reserves from October 1963 led to an upward tendency in interest rates and tighter conditions in the money market.

Towards the end of 1963 the substantial rate of increase in private fixed investment and the development of certain bottlenecks led to a change in the emphasis of monetary and fiscal policy, viz. from stimulation of economic activity to the maintenance of stability. In accordance with this policy, the March 1964 Budget contained no special disinflationary measures, neither did the large surplus on Revenue Account and the strong cash position of the government lead to any general reduction in taxation.

The third stage: Middle 1964 to April 1965

Although general economic activity continued to increase at a highly satisfactory rate during this period, signs of strain and bottlenecks were beginning to appear. During the year ended June 1965 the real gross domestic product in fact increased at a very high rate for the third consecutive year. This period was in particular characterised by excess domestic spending, which was reflected in all the major components of domestic expenditure.

The substantial increase in expenditure on both capital and consumer goods could not be met in full by domestic production and had to be supplemented by higher imports. Notwithstanding this addition to the supply of goods, excess domestic expenditure led to an appreciable acceleration in the rate of increase of prices and costs. The shortage of skilled labour was further aggravated and resulted in substantial increases in average salaries and wages.

With imports rising rapidly and exports increasing only moderately, the small surplus, at a seasonally adjusted annual rate of R34 million on the current account of the balance of payments in the second quarter of 1964 declined markedly to a deficit of R521 million in the second quarter of 1965. The sharp increase in imports was coupled with an exceptionally large investment in inventories. Thus the addition to stocks, at current prices, increased from R149 million in 1963/64 to R310 million in 1964/65. Together with a relatively small net outflow of foreign capital, the seasonally adjusted total gold and foreign exchange

reserves declined considerably during this period, viz. from R580 million in September 1963 to R349 million in September 1965. Notwithstanding this sharp decline, the supply of money and near-money increased further, mainly owing to a substantial rise in bank credit to the private and government sectors. The monetary situation therefore largely assisted the excessive increase in domestic demand.

In order to restore equilibrium in the economy, the authorities introduced various monetary and fiscal measures to curb the excess domestic demand and the excessive creation of credit by the banking sector. In June 1964 the Reserve Bank requested banking institutions to adopt a more cautious credit policy, and on 15th July 1964 the Bank Rate was increased from $3\frac{1}{2}$ to 4 per cent, and further to $4\frac{1}{2}$ per cent on 8th December 1964. More restrictive steps followed on 5th March 1965 when the Bank Rate was increased to 5 per cent, the Reserve Bank's pattern of rates for government stock was raised, and the required ratio of liquid assets to be held by commercial banks was increased. This ratio was further increased in May and June 1965, and again in July to the maximum permitted by law.

The Budget of March 1965 was generally intended to be restrictive, e.g. the amount requested on Loan Account was reduced by about R100 million and R30 million was transferred from Revenue to Loan Account. In addition, a loan levy of 5 per cent on the income tax of persons and companies (excluding gold mining companies) and a surcharge of 5 per cent on the income tax of all companies other than gold mining companies were introduced.

The import control policy changed significantly during this phase. When import control was relaxed in 1964 and the first half of 1965, business enterprises were requested to place their inventories on a higher level. In the second half of 1965, this policy was reversed when import control was tightened and business enterprises were advised to reduce the level of their inventories. These circumstances had a significant bearing on many economic variables, and the downswing which is identified in the second half of 1965 should be interpreted against this background.

It is obvious from the above outline of economic tendencies that an exceptional acceleration in economic activity was experienced after August 1961. This is also evident from the behaviour of the diffusion indices (see Graphs 2 and 3). The unweighted diffusion index shows that for more than two years during this phase over 80 per cent of the time series registered increases. However, during the third stage of the period under review, certain economic phenomena, as well as the change in import control policy and the restrictive measures taken by the authorities, caused a slowing down in the rate of increase in activity towards the middle of 1965. It would therefore appear that on the basis of changes in general economic conditions, an

upper turning point occurred between February and September 1965. The cluster of turning points, the weighted diffusion index and the unweighted diffusion index indicate upper turning points of the business cycle in April, June and August 1965, respectively, while the gross domestic product at current prices reached an upper turning point in the first quarter of the year (both including and excluding the value added by agriculture).

As the gross domestic product and another important composite series, namely the physical volume of manufacturing production, showed turning points in the first quarter of 1965, it would, therefore, be preferable to accept as reference peak the earliest date given by the statistical methods employed, namely April 1965, rather than June or August indicated by the other two methods.

Downswing: May 1965 to December 1965

As pointed out above, the downswing in the second half of 1965 should not only be interpreted against the background of economic events, but also in terms of the important role which import control policy played before and during this phase. Thus, the noticeable decline in the gross domestic expenditure from the third quarter of 1965 to the first quarter of 1966 can be attributed mainly to a sharp decline in inventory investment, which, in turn, was associated with the tightening of import control from October 1965. Private consumption, current government expenditure and gross domestic fixed investment continued to increase rapidly throughout 1965. The monetary demand for goods and services, therefore, remained at a very high level during the second half of 1965 and inflationary pressure continued to be in evidence.

The gross domestic product increased at a considerably lower rate during the second and third quarters of 1965, and gross domestic expenditure exceeded it by a large margin. This was reflected in the current account of the balance of payments, which reached a record deficit in the second quarter of 1965, before improving rapidly during the second half of 1965. In view of this large deficit the gold and foreign exchange reserves declined sharply and the authorities resorted to import restriction also on capital goods and raw materials in order to protect the balance of payments. At this stage it was, of course, not expected that a capital inflow during the second half of 1965 would alleviate the pressure on the balance of payments. The improvement in both the current and the capital accounts towards the end of 1965 caused a considerable increase in the gold and foreign exchange reserves of about R100 million during the fourth quarter of 1965. This contributed to a strong rise in the liquidity of the private sector, which was also fed by a substantial increase in the net claims of the banking sector on the government sector (mainly as a result of the use of the latter's cash balances with the Reserve Bank to finance its expenditure).

These circumstances were conducive to further inflationary developments and it was, therefore, not surprising that in September 1965 the Minister of Finance announced that every endeavour should be made to reduce expenditure at all levels of government and that the overall deficit of the Exchequer would not, if at all possible, be financed through the use of its cash balances with the Reserve Bank. Despite these measures the rate of growth in economic activity started accelerating towards the end of 1965, due especially to the environment created by increased liquidity, an improved balance of payments position and a general confidence in the South African economy. All economic indications point to a lower turning point after September 1965 but before February 1966. The weighted and unweighted diffusion indices indicated lower turning points in September and November 1965, respectively, whereas, according to the cluster of turning points, it occurred in January 1966. The fact that the gross domestic product showed a lower turning point in the third quarter, while another important composite series, namely the physical volume of manufacturing production, decreased until April 1966, made the choice of a specific month as reference turning point difficult. As the more important composite and other series cluster around December, it was taken as the final reference trough.

Upswing: January 1966 to May 1967

The decline in the rate of increase of the gross domestic product during the previous phase was followed by a strong acceleration from the beginning of 1966. Thus the value of the gross domestic product at current prices increased by about $10\frac{1}{2}$ per cent during the year ended June 1967, compared with $6\frac{1}{2}$ per cent during the preceding year. Major expansionary forces responsible for this renewed upswing were private consumption expenditure, current government expenditure up to the second quarter of 1966, exceptionally large inventory investment during 1967, and a pronounced increase in exports.

The increase in merchandise exports coupled with the high level of net gold output resulted in a surplus on the current account of the balance of payments during the first three quarters of 1966. With the sharp increase in domestic demand, and especially increased inventory investment from the fourth quarter of 1966 after the relaxation of import control in July 1966, merchandise imports began to rise rapidly and turned the balance of payments on current account into a substantial deficit during the subsequent three quarters. With a net inflow of foreign capital during the whole period, the gold and foreign exchange reserves increased from a low point in September 1965 to a high point in August 1966, before declining again during the rest of 1966 and the first five months of 1967.

The seasonally adjusted figures of money and near-

money continued to increase up to July 1966 before tending to level off during the remainder of the phase under review. In these circumstances, the Treasury Bill tender rate and related money market rates declined during the first half of 1966, but subsequently resumed their upward course and continued to increase during the remaining part of this phase. In July 1966 the Bank Rate was raised from 5 to 6 per cent while the Reserve Bank's pattern of rates for long-term government stock was adjusted upwards by $\frac{1}{2}$ per cent to $6\frac{1}{2}$ per cent in the same month. The rates on short- and medium-term stock were raised in March and April 1967, respectively.

The excessive monetary demand, especially from the middle of 1966 to the middle of 1967, resulted in upward pressure on prices and costs and aggravated the already serious shortage of skilled labour. In order to contain the excess demand and consequently also the inflationary pressure, various monetary and fiscal measures were introduced by the authorities.

The ceiling on bank credit to the private sector, which was instituted in October 1965, was extended with adjustments in February and July 1966. Further restrictive measures were announced in July 1966, including the lifting of deposit rate control instituted in March 1965, the extension of direct control over bank discounts and advances to the private sector, the introduction of higher ratios of prescribed and approved assets for insurers and pension funds, and the increases in interest rates already referred to. This was followed in December 1966 by further steps, including additional restraints on expenditure by the public sector, a substantial further relaxation of import control, a tightening of the direct restrictions on bank credit (which was made official through a proclamation in August 1967), and a more restrictive money market policy aimed at making the existing Bank Rate more effective.

As far as fiscal measures are concerned, various taxes were increased in the August 1966 Budget, special tax-exempted bonds were made available to the public and the authorities indicated that they would restrain public expenditure as far as possible. The Budget of March 1967 contained further fiscal measures to reinforce and supplement monetary policy. Several tax increases were announced, including higher company income tax, an increase in customs and excise duty on cars and an increase in loan levies on individuals and companies.

The above-mentioned monetary and fiscal measures had the desired effect, and by the middle of 1967 most of the economic time series, after rising strongly from the beginning of 1966, changed direction, indicating an upper turning point after February but before the third quarter of 1967. The cluster of turning points gave an upper turning point in May, while the weighted and unweighted diffusion indices registered upper turning points in June. The rate of increase in the gross

domestic product of the non-agricultural sectors accelerated until the first quarter of 1967, before it declined during the rest of 1967. The physical volume of manufacturing production, on the other hand, showed an upper turning point in June. An analysis of the turning points of other important series indicates that the final reference peak should be taken as May 1967.

Downswing: June 1967 to December 1967

The various anti-inflationary measures taken during 1966 and the earlier part of 1967 succeeded in cooling off the overheated economy. Total monetary demand slowed down, a surplus appeared on the current account of the balance of payments and prices tended to level off. The pressure was thus relieved on the domestic factors of production.

The improvement in the current account of the balance of payments together with a large inflow of capital resulted in a substantial increase in the gold and foreign exchange reserves. Furthermore, there was a further increase in bank credit to the private sector, and in these circumstances the rate of increase in the liquidity of the private and banking sectors accelerated towards the end of 1967. The Sterling devaluation in November 1967 triggered off a further inflow of capital, and this contributed to the stock exchange boom which followed. It is understandable that economic activity resumed a gradual upward tendency towards the end of 1967.

The weighted and unweighted diffusion indices showed a lower turning point in November, while the cluster of turning points approach indicated a lower point in December 1967. Unfortunately, the fluctuations in agricultural production and also in agricultural stocks in trade during 1967 were largely responsible for changes in the gross domestic product and expenditure. Thus, although the gross domestic product declined noticeably only in the fourth quarter of 1967, the gross domestic product of the non-agricultural sectors increased at slightly slower rates during both the second and third quarters of 1967. It is also important to note that the value added by sectors such as manufacturing, construction, gold mining and the South African Railways and Harbours, tended to level off during the second half of 1967. The movements of most of the other major economic indicators furthermore confirm the impression that the rate of increase in economic activity declined during the second half of 1967. For example, the physical volume of manufacturing production declined from July 1967 to February 1968, while a pronounced decline occurred in imports from July to November 1967, notwithstanding the progressive relaxation of import control since December 1966. The trough of December 1967 would, therefore, also appear to be reconcilable with the turning points of the more important and strategic series.

Upswing from January 1968

According to almost all economic indicators, the South African economy experienced a revival in 1968, which is the last year covered in this review. The rate of increase in economic activity was relatively slow during the first half of 1968 but gained momentum during the second half and during most of 1969. During 1968 as a whole gross domestic expenditure was more or less equal to the gross national product so that the domestic demand for and the supply of goods and services were in approximate balance.

Mainly owing to a very large inflow of capital associated with international currency uncertainties, the gold and foreign exchange reserves increased markedly, and together with a further increase in bank credit to the private sector, resulted in a build-up of excess liquidity by the private as well as the banking sectors. This exceptionally high level of liquidity engendered boom conditions in the property and share markets, which reached unprecedented levels towards the end of 1968 and early in 1969.

Final turning points

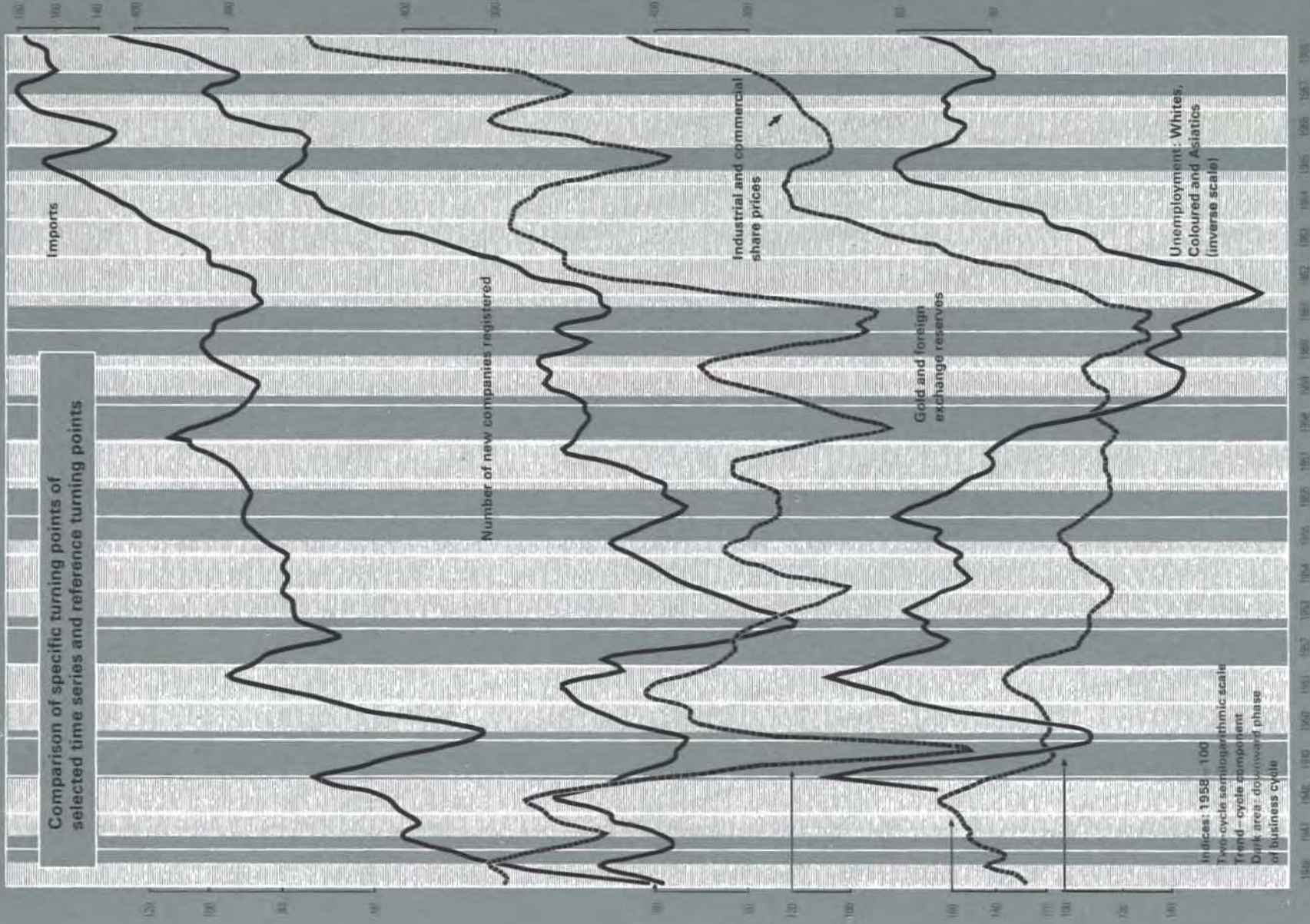
As pointed out earlier, the choice of a reference turning point in a specific month contains an element of arbitrariness due to the fact that economic activity does not necessarily change its pace within a month. It is, nevertheless, necessary for analytical purposes to make such a choice after all the relevant data have been considered. The accompanying table summarises the final reference turning point dates which have been fixed after considering the evidence of the statistical methods employed, the background developments as well as the behaviour of certain strategic indicators of economic activity.

Table 6
Final reference turning point dates and phases of the business cycle

Upswings	Downswings
Postwar-July 1946	August 1946-April 1947
May 1947-November 1948	December 1948-February 1950
March 1950-December 1951	January 1952-March 1953
April 1953-April 1955	May 1955-September 1956
October 1956-January 1958	February 1958-March 1959
April 1959-April 1960	May 1960-August 1961
September 1961-April 1965	May 1965-December 1965
January 1966-May 1967	June 1967-December 1967
January 1968-	

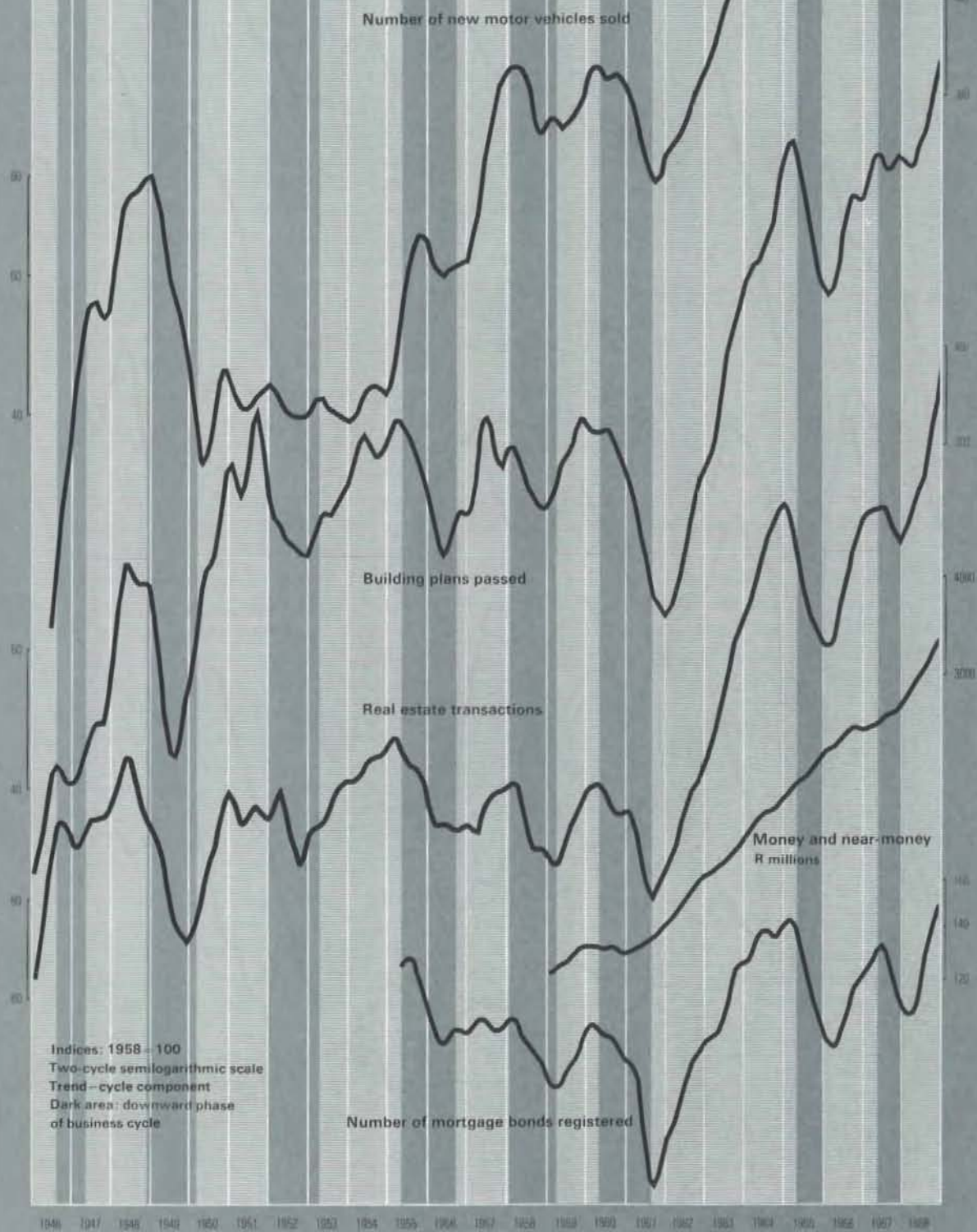
Graph 4

Comparison of specific turning points of selected time series and reference turning points



