

MONETARY POLICY REVIEW

April 2002



South African Reserve Bank

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Monetary Policy Review

Introduction

Since the publication of the previous *Monetary Policy Review* in October 2001, there have been a number of significant developments relevant to monetary policy. Firstly, there was the announcement of the new inflation targets for 2003 up to 2005. The new targets announced by the Minister of Finance in October 2001 were informed by technical input from the joint South African Reserve Bank/National Treasury Inflation-Targeting Technical Committee. The committee made recommendations to the Governor and the Minister of Finance, who jointly decided on the targets. The new targets were for an unchanged range of 3-6 per cent for 2003, and a lower target range of 3-5 per cent in 2004 and 2005.

The unchanged target for 2003 was recognition of the fact that monetary policy actions in late 2001 and 2002 would be reflected primarily in the 2003 inflation outcomes. Evidence from other countries suggests that the lag between monetary policy changes and their impact on inflation could vary between 3 and 12 quarters. Research shows that the lag in South Africa is around 6-8 quarters and implies that the target must be available at least two years in advance (see Box 1 in the October 2001 *Monetary Policy Review*). Although current changes in the monetary policy stance will have some impact on 2002 inflation, the main impact is likely to be on the inflation outcome in 2003.

The second significant development was the continued depreciation of the rand, accelerating in November and December. This contributed to a turnaround in CPIX inflation that had fallen below the upper end of the 2002 target of 3-6 per cent in September and October. Until then there had been surprisingly little pass-through of the exchange rate depreciation to production prices and consumer prices. There was, however, an underlying concern that this was not a sustainable situation. As is shown below, the category that contributed most to the acceleration of CPIX was food, which has become more subject to international pricing than in the past. The Monetary Policy Committee (MPC) decided at an unscheduled meeting in January 2002 to raise the repo rate by 100 basis points to 10,5 per cent. This was primarily a pre-emptive move to forestall the possible second-round effects of the rand's depreciation on inflation, particularly in the light of the turnaround in inflation expectations. Since that move, the inflation figures have deteriorated significantly, as did other indicators of inflationary pressure, and expectations of higher inflation appear to have become more entrenched. Consequently the MPC increased the repo rate by a further 100 basis points to 11,5 per cent in March.

Although the final inflation outcome for 2002 will only be known for certain early in 2003, the Bank's latest inflation forecast that incorporates the unexpectedly large depreciation of the rand, indicates that there is a strong possibility that the CPIX target for 2002 may not be achieved. At this stage however there is not much that monetary policy can do in this regard, given the lags between monetary policy actions and their effects on inflation. South Africa is now beginning to feel the full brunt of the first-round effects of the rand's depreciation, and monetary policy, as has always been the Bank's stated intention, will be focused on mitigating the second-round effects. The MPC is confident that the changes to the monetary policy stance effected since January are consistent with achieving the target of 3-6 per cent in 2003. In the

absence of major unexpected negative shocks, the Bank's forecasts also suggest that this target will be attainable.

As usual, the *Monetary Policy Review* analyses inflation developments and the factors that impact on inflation. This is followed by an assessment of recent monetary policy developments and a discussion of the inflation outlook as well as the Reserve Bank's inflation forecast. Three topical issues are focused on in the boxes. The first box analyses the new weights in the CPIX as calculated by Statistics South Africa. The second box addresses the issue of the food price increases and focuses on issues relating to the maize price. The third box shows the results of research into the pass-through effect of exchange rate changes on import prices.

Box 1 Re-weighting of the CPIX

Once every five years Statistics South Africa conducts a comprehensive Income and Expenditure Survey of Households (IES) to determine the earnings and spending patterns of South African households. These expenditure patterns change over time to reflect changes in the needs, tastes and buying preferences of households. This box highlights the impact of the IES conducted in October 2000 and implemented in the compilation of the set of January 2002 consumer price indices (i.e. on the headline, core CPI and CPIX measures).

The findings of the IES form the basis for determining the relative importance or weight of each item in the 'basket' of goods and services bought by an average household. The weight of a product is calculated by dividing the amount spent by all households in the country on that product by the total amount spent on goods and services by all households. The prices of the identified goods and services in the basket are then monitored on a monthly basis and adjusted by their weights to compile the various consumer price indices.

Table B1.1 depicts the new and previous weights for the CPIX measure targeted by the Reserve Bank. The new weights reflect not only the changes in the importance of existing goods in the basket, but in some cases new goods are included in certain categories to capture changes in spending patterns that have emerged since the previous IES. The 2000 IES, for example, included goods and services not explicitly measured in the 1995 survey, in particular cellular phones, gambling, private security systems and expenditure on the Internet.

The weights assigned to the aggregate *goods* and *services* categories in the new and previous baskets remain broadly unchanged. The weight for *goods* increases by just over $\frac{1}{2}$ a percentage point to 66,24 per cent at the expense of the weight for *services*.

At a more disaggregated level, significant shifts in the weights of goods and services in the basket are evident for: *food*, which increased from 21,92 per cent in 1995 to 25,66 per cent in 2000 (+3,74 percentage points); *medical care and health expenses*, which increased from 6,54 per cent to 7,70 per cent (+1,16 percentage points); and *education*, which increased from 2,05 per cent to 3,77 per cent (+1,72 percentage points). Items that decreased in importance in the basket include: *furniture and equipment*, which decreased from 4,88 per cent to 3,15 per cent (-1,73 percentage points); *clothing and footwear*, which declined from 5,70 to 4,06 per cent (-1,64 percentage points); and the residual *other goods and services* category which decreased from 7,63 per cent to 3,63 per cent (-4 percentage points).

The overall impact of the re-weighting exercise for measured CPIX inflation is ambiguous. The increased weight given to the relatively volatile *food* component of the index, where prices are currently growing at a faster rate, seems likely to increase measured inflation in the short term. In the longer term, of course, the opposite may apply. This is why some countries exclude volatile components from their targeted price index, or give them a lower weight in the index than they would warrant purely on the basis of surveyed expenditure.

Table B1.1 CPIX weights

Component	1995 weights Per cent	2000 weights Per cent	Change Percentage points
Goods	65,71	66,24	0,53
Services	34,29	33,76	-0,53
Food.....	21,92	25,66	3,74
Grain products	4,20	4,84	0,64
Meat.....	6,57	6,95	0,38
Fish and other seafood.....	0,87	0,78	-0,09
Milk, eggs and cheese	2,27	2,34	0,07
Fats and oils.....	1,06	0,93	-0,13
Fruits and nuts	1,20	1,26	0,06
Vegetables	2,18	2,43	0,25
Sugar	0,82	0,69	-0,13
Coffee, tea and cocoa.....	0,89	1,27	0,38
Other food products.....	1,86	4,17	2,31
Non-alcoholic beverages	0,92	1,26	0,34
Alcoholic beverages.....	1,32	1,70	0,38
Cigarettes, cigars and tobacco.....	1,17	1,35	0,18
Clothing and footwear	5,70	4,06	-1,64
Housing	12,74	11,57	-1,17
Fuel and power.....	3,98	4,28	0,30
Furniture and equipment.....	4,88	3,15	-1,73
Household operation	5,48	5,22	-0,26
Medical care and health expenses.....	6,54	7,70	1,16
Transport	15,36	15,30	-0,06
Communication	3,61	3,19	-0,42
Recreation and entertainment.....	2,45	3,39	0,94
Reading material.....	0,78	0,40	-0,38
Education	2,05	3,77	1,72
Personal care	3,47	4,37	0,90
Other goods and services.....	7,63	3,63	-4,00
Total	100,00	100,00	

Source : Statistics South Africa

The re-weighting exercise included administered prices, defined as those goods and services whose prices are directly determined by government departments or other public-sector agencies. In addition to updating the weights in the index of administered prices, first compiled by the Reserve Bank in the March 2001 *Monetary Policy Review*, the opportunity also was taken to refine that index. The new weights are presented in Table B1.2.

Table B1.2 shows that the combined weight of the various administered prices in the CPIX is now 24,55 per cent, slightly higher than the 23,90 per cent total obtained for these prices in the previous index. The refined index of administered prices now includes *assessment rates*, *sanitary services*, *refuse removal*, and *licences and registration*. Downward adjustments were made to the weights for *medical care and health expenses*, where medical goods have been excluded from the revised index, and to *transport*, where public transport now includes only buses and trains. As a result of the re-weighting exercise, the weight for *petrol* increased from 4,06 per cent in 1995 to 5,08 per cent in the 2000 basket (+1,02 percentage points). *Diesel* has been excluded from the new consumer basket since its weight accounted for less than the 0,01 per cent limit applied by Statistics South Africa. The weight for *petroleum products* (paraffin) increased from 0,11 per cent to 0,34 per cent (+0,23 percentage points) and as noted earlier *education* increased from 2,05 per cent to 3,77 per cent (+1,72 percentage points).