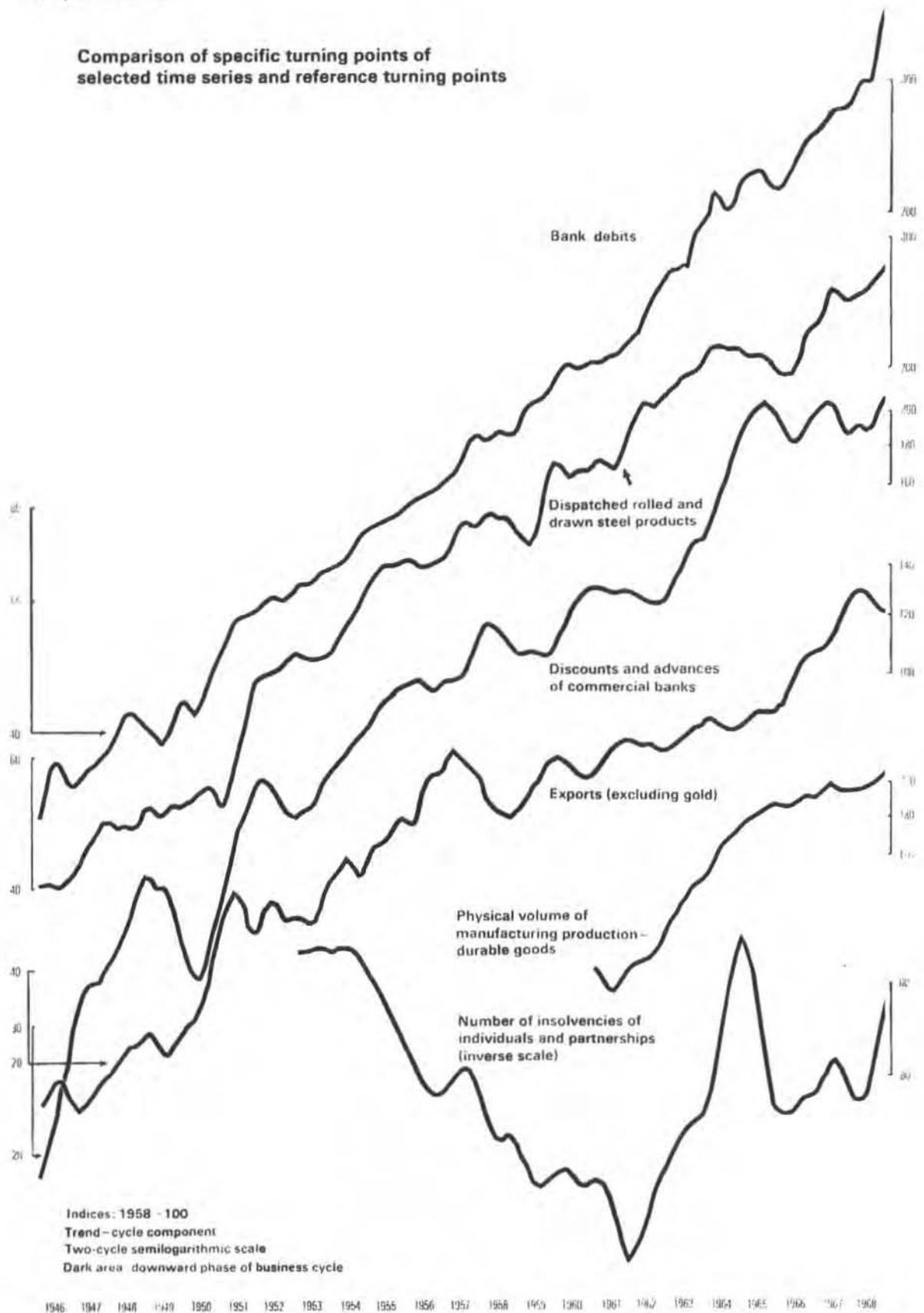
Graph 4 continued

Comparison of specific turning points of
selected time series and reference turning points



Graph 4 continued

Comparison of specific turning points of
selected time series and reference turning points



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Appendix—series used for business cycle analysis

Agriculture, forestry, hunting and fishing

	Available from
Cash credit advances of Landbank	Jan. 1946
Exports:	
canned fruit and fruit preparations	Jan. 1964
citrus fruit	Jan. 1964
karakul pelts	Jan. 1964
mealies	Jan. 1964
raw sugar	Jan. 1964
wool	Jan. 1964
Fixed investment:	
buildings and constructions	1st qtr. 1960
machinery, equipment, etc.	1st qtr. 1960
Gross domestic product: value added	1st qtr. 1960

Mining and quarrying

Average salaries and wages per month:	
all races	Jul. 1958
Whites	Jul. 1958
Employment (all races):	
gold mining	Jan. 1946
other mining	Jan. 1946
total	Jan. 1946
Exports:	
copper	Jan. 1964
diamonds	Jan. 1964
Fixed investment:	
buildings and constructions	1st qtr. 1960
machinery, equipment, etc.	1st qtr. 1960
Gross domestic product: value added	1st qtr. 1960
Investment in inventories	1st qtr. 1960
Physical volume of coal sales	Jul. 1911
Physical volume of production:	
gold mining	Jan. 1946
other mining	Jan. 1961
total	Jan. 1961
Prices of ordinary shares:	
coal mining companies	1st qtr. 1958
gold mining companies	Jan. 1946

Manufacturing

Consumption of rolled and drawn steel products (ton):	
flat steel	1st qtr. 1962
profile steel	1st qtr. 1962
total	1st qtr. 1962
Despatched rolled and drawn steel products (ton):	
flat steel	Jan. 1936
profile steel	Jan. 1936
total	Jan. 1936
Employment	Jan. 1948
Fixed investment: manufacturing and construction	
machinery, equipment, etc.	1st qtr. 1960
Gross domestic product: value added	
private manufacturing	
other income	1st qtr. 1960
total	1st qtr. 1960
other manufacturing	1st qtr. 1960
total	1st qtr. 1960
Hours worked:	
average per white production worker	April 1957
overtime as percentage of ordinary hours:	
production workers	April 1957
total	April 1957
Investment in inventories:	
material and work in progress	1st qtr. 1960
own manufactured articles	1st qtr. 1960
purchased goods	1st qtr. 1960
total	1st qtr. 1960

Labour turnover per 100 production workers:	
number of discharges and resignations	Jan. 1957
number of engagements	Jan. 1957
New orders received, selected groups:	
durable goods	3rd qtr. 1964
non-durable goods	3rd qtr. 1964
total	3rd qtr. 1964
Physical volume of production:	
basic metals and metal products	Jan. 1961
chemicals and chemical products	Jan. 1961
food	Jan. 1961
non-metallic mineral products	Jan. 1961
packaging goods	Jan. 1961
textiles, clothing and footwear	Jan. 1961
transport equipment	Jan. 1961
wood and furniture	Jan. 1961
other	Jan. 1961
durable goods	Jan. 1961
non-durable goods	Jan. 1961
total	Jan. 1961
pig iron and ferro alloys	Jan. 1936
Productivity (physical volume of production divided by total hours)	Jan. 1961
Unfilled orders, selected groups:	
durable goods	Jul. 1964
non-durable goods	Jul. 1964
total	Jul. 1964
Unfilled orders as percentage of sales, selected groups:	
durable goods	3rd qtr. 1964
non-durable goods	3rd qtr. 1964
total	3rd qtr. 1964

Construction

Average salaries and wages per month:	
all races	Jan. 1957
Whites	Jan. 1957
Buildings completed	Jan. 1959
Building plans passed:	
additions and alterations	Jan. 1958
residential buildings	Jan. 1958
non-residential buildings	Jan. 1958
total	May 1923
Employment (all races)—private construction	Jan. 1948
Fixed investment: buildings and constructions:	
Central Government, business enterprises	1st qtr. 1960
Central Government, general	1st qtr. 1960
commerce, private transport and financial institutions	1st qtr. 1960
local authorities, business enterprises	1st qtr. 1960
local authorities, general	1st qtr. 1960
manufacturing and construction	1st qtr. 1960
provincial administrations	1st qtr. 1960
public corporations	1st qtr. 1960
S.A.R. & H.	1st qtr. 1960
Gross domestic product: value added	1st qtr. 1960

Hours worked:	
overtime as percentage of ordinary hours:	
production workers	April 1959
total	April 1957
Investment in inventories	1st qtr. 1960
Labour turnover per 100 production workers:	
number of discharges and resignations	Jan. 1957
number of engagements	Jan. 1957
Physical volume of cement production	Jan. 1929

Electricity, gas and water

Electric current generated	Jan. 1943
Fixed investment: public corporations	
machinery, equipment, etc.	1st qtr. 1960
Gross domestic product: value added	1st qtr. 1960

Transport, storage and communication

Air freight—inland traffic (ton miles)	Jan. 1951
Average salaries and wages per month: S.A.R. & H.:	
all races	Jan. 1958
Whites	Jan. 1958
Diesel oil sales	Jan. 1957
Employment (all races):	
Post Office	April 1957
S.A.R. & H.	Jul. 1950
Fixed Investment: machinery, equipment, etc.:	
Central Government, business enterprises	1st qtr. 1960
S.A.R. & H.	1st qtr. 1960
Freight and merchandise insurance:	
payments to foreign countries	1st qtr. 1958
receipts from foreign countries	1st qtr. 1958
Gross domestic product: value added	1st qtr. 1960
Passenger miles—inland air traffic	Jan. 1948
Petrol sales	Jan. 1952
Railway earnings—transport services	Jun. 1910
Revenue-earning traffic, S.A.R.: ton miles	Jan. 1927
tons	April 1920
Shipping—coastwise cargo handled	Jan. 1951
Transport, excluding freight and insurance:	
payments to foreign countries	1st qtr. 1958
receipts from foreign countries	1st qtr. 1958

Trade

Civil judgements for debt (number)	Jul. 1951
Civil summonses for debt (number)	Jan. 1952
Consumer prices—total	Jan. 1922
Fixed investment: machinery, equipment, etc.	1st qtr. 1960
Gross domestic product: value added	1st qtr. 1960
Insolvencies of private individuals and partnerships (number)	Jan. 1953
Investment in inventories:	
motor trade	1st qtr. 1960
retail trade	1st qtr. 1960
total trade and industry	1st qtr. 1960
trade excluding agricultural stocks in trade and diamonds	1st qtr. 1960
Liquidation of companies (number)	Jan. 1934
Motor-vehicles sold:	
number of new commercial vehicles	Jan. 1947
number of new motor cars	Jan. 1947
total	Jan. 1928
value of used	Jan. 1962
Retail sales:	
furniture and household requisites	Jan. 1955
other	Jan. 1955
total	Jan. 1948
Wholesale prices of goods for domestic use—total	Jan. 1940
Wholesale sales:	
building materials	April 1966
furniture and household requisites	April 1966
metals, machinery and general farming requisites	April 1966
other	April 1966
total	April 1966

Financial services

Bank debits	Jan. 1928
Building societies:	
cash, deposits and investments (excl. mortgage advances)	Jan. 1945
fixed deposits	Jan. 1945
mortgage advances	Jan. 1945
mortgage advances granted but not yet paid out	Jan. 1960
new advances granted during the month	Jan. 1965
savings deposits	Jan. 1945
share capital	Jan. 1945
Commercial banks:	
cash and call money loans	Jun. 1953
discounts and advances	Jun. 1923
total deposit liabilities	Jan. 1948
Gross domestic product: value added	1st qtr. 1960

Monetary banking sector:			
gold and foreign exchange reserves	Jan. 1946		
long-term deposit liabilities	Dec. 1962		
money and near-money	Dec. 1962		
net claims on the government sector	Dec. 1962		
total claims on the private sector	Dec. 1962		
N.F.C.:			
call money rate	Jun. 1958		
total deposit liabilities	Sept. 1949		
N.F.C. and discount houses—total deposits and			
call money loans	Jan. 1959		
Treasury bill tender rate	Jun. 1958		
Yield on industrial and commercial shares	Jul. 1962		
Fixed property			
Real estate:			
transfer value of rural	Jan. 1943		
value of transactions	Jul. 1910		
General government			
Current expenditure by general government	1st qtr. 1960		
Employment (all races):			
Central Government	1st qtr. 1959		
local authorities	1st qtr. 1961		
provincial administrations	1st qtr. 1961		
Exchequer receipts on Revenue Account:			
customs and excise	Jan. 1946		
income tax	Jan. 1946		
total	Jan. 1946		
Gross domestic product:			
indirect taxes	1st qtr. 1960		
subsidies	1st qtr. 1960		
Issues on Revenue Account	Jan. 1946		
Total net issues (excl. loans)	Jan. 1964		
Other services			
Companies registered, number of new	Jan. 1934		
Consumption expenditure on services	1st qtr. 1960		
Mortgage bonds registered, number (excl.			
Land Bank)	April 1955		
Sundry series			
Average salaries and wages per month in non-			
agricultural sectors:			
all races	Jan. 1958		
Whites	Jan. 1958		
Balance of payments,			
exports—intermediate goods	1st qtr. 1965		
imports:			
capital goods	1st qtr. 1965		
consumer goods	1st qtr. 1965		
intermediate goods	1st qtr. 1965		
total	Jan. 1958		
Tourism—payment	1st qtr. 1958		
Capital changes of companies, all groups:			
decreases of nominal capital	Jan. 1934		
new nominal capital	Jan. 1932		
Consumption expenditure on:			
clothing	1st qtr. 1960		
food	1st qtr. 1960		
furniture	1st qtr. 1960		
motor cars	1st qtr. 1960		
durable goods	1st qtr. 1960		
non-durable goods	1st qtr. 1960		
total	1st qtr. 1960		
Corporate saving	1st qtr. 1960		
Employment in non-agricultural sectors:			
all races	1st qtr. 1958		
Whites	1st qtr. 1958		
Exports: Department of Customs and Excise			
(excl. gold)	Jan. 1910		
Gross domestic product:			
other income	1st qtr. 1960		
salaries and wages	1st qtr. 1960		
total	1st qtr. 1960		
Gross domestic saving	1st qtr. 1960		
Imports: Department of Customs and Excise	Jan. 1910		
Investment in inventories:			
public authorities	1st qtr. 1960		
public corporations	1st qtr. 1960		
Migration—number of immigrants	Jan. 1925		
Prices of industrial and commercial shares	Jan. 1946		
Stock exchange turnover	Jan. 1949		
Unemployment:			
number of registered Whites, Coloureds and			
Asiatics	Jan. 1948		
number of registered white men	Jan. 1948		

Konjunkturgolwe in Suid-Afrika gedurende die na-oorlogse tydperk, 1946 tot 1968

deur D. J. Smit en B. E. van der Walt*

Inleiding

Die Reserwebank is reeds vir 'n geruime tyd besig met navorsing betreffende konjunkturgolwe en vir hierdie doel is 'n groot aantal ekonomiese tydreekse versamel en ontleed. Alhoewel baie van die reekse in die verlede gebruik is om die verloop van ekonomiese bedrywigheid nader te bepaal, is daar tot dusver nog geen formele poging aangewend om die draaipunte van die konjunkturgolf in die na-oorlogse tydperk vas te stel nie. Op grond van die groot aantal reekse wat tans beskikbaar is, het dit nou moontlik geword om hierdie draaipunte met 'n redelike mate van sekerheid te bepaal.

Die eerste deel van hierdie artikel bevat 'n uiteensetting van die statistiese werkwyse wat gebruik is om die sogenaamde verwysingsdraaipunte te bepaal. Drie metodes word beskryf en 'n vergelyking van die resultate word gegee. In die tweede gedeelte van die artikel word die verskillende fases van die konjunkturgolf bespreek teen die agtergrond van ekonomiese ontwikkelings met die doel om meer lig op die werklike draaipunte te werp, in die besonder in dié gevalle waar die drie metodes verskillende resultate oplewer.

Deel I

Die draaipunte van die konjunkturgolf

Die komponente van 'n ekonomiese tydreeks

Veranderings in ekonomiese bedrywigheid word weerspieël in die verloop van nagenoeg alle ekonomiese

tydreekse en veral in sulke welbekende reekse soos die kwartaallikse nasionale rekeninge-syfers, betalingsbalans- en geld- en bankwesestatistiek, indekse van fabrieks- en mynbouproduksie, werkverskaffing en klein- en groothandelsverkope. 'n Tydreeks kan tegnies omskryf word as 'n stel geordende waarnemings van 'n kwantitatiewe eienskap of kenmerk van 'n individuele of kollektiewe verskynsel wat op verskillende tydstoppe gemaak is [6].

Die volgende komponente kan sinvol in 'n ekonomiese tydreeks onderskei word: (a) die langtermintendens, (b) konjunkturgolwe, (c) seisoenskommelings, en (d) onreëlmatige skommelings.

Die langtermintendens weerspieël die groei en ontwikkeling van 'n volkshuishouding oor die loop van die tyd en hou verband met 'n volgehoue toename in die ekonomiese bedrywige bevolking, die toepassing van innovasies, kwalitatiewe veranderings en toenemende produktiwiteit. Oor 'n lang tydperk kan „lang” golwe, wat omskryf kan word as golwe met 'n periode wat langer is as dié van die konjunkturgolf, ook van die ander komponente van 'n tydreeks onderskei word. Aangesien die tydperk sedert 1946 te kort is om so-danige golwe bevredigend te identifiseer, word hulle in hierdie studie as deel van die langtermintendens beskou.

'n Konjunkturgolf bestaan uit opeenvolgende uitbreidings en inkrappings van die algemene ekonomiese aktiwiteit. Burns en Mitchell stel dat „Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into

*Die menings uitgespreek en die gevolgtrekkings gemaak in hierdie artikel is dié van die skrywers en verteenwoordig nie noodwendig dié van die Suid-Afrikaanse Reserwebank nie.

the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration, business cycles vary from more than one year to ten or twelve years" [2]. Alhoewel die term „siklus" (golf) soos dit in wiskundige terminologie gebruik word, verwys na 'n streng periodieke beweging, sal dit in hierdie artikel gebruik word om die „aanvaarde" ekonomiese betekenis daarvan weer te gee.

Seisoenskommelings dui die patroon van verandering van 'n tydreeks binne 'n jaar aan. Hierdie skommelings, wat gewoonlik op gesette tye in elke jaar voorkom, word hoofsaaklik veroorsaak deur weersomstandighede, soos byvoorbeeld in die geval van die landbouseisoene, en deur sekere konvensies, soos in die geval van Kersfees en Pase.

Die vierde komponent van 'n tydreeks waarna hierbo verwys is, naamlik onreëlmatige skommelings, word hoofsaaklik veroorsaak deur toevallige faktore of gebeurtenisse, soos buitengewone weersomstandighede, stakings, politieke voorvalle en waarnemingsfoute. Vanuit 'n statistiese oogpunt kan hulle as residu-elemente in die breë beeld van ekonomiese bewegings beskou word.

Metodes om die draaipunte van die konjunkturgolf vas te stel

Voordat die metodes waarvolgens die draaipunte van die konjunkturgolf uitgeken kan word, bespreek word, is dit belangrik om daarop te let dat daar 'n onderskeid gemaak word tussen 'n „spesifieke" en 'n „verwysings"-draaipunt. Eersgenoemde verwys na 'n draaipunt van 'n bepaalde tydreeks, terwyl 'n verwysingsdraaipunt 'n draaipunt in die totale ekonomiese bedrywigheid is.

Die probleem van hoe om die draaipunte van die konjunkturgolf te bepaal, kan op verskeie maniere benader word. Die metodes wat die meeste gebruik word, maak gebruik van saamgestelde reekse, die „trosvorming" (of samevalling) van draaipunte van individuele reekse, en diffusie-indekse. Faktor-analise is ook op hierdie gebied toegepas.

Saamgestelde reekse

Die saamgestelde reekse wat die meeste in algemene ekonomiese ontleding gebruik word, is waarskynlik die bruto binnelandse produk en die indeks van nywerheids-produksie. Die bruto binnelandse produk teen heersende pryse meet die totale geldwaarde van die produksie, terwyl dit teen konstante pryse die fisiese volume van alle goedere en dienste wat gedurende 'n bepaalde tydperk geproduseer is, aangee. Dit is derhalwe 'n nuttige samevattende maatstaf van die peil van ekonomiese bedrywigheid. Ander voorbeelde van saamgestelde reekse is die fisiese volume van fabrieksproduksie, indiensneming in nie-landbousektore, en persoonlike

inkome. Harberler sê dat „... a combination of the three indices—(1) employment, (2) real income consumed and (3) real income produced—can be regarded as the criterion of the existence, and measure of the degree, of prosperity and depression and changes in the same" [5].

Tros van draaipunte

Die metode wat gebaseer is op die trosvorming van draaipunte behels dat die spesifieke draaipunte van elkeen van 'n voldoende groot aantal tydreekse wat soveel moontlik verskillende aspekte van ekonomiese bedrywigheid verteenwoordig, bepaal word. Konsentrasies van pieke en trôe op bepaalde tydstippe word gebruik as aanduidings van verwysingsdraaipunte. Die sikliese komponent van 'n tydreeks, of van die totale ekonomiese bedrywigheid, word gewoonlik as basis gebruik om hierdie draaipunte te bepaal. Die verwysingsdatums wat deur 'n vooraanstaande instelling soos die National Bureau of Economic Research bepaal word, word hoofsaaklik op die trosvorming van spesifieke draaipunte gebaseer [1]. Bush en Cohen het van hierdie metode gebruik gemaak om voorlopige ramings van verwysingsdatums te verkry, wat daarna met behulp van 'n verminderde aantal tydreekse wat op grond van hul besondere eienskappe uitgekies is, hersien is [3].

Diffusie-indekse

'n Diffusie-indeks kan omskryf word as 'n maatstaf van die verspreiding van die toenames in 'n aantal tydreekse soos op 'n bepaalde tydstip. Die waarde van die indeks vir 'n bepaalde periode (sê byvoorbeeld 'n maand) word verkry deur die aantal tydreekse waarin daar 'n toename was, uit te druk as 'n persentasie van die totale aantal reekse wat in die beskouing betrek word. In die geval van elke reeks wat onveranderd gebly het, word daar $\frac{1}{2}$ by die aantal reekse waarin daar toenames was, bygetel. 'n Variasie van hierdie metode bestaan uit die berekening van 'n saamgestelde reeks deur die persentasie van die reekse wat daal, af te trek van die persentasie van die reekse wat styg. Deur die resultate van hierdie berekening te akkumuleer, word 'n reeks verkry wat gewoonlik 'n duidelike aanduiding van veranderinge in die totale ekonomiese bedrywigheid gee.