Table B1.2 Administered prices

Per cent

	Weight
Home-owner's cost	
Assessment rates	1,64
Sanitary service	0,27
Refuse removal.....	0,37
Water.....	1,81
Fuel and power	
Electricity	3,55
Petroleum products	0,34
Medical health services	3,23
Transport	
Petrol.....	5,08
Buses	0,37
Trains.....	0,16
Licence and registration.....	0,09
Communication.....	3,19
Recreation and entertainment	
Television licences.....	0,68
Education.....	3,77
Total.....	24,55

Source : Statistics South Africa and SARB calculations

Recent developments in inflation

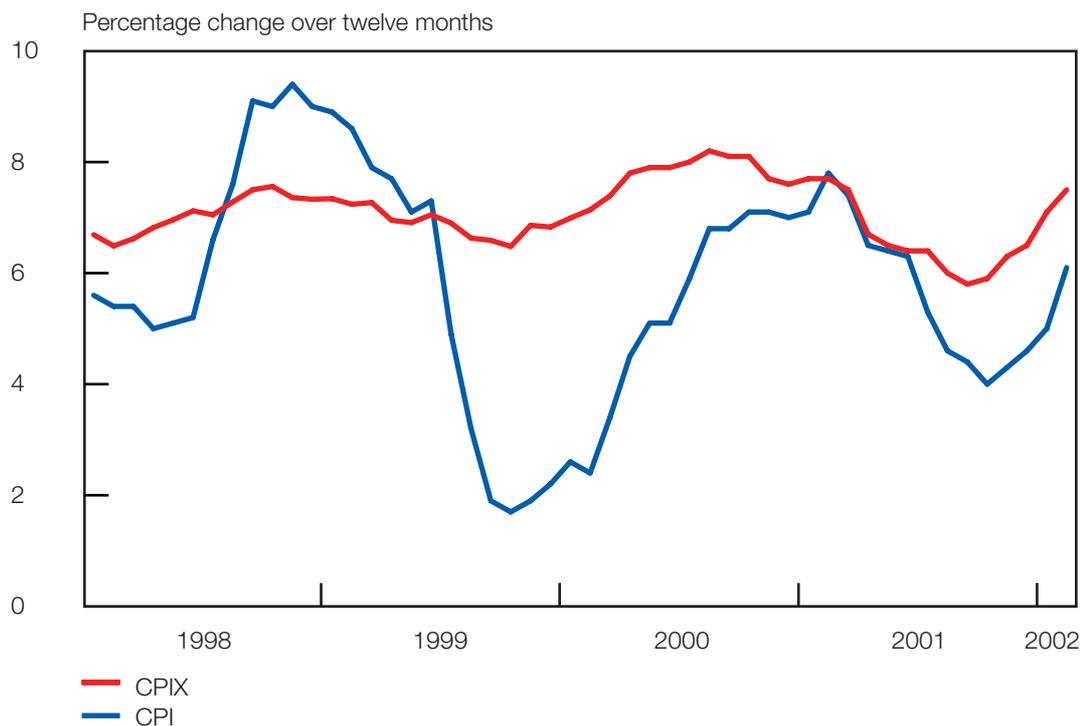
This section analyses recent trends in the main inflation indices, and reviews developments in the primary factors impacting on inflation in South Africa.

The evolution of indicators of inflation

Since the previous issue of the *Monetary Policy Review*, the downward trend in inflation has been interrupted and the various measures of year-on-year inflation have turned upward, largely reflecting the impact of the depreciation of the exchange rate and increases in food prices. Furthermore, in January the consumer price indices were compiled for the first time using the updated weights based on the survey conducted in 2000 (Box 1 provides more details about this). Although the new weights give greater importance to categories which are currently recording higher inflation, such as food, the change in weights has little effect on the trends discussed here. Possibly more important is the fact that all prices in the indices were surveyed and included in the January consumer price data as a result of the re-weighting process. Price increases that would only have found their way into the data in the coming months were therefore already included in the January figures.

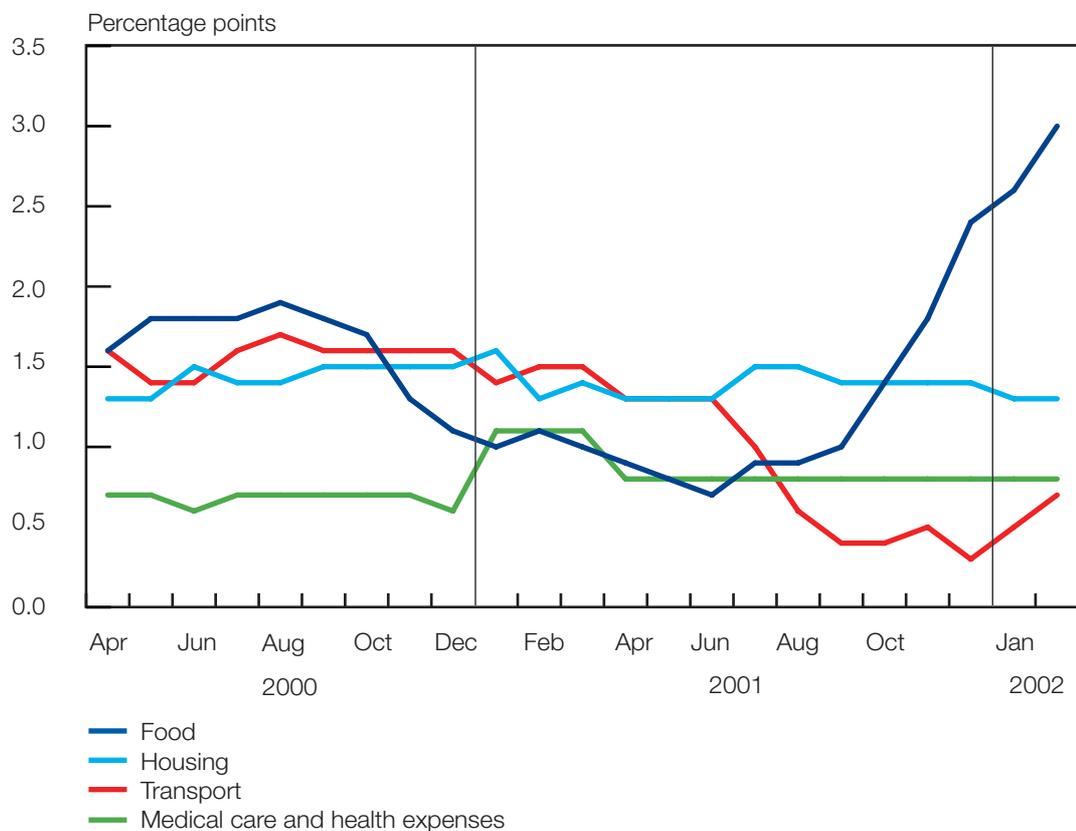
Figure 1 shows that year-on-year CPIX inflation (i.e. the consumer price index excluding mortgage interest cost for metropolitan and other urban areas) trended downward from 8,2 per cent in August 2000 to a low point of 5,8 per cent in September 2001, before increasing to 7,5 per cent in February 2002. The inflation rate measured by the consumer price index (CPI) for metropolitan areas reached a low of 4 per cent in October 2001 and by February 2002 inflation measured in terms of this index had increased to 6,1 per cent.