In die algemeen word twee diffusie-indekse bereken, naamlik die historiese en die lopende. In die geval van die historiese indeks word die draaipunte van die sikliese komponent van elke reeks vasgestel. In elke periode wat volg op 'n trog tot by en met insluiting van die daaropvolgende piek, word die reeks geag om te styg, en in elke periode wat volg op 'n piek tot by en met insluiting van die daaropvolgende trog word dit geag om te daal. Vir die berekening van die historiese indeks is daar dus slegs 'n stel spesifieke draaipunt-datums vir elke reeks nodig.

Die lopende diffusie-indeks word bereken sonder om

spesifieke draaipunte te bepaal. Dit word gebaseer op die werklike verandering in individuele tydreekse waarvan die langtermintendens- en seisoenskomponente uitgeskakel is. Pogings is aangewend om die toevallige komponent van hierdie diffusie-indeks te verminder deur van metodes soos bewegende gemiddeldes en die toekenning van gewigte aan die veranderinge in individuele reekse gebruik te maak.

Die mate waarin reekse vir opname in die berekening van diffusie-indeks uitgekies word, verskil aansienlik. Burns [8] het byvoorbeeld ongeveer 700 tydreekse gebruik wat alle soorte ekonomiese verskynsels soos produksie, pryse, rentekoerse en voorrade verteenwoordig het. Hy het reekse ingesluit wat sowel sterk as swak met die konjunkturgolf gekorreleer was. Moore [9] het 'n historiese diffusie-indeks opgestel op grond van reekse waarvan die draaipunte ooreenstemming met die verwysingsdatums van die National Bureau getoon het. In hierdie geval het die grootte van die steekproef van 83 tot 356 gewissel.

Metodes wat in Suid-Afrika gebruik is.

Du Plessis [4] het die draaipunte van die Suid-Afrikaanse konjunkturgolf oor die tydperk 1910-49 bepaal. Sy metode het bestaan uit die standaardisering van die sikliese bewegings in elkeen van 16 tydreekse deur elke reeks deur sy standaardafwyking te deel. 'n Gemiddelde van die gestandaardiseerde tydreekse, sonder gebruikmaking van gewigte, is vervolgens vir elke maand bereken. In 'n verhandeling van van der Walt [11] is verwysingsdraaipunte vir die na-oorlogse periode tot 1966 bepaal deur gebruik te maak van 'n ongeveegde diffusie-indeks wat op 106 reekse gebaseer is.

Voor- en nadele van die metodes

Die vernaamste nadeel van du Plessis se metode is dat dit baie meer berekenings per reeks verg as die diffusie-indeks- of die tros-van-draaipunte-metode. In die lig van die groot aantal reekse wat nou beskikbaar is, is dit 'n belangrike oorweging indien die resultate nie meer aanneemlik is as dié van die meer regstreekse metodes waarvan in hierdie studie gebruik gemaak word nie.

Die saamgestelde reekse wat vir doeleindes van konjunkturgolfontledings besonder nuttig is, is daardie reekse wat betrekking het op die totale van die nasionale rekeninge (soos die bruto binnelandse produk), die fisiese volume van produksie (soos fabrieks- en mynbouproduksie en elektriese krag opgewek), en indiensneming in die nie-landbousektore. Ongelukkig is hierdie reekse slegs vanaf 1960 op 'n maandelikse of kwartaallikse grondslag beskikbaar. Dit is egter nie altyd maklik om te besluit of daar meer gewig aan die verloop van 'n paar saamgestelde reekse as aan 'n groot aantal algemene ekonomiese aanwysers toegeken moet

word nie, veral omdat sekere van die totaalreekse nie duidelike golfbewegings vertoon nie. In albei gevalle moet die mate van korrelasie met totale ekonomiese bedrywigheid in ag geneem word. Aangesien totaalreekse dus nie as finale aanduiders van verwysingsdraaipunte gebruik kan word nie, moet die gedrag van ander ekonomiese gegewens ook vir hierdie doel in aanmerking geneem word.

Die tweede metode vir die bepaling van verwysingsdraaipunte, naamlik die tros-van-draaipunte-metode, gaan mank aan die nadeel dat dit dikwels moeilik is om duidelik afgebakende verdelings van draaipunte, waarvan elkeen op 'n besondere verwysingsdraaipunt betrekking het, te vind. Hierteenoor gee 'n grafiek van die frekwensie van draaipunte per periode 'n aanduiding van die mate waarin draaipunte om die verwysingsdatums gekonsentreer is.

Die derde metode, naamlik dié van die diffusie-indeks, gee gewoonlik 'n duidelike aanduiding van die rigting van verandering, asook van die verwysingsdatums, maar nie noodwendig van die omvang van die verandering nie. In die uiterste geval kan dit selfs gebeur dat die totale ekonomiese bedrywigheid versnel terwyl daar 'n voldoende aantal afnames in individuele tydreekse voorkom om 'n dalende waarde van die diffusie-indeks te gee. Bowendien is dit, net soos in die geval van 'n ontleding wat op die tros van draaipunte gegrond is, moeilik om 'n onsydige steekproef van reekse wat totale ekonomiese bedrywigheid weerspieël, te kies en terselfdertyd oorvleueling van ekonomiese bedrywigheid soos deur die verskillende reekse weergegee, te beperk. In die geval van die diffusie-indeks kan hierdie probleem egter gedeeltelik deur gewigtoekenning op 'n sektor-basis, byvoorbeeld ooreenkomstig die bydrae tot die bruto binnelandse produk, opgelos word.

Nieteenstaande hierdie tekortkominge, wat in 'n mate teoreties is, is daar in die praktyk gevind dat die diffusie-indeks 'n redelik betroubare aanwyser van die verloop van ekonomiese bedrywigheid is. Moore verklaar selfs dat "... this conglomerate is one of the best historical indices of the cyclical position of our economy that has ever been devised" [8]. Dit is ook bekend dat die sikliese beweging van die diffusie-indeks duidelik uitstaan, dat die maksima en minima daarvan voor die ooreenstemmende verwysingspieke en -trôe bereik word, dat die 50-persent-waardes daarvan min of meer saamval met die verwysingspieke en -trôe, en dat die maksima en minima van die diffusie-indeks 'n redelike aanduiding van die amplitudes van die golfbewegings in ekonomiese bedrywigheid gee. Die feit dat die diffusie-indeks algemene bedrywigheid lei, beteken dat dit gebruik kan word vir die vooruitskatting van draaipunte sowel as van die intensiteit van op- en afswaai.

Navorsing het getoon dat die koers van verandering in 'n saamgestelde reeks dieselfde leidende eienskappe het as die diffusie-indeks wat uit die komponente van die saamgestelde reeks bereken is. Die diffusie-indeks

wat bedoel is om die verloop van die totale ekonomiese bedrywigheid te weerspieël, kan egter 'n groot aantal nie-gelyksoortige tydreekse omvat waarvan sommige nie in saamgestelde reekse opgeneem word nie. Indien die diffusie-indeks uit 'n groot steekproef van reekse bereken word, neig dit ook om 'n beter aanduiding van die golfbeweging as die saamgestelde reekse te gee. Individuele tydreekse sal moontlik ook voor die saamgestelde reekse beskikbaar wees sodat voorlopige diffusie-indekswaardes op basis van gedeeltelike dekking bereken kan word namate die inligting beskikbaar gestel word. Daar word soms aangevoer dat, indien dit die bedoeling is om verwysingsdatums vooruit te skat, dit makliker is om die diffusie-indeks as die koers van verandering in 'n aantal reekse te vertolk.

Die historiese diffusie-indeks bied dus 'n nuttige samevatting van die verloop van 'n aantal individuele reekse maar soos alle saamgestelde reekse verberg dit besonderhede en kan dit op sigself nie as 'n plaasvervanger vir gedetailleerde ontledings dien nie. Dit is gevolglik noodsaaklik om ook die bewegings van individuele tydreekse na te gaan ten einde 'n aanduiding te kry van watter reekse verander, en van wanneer en met hoeveel hulle skommel.

Sekere skrywers is van mening dat toevallige skommelings waaraan die lopende diffusie-indeks onderhewig is, sy nut by die bepaling van historiese verwysingsdraaipunte verminder. Hierdie skommelings kan egter gedeeltelik uitgestryk word deur van 'n groot steekproef gebruik te maak.

Bepaling van verwysingsdraaipunte vir Suid-Afrika

Die bepaling van verwysingsdatums is op die trosvorming van draaipunte van tydreekse en op die historiese diffusie-indeks gebaseer. Vir hierdie doel is van 'n steekproef van meer as 200 tydreekse gebruik gemaak waarvan die meeste slegs vir 'n gedeelte van die tydperk vanaf 1946 beskikbaar is. Hierdie reekse is aanvanklik hoofsaaklik op grond van hul nut vir ekonomiese diagnose uitgekies. Die enigste reekse wat doelbewus wegelaat is, is dié wat nie duidelik sikliese bewegings toon nie, soos sekere indiensnemings-, nasionale rekening- en rentekoersreekse. Aangesien die klem meer op veranderinge in reële ekonomiese bedrywigheid val, is die aantal prysreekse beperk en is net die totale verbruikers- en groothandelsprysreekse ingesluit. In die geval van reekse waarby 'n prysfaktor ingesluit is, kan oor die algemeen aangeneem word dat die reële komponent die pryskomponent oorheers en dat die draaipuntatums gevolglik nie oormatig geraak word nie.¹ Die Aanhangel bevat 'n lys van die reekse wat in hierdie studie gebruik is.

Soos hierbo aangedui is, was dit noodsaaklik om die bepaling van spesifieke draaipunte op die sikliese

komponent van die tydreekse te baseer. Die seisoenskomponent is uitgeskakel deur basies gebruik te maak van die „X-11 Variant of the Census Method II Seasonal Adjustment Program” [10]. Daarbenewens is aansuiwerings gemaak vir wisselings in die aantal en soort werksdae in 'n besondere maand. Die toevallige komponent is vervolgens uitgeskakel deur gladde krommes op die seisoensaangesuiwerde reekse te pas². Aangesien die uitkakeling van die langtermintendens deur middel van 'n rekenaarprogram dikwels onbevredigende resultate lewer, is die tendens van elke reeks in hoofsaak deur middel van vryhandmetodes uitgeskakel, omdat 'n mate van persoonlike oordeel noodsaaklik was.

Waar die sikliese komponent in die omgewing van 'n draaipunt dieselfde opeenvolgende waarde gehad het, is die laaste van hierdie waardes gebruik. Die waarde van die produk van die sikliese en toevallige komponente is ook in berekening gebring wanneer 'n swak passing van 'n Henderson-kurwe voorgekom het. By sekere reekse, soos dié betreffende werkloosheid, was dit nodig om die omgekeerde waardes te gebruik. Spesifieke draaipuntatums van kwartaalreekse is aan die middelste maand van die betrokke kwartaal toegeken, hoewel erken word dat hierdie prosedure moontlik nie altyd die werklike draaipunt aandui nie.

Tros van draaipunte

Grafiek 1 toon die frekwensieverdeling van die aantal spesifieke draaipunte per maand. Die groter aantal draaipunte wat in die meer onlangse jare waargeneem word, kan aan die groter aantal reekse wat beskikbaar was, soos in tabel 1 aangedui, toegeskryf word.

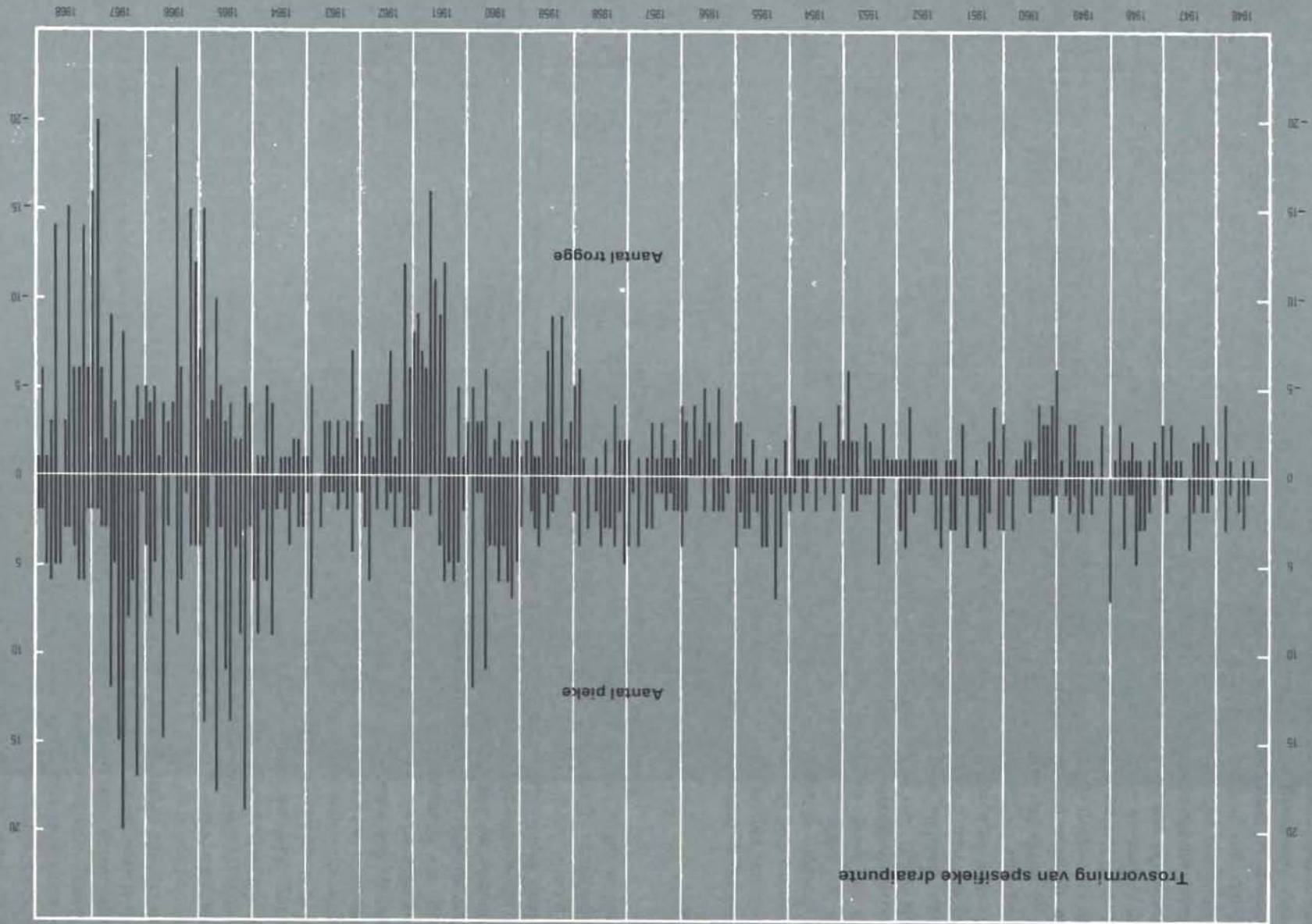
Tabel 1
Veranderings in die aantal beskikbare tydreekse

Tydperk	Maand-reekse	Kwartaal-reekse	Alle reekse
Jan. 1946-Des. 1947	31-40	0-0	31-40
Jan. 1948-Des. 1956	41-53	0-0	41-53
Jan. 1957-Des. 1959	52-77	0-11	52-88
Jan. 1960-Des. 1963	83-116	32-61	115-177
Jan. 1964-Des. 1968	111-122	64-82	175-204

Op grond van die konsentrasie van draaipuntatums is gepoog om 'n aantal homogene verdelings af te baken waarvan elkeen by slegs een verwysingsdraaipunt behoort. Dit is afsonderlik vir boonste en onderste draai-

¹In ooreenstemming met aanvaarde gebruik, behels die reekse wat gebruik is 'n mate van duplikasie deur die insluiting in sekere gevalle van sowel totale as gekose hoofkomponente [1, 3].

²Henderson-krommes is vir hierdie doel gebruik [7]. By kwartaalreekse is 5 terme gebruik, terwyl 9, 13 of 23 terme vir die maandreekse gebruik is, afhangende van die relatiewe amplitudes van die toevallige en tendens-siklus-komponente.



punte gedoen. Tabel 2 toon die eindpunte, die mediaan³ en die steekproefgrootte van elkeen van hierdie verdelings.

Tabel 2
Mediane en steekproefgroottes vir konsentrasies van spesifieke draaipunt datums

Pieke		
Eindpunte van verdeling	Steekproefgrootte	Mediaan
Jan. 1946 - Des. 1946	10	Jul. 1946
Jan. 1947 - Sep. 1950	67	Sep. 1948
Okt. 1950 - Jun. 1953	57	Nov. 1951
Jul. 1953 - Aug. 1956	60	Mei 1955
Sep. 1956 - Mrt. 1959	62	Jan. 1958
Apr. 1959 - Okt. 1961	109	Aug. 1960
Jul. 1963 - Jun. 1966	187	Apr. 1965
Jul. 1966 - Jun. 1968	144	Mei 1967

Trôe		
Eindpunte van verdeling	Steekproefgrootte	Mediaan
Jan. 1946 - Apr. 1948	28	Apr. 1947
Mei 1948 - Aug. 1951	61	Jan. 1950
Sep. 1951 - Feb. 1955	64	Sep. 1953
Mrt. 1955 - Sep. 1957	53	Aug. 1956
Okt. 1957 - Des. 1959	68	Mrt. 1959
Jan. 1960 - Des. 1962	164	Aug. 1961
Des. 1964 - Des. 1966	146	Jan. 1966
Jan. 1967 - Des. 1968	150	Des. 1967

Die mediaan behoort 'n goeie aanduiding van die verwysingsdatums te gee indien die spesifieke draaipunte van 'n bepaalde tros onsydig is met betrekking tot die betrokke verwysingspunt. Hierbenewens behoort die rigting van verandering van die reekse wat binne 'n bepaalde tros geen draaipunte het nie, statisties en ten opsigte van hul belangrikheid uit te kanselleer en behoort hulle ook in ewewig te wees wat leiers en sloeders betref.

Tabel 2 toon dat twee tydperke, naamlik November 1961 tot Junie 1963 met betrekking tot pieke en Januarie 1963 tot November 1964 met betrekking tot trôe, nie by die berekenings in ag geneem is nie. Dit is gedoen omdat dit, in die lig van die duidelike afwaartse sikliese beweging in ekonomiese bedrywigheid vanaf ongeveer die tweede kwartaal van 1960 wat deur die bewegings van die meer belangrike reekse in grafiek 4 en ander ekonomiese gegewens getoon word, enigsins onverwags sou gewees het indien spesifieke draaipunte, met verwysing na die voorafgaande verwysings-

piek, ná 1961 nog in noemenswaardige mate sou voorgekom het. Op soortgelyke wyse is dit, vanweë die skerp opwaartse fase ná 1961 wat weer eens uit die verloop van die belangrike reekse en ander ekonomiese gegewens na vore kom, onwaarskynlik dat trôe wat met die voorafgaande verwysingstrog verband gehou het, hulle ná 1962 nog op beduidende skaal kon voorgedoen het. Die beginpunte van hierdie twee tydperke is verder verfyn deur 'n beskouing van die trosse van draaipunte. Die eindpunte van die twee tydperke is ook bepaal op grond van ekonomiese gegewens en die waargenome verdelings van draaipunte. Hoewel bekend is dat spesifieke pieke en trôe waargeneem kan word selfs wanneer verwysingstrôe en -pieke onderskeidelik, voorkom, kan die uitskakeling van spesifieke draaipunte in hierdie tydperke gedeeltelik geregverdig word op grond van die feit dat baie van die reekse eers vanaf ongeveer 1960 beskikbaar gekom het en moontlik ook op grond van die feit dat sikliese bewegings wat nie betekenisvol was nie, aan sommige van hulle toegeskryf kon gewees het. Bowendien sou sekere van die draaipunte wat binne die betrokke twee tydperke val, nie as sodanig uitgeken gewees het nie indien kennis betreffende die datums van die verwysingsdraaipunte reeds vooraf beskikbaar sou gewees het. Deur die uitsluiting van hierdie tydperke is die mediane van die aangrensende verdelings van draaipunt datums waarskynlik minder sydig as beramers van die verwysingsdraaipunt datums.