Figure 1 Consumer price inflation: CPIX and CPI



Source: Statistics South Africa

Figure 2 Contributions to CPIX inflation

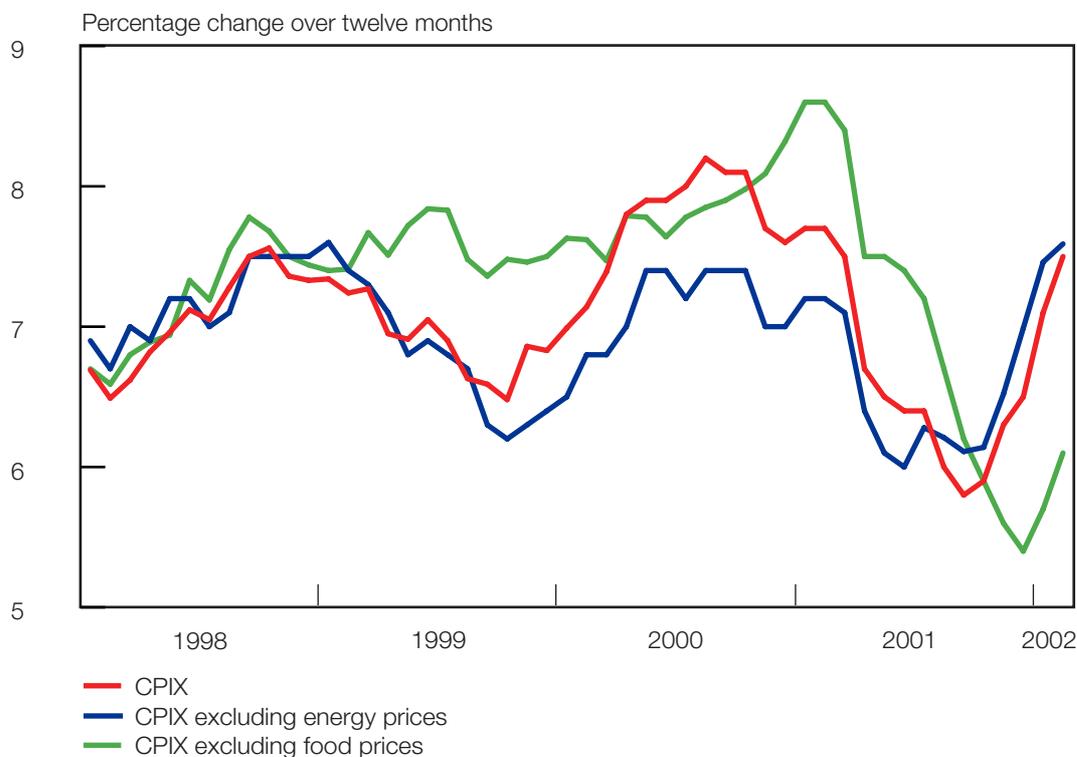


Source: Statistics South Africa

The weighted contribution of *food* prices has provided the main impetus to the recent increase in the year-on-year CPIX inflation rate. As Figure 2 reveals, *food* prices contributed 3 percentage points to total CPIX inflation of 7,5 per cent in February 2002, compared with the 1 percentage point they contributed to CPIX inflation of 5,8 per cent in September 2001. The contributions of the other main components of the index in Figure 2 have been relatively constant over this period, although the downward trend in the contribution of *transport* prices appears to have bottomed out as the effects of the depreciation of the rand and higher world oil price became evident.

The *food* price index, whose weight in the CPIX has increased from 21,92 per cent to 25,66 per cent as a result of the re-weighting exercise (see Box 1), is acknowledged to be one of the more volatile categories in the index. To highlight the important role food prices have played in determining the recent path of CPIX inflation, Figure 3 shows the effects of excluding these prices from the index. Since October 2001, it is clear that CPIX inflation would have been lower without the contribution of *food* prices. Excluding these prices, inflation in January 2002 would have been 5,7 per cent, rising to 6,1 per cent in February. The effect of excluding energy prices, which is also shown in Figure 3, reveals that these prices have been exerting downward pressure on CPIX inflation since August 2001. As the figure shows, however, these recent trends in food and energy prices are not representative of the entire period since 1999. Food prices generally had a restraining influence on CPIX inflation during this period (except for a period from April to October 2000), and the upward pressure that energy prices placed on inflation from mid-1999 until July 2001 has been well documented.

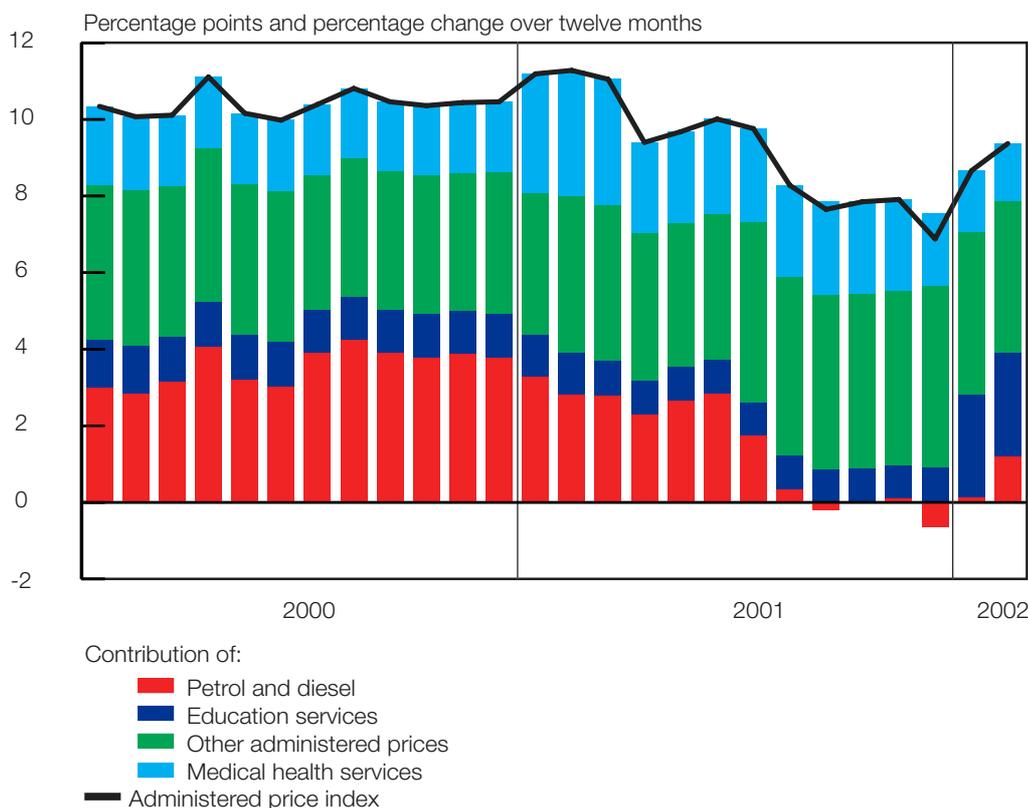
Figure 3 The effect of food and energy prices on CPIX inflation



Source: Statistics South Africa

Figure 4 shows that year-on-year inflation in the administered prices component of the CPIX trended downward in 2001 as the contributions of *petrol and diesel* price increases declined sharply. The inflation rate for administered prices did, however, remain above the rate measured by the overall CPIX throughout the year. At its lowest rate of 7,2 per cent in December, for example, it was still well above overall CPIX inflation of 6,5 per cent.

Figure 4 Contributions to the administered price index



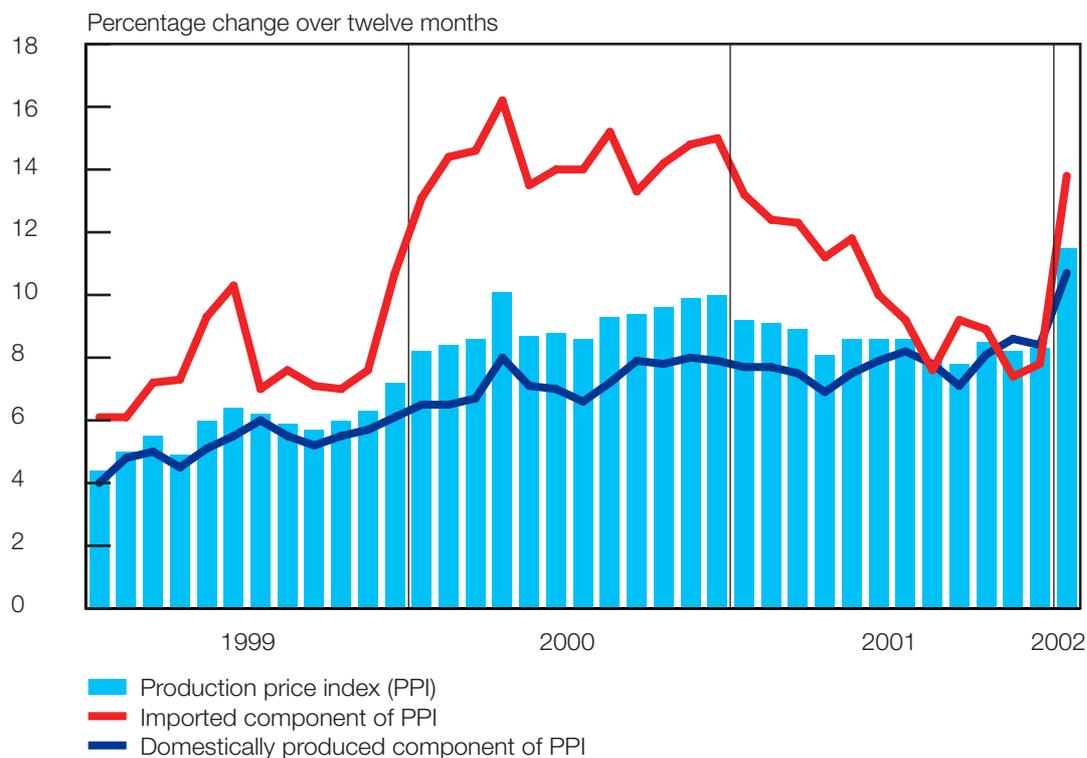
Source: Statistics South Africa and SARB calculations

Various refinements to the index of administered prices, over and above the changes resulting from the re-weighting exercise, mean that the inflation rate measured since January 2002 is not strictly comparable with the data for preceding months. These refinements and changes are discussed in Box 1. The year-on-year inflation for this revised index in February 2002 was 9,4 per cent, again above the overall CPIX inflation rate of 7,5 per cent for the month. The largest contributions to this administered prices inflation rate were made by *education* (2,7 percentage points) and *medical health services* (1,5 percentage points), while the contribution of *petrol and diesel* prices rose from being marginally positive in January to 1,2 percentage points.