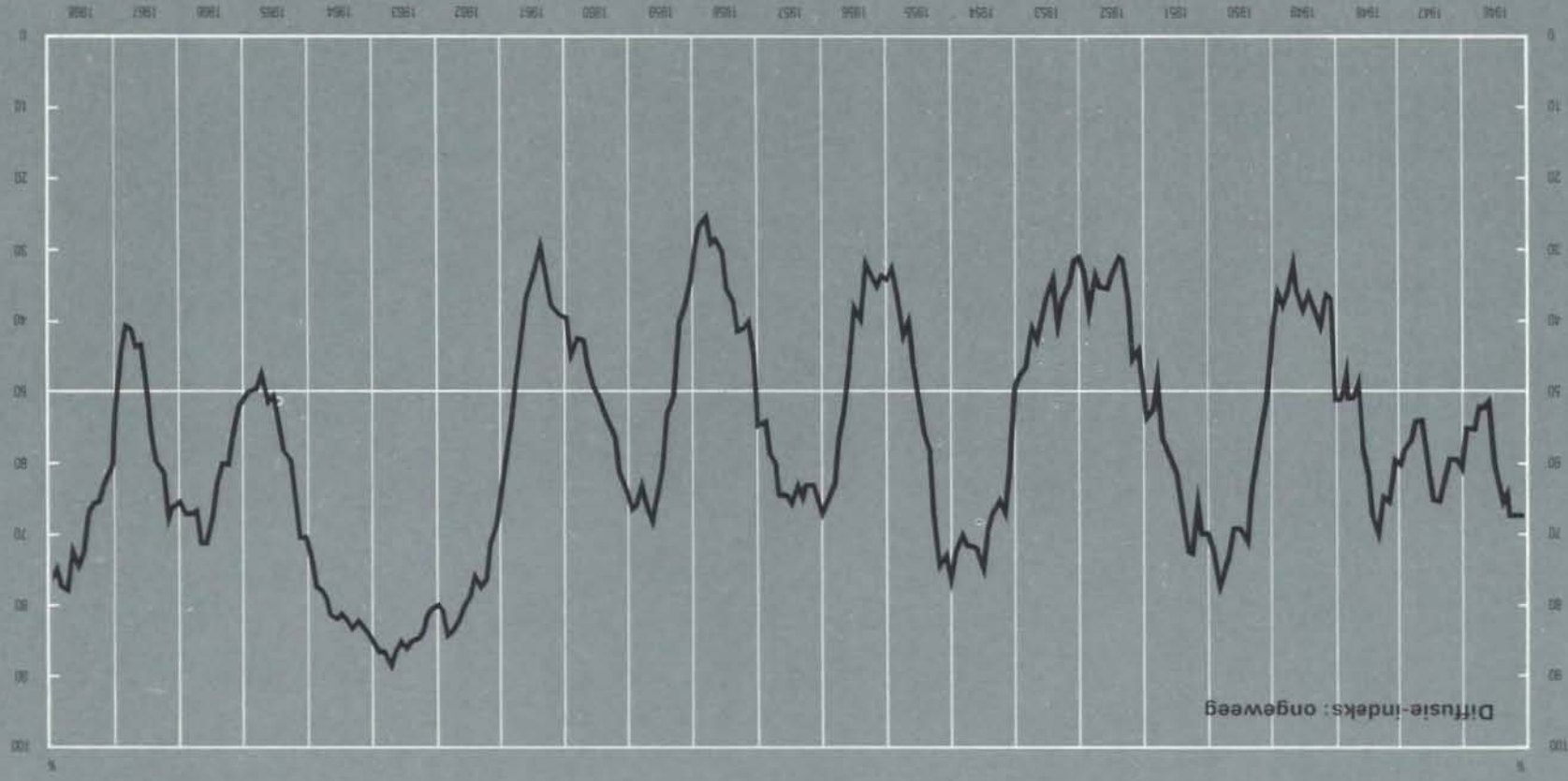
Ongeweegde diffusie-indeks

Die historiese diffusie-indeks word in grafiek 2 getoon. Oor die algemeen kan vir doeleindes van hierdie indeks op meer tydreëse waarnemings gedoen word as in die geval van die tros-van-draaipunte-metode, omdat die rigting van verandering van 'n reeks vir 'n bepaalde tydperk soms bepaal kan word terwyl een of albei van die aangrensende spesifieke draaipunt datums nie met sekerheid vasgestel kan word nie. Die grafiek toon 'n betreklik gladde en duidelike sikliese beweging wat hoofsaaklik toegeskryf kan word aan die groot steekproewe en die feit dat 'n historiese indeks bereken is.

Aannemende dat die steekproef van tydreëse onsydig is, dui 'n indeks waarde van meer as 50 persent in 'n besondere maand 'n toename in ekonomiese bedrywigheid tussen die vorige maand en die betrokke maand aan. Op dieselfde wyse dui 'n indeks waarde van minder as 50 persent op 'n afname in ekonomiese bedrywigheid, terwyl 'n waarde van 50 persent beteken dat die tempo van bedrywigheid onveranderd gebly het. 'n Verwysingsdatum word dus van die grafiek verkry as synde die maand wat die snypunt met die 50-persentlyn voorafgaan. 'n Uitsondering is byvoorbeeld op hierdie reël gemaak in die geval van die 1951/52-draaipunt. Hoewel die ekonomiese bedrywigheid tussen Augustus en September 1951 skynbaar ietwat gedaal het, toon die diffusie-indeks dat die toename in bedry-

³Die mediaan is daardie maand wat die aantal draaipunte van die besondere verdeling in twee helftes verdeel.

Grafiek 2



wigheid onmiddellik ná September hierdie daling waarskynlik oortref het. Die snypunt met die 50-persent-lyn tussen Augustus en September word derhalwe nie as betekenisvol beskou nie. Tabel 3 toon die verwysingsdatums gegronde op die diffusie-indeks.

Tabel 3
Verwysingsdraaipunt datums volgens die ongeweege diffusie-indeks

Pieke	Trôe
September 1948	Desember 1949
Desember 1951	November 1953
Junie 1955	Julie 1956
Desember 1957	Maart 1959
Junie 1960	Augustus 1961
Augustus 1965	November 1965
Junie 1967	November 1967

Alhoewel die diffusie-indeks nie 'n direkte weerspieëling van algemene ekonomiese bedrywigheid gee nie, verskaf dit nogtans 'n aanduiding van die peil en koers van verandering in ekonomiese bedrywigheid. So toon dit byvoorbeeld dat 'n sterk oplewing ná 1961 plaasgevind het. Tussen Augustus 1961 en Augustus 1965 toon die indeks 'n groot swaaiwydte oor 'n lang periode. Vanaf September 1965 tot November 1965 was die afname in aktiviteit vanaf die hoë peil wat in Augustus 1965 behaal is, besonder klein, soos getoon word deur 'n indeks waarde wat slegs in geringe mate benede die 50-persent-lyn gedaal het. Alhoewel dit wil voorkom of die afname in bedrywigheid in die tweede helfte van 1967 meer wydverspreid was as dié in die tweede helfte van 1965, het dit ook oor 'n betreklik kort tydperk voorgekom. In 1965 en 1967 kan derhalwe twee duidelike en waarskynlik statisties beduidende afwaartse fases onderskei word wat ook op grond van die diffusie-indeks beskou kan word as matige afnames in die verloop van 'n sterk opwaartse fase na Augustus 1961.

Vir doeleindes van vooruitskatting is dit interessant om op te merk dat die draaipunte van die diffusie-indeks (sien grafiek 2) voortdurend met 'n aantal maande op die verwysingsdraaipunte, soos dit deur hierdie indeks aangedui word, vooruitloop.

Geweegde diffusie-indeks

'n Gewysigde historiese diffusie-indeks is bereken deur die sektorale diffusie-indeks te weeg. Ongeweegde diffusie-indeks is bereken vir elke sektor (ooreenkomstig die „International Standard Industrial Classification of All Economic Activities“) sowel as vir 'n groep diverse reekse wat nie in een van die elf sektore tuisgebring kan word nie. Die gewig van hierdie „diverse“-groep teenoor die totale gewig van die elf sektore is bepaal volgens

die aantal reekse daarin opgeneem in verhouding tot die totale aantal reekse wat gebruik is. Die totale gewig wat sodoende vir die elf sektore verkry is, is aan die individuele sektore toegedeel in verhouding tot hul bydrae tot die bruto binnelandse produk. Die gewigte is vir tydperke van vyf jaar (die laaste tydperk bestaan uit slegs drie jaar) konstant gehou om die wisseling in die gewigte van jaar tot jaar te beperk.

Om 'n geweegde diffusie-indeks aanvaarbaar te maak, is dit wenslik dat die bewegings in die reekse van 'n besondere sektor verteenwoordigend moet wees van die verloop van die bedrywigheid in daardie sektor. Die gevaar bestaan dat betreklik groot gewigte aan sekere sektorale diffusie-indeks toegeken kan word, wat vir sekere tydperke op slegs enkele tydreekse gegronde is en wat met betrekking tot die bedrywigheid in hierdie sektore sydig kan wees. Die weging van die sektorale indekse verseker egter dat die verskillende sektore van die ekonomie in die globale diffusie-indeks gebalanseerd is.

Die geweegde diffusie-indeks word in grafiek 3 aangebied, terwyl die verwysingsdatums in die volgende tabel verskyn:

Tabel 4
Verwysingsdraaipunt datums volgens die geweegde diffusie-indeks

Pieke	Trôe
Desember 1948	Februarie 1950
Desember 1951	November 1953
April 1955	September 1956
Desember 1957	Maart 1959
April 1960	Julie 1961
Junie 1965	September 1965
Junie 1967	November 1967

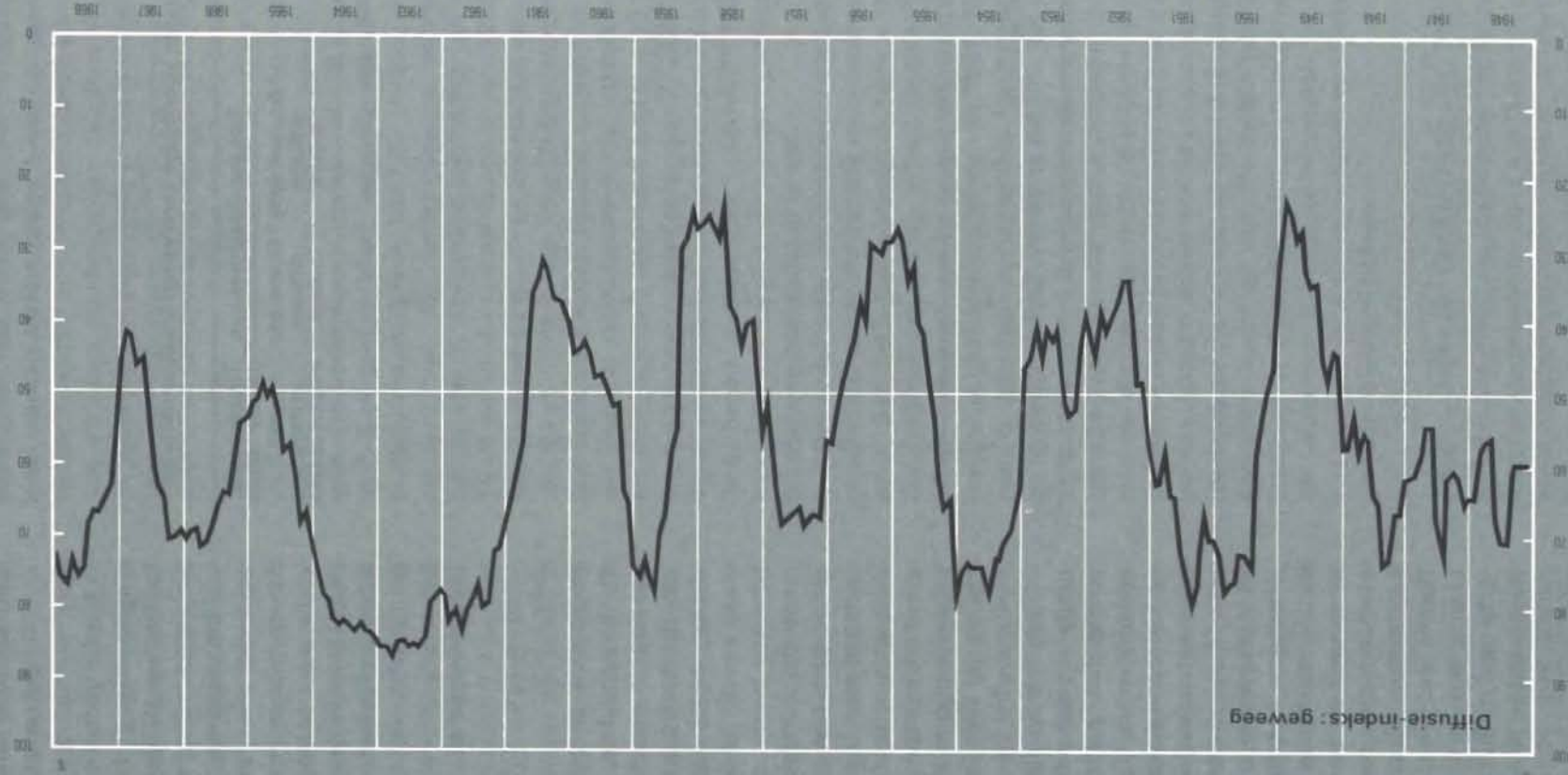
Afwykinge tussen verwysingsdatums

Tabel 5 toon die verskil tussen die drie stelle voorlopige verwysingsdatums volgens die trosse van spesifieke draaipunte en die geweegde en ongeweege diffusie-indeks.

In die lig van die feit dat dit onder normale omstandighede nie moontlik is om 'n draaipunt in die konjunkturgolf binne 'n kort tydperiode, byvoorbeeld binne 'n maand, te bepaal nie, wil dit volgens tabel 5 voorkom of die resultate van die drie metodes nie beduidend van mekaar verskil nie. In werklikheid is die verskil tussen die resultate van die drie metodes ten opsigte van geen van die verwysingsdraaipunte groter as vier maande nie. Dit wil ook voorkom of die verskille tussen die resultate van die drie metodes van toevallige aard is.

Al drie metodes het tekortkominge en dit sou moeilik wees om een daarvan as die beste uit te sonder. Ten einde „finale“ verwysingsdraaipunte te verkry, sal die

Grafiek 3



resultate van al drie metodes tesame met die draaipunte van die meer belangrike saamgestelde en ander individuele reekse en met inagneming van ekonomiese gebeurtenisse, derhalwe in aanmerking geneem moet word.

Tabel 5
Verskil tussen voorlopige verwysingsdraaipunt-datum
aantal maande

Jaar	Tros van draaipunte min		Ongeweegde diffusie-indeks min geweegde diffusie-indeks			
	Ongeweegde diffusie- indeks	Geweegde diffusie- indeks				
Boonste draaipunte:						
1946	—	—	—			
1948	0	—3	—3			
1951	—1	—1	0			
1955	—1	1	2			
1957/58	1	1	0			
1960	2	4	2			
1965	—4	—2	2			
1967	—1	—1	0			
Maksimum absolute verskil				4	4	3
Gemiddelde absolute verskil				1·4	1·9	1·3
Onderste draaipunte:						
1947	—	—	—			
1949/50	1	—1	—2			
1953	—2	—2	0			
1956	1	—1	—2			
1959	0	0	0			
1961	0	1	1			
1965/66	2	4	2			
1967/68	1	1	0			
Maksimum absolute verskil				2	4	2
Gemiddelde absolute verskil				1·0	1·4	1·0

Deel II

Ekonomiese ontwikkelings en finale draaipunt- datums van die konjunkturgolf

In hierdie gedeelte word 'n kort oorsig van ekonomiese ontwikkelings gedurende die verskillende fases van die konjunkturgolf gegee en aandag word op gebeure wat die verloop van die verskillende ekonomiese aanwysers kon beïnvloed het, gevestig⁴. Teen hierdie agtergrond word die drie stelle voorlopige verwysingsdraaipunt-datum wat in deel I verkry is, saam met veranderings in die meer belangrike saamgestelde reekse, soos die bruto binnelandse produk en die fisiese volume van fabrieksproduksie, gebruik om finale verwysingsdraaipunt-datum vas te stel. 'n Seleksie van die meer betekenisvolle ekonomiese aanwysers word in die bygaande grafiek getoon.

Opswaai: Die onmiddellik na-oorlogse tydperk tot Julie 1946

Hoofsaaklik as gevolg van 'n afname in landbou- en mynbouproduksie, het die reële bruto binnelandse produk slegs in 'n geringe mate gedurende die laaste drie jaar van die oorlog gestyg. Teenoor die beperkte styging in binnelandse aanbod, het 'n aansienlike opgehoopte vraag aan die einde van die oorlog bestaan. Die streng-beperkte invoer en verhoogde goudproduksie gedurende die oorlogsjare het die binnelandse likwiditeit tot 'n baie hoë peil gevoer. In die onmiddellike na-oorlogse jare is die Suid-Afrikaanse volkshuishouding deur verhoogde vraag in sowel die binnelandse as uitvoermarkte gestimuleer, terwyl die ontdekking van goud in die Oranje-Vrystaat en gunstige verwikkelings in die mynbou in Wes-Transvaal 'n nuwe tydvak in die goud-mynboubedryf ingelui het.

Teen hierdie agtergrond gesien is dit nie verbasend nie dat toe die owerhede invoer- en valutabeheer in 1946 verslap het, sekere ekonomiese aanwysers soos die goedere-invoer, die aantal nuwe motorvoertuie verkoop en kleinhandelsverkope, vinnig gestyg het. Ander aanwysers, hoofsaaklik dié van 'n finansiële aard soos die waarde van vaste eiendomstransaksies, die waarde van bouplanne goedgekeur, die aantal nuwe maatskappye geregistreer en die diskonteringe en voorskotte van handelsbanke, het opmerklik toegeneem, hoofsaaklik vanweë die hoë peil van binnelandse likwiditeit, die algemene spekulatiewe stemming en die feit dat sekere kapitaalgoedere nou beskikbaar gekom het. Die opgehoopte vraag was egter so groot dat dit 'n aansienlike styging in pryse tot gevolg gehad het. Dit is derhalwe nie verbasend nie dat die President van die Suid-Afrikaanse Reserwebank in Augustus 1946 die aandag op die ge-

⁴Die bespreking van ekonomiese ontwikkelings is hoofsaaklik gebaseer op die Redes van die President van die Reserwebank voor aandeelhouders, die Jaarlikse Ekonomiese Verslag en die Kwartaalblad van die Bank en ander inligting wat in die Ekonomiese Departement van die Bank beskikbaar is.

vare van inflasie en buitensporige spekulاسie gevestig het en gewaarsku het dat 'n grootskaalse spekulاسiewe gees, wat tot gevolg gehad het dat 'n groot gedeelte van die publiek gesonde oordeel en onderskeidingsvermoë in hul beleggings- en aankoopbesluite verwaarloos het, ontwikkel het.

Teen die middel van 1946 het 'n aantal belangrike ekonomiese aanwysers boonste draaipunte aangeteken. Volgens die tros van draaipunte is 'n piek in Julie 1946 bereik, terwyl die geweegde en ongeweegde diffusie-indekse op 'n laer koers van toename teen die middel van 1946 gedui het, maar nie die 50-persent-lyn gekruis het nie. 'n Boonste draaipunt teen ongeveer die middel van 1946 word egter deur die verandering in die koers van toename in die bruto binnelandse produk aangedui. Indien die bydrae van die landbou uitgesluit word, het die reële produksie van die res van die volkshuishouding met $4\frac{1}{2}$ persent gedurende die jaar geëindig Junie 1946 gestyg, gevolg deur 'n toename van slegs 0.4 persent gedurende 1946/47. Alhoewel invoer en verkope van motorvoertuie voortgegaan het om toe te neem, is boonste draaipunte ook in Julie 1946 deur 'n aantal ander belangrike tydreekse getoon, en aangesien die aanduiding van die tros van draaipunte ook deur die verandering in die bruto binnelandse produk bevestig word, word hierdie maand as die eerste na-oorlogse verwysingsdraaipunt datum aanvaar.

Afswaai: Augustus 1946 tot April 1947

Die geringe verlansaming in ekonomiese bedrywigheid wat op die Julie 1946 piek gevolg het, het vir ongeveer nege maande voortgeduur en is in 'n groei-koers van slegs $1\frac{1}{2}$ persent in die reële bruto binnelandse produk gedurende die jaar geëindig Junie 1947 weerspieël, gevolg deur 'n toename van $9\frac{1}{2}$ persent gedurende 1947/48.

In Augustus 1947 het die President van die Reserwebank na die verminderde gevare van inflasie en spekulاسie verwys en dit is deur die betreklike stabiliteit van verbruikerspryse, 'n afname in die pryse van goudmyn-aandele en 'n meer gematigde verloop in vaste eien-domstransaksies, bevestig. Onderste draaipunte is in die eerste helfte van 1947 deur 'n aantal belangrike reekse getoon, maar van die drie algemene statistiese metodes het slegs die tros van draaipunte op 'n trog gedui. Gesien die verandering in die koers van toename in die reële bruto binnelandse produk en die aantal onderste draaipunte wat by die meer belangrike ekonomiese reekse opgemerk word, wil dit voorkom of 'n trog in ongeveer April 1947 voorgekom het.

Opswaai: Mei 1947 tot November 1948

Die uitstaande kenmerk van hierdie tydperk was die uitsonderlik hoë koers van toename in die reële produk. Gedurende die kalenderjaar 1948 het die reële bruto binnelandse produk byvoorbeeld met nie minder nie as $8\frac{1}{2}$ persent gestyg, terwyl die ooreenstemmende koers

vir die jaar geëindig Junie 1948 selfs nog hoër was, naamlik ongeveer $9\frac{1}{2}$ persent. Hierdie opvallende versnelling in die koers van toename in die reële produk is deur betekenisvolle stygings in feitlik alle soorte binnelandse besteding en uitvoer veroorsaak. Die ontginning van die nuwe goudvelde van die Verre Wesrand, die ontwikkeling van diep myne en die ontdekking van die Vrystaatse goudvelde het ook bygedra om algemene optimisme gedurende hierdie tydperk te verhoog.

As gevolg van die hoë koerse van toename in die reële bruto binnelandse besteding van nie minder nie as 8.8 en 8.5 persent in 1947 en 1948 onderskeidelik, het die volkshuishouding tekens van oorverhitting begin toon. Die verbruikersprysindeks het met nie minder nie as 5.8 persent in 1948, vergeleke met 1947, gestyg, en groot tekorte het in 1947 en 1948 op die lopende rekening van die betalingsbalans voorgekom. As gevolg van 'n aansienlike toevloeiing van kapitaal in 1947 en in die eerste kwartaal van 1948, het die Reserwebank se goud- en buitelandse valuta-reserwes tot Maart 1948 skerp toegeneem, voordat dit weer opmerklik gedaal het. Om die toestand te verlig het die Tesourie staatsdepartemente, plaaslike owerhede en ander openbare liggame in Augustus 1948 versoek om hul kapitaaluitgawes te besnoei en vanaf November 1948 is buitelandse valuta vir invoer uit nie-Sterlinglande beperk. In Desember 1948 het die Reserwebank handelsbanke versoek om kredietfasiliteite vir nie-produktiewe doeleindes in te kort.