Production price inflation averaged 8,4 per cent in 2001, dropping to below 8 per cent in August and September. As Figure 5 shows, inflation then increased sharply to 11,5 per cent in January 2002, well above the rate expected by most forecasters. The imported component of the index, which has a weight (27 per cent) that is significantly larger than that of imports in the consumer price indices, increased at a year-on-year rate of 13,8 per cent. This reflects the weakening of the rand in the second half of last year, although since production prices were surveyed early in January

it is unlikely that the full impact of the strong depreciation in December is evident yet. Perhaps of greater concern is the 10,7 per cent increase in inflation for the locally produced component of the index. This is the largest increase in this index reported since June 1995, and suggests that second-round effects may become an important factor in domestic inflation.

Figure 5 Production price inflation



Source: Statistics South Africa

Box 2 Grain prices and food inflation

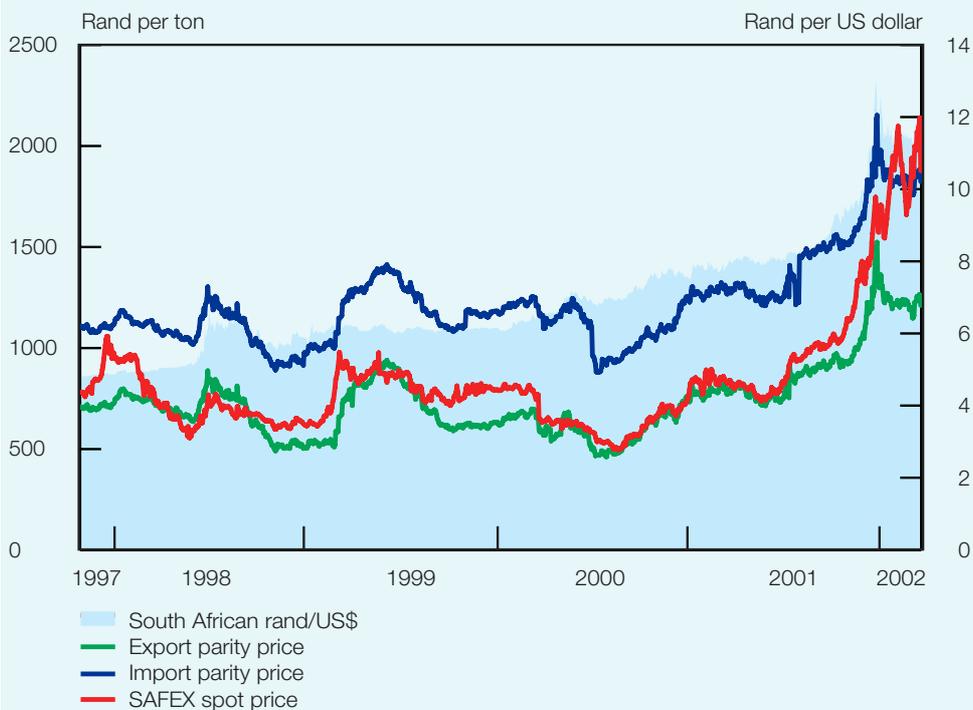
Food prices have played an important role in determining recent trends in CPIX inflation, as prices in the main components of the food price index have risen rapidly since mid-2001. Box 2 looks at inflation in the grain products price index, which has a weight of 4,84 per cent in the CPIX. More specifically, the analysis focuses on the market for maize, a product that has wide economic significance. White maize is a staple food for many South Africans (83 per cent of total production is used for human consumption), and 90 per cent of yellow maize is used as feedstock in the meat, dairy, poultry and egg industries. Developments in the price of maize therefore have important implications for consumer and production prices. The prices of both white and yellow maize more than doubled between June 2001 and January 2002.

Because traditional grain products are tradeable commodities, their prices are derived from dollar-based export and import parities, as well as depending on supply and demand factors affecting crop outputs. The export parity price of maize is a function of the exchange rate of the rand to the US dollar, as well as financing, loading and transport costs. Import parity prices are determined by the exchange rate of the rand to the US dollar, and by insurance, import tariffs, financing and transport costs.

After the liberalisation of agricultural pricing, export and import parity prices have set the (theoretical) lower and upper bounds to maize prices. As can be observed from Figures B2.1 and B2.2, in cases where there have been domestic maize surpluses such as in 2000/01 (when the volume of the white and yellow maize crops harvested was 32 per cent and 13 per cent higher than in the previous year respectively), maize prices have more or less matched export parity prices. In instances where there were domestic shortages, maize prices tended to trade at import parity prices. Following the depreci-

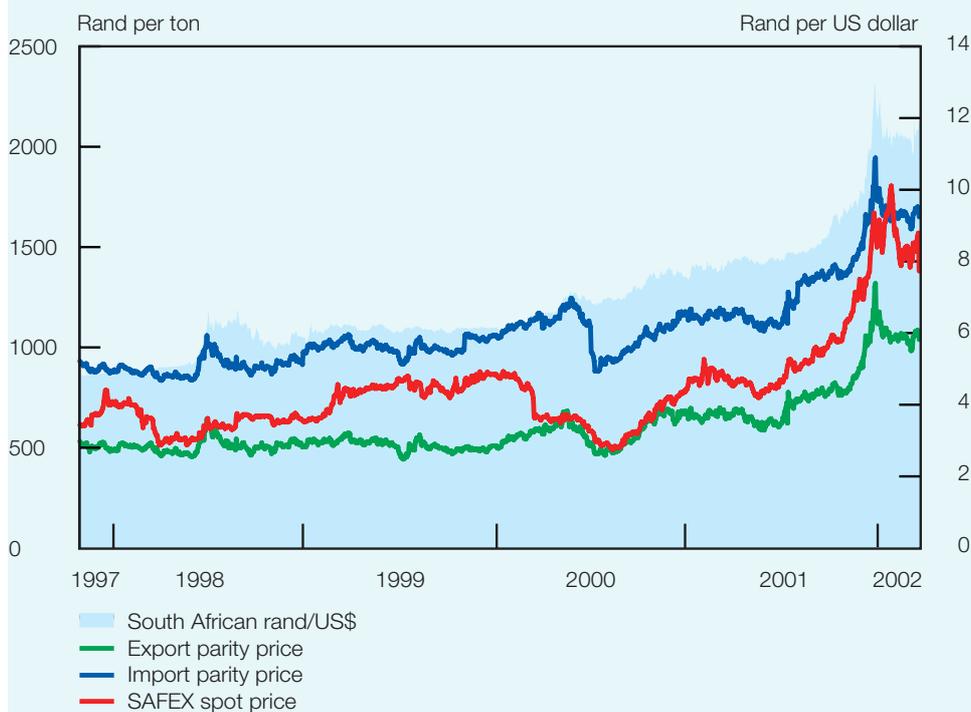
ation of the exchange rate of the rand, maize prices have increased to record rand price levels. By December grain product prices had moved away from trading at export parity prices to match (and even trade above for a short period) the import parity prices (see Figures B2.1 and B2.2). A similar pattern is also evident for other grain products such as wheat and sunflower seeds.

Figure B2.1 White maize price



Source: Grain South Africa

Figure B2.2 Yellow maize price



Source: Grain South Africa

The high domestic price of maize can therefore be attributed to exchange rate developments as well as to lower domestic production and exceptionally high regional demand. On the regional front, poor crops in some countries and the fact that traditional Zimbabwean producers did not plant their normal crops have resulted in shortfalls in a number of countries. The Southern African Development Community is in a deficit position and this has widened the import gap. Because South Africa is the most logical supplier of maize to these countries, this has put pressure on the domestic supply of maize and contributed to the increase in the domestic maize price.

Although domestic maize prices have moved to lower levels on the back of lower international grain prices as well as the strengthening in the exchange rate in January, the inflationary consequences of increases in prices during December 2001 are yet to be realised in full. However, rand prices are expected to fall given an expectation of a strengthening of the rand as well as a fall in the dollar price of maize. The price in mid-March of yellow maize was around R1 500 per ton with July 2002 futures at R1 317 per ton, the US gulf price was at \$89,44 per ton and the July Chicago Board of Trade futures price was at \$84,25 per ton. These current market indicators imply an expectation that domestic maize prices will decline although they will still be significantly above the 2001 levels, when the average price in June was around R800 per ton. The actual volume of output at harvest time, both domestically and regionally, as well as fluctuations in the exchange rate will influence future developments in these prices.

Factors affecting inflation

Monetary policy decisions are made on the basis of current and expected developments in a number of variables. These variables are also the main drivers in the Bank's econometric models, whose forecasts contribute to the decision-making process. Some of the main factors affecting inflation are discussed below.

International economic developments

International economic developments continued to have an important impact on the domestic economy. The international slowdown continued into the fourth quarter of 2001, as can be seen in Table 1. A significant feature of the downturn has been its degree of synchronicity across regions. According to the IMF, this downturn has been the most synchronised for two decades. The Fund ascribes this partly to the common shocks of higher oil prices and the bursting of the information technology bubble, both of which had worldwide implications. Another factor is the increase in international linkages, particularly in the financial and corporate sectors, a trend which is likely to continue. Although output growth in South Africa did not decline to the extent that it did in the rest of the world, the impact could be felt in commodity prices and export volumes. For example, merchandise export volumes declined by 11 per cent in the third quarter and by 3½ per cent in the fourth quarter. However, the international downturn did contribute to a low world inflation environment which helped mitigate the impact of imported inflation on South Africa.

The IMF reduced its growth estimates for most economies and regions in the wake of the September 11 attacks. World growth for 2001 was estimated to have been 2,4 per cent, compared with the 2,6 per cent projection prepared before the attacks. Despite the significant slowdown in the United States, a recession was not recorded (in the sense of two consecutive quarters of negative growth). Real gross domestic product (GDP) declined by 1,3 per cent in the third quarter, but rebounded to grow at a positive 1,4 per cent in the fourth quarter, much higher than anticipated and significantly higher than the initial estimate of 0,2 per cent. Overall US growth for 2001 was 1,2 per cent compared with 4,1 per cent in both 1999 and 2000. Although the unemployment rate reached a peak in December at 5,8 per cent, a significant feature of the downturn was the extent to which consumer demand held up compared to other downturns.

Table 1 Annual percentage change in real gross domestic product and inflation rates

	Real GDP		Inflation rates	
	2000	2001 (estimate)	2000	2001 (estimate)
World	4,7	2,4	4,6	4,5
Advanced economies.....	3,9	1,1	2,3	2,3
USA	4,1	1,0	3,4	2,9
Japan	2,2	-0,4	-0,8	-0,7
Euro area	3,4	1,5	2,4	2,7
United Kingdom.....	2,9	2,3	2,1	2,3
Developing countries.....	5,8	4,0	5,9	6,0
Africa	2,8	3,5	13,5	12,8
Asia	6,8	5,6	1,9	2,8
Western hemisphere.....	4,1	1,0	8,1	6,3
Countries in transition.....	6,3	4,9	20,1	16,0

Source: *IMF World Economic Outlook*, December 2001

There are now increasing indications that the upswing in the US has begun with the turning of the inventory cycle. Unemployment claims have been falling and other indicators such as recovering retail sales and high productivity growth suggest the beginning of the recovery. If this is indeed the case, then it will have been one of the mildest US recessions.

The latest data for the euro area show that third-quarter annualised growth was 0,4 per cent, marginally higher than in the previous quarter. However, fourth-quarter growth is expected to be minimal if not negative. The IMF estimate for 2001 is 1,5 per cent compared with 3,4 per cent in 2000. Within the euro area, the German economy remained in recession, although the latest indicators suggest that the trough of the business cycle may have been reached.

The recession in the Japanese economy intensified, and overall growth of -0,5 per cent was realised in 2001. Japanese consumers' reluctance to spend continued and in December alone household spending declined by 6,6 per cent from a year earlier. Burgeoning government debt and low interest rates have failed to reverse the Japanese deflation.

Not surprisingly, emerging markets were hard hit by the downturn in the industrialised countries. This was particularly the case with the technology-intensive exporters in Asia, where, for example, Malaysia, Taiwan and Singapore experienced recessions. However, there are indications that strong rebounds were experienced in the last quarter of 2001, except in Hong Kong. Developments in Latin America have been overshadowed by the crisis in Argentina, although contagion in the region has apparently been limited.

The downturn resulted in subdued inflationary pressures internationally. Average world inflation was estimated at 4,5 per cent in 2001. World inflation has not only been lower, but also less volatile, and reflects factors such as enhanced central bank credibility, lower commodity prices, greater competition arising from increased globalisation and sustained higher productivity growth in some economies.

Oil prices

The downward trend in international inflation rates is attributable in part to lower international oil prices. Oil prices trended downwards during the course of 2001, and after

a spike to around US\$30 per barrel after the September 11 attacks, the Brent price declined to below US\$17 in November. The lower prices were partly a result of higher inventories, lower refinery runs and weak demand due to the global downturn. The response of the Organisation of Petroleum Exporting Countries (OPEC) was to reduce output quotas further. In January 2002, OPEC and non-OPEC output was reduced by over 500 000 barrels per day. This stabilised the Brent price at around US\$20 in January and February, although by March prices were edging higher into the target price range of between US\$22-28 for the OPEC basket of crude. OPEC's ability to prevent the price falling further was due critically to the co-operation of the non-OPEC producers, particularly Russia. The strength of the cartel in future will therefore depend largely on the co-operation of non-members.

World interest rates

The worldwide trend of an easing in monetary policy continued throughout the fourth quarter of 2001. In December the US reduced the federal funds rate to 1,75 per cent, making this the eleventh cut during 2001. Subsequent Federal Open Market Committee meetings left the rate unchanged. Similarly, as Table 2 shows, none of the major industrialised countries, with the exception of Canada, has lowered its official rates since the beginning of 2002, indicating that the international interest rate cycle has probably bottomed out. Indeed, Sweden and New Zealand have raised their rates in March. By contrast, a number of emerging-market economies have continued with monetary easing during January and February. This included Brazil where the inflation rate reached 7,7 per cent, significantly above the upper limit of 6 per cent of the target range for 2001. Prior to the lowering of interest rates in February, Brazil was one of the few countries that had raised rates in the latter half of 2001.

Exchange rate developments

The most significant development for inflation over the past few months has been the behaviour of the exchange rate of the rand. As mentioned in the previous *Monetary Policy Review*, until late last year the impact of the more or less continuous depreciation of the nominal exchange rate since the beginning of 2000 had been surprisingly small. More surprising was the benign effect on the production price index. In the October *Monetary Policy Review*, it was questioned whether this situation would persist given that the rand was declining against most of the major currencies. As noted earlier, the exchange rate is beginning to have a significant and noticeable impact on the measured rate of inflation.

The declining trend in the value of the rand accelerated substantially during November and December. At the end of November, the rand went above the R10 level against the US dollar for the first time and reached an all-time low of R13,84 on 21 December. After this date it appreciated gradually and in the first week of January it was below R12 against the US dollar. During most of January and February 2002 it fluctuated around the R11,50 level against the US dollar.

Whereas in 2000 and the first half of 2001 the rand's depreciation was primarily against the US dollar, after July the depreciation became more generalised. As can be seen in Figure 6 the rand began depreciating significantly against the euro in July and against the Australian dollar in September. It can also be seen that the rand has performed poorly against the Brazilian real since September, when the real began to recover from the impact of the crisis in Argentina. Against a trade-weighted basket, the rand decreased by over 34 per cent between June 2001 and 21 December 2001.