Hierdie maatreëls, gepaard met 'n mate van politieke onsekerheid as gevolg van die regeringsverandering in April 1948, het 'n laer koers van toename in ekonomiese bedrywigheid tot gevolg gehad. Binnelandse ekonomiese aanwysers dui op 'n boonste draaipunt in die konjunkturgolf teen die einde van 1948. So 'n draaipunt is inderdaad in September 1948 deur sowel die ongeweegde diffusie-indeks as die tros van draaipunte aangetoon, terwyl die geweegde diffusie-indeks Desember 1948 as 'n verwysingspiek aangedui het. Nieteenstaande die verskille in die draaipunte deur verskeie belangrike reekse getoon, skyn dit dat daar 'n konsentrasie van boonste draaipunte van die meer strategiese reekse in die vierde kwartaal van 1948 voorgekom het. Aangesien sommige van die reekse wat 'n boonste draaipunt in Desember aantoon redelikerwys verwag kan word om sloerings te weerspieël, is November 1948 as die verwysingspiekdatum vir hierdie fase van die konjunkturgolf geneem.

Afswaai: Desember 1948 tot Februarie 1950

In Februarie 1949 het die Minister van Finansies algemene invoerbeheer by wyse van lisensiering vir invoer vanaf die Sterlinggebied en 'n stelsel van kommoditeits-beheer op invoer vanaf nie-Sterlinglande, met ingang van 1 Julie 1949, aangekondig. Alhoewel die aankondiging tot antispasie-invoere vanaf die Sterling-

gebied aanleiding gegee het, het totale invoer vanaf Desember 1948 begin daal as gevolg van verskeie beperkende maatreëls wat in 1948 geneem is.

Gedurende die verloop van 1949 het die koers van toename in algemene ekonomiese bedrywigheid aansienlik gedaal. Vergeleke met 'n toename van $8\frac{1}{2}$ persent in 1948, het die reële bruto binnelandse produk slegs met $3\frac{1}{2}$ persent gedurende 1949 gestyg. Hierdie aanmerklike daling in die koers van toename is deur drastiese afnames in die koers van toename van byna al die komponente van binnelandse besteding sowel as uitvoer, veroorsaak. Die koers van toename in reële private verbruiksbesteding het van ongeveer 8 persent in 1948 tot 3 persent in 1949 gedaal; die reële vaste investering van nagenoeg 30 persent tot 14 persent; die reële uitvoer van 'n styging van byna 9 persent tot 'n daling van ongeveer 1 persent; en die reële invoer van 'n toename van 10 persent tot 'n afname van ongeveer 13 persent.

Ten spyte van 'n groot netto kapitaalinvloeiing gedurende die tweede helfte van 1949, het die tekort op die lopende rekening van die betalingsbalans tot 'n aansienlike daling, vanaf 'n betreklike hoë peil in Maart 1948 tot 'n krisisspeil van slegs R108 miljoen in Augustus 1949, in die goud- en buitelandse valuta-reserwes gelei. Op 18 September 1949 is die Suid-Afrikaanse pond gelyktydig met die pond Sterling ge-devalueer. Dit het 'n stimulerende invloed op die Suid-Afrikaanse volkshuishouding gehad, nie alleen vanweë die uitwerking op die betalingsbalans nie, maar ook deur die aansporing van buitelandse belegging in Suid-Afrika, en veral wat betref die hulp wat dit vir die goudmynboubedryf meegebring het. Die netto uitvloeiing van private kapitaal wat gedurende die eerste helfte van 1949 ondervind is, het in die tweede helfte van 1949 omgeswaai en die totale goud- en buitelandse valuta-reserwes het weer vanaf Oktober 1949 gestyg. Die likwiditeit van die private sektor het ook na die devaluasie toegeneem, en 'n klimaat wat bevorderlik vir inflasie was, het ontstaan. Die Bankkoers is derhalwe op 30 Oktober 1949 van 3 na $3\frac{1}{2}$ persent verhoog.

Die ekonomiese gebeurtenisse wat hierbo geskets is, dui op 'n onderste draaipunt in sake-bedrywigheid teen die einde van 1949 of vroeg in 1950. Hierdie vermoede word deur die resultate van die drie statistiese metodes bevestig wat draaipunte as volg gee: die ongeweege diffusie-indeks in Desember 1949, die tros van draaipunte in Januarie 1950, en die geweege diffusie-indeks in Februarie 1950. Die meer belangrike gekose aanwysers het onderste draaipunte in verskeie maande vanaf Augustus 1949 tot Junie 1950 aange-teken. Hierdie draaipunte het dus oor 'n tydperk van elf maande voorgekom, maar 'n konsentrasie is teen die end van 1949 en die begin van 1950 waargeneem. Alhoewel dit moeilik is om 'n verwysingsdraaipunt aan 'n spesifieke maand in hierdie stadium van die siklus toe te wys, wil dit nietemin voorkom asof Februarie

1950 die mees aanneemlike finale verwysingsdraaipunt datum is.

Opswaai: Maart 1950 tot Desember 1951

Die versnelling in ekonomiese bedrywigheid na Februarie 1950 kan hoofsaaklik aan die stimulerende uitwerking van die devaluasie en die ekspansionistiese toestande wat deur die Koreaanse Oorlog veroorsaak is, toegeskryf word. Die devaluasie gepaardgaande met invoer- en valutabeheer, sowel as 'n netto invloeiing van kapitaal, het tot 'n skerp styging in die goud- en buitelandse valuta-reserwes en tot 'n finansiële klimaat wat vir ekonomiese uitbreiding gunstig was, aanleiding gegee. Verder het die aansienlike herbewapening en voorraadoppotting deur verskeie lande as gevolg van die Koreaanse Oorlog daartoe gelei dat sowel die prys as die volume van Suid-Afrikaanse uitvoer aansienlik gestyg het.

Die veerkragtige ekonomiese toestand is deur 'n toename van 8 persent in die reële bruto binnelandse produk vir die jaar geëindig Junie 1951, weerspieël. Indien die bydrae van die landbou, wat 'n buitengewoon hoë styging gedurende daardie jaar getoon het, buite rekening gelaat word, het die produksie van die nie-landbousektore met ongeveer 5 persent vermeerder. Die vernaamste ekspansionistiese kragte skyn hoër uitvoer en 'n skerp toename in voorraadvooring, waar-skyklik gedeeltelik met die oog op oppotting vanweë die onsekere internasionale politieke toestande, te gewees het. Gevolglik het die invoer skerp gestyg, terwyl die uitvoer tot April 1951 toegeneem en daarna afge-neem het. Met 'n groot kapitaalinvloeiing gedurende 1950 en 1951, het die goud- en buitelandse valuta-reserwes deurgaans gedurende 1950 en die eerste helfte van 1951 gestyg, voordat dit begin daal het.

As gevolg van die stygende koste van invoere en die heersende binnelandse faktore, het inflasionistiese druk gedurende 1951 ontwikkel toe die verbruikersprys-indeks met nie minder nie as 7.3 persent, vergeleke met die vorige jaar, gestyg het. In sy Begrotingsredes van sowel Maart 1950 as 1951 het die Minister van Finansies teen die hoë peil van besteding gewaarsku. Die hoë vlak van ekonomiese bedrywigheid het uiteinde-lik tot die ontstaan van sekere knelpunte, soos onvol-doende krag-, vervoer- en kommunikasiefasiliteite en 'n tekort aan sowel geskoolde as ongeskoolde arbeid, gelei.

Die bogemelde omstandighede en ander beperkende faktore het tot 'n verlengsaming in algemene ekonomiese bedrywigheid gelei, en 'n piek in die konjunkturgolf het dus waarskynlik teen die einde van 1951 voorge-kom. Volgens die tros van draaipunte is 'n boonste verwysingsdraaipunt in November 1951 bereik, terwyl sowel die geweege as die ongeweege diffusie-indeks op 'n piek in Desember dui. Die meeste van die belang-

rike individuele reekse het draaipunte rondom Desember 1951 aangeteken. 'n Piek teen die einde van 1951 is ook deur die reële bruto binnelandse produk, wat teen 'n stadiger koers in 1952 as in 1951 toegeneem het, aangedui. Desember 1951 blyk derhalwe die beste keuse as 'n verwysingspiekdatum te wees.

Afswaai: Januarie 1952 tot Maart 1953

Gedurende hierdie tydperk het sekere onewewigtighede in die ekonomie na vore gekom. As gevolg van die hoë koers van ontwikkeling van die private sektor gedurende die voorafgaande jare, het die voorsiening van openbare dienste soos vervoer, water, krag, behuising, skole en hospitale, by die verhoogde vraag agtergebly. Die owerhede het gevolglik 'n beleid van ekonomiese konsolidasie aanvaar ten einde 'n meer gebalanseerde groei in die ekonomie teweeg te bring. Met hierdie doel voor oë het die Begroting van 1952 verskeie beperkende maatreëls, soos verhogings in doeane- en aksynsregte, postariewe, inkomstebelasting op maatskappye, seëlregte op wissels en op transportaktes, en 'n vermindering van die primêre belastingkorting vir persone, ingesluit.

Die volgehoue hoë vraag na krediet het tot opwaartse druk op rentekoerse gelei en die Bankkoers is op 27 Maart 1952, in ooreenstemming met die stygende neiging van geldmarkkoerse in die buiteland, van $3\frac{1}{2}$ na 4 persent verhoog. In Julie 1952 het die Minister van Finansies goedkeuring gegee aan 'n hoër patroon van rentekoerse op staats- en munisipale effekte en effekte van openbare nutsmaatskappye. Die likwiede bates van die private sektor het tussen Maart 1951 en September 1952 as gevolg van 'n skerp afname in die goud- en buitelandse valuta-reserwes 'n daling getoon.

Hierdie maatreëls het inderdaad die verlangde uitwerking gehad om die koers van toename in die algemene ekonomiese bedrywigheid te verlangsam. Dit word weerspieël in die groeikoers van die reële bruto binnelandse produk, wat van 5.4 persent in 1951 tot 3.2 persent in 1952 gedaal het, voordat dit tot 4.9 persent in 1953 toegeneem het. Op soortgelyke wyse het die reële bruto binnelandse besteding in 1952 met 4 persent afgeneem voordat dit gedurende 1953 weer met 7 persent gestyg het. 'n Noukeuriger studie van die verloop van die komponente van die bruto binnelandse produk en besteding toon egter uiteenlopende tendense. Indien die landbouproduksie uitgesluit word, het die koers van toename in die reële bruto binnelandse produk gedaal vanaf 4.9 persent in 1951 tot 3.9 persent in 1952 en 'n baie gematigde styging tot 4.2 persent in 1953 getoon. Bowendien was, afgesien van die landbou, die handel die enigste belangrike sektor wat 'n aanmerklike versnelling in die koers van toename getoon het, naamlik van $2\frac{1}{2}$ persent in 1952 tot 8 persent in 1953. Die toename in die reële toegevoegde

waarde van fabriekswese het vanaf die baie hoë koers van $8\frac{1}{2}$ persent in 1951 tot $6\frac{1}{2}$ persent in 1952 gedaal en vervolgens weer tot 7 persent in die volgende jaar gestyg. Alhoewel laasgenoemde styging slegs 'n geringe versnelling aandui, het die produksietempo hoog gebly.

Die komponente van die bruto binnelandse besteding het ook uiteenlopende neigings getoon. Die koers van toename in private verbruiksbesteding teen konstante pryse het vanaf ongeveer 4 persent in 1951 tot 2 persent in 1952 afgeneem en vervolgens tot 5 persent in 1953 gestyg. Die private vaste investering teen heersende pryse, wat in 1952 met ongeveer 13 persent toegeneem het, het in 1953 'n styging van slegs ongeveer 2 persent getoon, terwyl die vaste investering deur openbare owerhede so vinnig versnel het dat die totale vaste investering in 1953 met 13 persent gestyg het, vergeleke met 14 persent gedurende die vorige jaar. Uit die veranderinge in die nasionale rekeninge-gegewens wil dit voorkom asof die ekonomiese bedrywigheid gedurende 1952 meer gelyk verloop het maar in 1953 ietwat meer momentum gekry het. Hierdie neigings dui dus daarop dat 'n onderste draaipunt in die konjunkturgolf waarskynlik teen die einde van 1952 of vroeg in 1953 bereik is. Die uiteenlopende neigings, veral die skommelings in die landbou, toon egter dat die draaipunt nie presies afgebaken kan word nie en dat die ekonomie waarskynlik vir geruime tyd, sê vanaf die vierde kwartaal van 1952 tot die tweede kwartaal van 1953, „horisontaal” beweeg het.

Dit is derhalwe nie verbasend nie dat die drie algemene statistiese metodes verskillende resultate oplewer wat almal skynbaar 'n hele paar maande verwyderd is van waar 'n mens die draaipunte volgens die nasionale rekeninge-gegewens sou kon verwag het. Die tros van draaipunte dui op 'n trog in September 1953, terwyl sowel die geweegde as die ongeweegde diffusie-indeks onderste draaipunte aangee wat so laat as November 1953 voorgekom het. Dit is van betekenis dat die geweegde diffusie-indeks vroeg in 1953 opvallende skommelings getoon het en in werklikheid die 50-persent-lyn tussen Februarie en April 1953 oorskry het. Aangesien die aansienlike verskil tussen die verwysingsdatums wat deur die drie statistiese metodes getoon word en dié wat deur die veranderinge in die syfers betreffende die reële binnelandse produk en besteding aangedui word, moeilik versoenbaar is, is die gedrag van spesifieke reekse wat vir konjunktuurinvloede gevoelig is, ondersoek.

'n Reeks wat normaalweg 'n goeie ooreenkoms met ekonomiese bedrywigheid toon, is dié van die goedere-invoer. Die seisoensaangesuiwerde waarde van die invoer het in September 1952 'n onderste draaipunt getoon. Indien hierdie reeks vir die invoer van regeringsvoorrade en tekstielware, wat albei kategorieë is wat deur eksogene faktore beïnvloed is, aangesuiwer word, dui dit op onderste draaipunte in September 1952 en Junie 1953, met 'n effense toename tussen

hierdie twee datums. Aangesien die invoerbeheer-beleid die verloop van hierdie reeks kon beïnvloed het, is dit belangrik om daarop te let dat bykomende beperkings in 1952 aangekondig is, maar nie in 1953 nie.

Daar kan ook op die gedrag van die ander siklies gevoelige reekse gelet word. Bouplanne goedgekeur het in Desember 1952 'n duidelike onderste draaipunt getoon, transaksies in vaste eiendom in Julie 1952, die aantal werklose Blankes, Kleurlinge en Asië in September 1952, die aantal maatskappye geregistreer in Januarie 1953, en die diskonteringe en voorskotte van die handelsbanke in Junie 1953. Reekse wat op 'n onderste draaipunt in die tweede helfte van 1953 dui, is die pryse van nywerheids- en handelsaandele (Desember 1953), goud- en buitelandse valuta-reserwes (Januarie 1954), en die aantal nuwe motorvoertuie verkoop (Januarie 1954).

In die lig van die verloop van die geweegde diffusie-indeks vroeg in 1953 en van die draaipunte van die invoer en sekere ander reekse, asook op grond van bekende feite met betrekking tot ekonomiese beleid en die verloop in die ekonomie in die algemeen, word aanvaar dat die trog in ekonomiese bedrywigheid op Maart 1953 vasgestel behoort te word. Dit sou ook ooreenstem met die veranderinge in die beskikbare totale van die nasionale rekeninge.

Opswaai: April 1953 tot April 1955

Die opswaai vanaf April 1953 is in belangrike mate deur die toename in die vaste investering wat gedurende 1952 begin het en gedurende 1953 voortgeduur het, aangespoor. Die herstel is verder gerugsteun deur 'n toename in die goudproduksie vanaf die middel van 1953, toe nuwe myne in produksie gekom het, en deur 'n toename in die uitvoer. Die Begroting van 1954/55 het stimulerende maatreëls bevat soos 'n vermindering van persoonlike belasting, die afskaffing van die spaarheffing, en toegewings in die vorm van aanvangs- en investeringstoelaes aan nywerars. As gevolg van die hoër uitvoer en 'n gunstige wending in die toevloeiing van kapitaal vanaf die tweede kwartaal van 1954, het die seisoensaangesuiwerde goud- en buitelandse valuta-reserwes van die Reserwebank vanaf Februarie 1954 tot Maart 1955 skerp toegeneem en het dit, tesame met 'n algemene toename in bankkrediet gedurende die grootste gedeelte van die opwaartse fase, 'n ruim geldtoestand geskep wat vir 'n hoër peil van ekonomiese aktiwiteit bevorderlik was en gedurende die tweede helfte van 1954 tot 'n afwaartse beweging van rentekoerse gelei het.

Hoofsaaklik as gevolg van die hoër koers van toename in die vaste investering gedurende 1953 en die skerp toename in die uitvoer vanaf die middel van 1953, het die groeikoers in die reële bruto binnelandse produk, wat gedurende 1952 met slegs effens meer as 3 per-

sent toegeneem het, in 1953 tot byna 5 persent gestyg en in 1954 verder toegeneem tot ongeveer 6½ persent. Die vernaamste sektore wat in 1954 tot die toename bygedra het was die mynbou, die fabriekswese, en elektrisiteit, gas en water, met toenames van 14, 9 en 10 persent onderskeidelik.

Grotendeels as gevolg van arbeidstekorte, het inflasionistiese neigings teen die einde van hierdie periode ontstaan en het die seisoensaangesuiwerde indeks van verbruikerspryse tussen Desember 1953 en April 1955 teen 'n gemiddelde jaarcoers van 3.8 persent toegeneem. Om hierdie inflasionistiese neigings in toom te hou, het die regering in sy Begroting van 1955/56 die belastingtoegewings wat gedurende die vorige jaar toegestaan is, teruggetrek, aansienlike bedrae na die Leningsrekening oorgeplaas en die lopende verbruiksbesteding so veel as moontlik ingekort. Die lopende besteding van die algemene owerheid teen konstante pryse het afgeneem terwyl die koers van toename in totale vaste investering opvallend gedaal het. Daar kon dus redelikerwys verwag word dat 'n afswaai in ekonomiese bedrywigheid in die eerste helfte van 1955 voorgekom het.

'n Groot aantal ekonomiese aanwysers het vroeg in 1955 afwaartse veranderinge getoon. Die geweegde diffusie-indeks het in April, die tros van draaipunte in Mei, en die ongeweegde diffusie-indeks in Junie 1955 'n piek aangeteken. 'n Boonste draaipunt in die eerste helfte van 1955 is ook versoenbaar met 'n daling in die groeikoers van die reële bruto binnelandse produk van die nie-landbousektore vanaf byna 7 persent gedurende die jaar geëindig Junie 1955 tot 5 persent in 1955/56. In die lig van die verloop van die meer belangrike spesifieke ekonomiese aanwysers wil dit voorkom of 'n verwysingspiek in April 1955 die aanneemlikste is.

Afswaai: Mei 1955 tot September 1956

Soos hierbo vermeld, het die 1955/56-Begroting beoog om die inflasionistiese druk te verminder. Daarby het die Reserwebank die handelsbanke in Julie 1955 versoek om die verlening van krediet vir doeleindes van verbruiksbesteding en vaste investering te beperk. Die Bankkoers is van 4 tot 4½ persent verhoog, gedeeltelik om die afname in die kapitaaltoevloeiing vanaf die buiteland te ontmoedig. 'n Afname in pryse van landbouprodukte soos wol en mielies en die afname in die kapitaaltoevloeiing het ook bygedra tot die matige afname in binnelandse ekonomiese bedrywigheid.

Die totale reële vaste investering het met bykans 4½ persent in 1955 en met 2 persent in 1956 afgeneem. Die reële private sowel as owerheidsverbruiksbesteding het teen 'n stadiger koers gedurende 1956 in vergelyking met 1955 toegeneem, terwyl die koers van toename in die reële uitvoer 'n merkbare afname vanaf 12 tot 8 persent gedurende dieselfde periode getoon het.

Die verslapping in die binnelandse vraag het 'n matige afname in die koers van toename in die bruto binnelandse produk tot gevolg gehad. Indien die bydrae van die landbou uitgesluit word, het die reële bruto binnelandse produk met slegs 5 persent in die jaar geëindig Junie 1956 toegeneem vergeleke met byna 7 persent gedurende die voorafgaande jaar. Die bydrae tot die bruto binnelandse produk deur die fabriekswese en die mynbou het albei teen laer koerse gedurende 1956 toegeneem.

Die verandering in die binnelandse vraag na goedere en dienste is weerspieël in 'n merkbare ommeswaai in die lopende rekening van die betalingsbalans, van 'n groot tekort gedurende die periode van 1953 tot 1955 tot 'n ewewigstoestand in 1956. Toe die kapitaalinvloeiing tot 'n lae peil gedaal het, het die goud- en buitelandse valuta-reserwes min verandering gedurende die grootste gedeelte van 1956 getoon maar matig vanaf die laaste kwartaal van 1956 tot die middel van 1957 begin toeneem.

Die toename in die goud- en buitelandse valuta-reserwes tesame met 'n toename in bankkrediet het tot 'n aansienlike toename in die likwiditeit van die private nie-banksektor teen die einde van 1956 en die begin van 1957 gelei. Hoofsaaklik as gevolg van 'n toename in goud- en uraanproduksie het die uitvoer vanaf Maart 1956 tot Maart 1957 toegeneem, terwyl 'n merkbare toename in ontvangste van vreemde skepe wat Suid-Afrikaanse hawens na die Suez-krisis aangedoen het, bygedra het tot die verbetering in die betalingsbalans. Boonop het die Reserwebank teen die einde van 1956 sy versoek aan die handelsbanke om krediet vir doeleindes van verbruiksbesteding en vaste investering te beperk, teruggetrek. Gedurende 1957 is invoerbeperkings, in die besonder op motorvoertuie, en minimum huurkoopvereistes vir motorvoertuie verslap.