Table 2 Key central bank interest rates

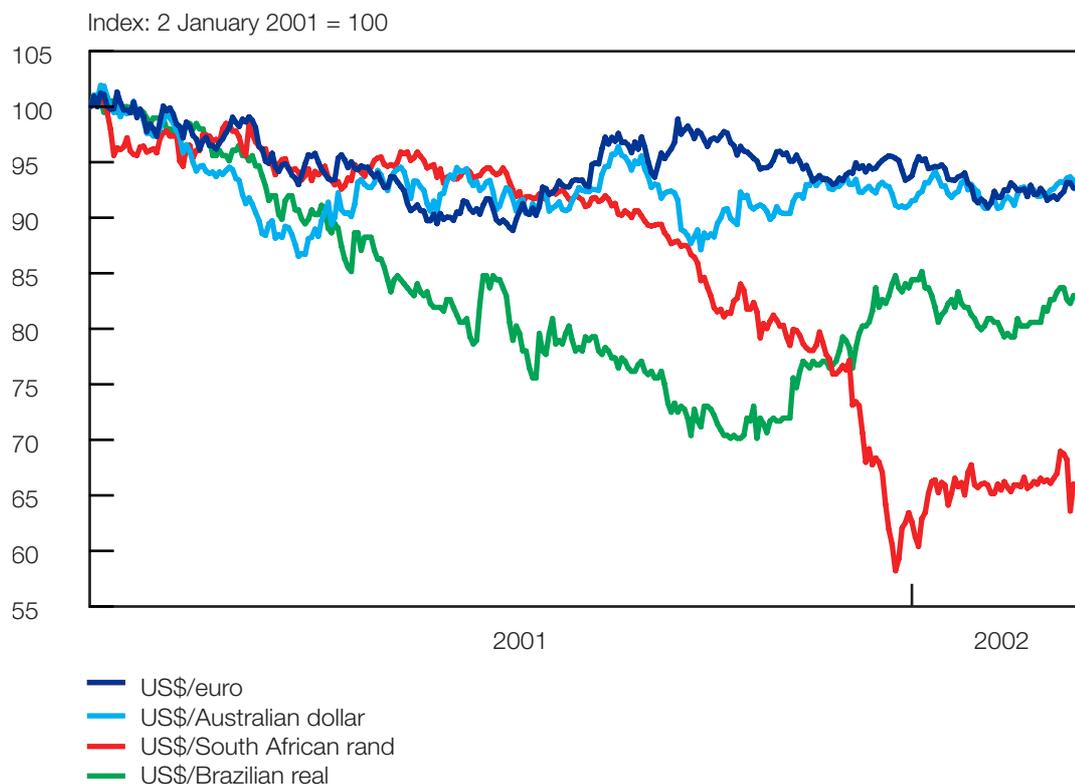
Per cent

Countries	1 Jan 2001	22 March 2002	Latest change (Percentage points)	
USA	6,50	1,75	11 Dec 2001	(-0,25)
Japan (overnight call rate)	0,25	0,00	19 Mar 2001	(-0,15)
Euro area	4,75	3,25	8 Nov 2001	(-0,50)
United Kingdom	6,00	4,00	8 Nov 2001	(-0,50)
Canada	5,75	2,00	15 Jan 2002	(-0,25)
Denmark	4,75	3,25	9 Nov 2001	(-0,50)
Sweden	4,00	4,00	20 Mar 2002	(+0,25)
Switzerland	3,00 – 4,00	1,25 – 2,25	7 Dec 2001	(-0,50)
Australia	6,25	4,25	5 Dec 2001	(-0,25)
New Zealand	6,50	5,00	20 Mar 2002	(+0,25)
Israel	8,00	4,40	25 Feb 2002	(+0,60)
Hong Kong	8,00	3,25	12 Dec 2001	(-0,25)
Malaysia	5,50	5,00	20 Sep 2001	(-0,50)
South Korea	5,25	4,00	19 Sep 2001	(-0,50)
Taiwan	4,63	2,13	27 Dec 2001	(-0,12)
Thailand	1,50	2,00	21 Jan 2002	(-0,25)
Brazil	15,75	18,75	20 Feb 2002	(-0,25)
Chile	5,00	4,75	12 Mar 2002	(-0,75)
Mexico*	18,46	7,42	31 Jul 2001	(-50m pesos)
Czech Republic	5,25	4,25	31 Jan 2002	(-0,25)
Hungary	11,75	8,50	18 Feb 2002	(-0,50)
Poland	19,00	10,00	31 Jan 2002	(-1,50)
Russia	25,00	25,00	4 Nov 2000	(-3,00)

* The Bank of Mexico uses the “shortage” to influence liquidity conditions, while the interest rate is market determined.

Source: National central banks

Figure 6 US dollar per rand, euro, Brazilian real and Australian dollar



There are a number of factors that contributed to the decline of the rand, although there is to date no clear explanation for the timing or the extent of the fall. As can be seen from Figure 6 the rate of decline against the dollar increased firstly around July in the wake of the crisis in Argentina which impacted negatively on a number of emerging markets. After September 11 the rate of depreciation increased further. The following are among the factors that contributed to the depreciation:

- The impression created that the Reserve Bank's activities in reducing the net open foreign currency position (NOFP) created a one-way bet on the rand. It was believed that the need to buy up US dollars from the market (albeit selectively) reduced the potential for the rand to appreciate;
- net sales of South African bonds by non-residents. This was a reflection of increased risk aversion on the part of international investors. Non-residents were also net sellers of equities in November;
- the turnaround in the current account of the balance of payments in the third and fourth quarters of 2002;
- leads and lags in foreign payments and receipts;
- other factors such as regional instability particularly in Zimbabwe, the lack of progress with privatisation and the handling of the HIV/Aids issue.

Box 3 Exchange rate pass-through and South African import prices

The recent depreciation of the rand has renewed interest in the nature of the 'pass-through' relationship from exchange rate movements to domestic prices. The extent to which a depreciation in the exchange rate of the rand is reflected in higher import prices and ultimately in increased domestic consumer price inflation, and the rate at which this occurs, is therefore highly topical. This box reports on research into the first stage of the relationship, linking changes in the rand exchange rate to the domestic currency price of imports, which is commonly known as exchange rate pass-through.

Exchange rate pass-through is traditionally measured using an import price equation. The simplest case is where a country is small and a price-taker on perfectly competitive world markets. Assuming away tariffs, transport costs and other distortions to trade, arbitrage will ensure that the 'law of one price' holds, i.e.

$$IP = SP^* \quad (1)$$

where IP is the domestic price of the imported good, P^* is the foreign-currency price of the corresponding good, and S is the nominal exchange rate (quoted as the domestic currency price of the foreign currency). The implication is therefore that the same traded good will sell at the same price when expressed in a common currency in different destinations.

Equation (1) provides the basis for an aggregate import price equation. Defining IP and P^* in terms of aggregate prices, the long-run exchange rate pass-through relationship can be estimated from a log-linear transformation which allows for a constant

$$LIP_t = \beta_0 + \beta_1 LS_t + \beta_2 LP_t^* + \epsilon_t \quad (2)$$

where ϵ_t is the stochastic error term, and β_1 is the elasticity of exchange rate pass-through to aggregate import prices. Given the definition of the exchange rate variable S , a depreciation of the currency (i.e. an increase in S) is expected to raise the domestic rand price of imports. It is therefore expected that $0 \leq \beta_1 \leq 1$; there is no exchange rate pass-through effect when $\beta_1 = 0$, and complete pass-through when $\beta_1 = 1$. Similarly, an increase in foreign prices is expected to lead to an increase in import prices with a result that $0 \leq \beta_2 \leq 1$. In fact, the theoretical underpinnings provided by Equation (1) imply that the pass-through coefficients from exchange rate and foreign price changes should be equal in magnitude, i.e. $\beta_1 = \beta_2$.

Studies of exchange rate pass-through, particularly those undertaken for the same country, have shown that estimates of pass-through are sensitive to the choice of data as well as to the methodology employed in the study (Menon, 1995a: 225).¹ Given restrictions on data availability, this study opted to use the nominal effective exchange rate of the rand (NEER) as the exchange rate variable,

¹ Menon (1995a) lists 7 studies that estimate the aggregate pass-through of exchange rate changes to import prices for the US; the estimates range from 48,7 per cent to 91 per cent.

the imported component of the PPI as the proxy for import prices, and an index of foreign wholesale price indices weighted on the same basis as the NEER as the proxy for foreign prices. All data are at the monthly frequency, with the sample running from January 1980 to December 2001. Since unit root tests found the variables in Equation (2) to be integrated of order one, the equation was estimated using a Johansen-type vector error-correction model (VECM).

Using this approach, the estimated long-run pass-through relationship is²

$$LIP_t = 0,776 LS_t + 0,776 LP_t^* \quad (3)$$

A 10 per cent depreciation in the NEER is therefore estimated to increase import prices by approximately 7,8 per cent in the long run. Although this pass-through coefficient is relatively high, as would be expected for an open economy such as that of South Africa,³ tests suggest that even in the long run pass-through is not complete (i.e. $\beta_1, \beta_2 \neq 1$).⁴

The dynamics of adjustment to this long-run equilibrium are revealed by the restricted VECM, which explains changes in import prices as a function of changes in the NEER and foreign prices, and an error-correction term. The coefficient on the error-correction term, which measures the feedback of the (lagged) disequilibrium in the long-run cointegrating relation (3) onto the import price variable, shows that the adjustment to shocks is gradual. The coefficient has a value of -0,059 and is highly significant. This suggests that import prices adjust to correct about 6 per cent of any disequilibrium in the long-run relationship each month. A 10 per cent depreciation in the exchange rate will therefore increase import prices by 0,46 per cent within a month (i.e. $-0,059 * -7,76$), and each succeeding month the disequilibrium will be reduced by progressively smaller increments until the long-run pass-through of 7,76 per cent is achieved. The half-life of this process is just over 11 months, i.e. this is approximately how long it would take for half of the adjustment to the long-run exchange rate pass-through to occur.

The econometric results reported here therefore suggest that around 78 per cent of an exchange rate change passes through to import prices in South Africa, and that half of this adjustment occurs in less than one year. The finding that pass-through is not complete even in the long run, which is common in studies of this type, could be explained by a number of factors. At a more disaggregated level, the pass-through coefficient is influenced by the homogeneity and substitutability of the goods concerned, the degree of market concentration, and the currency in which imports are denominated. It could also be that foreign exporters engage in 'pricing to market' behaviour, and set their prices relative to those of domestic competitors rather than on the basis of foreign costs and exchange rates.

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² The Johansen trace and maximal eigenvalue tests, conducted on the basis of a VAR with 3 lags and an unrestricted constant term, selected a single cointegrating relationship between the variables in Equation (2). The restriction that $\beta_1 = \beta_2$ was tested and could not be rejected. Weak exogeneity tests also revealed that the cointegrating vector and the adjustment coefficients enter only the import price equation in the VECM. Equation (3) is obtained by imposing these restrictions and normalising on the coefficient of the import price variable.

³ Many recent studies find evidence of incomplete pass-through. Goldberg and Knetter (1996) argue that pass-through is close to 60 per cent for the US, and Menon's (1995a) survey cites estimates of 58 per cent for Korea and 74 per cent for Taiwan. Menon (1995b) reports pass-through of around 66 per cent for Australian manufactured imports.

⁴ These results for the long-run pass-through coefficient confirm the findings obtained by Nell (2000) from a wider ranging study of imported inflation in South Africa. Nell reports a coefficient that has a value of 0,82, and is significantly different from one, estimated using quarterly data for 1987-97.

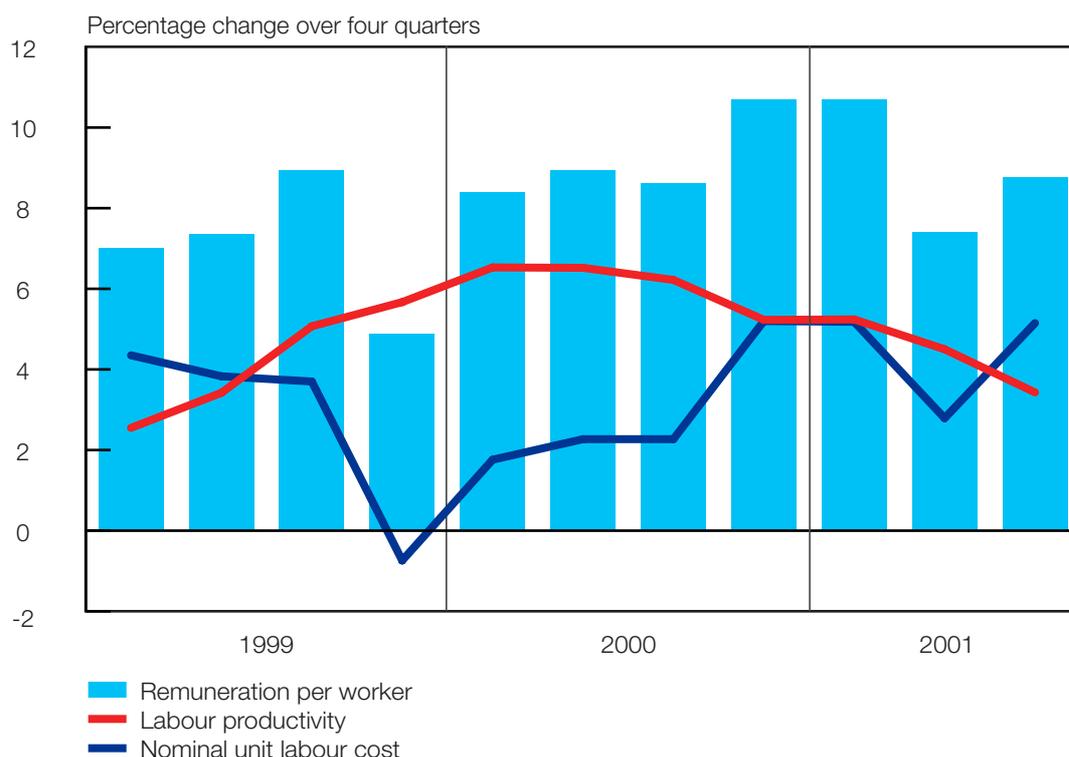
Labour markets

The inflationary impact of developments in the labour market depends not only on wage settlements, but also on productivity changes. A key indicator in this regard is therefore unit labour cost, measured as the ratio of nominal remuneration per worker to output per worker.

As Figure 7 shows, the year-on-year growth in remuneration per worker was 8,8 per cent in the third quarter of 2001, up from 7,4 per cent in the second quarter, and above the 4,6 per cent increase in headline CPI over the corresponding period. This increase was supported by the continued gradual decline in measured labour productivity growth, which has been evident since early in 2000 as changes in employment have lagged changes in output growth. Productivity growth slowed

from 4,5 per cent in the second quarter to 3,4 per cent in the third quarter. Overall therefore, growth in unit labour cost was 5,2 per cent in the third quarter, higher than the 2,8 per cent growth reported in the second quarter, but at the same level as growth in the fourth quarter of 2000 and the first quarter of 2001. Growth in unit labour cost in the manufacturing sector rose from 1,2 per cent in the second quarter to 7,1 per cent in the third quarter.

Figure 7 Remuneration per worker, labour productivity and unit labour cost in the formal non-agricultural sectors



Demand and output

Growth in real GDP in the South African economy was 2½ per cent on a quarter-on-quarter basis in the fourth quarter of 2001 (Table 3). Despite this being a relatively robust performance in an international context, slower growth earlier in the year

Table 3 Growth in real gross domestic product and expenditure components
Per cent

	2000	2001Q1	2001Q2	2001Q3	2001Q4	2001
Final consumption expenditure (households)	3,3	2,7	2,3	2,6	3,4	2,8
Final consumption expenditure (government)....	0,5	1,5	2,3	2,6	2,8	1,4
Gross fixed capital formation	0,3	4,9	3,1	3,0	5,7	3,3
Change in inventories (R billion)	7,0	2,6	-2,3	5,3	6,2	3,0
GDE	2,9	2,7	0,1	6,2	3,2	1,8
Exports of goods and services	8,3	-10,1	18,8	-30,2	-4,5	2,4
Imports of goods and services	7,2	-7,5	14,5	-20,2	-2,9	0,4
GDP	3,4	1,5	1,8	1,2	2,5	2,2

Quarterly data refer to quarter-on-quarter growth at annualised rates of seasonally adjusted data

meant that the overall GDP growth for the year 2001 was 2,2 per cent, compared with 3,4 per cent in 2000.

Real gross domestic expenditure (GDE), which grew at 6,2 per cent in the third quarter of 2001, slowed somewhat in the fourth quarter to grow at 3,2 per cent. This slower growth in the fourth quarter was largely the result of a moderation in the rate of net inventory investment. Growth in real final consumption expenditure by households, by contrast, accelerated from 2,6 per cent in the third quarter to an annualised rate of 3,4 per cent in the fourth quarter of 2001. This was largely a reflection of household's increased expenditure on durable and semi-durable goods, partly motivated by the expectation of future price increases related to the depreciation of the exchange rate of the rand.

Fiscal policy

Fiscal policy continues to support monetary policy. The 2002/03 Budget was mildly expansionary, cognisant of the global slowdown and the sluggish domestic economy. Although it was growth-oriented with a real increase in expenditure, the overall deficit is expected to be a prudent 2,1 per cent of GDP. The Budget provides for declining debt service and intensified spending on poverty alleviation and infrastructure development. An amount of R15 billion was also allocated in the form of personal tax relief.

Table 4 shows that in the fiscal year 2001/02 revenue is estimated to improve significantly compared with previous years, bolstered by higher corporate tax receipts. With improved tax administration measures in place and higher profit-earnings, particularly in the resources sector, revenue levels are expected to improve.