In die lig van die voorafgaande beskrywing van ekonomiese ontwikkelings wil dit voorkom of 'n matige afname in algemene ekonomiese bedrywigheid gedurende die tweede helfte van 1955 en die eerste helfte van 1956 voorgekom het. Omdat ekonomiese bedrywigheid blykbaar teen die einde van 1956 effens versnel het, word 'n laer draaipunt in ekonomiese bedrywigheid in die tweede helfte van 1956 aangedui. Dit is derhalwe nie verbasend dat 'n relatief groot aantal ekonomiese aanwysers gedurende die tweede helfte van 1956 van rigting verander het nie. Die drie algemene statistiese metodes gee verwysingstrôe in die tweede helfte van 1956 soos volg: Die ongeweege diffusie-indeks in Julie, die tros van draaipunte in Augustus en die ge-weege diffusie-indeks in September. Alhoewel dit nie voor die hand liggend is welke een van hierdie drie maande die verwysingsdraaipunt is nie, maak die feit dat 'n belangrike konjunkturgolfaanwyser soos die goedere-invoer in September gedraai het, waarskynlik laasgenoemde maand die mees aanvaarbare verwysingstrogdatum.

Opswaai: Oktober 1956 tot Januarie 1958

As gevolg van die verslapping van beperkings op die invoer en op huurkoop- en bankkrediet, en met geld relatief vryelik beskikbaar, het verskeie komponente van besteding aansienlik gedurende 1957 toegeneem terwyl die uitvoer veerkragtig gebly het. So het die reële bruto binnelandse besteding met 5.9 persent in 1957 gestyg vergeleke met 'n toename van slegs 3 persent gedurende die voorafgaande jaar. Al die komponente van die bruto binnelandse besteding het tot die versnelling in die koers van toename bygedra. Die toename in die binnelandse besteding tesame met die veerkragtigheid van die uitvoer het dus tot 'n versnelling in die bruto binnelandse produk gelei, van 'n toename in reële terme van ongeveer 5 persent in 1956 tot bykans 6 persent in 1957 indien die landbou-produksie uitgesluit word. Laasgenoemde het gedurende 1957 'n afname getoon met die gevolg dat die koers van toename in die totale bruto binnelandse produk gedurende 1957 afgeneem het. Die versnelling in ekonomiese bedrywigheid gedurende 1957 blyk baie matig te gewees het, net soos die voorafgaande afswaai.

Met uitvoer wat vroeg in 1957 'n boonste draaipunt bereik het en snel stygende invoer, was daar weer 'n klein tekort op die lopende rekening van die betalingsbalans gedurende 1957. As gevolg van hoofsaaklik die hoër rentekoersstruktuur in die buiteland, is gedurende 1957 'n uitvloeiing van kapitaal ondervind, wat terloops die eerste uitvloeiing sedert 1946 was. Dit het tot gevolg gehad dat daar vanaf ongeveer die middel van 1957 'n afname in die goud- en buitelandse valuta-reserwes was. Nieteenstaande hierdie afname het aansienlike toenames in bankkrediet aan sowel die private as die regeringsektore 'n toename in die likwiditeit van die private sektor tot gevolg gehad, wat op sy beurt besteding aangewakker het en daardeur die druk op die betalingsbalans verhoog het.

Onder hierdie omstandighede het die owerhede teen die einde van 1957 en vroeg in 1958 'n beperkende beleid begin volg ten einde die betalingsbalans te beveilig en oormatige besteding in te kort. Gedurende November 1957 het die Reserwebank die handelsbanke versoek om krediet vir verbruiksdoeleindes en invoer te beperk. Rentekoerse is in Februarie 1958 opwaarts aangepas, die minimum vereistes vir huurkoopkrediet is verskerp en lenings deur plaaslike owerhede is beperk. Gedurende Mei 1958 is vir die eerste keer van die handelsbanke vereis om aanvullende kontant-reserwes by die Reserwebank te hou en hulle vermoë om krediet te skep is dus sodoende ingekort. Die Minister van Finansies het in sy Begrotingsrede in Julie 1958 aansienlike toenames in sekere doeane- en aksyns-regte aangekondig en spesiale maatreëls is ingevoer om addisionele leningsfondse van die publiek te verkry om die regering se kapitaalprogram te finansier.

Die bogenoemde verwikkelings dui daarop dat die algemene ekonomiese bedrywigheid, nadat dit effens

afgeneem het gedurende 1955/56, in 1957 weer tot 'n mate herstel het, maar as gevolg van oormatige besteding en 'n afname in die uitvoer het daar betalingsbalansprobleme ontstaan en, soos reeds hierbo beskryf, is ekonomiese bedrywigheid weer teen die einde van 1957 en vroeg in 1958 ingekort. 'n Boonste draaipunt in die konjunkturgolf kan dus redelikerwyse teen hierdie tyd verwag word. Dit word bevestig deur die boonste draaipunte soos aangegee deur die drie algemene statistiese metodes, naamlik: geweegde en ongeweegde diffusie-indekse in Desember 1957 en die tros van draaipunte in Januarie 1958. Laasgenoemde skyn die meer aanvaarbare verwysingsdraaipunt datum te wees, aangesien die meer belangrike ekonomiese aanwysers ook om Januarie 1958 gekonsentreer is.

Afswaai: Februarie 1958 tot Maart 1959

Saketoestande was gedurende 1958 en vroeg 1959 traag as gevolg van maatreëls wat teen die einde van 1957 en begin 1958 in werking gestel is om oormatige besteding in te kort en die druk op die betalingsbalans te verlig, die afname in die uitvoer veral as gevolg van laer pryse, die afname in landbouproduksie as gevolg van ongunstige weersomstandighede, asook die buitengewoon hoë peil van voorraadinvestering. Die koers van toename in die reële bruto binnelandse produk het dus afgeneem van ongeveer $4\frac{1}{2}$ persent in 1957 tot slegs $\frac{1}{2}$ persent in 1958. Dit is veroorsaak deur 'n laer koers van toename in die reële private en owerheidsverbruiksbesteding en 'n werklike afname in die reële uitvoer. Die koers van toename in vaste investering teen konstante pryse het egter steeds toegeneem. Die algemene verlangsamings in ekonomiese bedrywigheid is ook weerspieël in 'n verbetering van die toestand in die arbeidsmark.

Gedurende die tweede helfte van 1958 het die invoer afgeneem terwyl daar 'n toename in die uitvoer en netto goudproduksie was, met die gevolg dat die lopende rekening van die betalingsbalans 'n verbetering getoon het. Terselfdertyd was daar 'n groot kapitaalinvloeiing en het die goud- en buitelandse valuta-reserwes dus vinnig toegeneem. In die lig van die verbetering in die betalingsbalansposisie en die relatiewe slappe in die binnelandse ekonomiese toestande, is verskeie maatreëls getref om die beskikbaarheid van krediet te vergemaklik en om ekonomiese aktiwiteit te stimuleer. Die aanvullende reserweverpligtings wat vir handelsbanke ingestel is, is in November 1958 en weer in Februarie 1959 verlig. Samehangend hiermee het die Reserwebank die Bankkoers van $4\frac{1}{2}$ tot 4 persent in Januarie 1959 verlaag. Die Begroting van Maart 1959 het verskeie stimulerende maatreëls, soos die volgende, bevat: die aanvangstoelae ten opsigte van nuwe nywerheidsmasjinerie is vir inkomstebelastingdoeleindes

van 10 tot 20 persent verhoog, 'n nuwe waardeverminderingstoelae van 2 persent per jaar op nuwe fabrieksgeboue is ingestel, die bestaande toegewing aan nuwe „ultra-diep” goudmyne om 5 persent rente by te voeg by die kapitaaluitgawe wat hulle van winste kon aftrek, is na alle goudmyne uitgebrei, 'n addisionele bedrag is bewillig vir noodleniging aan boere, die beheer oor kapitaaluitgawes van munisipaliteite is verslap, huurkoopbeperkings ten opsigte van nuwe en laat model voertuie is in Maart en Mei 1959 verlig, terwyl persoonlike inkomstebelastingskoerse verlaag en die leningsheffing afgeskaf is. 'n Gunstige klimaat is verder geskep deur die aankondiging dat die regering voorkeur sou gee aan plaaslike vervaardigers van tekstiele en ingenieursprodukte by die toekenning van amptelike tenders.

As gevolg van die onderskeie maatreëls was daar vroeg in 1959 'n versnelling in aktiwiteit. Die ekonomiese oplewing in die belangrikste nywerheidslande gedurende 1959 het tot verhoogde uitvoer en hoër kommoditeitspryse gelei wat die Suid-Afrikaanse volkshuishouding verder gestimuleer het. Hierdie verwickelings dui daarop dat 'n onderste sikliese draaipunt moontlik vroeg in 1959 bereik kon gewees het. Die drie algemene statistiese metodes bevestig dit en wys almal 'n onderste verwysingsdraaipunt in Maart 1959, wat dus aanvaar kan word as die verwysingstrogdatum.

Opswaai: April 1959 tot April 1960

Die oplewing in ekonomiese bedrywigheid gedurende 1959 word weerspieël in die verdubbeling in die koers van toename van die reële bruto binnelandse produk tussen 1958 en 1959. Die versnelling was hoofsaaklik te danke aan 'n skerp toename in die uitvoer en aan 'n toename in landbouproduksie. Ten spyte van die toename in die reële produksie het die reële binnelandse besteding gedurende 1959 afgeneem. Die lopende rekening van die betalingsbalans het dienoooreenkomstig 'n groot oorskot getoon en, met 'n matige uitvloeiing van kapitaal, het die goud- en buitelandse valuta-reserwes tot Januarie 1960 aanhoudend gestyg.

Die uitbreiding was gedurende die eerste maande van 1960 nog steeds aan die toeneem toe die politieke oproerighede wat gedurende Maart plaasgevind het, tot 'n grootskaalse kapitaaluitvloeiing aanleiding gegee het wat 'n voortdurende dreinerings van die goud- en buitelandse valuta-reserwes sowel as 'n vermindering van die likwiede bates van die publiek by die banksektor veroorsaak het. Ten spyte van 'n aantal toegewings wat gedurende Maart 1960 deur die Minister van Finansies aangekondig is om die ekonomie te stimuleer, is die vertroue van sakelui klaarblyklik aangetas, en het die ekonomie in 'n resessie verval voordat die oplewing momentum kon bereik.

Die drie algemene statistiese metodes dui drie verskillende boonste draaipunte in 1960 soos volg aan: die geweegde diffusie-indeks in April, die ongeweegde diffusie-indeks in Junie en die tros van draaipunte in Augustus. Op grond van die boonste draaipunte van veral die meer belangrike individuele reekse en die feit dat die invoer teen die einde van 1959 meer gelyk begin verloop het, word die draaipunt van die geweegde diffusie-indeks, naamlik April 1960, aanvaar as die verwysingspiekdatum van die konjunkturgolf.

Afswaai: Mei 1960 tot Augustus 1961

Gedurende hierdie afswaai is die ekonomiese toestand gekenmerk deur 'n algemene gebrek aan vertroue as gevolg van die politieke onrus in Maart 1960. 'n Aansienlike uitvloeiing van private kapitaal het plaasgevind, die uitvoer het merkbaar gedaal en ondernemers het 'n onsekere houding teenoor die ontwikkeling van nuwe kapitaalprojekte ingeneem. Die traagheid van die vaste investering wat hieruit voortgevloei het, is deur die oordrag van surplus kapasiteit in sekere vervaardigingssektore vanaf die vorige sikliese laagtepunt, en deur die mededinging van invoer vererger. Ander komponente van die bruto binnelandse besteding, naamlik die private verbruiksbesteding en die investering in voorrade, het ook afgeneem of gelyk verloop. Terselfdertyd het die reële bruto binnelandse produk in 1960 en 1961 met ongeveer 5 en $3\frac{1}{2}$ persent, onderskeidelik, toegeneem. Vir die jaar geëindig Junie 1961 was die reële groei koers ook slegs $3\frac{1}{2}$ persent. Die bruto nasionale produk het nietemin die bruto binnelandse besteding oorskry en dit is weerspieël in 'n oorskot op die lopende rekening van die betalingsbalans. Ondanks hierdie oorskot het die groot kapitaaluitvloeiing 'n aansienlike afname in die goud- en buitelandse valuta-reserwes, tot die baie lae peil van R142 miljoen in Junie 1961, tot gevolg gehad.

In hierdie omstandighede het die owerheid te staan gekom teenoor die probleem dat die binnelandse ekonomie aanspooring nodig gehad het terwyl die buitelandse toestand 'n beperkende beleid vereis het om 'n devaluasie te vermy. Ten einde die druk op die betalingsbalans te verlig, is invoer- en valutabeheer verskerp en is beheer oor buitelandse kapitaal in Junie 1961 ingestel. Doeane- en aksynsregte op sekere weeldeverbruiks-goedere is ook in die Begroting van 1961 verhoog. Boonop is die Bankkoers verhoog van 4 na $4\frac{1}{2}$ persent in Augustus 1960 en na 5 persent in Mei 1961. Alhoewel die Begrotings van 1959 en 1960 maatreëls bevat het om die vaste investering aan te moedig, was die beleid in die algemeen dus daarop gemik om die betalingsbalansposisie te beskerm.

Geoordeel volgens die heersende ekonomiese toestand in 1961, wil dit voorkom asof daar tussen Mei en November 1961 'n onderste draaipunt van die konjunkturgolf bereik is. Beide die tros van draaipunte en die ongeweegde diffusie-indeks toon dat 'n onderste draai-

punt in ekonomiese bedrywigheid in Augustus 1961 bereik is, terwyl die geweegde diffusie-indeks Julie 1961 as die verwysingsdraaipunt aandui. Eersgenoemde datum is deur 'n ontleding van die draaipunte van betekenisvolle individuele reekse bevestig. Volgens die kwartaallike nasionale rekeninge-statistiek⁵ het die toenamekoers in die bruto binnelandse produk van die nie-landbousektore gedurende 1960 en in die eerste helfte van 1961 afgeneem. Alhoewel die koers in die derde kwartaal van 1961 toegeneem het, is daar ook in die vierde kwartaal 'n afname aangeteken voordat dit in 1962 weer versnel het. Die skommelings in die bruto binnelandse produk gedurende hierdie tydperk kan dus met die verwysingstrog in Augustus 1961 versoen word.

Opswaai: September 1961 tot April 1965

Alhoewel die hele periode ná die afswaai van 1960/61 deur 'n betreklik hoë groei koers, en ná 1964 ook deur inflasionistiese neigings waarop daar voortdurend beleidmaatreëls gerig is, gekenmerk is, kon kort afswaie nietemin in die tweede helfte van 1965 en weer in 1967 uitgeken word. Die opswaai vanaf September 1961 tot April 1965 word verder gekenmerk deur drie sub-periodes, naamlik:

- (1) die nege maande tot omstreeks die middel van 1962, toe 'n aantal faktore bygedra het tot 'n stadige maar gelykmatige toename in ekonomiese bedrywigheid;
- (2) vanaf die middel van 1962 tot omstreeks die middel van 1964, toe verdere stimulerende faktore voorgekom het en 'n meer neutrale ekonomiese beleid gevolg is; en
- (3) die oorblywende tien maande toe die volkshuishouding oorverhit geraak het en anti-inflasionêre maatreëls weer ingestel is.

Die eerste stadium: September 1961 tot middel 1962

Die belangrikste uitbreidingsfaktore wat vir die aanvanklike opswaai in ekonomiese bedrywigheid ná Augustus 1961 verantwoordelik was, was 'n duidelike toename in die goedere-uitvoer en goudproduksie. Die betalingsbalans is verder versterk deur 'n aansienlike afname in die kapitaaluitvloeiing as gevolg van die strenger toepassing van valutabeheer. Gepaard met 'n afname in die invoer, het hierdie gunstige ontwikkelings nie alleen tot 'n groot oorskot op die lopende rekening gelei nie maar, ná Junie 1961, ook tot 'n aansienlike toename in die goud- en buitelandse valuta-reserwes. Laasgenoemde het weer gelei tot 'n toename in die likwiditeit van die private sektor en 'n gunstige monetêre en banktoestand wat bevorderlik was vir 'n opswaai in ekonomiese bedrywigheid. Hierdie omstandighede is aangehelp deur die aanvaarding van 'n bewuste ekspansionistiese beleid deur die owerheid.

⁵Beskikbaar vanaf 1960.

Die Reserwebank het die Bankkoers verlaag van 5 na $4\frac{1}{2}$ persent op 7 September 1961 en tot 4 persent op 13 Junie 1962, met die gevolg dat korttermyn leen- en uitleenkoerse afwaarts beweeg het. Verder is in die Begroting van 1962 'n ekspansionistiese fiskale beleid aangekondig toe inkomstebelastingkortings vir kapitaal-besteding en toenames in uitvoeromsette ingestel is en vir aansienlike toenames in owerheidsbesteding voorsiening gemaak is.

Die tweede stadium: Middel 1962 tot middel 1964

Die duidelike versnelling in ekonomiese bedrywigheid gedurende hierdie periode, soos weerspieël in groei-koerse van ongeveer $8\frac{1}{2}$ persent in die reële bruto binnelandse produk gedurende sowel 1963 as 1964, het voortgespruit uit aansienlike toenames in al die komponente van die bruto binnelandse besteding en die uitvoer.

Tot ongeveer die einde van 1963 het die owerheid dit nog steeds nodig geag om die herstel in die ekonomiese bedrywigheid te ondersteun deur stimulering van die investering, verbruiksbesteding en uitvoer. Vir hierdie doel is die Bankkoers op 27 November 1962 van 4 na $3\frac{1}{2}$ persent verlaag, wat die derde verlaging van die koers in 'n periode van elf maande was, terwyl die Begroting van Maart 1963 deur 'n ekspansionistiese fiskale beleid gevolg is. Afsien van die feit dat daar vir 'n aansienlike toename in die besteding op die Inkomste- en die Leningsrekening voorsiening gemaak is, het hierdie begroting maatreëls bevat om die verbruik, investering en uitvoer te stimuleer. Hierdie maatreëls het 'n korting van 5 persent op inkomstebelasting van individue en 'n inkomstebelastingvrye periode van agt maande vanaf Julie 1962 ingesluit. Ten einde die private vaste investering aan te moedig, is die investeringstoelaes wat vroeër ingestel is, uitgebrei. Uitvoerders het toegewings ontvang ooreenkomstig die koste wat hulle vir die ontwikkeling van uitvoermarkte aangegaan het.

Hoewel die aansienlike toename in die vraag na sowel verbruiks- as kapitaalgoedere gedurende hierdie tydperk gedeeltelik deur plaaslike produksie bevredig kon word, is daar tot laat in die jaar 1965 ook 'n aansienlike toename in die goedere-invoer ondervind. Aangesien die uitvoer vanweë die toename in die binnelandse vraag ook teen 'n stadiger koers toegeneem het, het die groot oorskot van R454 miljoen (teen 'n seisoensaangesuiwerde jaarkoers) op die lopende rekening van die betalingsbalans in die tweede kwartaal van 1962 skerp afgeneem tot slegs R34 miljoen in die tweede kwartaal van 1964. Ten spyte van die voortgesette netto uitvloeiing van kapitaal, wat hoofsaaklik die gevolg was van 'n verslapping van valutabeheer, het die totale goud- en buitelandse valuta-reserwes tot September 1963 aangehou om skerp te styg voordat dit matig begin afneem het. Aangesien die diskonteringe en voorskotte van die handelsbanke, hand aan hand met

die versnelling in die totale binnelandse besteding, sterk gestyg het, het geld en kwasi-geld ook aanmerklik toegeneem. Die totale monetêre vraag is gevolglik verder deur die gunstige monetêre en banktoestand aangehelp.

Dit het duidelik geword dat die oorskot-likwiditeit op die geldmark verminder sou moes word ten einde die dalende neiging in korttermynrentekoerse af te rem. Met hierdie doel voor oë het die regering voortgegaan om meer geld op die binnelandse mark te leen as wat hy nodig gehad het, terwyl die Reserwebank handelsbanke toegelaat het om beperkte bedrae aan buitelandse valuta in die buiteland te belê en valutabeheer terselfdertyd verder verslap is. Bykomende toewysings van invoerpermitte is ook op verskillende stadia gedurende die tydperk onder bespreking aangekondig. Hierdie maatreëls sowel as die voortgesette toename in bankkrediet en 'n daling in die goud- en buitelandse valuta-reserwes vanaf Oktober 1963, het tot 'n opwaartse neiging in rentekoerse en 'n strammer toestand op die geldmark gelei.

Teen die einde van 1963 het die aansienlike koers van toename in die private vaste investering en die ontstaan van sekere knelpunte aanleiding gegee tot 'n klemverskuiwing in monetêre en fiskale beleid, naamlik van stimulering van ekonomiese bedrywigheid na handhawing van stabiliteit. Ooreenkomstig hierdie beleid het die Begroting van Maart 1964 geen besondere disinflasionêre maatreëls bevat nie, terwyl die groot oorskot op die Inkomsterekening en die sterk kontantposisie van die regering ook nie tot 'n algemene belastingverlaging gelei het nie.

Die derde stadium: Middel 1964 tot April 1965

Hoewel die algemene ekonomiese aktiwiteit gedurende hierdie periode voortgegaan het om teen 'n baie bevredigende koers toe te neem, het daar tekens van oorspanning en knelpunte begin voorkom. Gedurende die jaar geëindig Junie 1965 het die reële bruto binnelandse produk in werklikheid vir die derde agtereenvolgende jaar teen 'n baie hoë koers gestyg. Hierdie tydperk is in die besonder gekenmerk deur binnelandse oorbesteding wat in al die belangrike komponente van die besteding weerspieël is.

Die aansienlike toename in die besteding op sowel kapitaal- en verbruiksgoedere kon nie ten volle deur die binnelandse produksie bevredig word nie en moes dus met hoër invoer aangevul word. Nieteenstaande hierdie toevoeging tot die aanbod van goedere het die oormatige binnelandse besteding gelei tot 'n aansienlike versnelling in die koers van toename in pryse en koste. Die tekort aan geskoolde arbeid het verder versleg en tot aansienlike toenames in die gemiddelde salarisse en lone aanleiding gegee.

Met invoer wat vinnig toegeneem het en uitvoer wat slegs matig gestyg het, het die klein oorskot van R34 miljoen (teen 'n seisoensaangesuiwerde jaarkoers) op

die lopende rekening van die betalingsbalans aanmerklik afgeneem tot 'n tekort van R521 miljoen in die tweede kwartaal van 1965. Die skerp toename in die invoer het met uitsonderlik groot investeringe in voorrade gepaard gegaan. So het die toevoeging tot voorrade, teen heersende pryse, vanaf R149 miljoen in 1963/64 tot R310 miljoen in 1964/65 toegeneem. Tesame met 'n betreklik klein netto uitvloeiing van buitelandse kapitaal, het dit die seisoensaangesuiwerde totale goud- en buitelandse valuta-reserwes gedurende hierdie tydperk aansienlik laat daal, naamlik van R580 miljoen in September 1963 tot R349 miljoen in September 1965. Nieteenstaande hierdie skerp daling het die hoeveelheid geld en kwasi-geld verder toegeneem, hoofsaaklik as gevolg van 'n aansienlike toename in bankkrediet aan die private en die regeringsektor. Die monetêre toestand het daardeur die oormatige toename in die binnelandse vraag in belangrike mate aangehelp.

Ten einde die ewewig in die volkshuishouding te herstel, het die owerheid verskeie monetêre en fiskale maatreëls ingestel om die oormatige binnelandse vraag en die oormatige kredietsekkering deur die banksektor te beperk. In Junie 1964 het die Reserwebank bankinstellings versoek om 'n versigtiger kredietbeleid te volg en op 15 Julie 1964 is die Bankkoers van $3\frac{1}{2}$ na 4 persent, en op 8 Desember 1964 verder na $4\frac{1}{2}$ persent, verhoog. Meer beperkende stappe het op 5 Maart 1965 gevolg toe die Bankkoers na 5 persent verhoog is, die Reserwebank se „stel” koerse vir staatseffekte opwaarts hersien is, en die vereiste verhouding van likwiede bates wat deur handelsbanke gehou moet word, verhoog is. Hierdie verhouding is verder verhoog in Mei en Junie 1965, en is nogmaals verhoog in Julie tot die maksimum wat wetlik toelaatbaar is.

Die Begroting van 1965 was oor die algemeen beperkend deurdat die bedrag wat op Leningsrekening aangevra is, byvoorbeeld met ongeveer R100 miljoen verminder is en R30 miljoen van die Inkomsterekening na die Leningsrekening oorgedra is. Bowendien is 'n leningsheffing van 5 persent op die inkomstebelasting van persone en maatskappye (uitsluitende goudmynmaatskappye), en 'n heffing van 5 persent op die inkomstebelasting van alle maatskappye anders as goudmynmaatskappye, ingestel.

Die invoerbeheerbeleid het gedurende hierdie stadium betekenisvol verander. Toe invoerbeheer in 1964 en die eerste helfte van 1965 verslap is, is sakeondernemings gevra om hulle voorrade op 'n hoër peil te bring. In die tweede helfte van 1965 is hierdie beleid omgekeer, toe invoerbeheer verskerp is en sake-ondernemings meegedeel is dat hulle die peil van hul voorrade moes verminder. Hierdie omstandighede het 'n betekenisvolle invloed op baie ekonomiese veranderlikes gehad en die afswaai wat in die tweede helfte van 1965 geïdentifiseer is, moet teen hierdie agtergrond verklaar word.

Uit die voorgaande breë oorsig van ekonomiese neigings blyk duidelik dat 'n uitsonderlike versnelling

in ekonomiese bedrywigheid na Augustus 1961 ondervind is. Dit kom ook duidelik na vore uit die gedrag van die diffusie-indeks (sien grafieke 2 en 3). Die ongeweege diffusie-indeks toon dat vir meer as twee jaar gedurende hierdie stadium in meer as 80 persent van die tydreeks toenames aangeteken is. Gedurende die derde stadium van die tydperk onder bespreking het sekere ekonomiese verskynsels, asook die verandering in die invoerbeheerbeleid en die beperkende maatreëls wat deur die owerheid getref is, teen die middel van 1965 egter 'n verlangsaming in die groei koers van bedrywigheid teweeggebring. Dit wil derhalwe voorkom asof daar, op grond van veranderinge in die algemene ekonomiese toestand, tussen Februarie en September 1965 'n boonste draaipunt voorgekom het. Die tros van draaipunte, die geweege diffusie-indeks en die ongeweege diffusie-indeks dui boonste draaipunte van die konjunkturgolf aan in April, Junie en Augustus 1965, onderskeidelik, terwyl die bruto binnelandse produk teen heersende pryse (sowel met insluiting as met uitsluiting van die toegevoegde waarde van die landbou) in die eerste kwartaal van die jaar 'n boonste draaipunt bereik het.

Aangesien sowel die bruto binnelandse produk as 'n ander belangrike saamgestelde reeks, naamlik die fisiese volume van fabrieksproduksie, in die eerste kwartaal van 1965 draaipunte getoon het, sou dit dus verkieslik wees om die vroegste datum wat deur die gebruikte statistiese metodes aangedui word, naamlik April 1965, eerder as Junie of Augustus wat deur die ander twee metodes aan die hand gedoen word, as verwysingsdraaipunt te aanvaar.

Afswaai: Mei 1965 tot Desember 1965

Soos hierbo reeds opgemerk is, moet die afswaai in die tweede helfte van 1965 nie slegs verklaar word teen die agtergrond van ekonomiese gebeurtenisse nie maar ook in terme van die belangrike rol wat invoerbeheerbeleid voor en gedurende hierdie fase gespeel het. So kan die merkbare afname in die bruto binnelandse besteding vanaf die derde kwartaal van 1965 tot die eerste kwartaal van 1966, hoofsaaklik toegeskryf word aan die skerp daling in die investering in voorrade, wat op sy beurt weer met die verskerping van invoerbeheer vanaf Oktober 1965 in verband gestaan het. Die private verbruiksbesteding, die lopende owerheidsbesteding en die bruto binnelandse vaste investering het dwarsdeur 1965 aangehou om vinnig te styg. Die monetêre vraag na goedere en dienste het daardeur gedurende die tweede helfte van 1965 op 'n baie hoë vlak gebly en inflasionêre druk kon nog steeds waargeneem word.

Die bruto binnelandse produk het gedurende die tweede en derde kwartaal van 1965 teen 'n aanmerklik stadiger koers toegeneem, en die bruto binnelandse besteding het dit ver oorskry. Dit is weerspieël in die lopende rekening van die betalingsbalans wat in die

tweede kwartaal van 1965 'n rekord tekort getoon het, voordat dit gedurende die tweede helfte van 1965 vinnig herstel het. As gevolg van hierdie groot tekort het die goud- en buitelandse valuta-reserwes skerp gedaal en het die owerheid die toevlug geneem tot invoerbeperkings op sowel kapitaalgoedere as grondstowwe om die betalingsbalans te beskerm. Op hierdie stadium is uiteraard nog nie verwag dat 'n kapitaalinvloeiing gedurende die tweede helfte van 1965 die druk op die betalingsbalans sou verlig nie. Die verbetering in sowel die lopende as die kapitaalrekening teen die einde van 1965 het 'n aansienlike toename in goud- en buitelandse valuta-reserwes van omstreeks R100 miljoen gedurende die vierde kwartaal van 1965 teweeggebring. Dit het bygedra tot 'n skerp styging in die likwiditeit van die private sektor wat deur 'n aansienlike toename in die netto eise van die banksektor teen die regeringsektor (hoofsaaklik as gevolg van laasgenoemde se gebruik van sy kontantsaldo's by die Reserwebank om sy uitgawes te finansier) verder aangevul is.

Hierdie omstandighede was bevorderlik vir verdere inflasionistiese verwikkelinge en dit is dus geensins verbasend dat die Minister van Finansies in September 1965 aangekondig het dat alle moontlike pogings aangewend sou word om die besteding op alle vlakke van die owerheid te verminder en dat die totale tekort op die Skatkisrekening, indien enigsins moontlik, nie deur die gebruik van die owerheid se kontantsaldo's by die Reserwebank gefinansier sou word nie. Ten spyte van hierdie maatreëls het die groeikoers van die ekonomiese bedrywigheid teen die einde van 1965 begin toeneem, hoofsaaklik as gevolg van die klimaat wat deur die verhoogde likwiditeit, die verbeterde stand van die betalingsbalans en die algemene vertroue in die Suid-Afrikaanse ekonomie geskep is. Al die ekonomiese aanwysers dui op 'n onderste draaipunt ná September 1965 maar voor Februarie 1966. Die geweegde en ongeweegde diffusie-indeks dui op onderste draaipunte in September en November 1965, onderskeidelik, terwyl dit volgens die tros van draaipunte in Januarie 1966 voorgekom het. Die feit dat die bruto binnelandse produk gedurende die derde kwartaal 'n onderste draaipunt toon terwyl 'n ander belangrike saamgestelde reeks, naamlik die fisiese volume van fabrieksproduksie, tot April 1966 gedaal het, bemoeilik die keuse van 'n spesifieke maand as verwysingsdraaipunt. Aangesien die meer belangrike saamgestelde en ander reekse om Desember 'n tros vorm, is dit as die finale verwysingstrog aanvaar.

Opswaai: Januarie 1966 tot Mei 1967

Die afname in die koers van toename in die bruto binnelandse produk gedurende die vorige fase is vanaf die begin van 1966 deur 'n aansienlike versnelling gevolg. So het die waarde van die bruto binnelandse produk teen heersende pryse gedurende die jaar geëindig Junie 1967 byvoorbeeld met ongeveer $10\frac{1}{2}$

persent toeneem, vergeleke met $6\frac{1}{2}$ persent gedurende die vorige jaar. Die belangrikste ekspansionistiese faktore wat vir die hernieude opswaai verantwoordelik was, was die private verbruiksbesteding, die lopende owerheidsbesteding tot die tweede kwartaal van 1966, buitengewoon groot investeringe in voorrade gedurende 1967, en 'n opvallende toename in die uitvoer.

Die toename in die uitvoer van handelsware, tesame met die hoë vlak van die netto goudproduksie, het gedurende die eerste drie kwartale van 1966 tot 'n oorskot op die lopende rekening van die betalingsbalans gelei. As gevolg van die groot toename in die binnelandse vraag, en veral as gevolg van die toename in die investering in voorrade vanaf die vierde kwartaal van 1966 ná die verslapping van invoerbeheer in Julie 1966, het die invoer van handelsware vinnig begin styg sodat die betalingsbalans in lopende rekening gedurende die daaropvolgende drie kwartale na 'n aansienlike tekort omgeswaai het. Met 'n netto invloeiing van buitelandse kapitaal oor hierdie hele tydperk, het die goud- en buitelandse valuta-reserwes toeneem vanaf 'n laagtepunt in September 1965 tot 'n hoogtepunt in Augustus 1966 voordat dit gedurende die res van 1966 en die eerste vyf maande van 1967 weer gedaal het.

Die seisoensaangesuiwerde syfers vir geld en kwasi-geld het tot Julie 1966 aangehou om te styg voordat dit oor die oorblywende gedeelte van hierdie stadium geneig het om af te plat. Onder hierdie omstandighede het die skatkiswissel-tenderkoers en verwante geldmarkkoerse gedurende die eerste helfte van 1966 gedaal maar daarna weer hul opwaartse beweging hervat en gedurende die oorblywende gedeelte van hierdie stadium voortgegaan om te styg. In Julie 1966 is die bankkoers van 5 tot 6 persent verhoog terwyl die „stel“ koerse van die Reserwebank op langtermynstaatsseffekte in dieselfde maand met 'n $\frac{1}{2}$ persent tot $6\frac{1}{2}$ persent opgeskuif is. Die koerse op kort- en mediumtermynseffekte is onderskeidelik in Maart en April 1967 verhoog.

Die oormatige monetêre vraag het, veral vanaf die middel van 1966 tot die middel van 1967, aanleiding gegee tot opwaartse druk op pryse en koste en die tekort aan geskoolde arbeid wat alreeds ernstig was, vererger. Ten einde die oormatige vraag en daardeur ook die inflasionistiese druk in bedwang te hou, is verskeie monetêre en fiskale maatreëls deur die owerheid ingestel.

Die plafon op bankkrediet aan die private sektor, wat in Oktober 1965 ingestel is, is met aanpassings in Februarie en Julie 1966 verder verleng. Verdere beperkende maatreëls, insluitende die opheffing van die beheer oor depositokoerse wat in Maart 1965 ingestel is, die uitbreiding van direkte beheer oor bankdiskonteringe en voorskotte aan die private sektor, die instelling van hoër verhoudings van voorgeskrewe en goedgekeurde bates vir versekeraars en pensioenfondse, en die reeds gemelde verhogings van rentekoerse, is in Julie 1966 aangekondig. Dit is in Desember 1966 ge-

volg deur verdere stappe, insluitende bykomende beperkings op die besteding van die openbare sektor, 'n aansienlike verdere verslapping van invoerbeheer, die verskerping van direkte beperkings op bankkrediet (waaraan deur 'n proklamasie in Augustus 1967 amptelike status gegee is), en 'n meer beperkende geldmark-beleid wat daarop gemik was om die bestaande bankkoers meer effektief te maak.

Wat fiskale maatreëls betref, is verskeie belastinge in die Begroting van Augustus 1966 verhoog en is spesiale belastingvrye obligasies aan die publiek beskikbaar gestel, terwyl die owerheid te kenne gegee het dat die owerheidsbesteding soveel as moontlik beperk sou word. Die Begroting van Maart 1967 het verdere fiskale maatreëls bevat om die monetêre beleid te versterk en aan te vul. Verskeie belastingverhogings, insluitende hoër maatskappy-inkomstebelasting, die verhoging van doeane- en aksynsregte op motors en 'n verhoging van leningsheffings op individue en maatskappye, is aangekondig.

Bogenoemde monetêre en fiskale maatreëls het die gewenste uitwerking gehad en teen die helfte van 1967 het die meeste ekonomiese tydreeks, nadat dit vanaf die begin van 1966 skerp gestyg het, van rigting begin verander, wat dui op 'n boonste draaipunt ná Februarie maar voor die derde kwartaal van 1967. Die tros van draaipunte het 'n boonste draaipunt in Mei aangedui, terwyl die geweegde en ongeweegde diffusie-indekse boonste draaipunte in Junie getoon het. Die koers van toename in die bruto binnelandse produk van die nie-landbousektore het tot die eerste kwartaal van 1967 versnel voordat dit oor die res van 1967 gedaal het. Hierteenoor het die fisiese volume van fabrieksproduksie 'n boonste draaipunt in Junie getoon. 'n Ontleding van die draaipunte van ander belangrike reekse dui daarop dat Mei 1967 as die finale verwysingspiek beskou behoort te word.

Afswaai: Junie 1967 tot Desember 1967

Die verskillende anti-inflasionistiese maatreëls wat gedurende 1966 en die eerste deel van 1967 geneem is, het daarin geslaag om die oorverhitte ekonomie af te koel. Die totale monetêre vraag het verlangsaam, 'n oorskot het op die lopende rekening van die betalingsbalans verskyn, en pryse het geneig om meer gelyk te verloop. Die druk op die binnelandse produksiefaktore is daardeur verlig.

Die verbetering in die lopende rekening van die betalingsbalans, tesame met 'n groot invloeiing van kapitaal, het tot 'n groot toename in die goud- en buitelandse valuta-reserwes gelei. Bowendien was daar 'n verdere toename in bankkrediet aan die private sektor, en onder hierdie omstandighede het die koers van toename in die likwiditeit van die private- en banksektore teen die einde van 1967 versnel. Die devaluasie van Sterling in November 1967 het 'n verdere invloeiing

van kapitaal aan die gang gesit wat bygedra het tot die oplewing op die effektebeurs wat daarop gevolg het. Dit is gevolglik verstaanbaar dat die ekonomiese bedrywigheid teen die einde van 1967 'n geleidelike opwaartse neiging hervat het.

Die geweegde en ongeweegde diffusie-indekse het 'n onderste draaipunt in November getoon terwyl die tros-van-draaipunte-benadering op 'n onderste draaipunt in Desember 1967 gedui het. Ongelukkig was die skommelings in die landbouproduksie en ook in landbouvoorrade gedurende 1967 grotendeels vir die veranderinge in die bruto binnelandse produk en besteding verantwoordelik. Alhoewel die bruto binnelandse produk eers in die vierde kwartaal van 1967 merkbaar gedaal het, het die bruto binnelandse produk van die nie-landbousektore hierdeur gedurende sowel die tweede as die derde kwartale van 1967 teen 'n effens laer koers toegeneem. Dit is ook belangrik om daarop te let dat die toegevoegde waarde van sekere sektore soos die fabriekswese, konstruksie, goudmynbou en die Suid-Afrikaanse Spoorweë- en Hawensadministrasie, gedurende die tweede helfte van 1967 geneig het om af te plat. Bowendien bevestig die verloop van die meeste van die ander belangrike ekonomiese aanwysers die indruk dat die koers van toename in ekonomiese bedrywigheid gedurende die tweede helfte van 1967 afgeneem het. Die fisiese volume van die fabrieksproduksie het byvoorbeeld vanaf Mei 1967 tot Februarie 1968 gedaal, terwyl ondanks die steeds verdere verslapping van invoerbeheer sedert Desember 1966, 'n besliste afname in die invoer vanaf Julie tot November 1967 voorgekom het. Die trog van Desember 1967 blyk dus ook versoenbaar te wees met die draaipunte van die meer belangrike en strategiese reekse.

Opswaai vanaf Januarie 1968

Volgens byna alle ekonomiese aanwysers het die Suid-Afrikaanse volkshuishouding 'n herlewing ondervind in 1968, wat die laaste jaar is wat in hierdie oorsig gedek word. Die koers van toename in ekonomiese bedrywigheid gedurende die eerste helfte van 1968 was betreklik laag maar het gedurende die tweede helfte en gedurende die grootste deel van 1969 momentum gekry. Gedurende 1968 in sy geheel was die bruto binnelandse besteding min of meer gelyk aan die bruto nasionale produk sodat die binnelandse vraag na en aanbod van goedere en dienste min of meer in ewewig was.

Hoofsaaklik as gevolg van 'n baie groot invloeiing van kapitaal wat met die internasionale valuta-onsekerhede verband gehou het, het die goud- en buitelandse valuta-reserwes aanmerklik toegeneem en, saam met 'n verdere toename in bankkrediet aan die private sektor, gelei tot die opbouing van oormatige likwiditeit in die private sowel as die banksektor. Hierdie buitengewoon hoë peil van likwiditeit het hoogkonjunktuurtoestande

in die eiendoms- en aandelemarkte teweeggebring wat teen die einde van 1968 en vroeg in 1969 'n ongeëwenaarde peil bereik het.

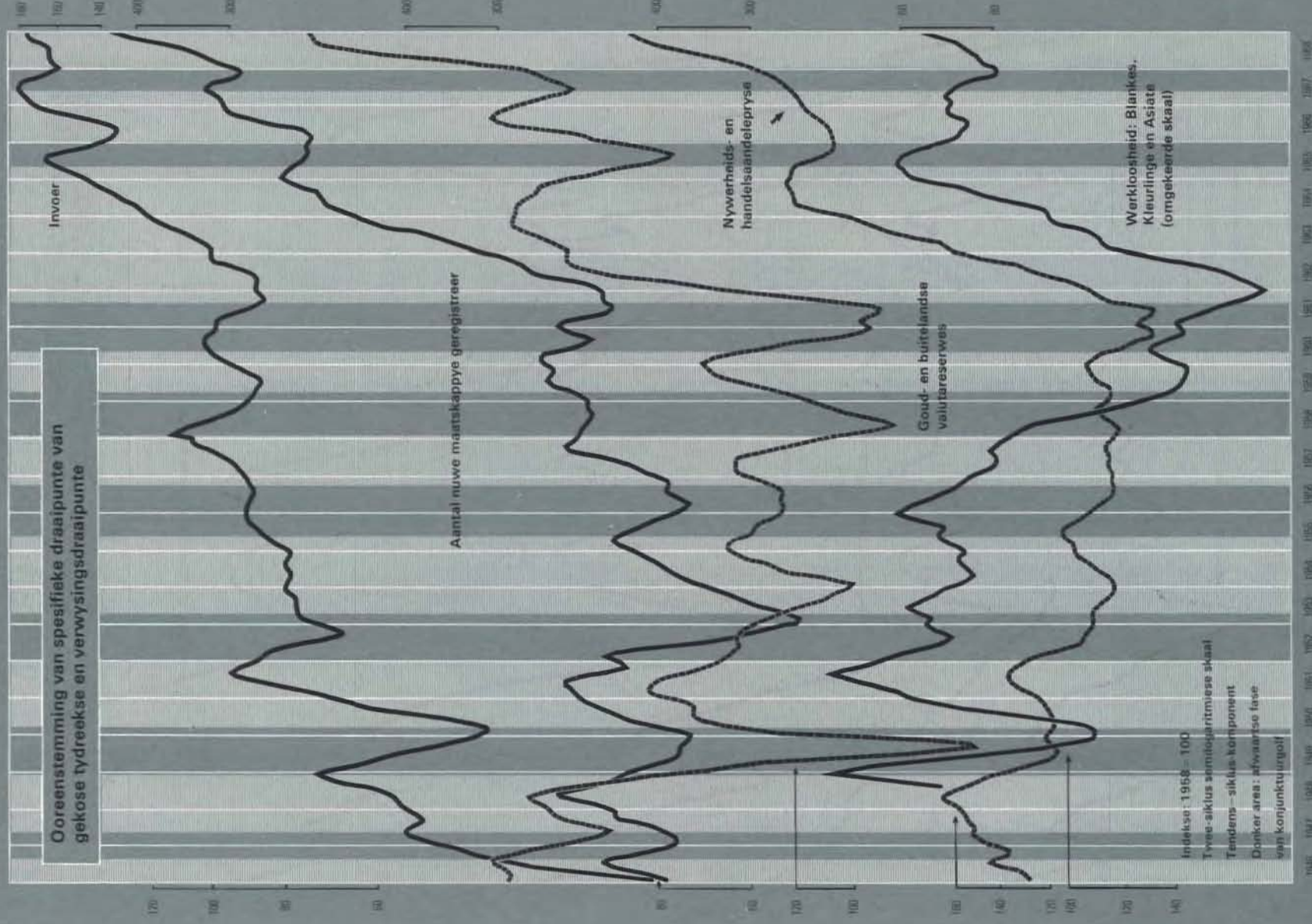
Finale draaipunte

Soos voorheen reeds bespreek, is die keuse van 'n verwysingsdraaipunt wat in 'n spesifieke maand geleë moet wees tot op sekere hoogte arbitrêr, aangesien die ekonomiese bedrywigheid nie noodwendig binne 'n maand van tempo en koers verander nie. Dit is nie-temin vir analitiese doeleindes noodsaaklik om wel so 'n keuse te maak nadat al die ter sake dienende inligting in ag geneem is. Die bygaande tabel gee 'n samevatting van die finale verwysingsdraaipunt datums soos wat dit ná oorweging van die resultate van die gebruikte statistiese metodes en die agtergrondontwikkelings sowel as van die verloop van sekere strategiese aanwysers van ekonomiese bedrywigheid, vasgestel is.

Tabel 6
Finale verwysingsdraaipunt datums en fases in die konjunkturgolf

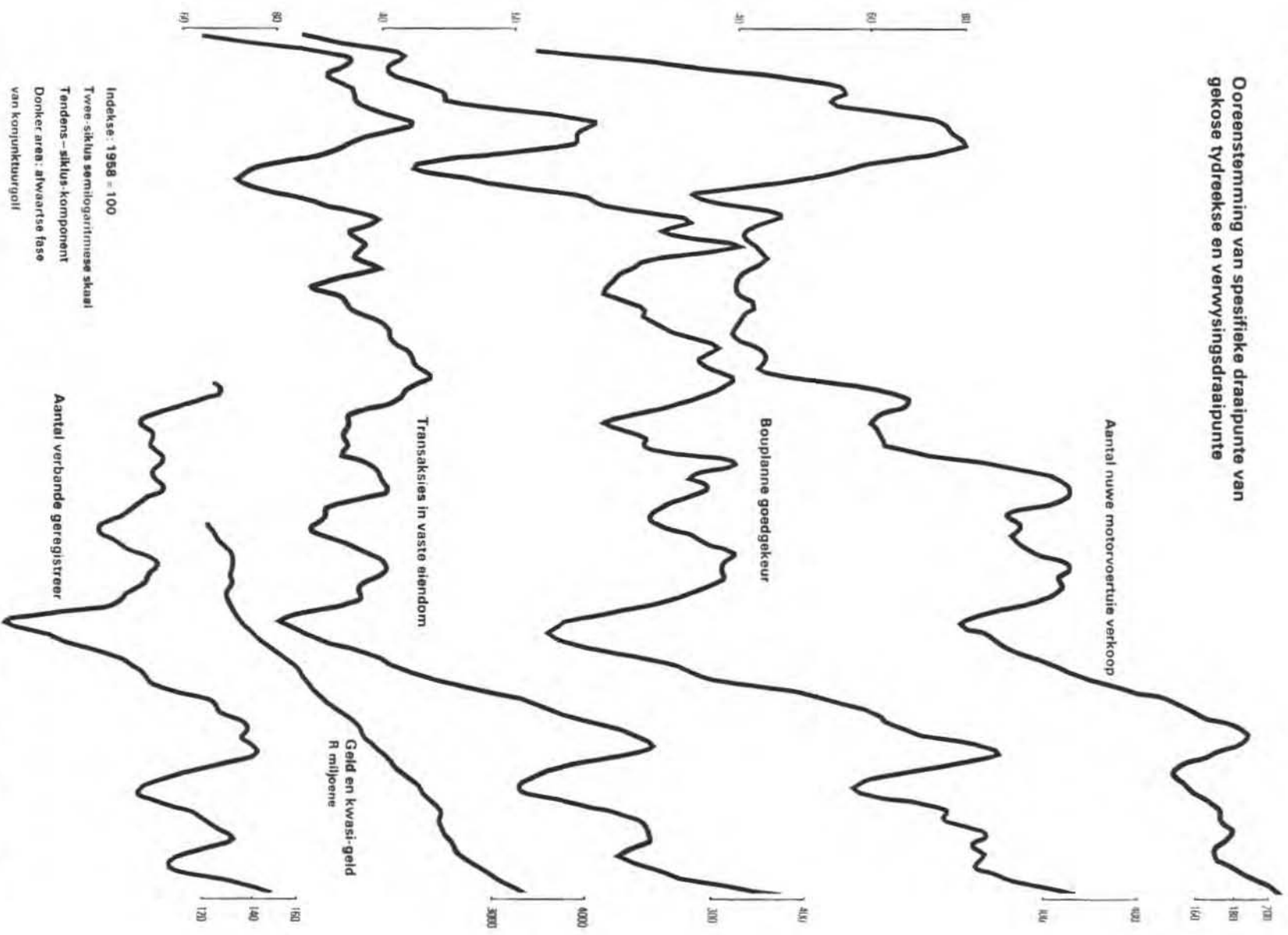
Opswaai	Afswaai
Na-oorlogs-Julie 1946	Augustus 1946-April 1947
Mei 1947-November 1948	Desember 1948-Februarie 1950
Maart 1950-Desember 1951	Januarie 1952-Maart 1953
April 1953-April 1955	Mei 1955-September 1956
Oktober 1956-Januarie 1958	Februarie 1958-Maart 1959
April 1959-April 1960	Mei 1960-Augustus 1961
September 1961-April 1965	Mei 1965-Desember 1965
Januarie 1966-Mei 1967	Junie 1967-Desember 1967
Januarie 1968—	

Grafiëk 4

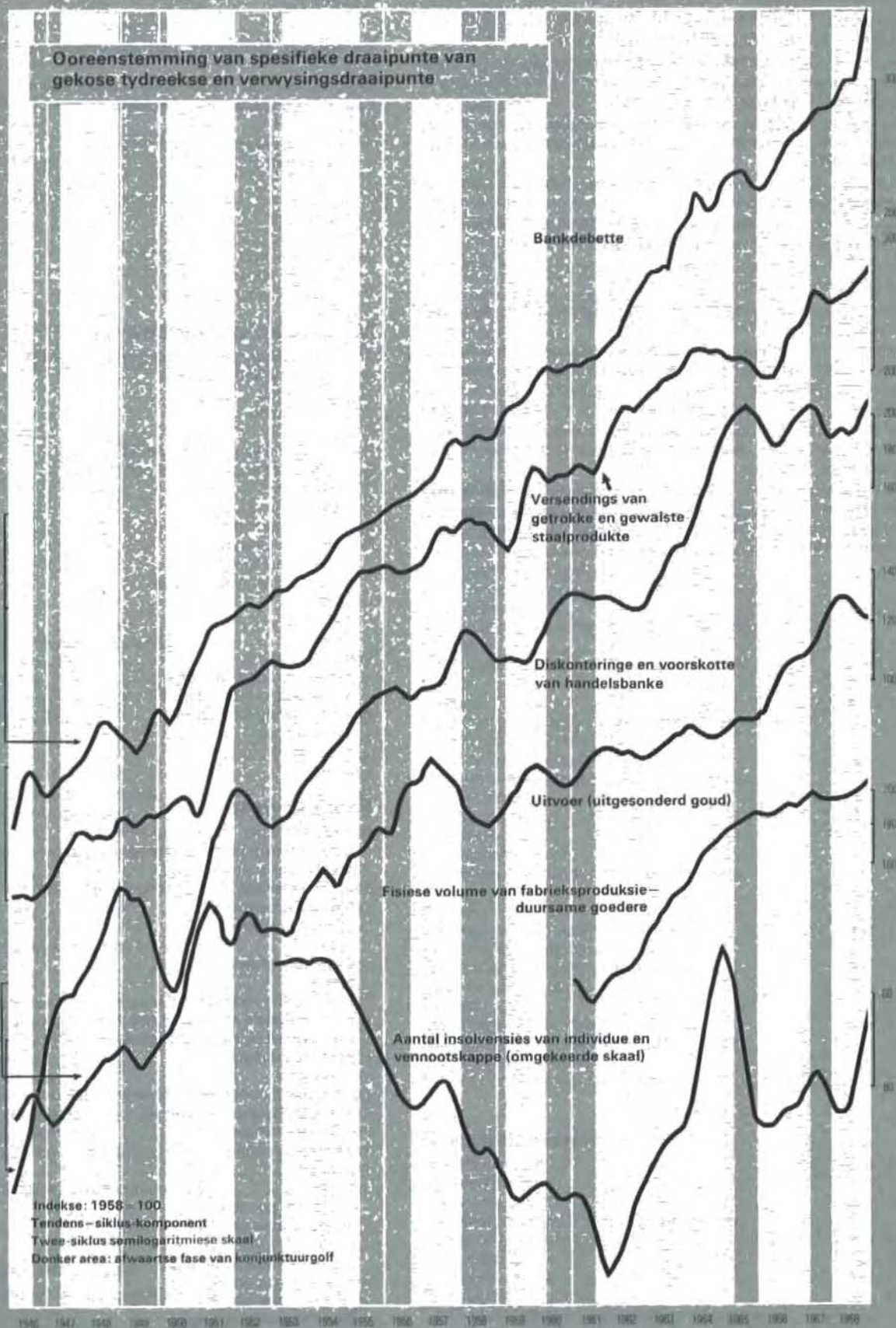


Grafiek 4 vervolg

Ooreenstemming van spesifieke draaipunte van gekose tydreeke en verwysingsdraaipunte



Grafiek 4 vervolg



Verwysings

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Aanhangsel—reekse gebruik vir konjunkturgolf-ontleding

Landbou, bosbou, jag en visserye

	Beskikbaar vanaf
Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Kaskredietvoorskotte van Landbank	Jan. 1946
Uitvoer:	
ingelegde vrugte en vrugte preparate	Jan. 1964
karakoelpelse	Jan. 1964
mielies	Jan. 1964
rou-suiker	Jan. 1964
sitrusvrugte	Jan. 1964
wol	Jan. 1964
Vaste investering:	
geboue en konstruksies	1e kw. 1960
masjinerie, uitrusting, ens.	1e kw. 1960

Mynbou en steengroewery

Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Fisiese volume van produksie:	
goudmynbou	Jan. 1946
ander mynbou	Jan. 1961
totaal	Jan. 1961
Fisiese volume van steenkoolverkope	
Gemiddelde salarisse en lone per maand:	
alle rasse	Jul. 1958
Blankes	Jul. 1958
Investering in voorrade	1e kw. 1960
Pryse van gewone aandele:	
goudmynmaatskappye	Jan. 1946
steenkoolmynmaatskappye	1e kw. 1958
Uitvoer:	
diamante	Jan. 1964
koper	Jan. 1964
Vaste investering:	
geboue en konstruksies	1e kw. 1960
masjinerie, uitrusting, ens.	1e kw. 1960
Werkverskaffing (alle rasse):	
goudmynbou	Jan. 1946
ander mynbou	Jan. 1946
totaal	Jan. 1946

Fabriekswese

Arbeidsomset per 100 produksiewerkers:	
getal afdankings en bedankings	Jan. 1957
getal indiensnemings	Jan. 1957
Bruto binnelandse produk: toegevoegde waarde	
private fabriekswese:	
ander inkomme	1e kw. 1960
totaal	1e kw. 1960
ander fabriekswese	1e kw. 1960
totaal	1e kw. 1960
Fisiese volume van produksie:	
basiese metale en metaalprodukte	Jan. 1961
chemikalieë en chemiese produkte	Jan. 1961
hout en meubels	Jan. 1961
masjinerie	Jan. 1961
nie-metaalhoudende mineraalprodukte	Jan. 1961
tekstiele, klerasie en skoeisel	Jan. 1961
verpakkingsmateriaal	Jan. 1961
vervoertoerusting	Jan. 1961
voedsel	Jan. 1961
ander	Jan. 1961
duursame goedere	Jan. 1961
nie-duursame goedere	Jan. 1961
totaal	Jan. 1961
ru-yster en ysterlegerings	Jan. 1936
Investering in voorrade:	
aangekoopte goedere	1e kw. 1960
eie-vervaardigde goedere	1e kw. 1960
materiaal en werk aan die gang	1e kw. 1960
totaal	1e kw. 1960

Nuwe bestellings ontvang, uitgesoekte groepe:	
duursame goedere	3e kw. 1964
nie-duursame goedere	3e kw. 1964
totaal	3e kw. 1964
Onvoltooide bestellings, uitgesoekte groepe:	
duursame goedere	Jul. 1964
nie-duursame goedere	Jul. 1964
totaal	Jul. 1964
Onvoltooide bestellings as persentasie van verkope,	
uitgesoekte groepe:	
duursame goedere	3e kw. 1964
nie-duursame goedere	3e kw. 1964
totaal	3e kw. 1964
Produktiwiteit (fisiese volume van produksie gedeel	
deur totale ure)	Jan. 1961
Ure gewerk:	
gemiddelde per blanke produksiewerker	April 1957
oortyd as persentasie van gewone ure,	
produksiewerkers	April 1957
totaal	April 1957
Vaste investering: fabriekswese en konstruksie	
masjinerie, uitrusting, ens.	1e kw. 1960
Verbruik van gewalste en getrokke staalprodukte (ton):	
platstaal	1e kw. 1962
profielstaal	1e kw. 1962
totaal	1e kw. 1962
Versendings van gewalste en getrokke	
staalprodukte (ton):	
platstaal	Jan. 1936
profielstaal	Jan. 1936
totaal	Jan. 1936
Werkverskaffing	Jan. 1948

Konstruksie

Arbeidsomset per 100 produksiewerkers:	
getal afdankings en bedankings	Jan. 1957
getal indiensnemings	Jan. 1957
Bouplanne goedgekeur:	
aanbouings en veranderings	Jan. 1958
woongeboue	Jan. 1958
nie-woongeboue	Jan. 1958
totaal	Mei 1923
Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Fisiese volume van sementproduksie	Jan. 1929
Geboue voltooi	Jan. 1959
Gemiddelde salarisse en lone per maand:	
alle rasse	Jan. 1957
Blankes	Jan. 1957
Investering in voorrade	1e kw. 1960
Ure gewerk:	
oortyd as persentasie van gewone ure,	
produksiewerkers	April 1959
totaal	April 1957
Vaste investering: geboue en konstruksies:	
fabriekswese en konstruksie	1e kw. 1960
handel, private vervoer en finansiële instellings	1e kw. 1960
openbare korporasies	1e kw. 1960
plaaslike owerhede, algemeen	1e kw. 1960
plaaslike owerhede, sake-ondernemings	1e kw. 1960
provinsiale administrasies	1e kw. 1960
sentrale regering, algemeen	1e kw. 1960
sentrale regering, sake-ondernemings	1e kw. 1960
S.A.S. & H.	1e kw. 1960
Werkverskaffing (alle rasse)—private konstruksie	Jan. 1948

Elektrisiteit, gas en water

Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Elektriese stroom opgewek	Jan. 1943
Vaste investering: openbare korporasies:	
masjinerie, uitrusting, ens.	1e kw. 1960

Vervoer, opberging en kommunikasie

Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Dieselolie-verkope	Jan. 1957
Gemiddelde salarisse en lone per maand: S.A.S. & H.	
alle rasse	Jan. 1958
Blankes	Jan. 1958
Inkomstedaende verkeer, S.A.S.:	
tonmyle	Jan. 1927
tonnemaat	April 1920
Lugvragtonmyle—binnelandse verkeer	Jan. 1951
Passasiersmyle—binnelandse lugverkeer	Jan. 1948
Petrolverkope	Jan. 1952
Skeepvaart—kusvaartlading gehanteer	Jan. 1951
Spoorweginkomste—vervoerdienste	Jun. 1910
Vaste investering: masjinerie, uitrusting, ens.:	
sentrale regering, sake-ondernemings	1e kw. 1960
S.A.S. & H.	1e kw. 1960
Vervoer, uitges. vrag en versekering:	
betalings aan buiteland	1e kw. 1958
ontvangste van buiteland	1e kw. 1958
Vrag en versekering:	
betalings aan buiteland	1e kw. 1958
ontvangste van buiteland	1e kw. 1958
Werkverskaffing (alle rasse):	
Poskantoor	April 1957
S.A.S. & H.	Jul. 1950

Handel

Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Dagvaardings vir skuld (aantal siviele)	Jan. 1952
Groothandelspryse van goedere vir binnelandse	
aanwending—totaal	Jan. 1940
Groothandelsverkope:	
boumateriaal	April 1966
metale, masjinerie en algemene plaasbenodigd-	
hede	April 1966
meubels en huishoudelike benodighede	April 1966
ander	April 1966
totaal	April 1966
Insolvensies van individue en vennootskappe (aantal)	Jan. 1953
Investering in voorrade:	
handel en nywerheid	1e kw. 1960
handel uitges. landbouvoorrade in handel en	
diamante	1e kw. 1960
kleinhandel	1e kw. 1960
motorhandel	1e kw. 1960
Kleinhandelsverkope:	
meubels en huishoudelike benodighede	Jan. 1955
ander	Jan. 1955
totaal	Jan. 1948
Likwidasiess van maatskappye (aantal)	Jan. 1934
Motorvoertuie verkoop:	
aantal nuwe handelsvoertuie	Jan. 1947
aantal nuwe motors	Jan. 1947
totaal	Jan. 1928
waarde van gebruikte	Jan. 1962
Vaste investering: masjinerie, uitrusting, ens.	1e kw. 1960
Verbruikerspryse—totaal	Jan. 1922
Vonnisse vir skuld (aantal siviele)	Jul. 1951

Finansiële dienste

Bankdebiteringe	Jan. 1928
Bouverenigings:	
aandelekapitaal	Jan. 1945
kontant, deposito's en beleggings (uitges.	
verbandvoorskotte)	Jan. 1945
spaardeposito's	Jan. 1945
vaste deposito's	Jan. 1945
verbandvoorskotte	Jan. 1945
verbandvoorskotte toegestaan maar nog nie	
uitbetaal	Jan. 1960
voorskotte toegestaan gedurende die maand	Jan. 1965

Bruto binnelandse produk: toegevoegde waarde	1e kw. 1960
Handelsbanke:	
diskonteringe en voorskotte	Jun. 1923
kontant en daggeldlenings	Jun. 1953
totale depositolaste	Jan. 1948
Monetêre banksektor:	
geld en kwasi-geld	Des. 1962
goud- en buitelandse valutareserwes	Jan. 1946
langtermyn depositolaste	Des. 1962
netto eise teen die regeringsektor	Des. 1962
totale eise teen die private sektor	Des. 1962
N. F. K.:	
daggeldkoers	Jun. 1958
totale depositolaste	Sep. 1949
N. F. K. en diskontohuise—totale deposito's en daggeldlenings	Jan. 1959
Opbrengskoers op nywerheids- en handelsaandele	Jul. 1962
Skatkiswissel—tenderkoers	Jun. 1958

Vaste eiendom

Vaste eiendom:	
waarde van transaksies	Jul. 1910
oordragwaarde van plattelandse	Jan. 1943

Algemene owerheid

Bruto binnelandse produk:	
indirekte belastinge	1e kw. 1960
subsidies	1e kw. 1960
Lopende besteding deur algemene owerheid	1e kw. 1960
Skatkisontvangste op Inkomsterekening:	
doeane en aksyns	Jan. 1946
inkomstebelasting	Jan. 1946
totaal	Jan. 1946
Totale netto uitreikings (uitges. lenings)	Jan. 1964
Uitreikings op Inkomsterekening	Jan. 1946
Werkverskaffing (alle rasse):	
plaaslike besture	1e kw. 1961
provinsiale administrasies	1e kw. 1961
sentrale regering	1e kw. 1959

Ander dienste

Maatskappye geregistreer, getal nuwe	Jan. 1934
Verbande geregistreer, getal (uitges. Landbank)	April 1955
Verbruiksbesteding aan dienste	1e kw. 1960

Diverse reekse

Betalingsbalans:	
invoer:	
intermediêre goedere	1e kw. 1965
kapitaalgoedere	1e kw. 1965
verbruiksgoedere	1e kw. 1965
totaal	Jan. 1958
toerisme—betalings aan buiteland	1e kw. 1958
uitvoer—intermediêre goedere	1e kw. 1965
Bruto binnelandse besparing	1e kw. 1960
Bruto binnelandse produk:	
salarisse en lone	1e kw. 1960
ander inkome	1e kw. 1960
totaal	1e kw. 1960
Effektebeurs—omset	Jan. 1949
Gemiddelde salarisse en lone per maand in	
nie-landbousektore:	
alle rasse	Jan. 1958
Blankes	Jan. 1958
Investering in voorrade:	
openbare korporasies	1e kw. 1960
openbare owerhede	1e kw. 1960
Invoer; Departement Doeane en Aksyns	Jan. 1910
Kapitaalverandering van maatskappye, alle groepe:	
nominale kapitaalverminderinge	Jan. 1934
nuwe nominale kapitaal	Jan. 1932
Maatskappybesparing	1e kw. 1960
Pryse van nywerheids- en handelsaandele	Jan. 1946
Uitvoer; Departement Doeane en Aksyns (uitgesonderd goud)	Jan. 1910

Verbruiksbesteding aan:	
klerasie	1e kw. 1960
meubels	1e kw. 1960
motors	1e kw. 1960
voersel	1e kw. 1960
duursame goedere	1e kw. 1960
nie-duursame goedere	1e kw. 1960
totaal	1e kw. 1960
Volkstrek—aantal immigrante	Jan. 1925
Werkloosheid:	
getal geregistreerde Blankes, Kleurlinge en Asiate	Jan. 1948
getal geregistreerde blanke mans	Jan. 1948
Werkverskaffing in nie-landbousektore:	
alle rasse	1e kw. 1958
Blankes	1e kw. 1958