Table 4: Public finance: ratios to gross domestic product (fiscal years)
Per cent

	1998/99	1999/00	2000/01	2001/02*	2002/03	2003/04	2004/05
					Medium-term estimates		
National government							
Revenue	24,4	24,1	23,7	25,1	24,5	24,5	24,5
Expenditure	26,7	26,2	25,7	26,5	26,6	26,4	26,2
Deficit (-)	-2,3	-2,0	-2,0	-1,4	-2,1	-1,9	-1,7
Total loan debt	47,5	45,6	43,6	42,9	40,3	38,8	37,4
PSBR**	3,5	0,6	0,9	0,5	1,4	1,6	1,7

* Estimate

** Public-sector borrowing requirement

Source: National Treasury, *Budget Review 2002*

Following a period of contained expenditure since 1997/98, government consumption expenditure is expected to pick up in key areas conducive to spurring on economic growth and fighting poverty. The privatisation proceeds expected in coming years from identified state enterprises are expected to provide resources for priority areas. The resultant deficit is expected to decline relative to GDP.

Monetary conditions

During 2001, growth in monetary aggregates was strong and ended the year at double-digit levels (Table 5). Although high monetary growth rates can be seen as reflecting stronger growth in the real economy, in a number of months these figures were distorted by various factors. For example, in July and August the flow of funds emanating from the takeover of De Beers by Anglo American was significant. Broad money supply (M3) growth averaged 14,1 per cent for 2001, although the quarterly growth rate slowed to 9,2 per cent in the fourth quarter. Growth over twelve months in M3 was still at a high level of 19,3 per cent for January 2002. This was in part a result of an increase in its statistical counterpart *net foreign assets*, which increased by R25 billion in January 2002 mainly because of a transfer of a syndicated loan amounting to R17,5 billion from the Reserve Bank to the National Treasury.

Table 5 Percentage change in monetary aggregates
Twelve-month change

	M1A	M1	M2	M3
2001: January	0,2	7,1	7,5	9,2
February.....	0,3	3,3	8,0	9,4
March	-1,1	6,4	11,9	12,9
April	3,2	7,3	11,1	12,3
May.....	2,9	9,0	11,7	13,5
June.....	6,7	8,6	11,0	13,8
July	15,9	14,5	14,7	17,7
August	15,3	16,8	15,9	17,9
September	8,9	10,7	12,2	14,5
October	16,3	11,8	12,9	14,8
November	20,2	16,7	13,5	16,6
December	19,4	18,6	15,5	17,0
Average	9,0	10,9	12,2	14,1
2002: January	18,0	22,3	18,2	19,3

Initially, the high growth rates in M3 were driven by an increase in deposits with a maturity of six months and longer, but in the last quarter of 2001 and in January 2002, the biggest contribution was from high growth in cheque and other demand deposits. The corporate sector, rather than the private household sector, was responsible for the major share of the increase in M3 for 2001 and January 2002. This trend clearly indicates a greater preference for liquidity by the corporate sector and can be partly attributed to uncertainty about global economic conditions and the depreciation of the rand.

Robust growth in nominal domestic final demand was also reflected in credit extended to the private sector. The twelve-month growth rate in domestic private-sector credit extension showed a strong increase in December and January 2002, moving from 9 per cent in November 2001 to 12,1 and 14,1 per cent in the respective months. Quarter-to-quarter growth rates also strengthened from an annualised rate of 5 per cent in the second quarter to 14,2 and 17,9 per cent in the third and fourth quarters of 2001. The category *other loans and advances* was responsible for the high growth rate in private-sector credit extension in December 2001. It is likely that this reflected pre-emptive spending in anticipation of steep increases in consumer prices following the sharp depreciation in the value of the rand. In January 2002, the

mortgage advances and *instalment sale credit* categories contributed to the high year-on-year growth rate in private-sector credit extension, partly due to the 'base effect' which results from calculating growth rates on low levels of the credit aggregates measured twelve months ago. The bigger share of credit extended to the private sector in 2001 and in January 2002 was to the corporate sector, partly reflecting the growth in real gross fixed capital formation in the fourth quarter of 2001.

Monetary policy

The turbulence in the foreign exchange market has had a significant impact on the stance of monetary policy. CPIX inflation had declined to below the upper limit of the 2002 target by September 2001, and at that time it was expected that the downward trend would be sustained, albeit at a slower rate. Although during the course of 2000 and 2001 the rand had come under sustained pressure, the degree of pass-through was relatively muted. At the same time, since the beginning of 2001, the downward trend in international oil prices had a moderating effect on the inflation rate. The exchange rate movements since June however were of an order of magnitude that made a reversal in the downward trend of CPIX inflation inevitable.

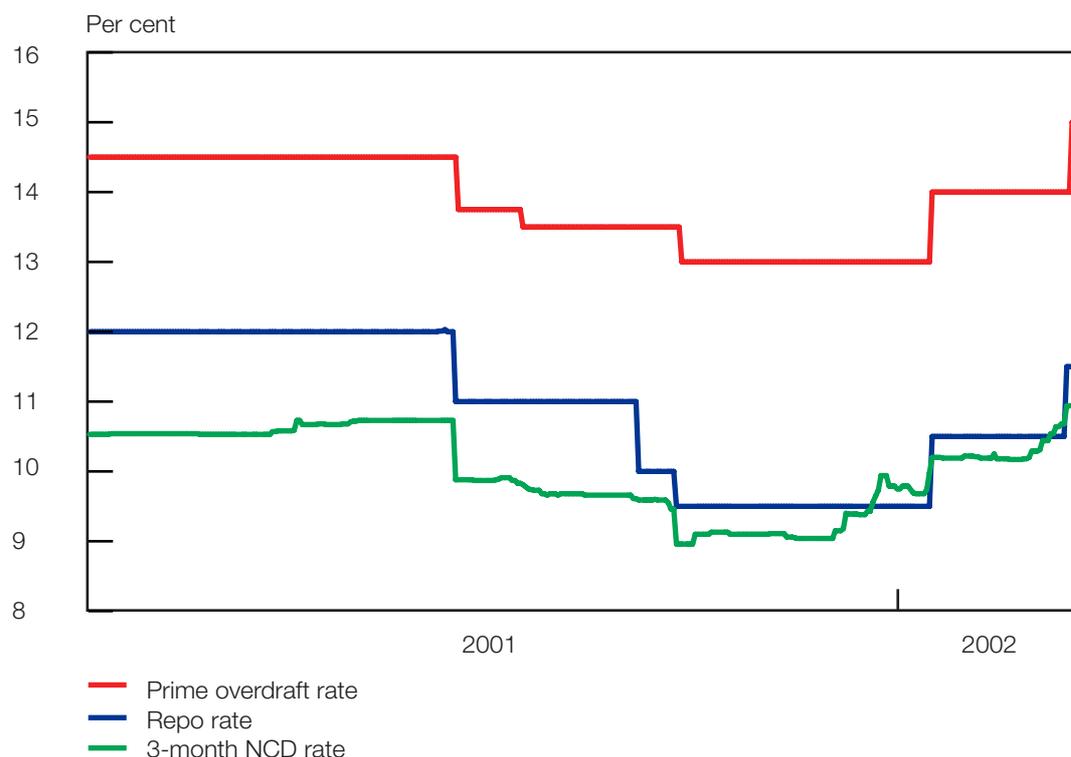
An important challenge for monetary policy during this period was resisting the temptation to use interest rate policy to defend the currency directly. This was particularly the case as the depreciation was not seen as having been caused primarily by domestic macroeconomic factors. As has been reiterated in the past, the Reserve Bank does not have a target for the exchange rate. For this reason, there was no change in the monetary policy stance during the worst of the exchange rate movements in November and December of 2001.

Nevertheless, the MPC cannot be impervious to the impact of exchange rate changes on the measured inflation rate. Monetary policy can do little to offset the first-round effects of exchange rate changes on the measured inflation rate. Nor is this necessarily true inflation, defined as a continuous increase in the general level of prices. A one-off depreciation and consequent price level increase not related to excessive expenditure or money supply growth would not merit an offsetting interest rate increase. By contrast, if the depreciation and initial price increase result in or threaten higher wage demands and further price-raising behaviour, then monetary policy could play a role in moderating these second-round effects.

It had been decided that the MPC would only have four scheduled meetings during 2002, with the timing intended to coincide with the availability of quarterly data. However, given the long gap between the November and March meetings, and given the adverse developments in the foreign exchange market, an unscheduled meeting was convened on 15 January to consider these developments and their consequences for inflation and monetary policy. The outcome of this meeting was a decision to raise the repo rate by one hundred basis points, with the expectation that banks would follow by increasing their prime overdraft and other lending rates accordingly. Figure 8 shows the movement of the repo rate and other short-term rates since January 2001.

The primary reason for this increase was pre-emptive. The main concern at that time was the evidence of higher inflation expectations that could feed through to higher wage demands and further price increases. In addition, although excess spending in the economy was still relatively moderate, there were signs of excessive increases in the money supply and credit extension data. Although some of this may have been due to pre-emptive buying ahead of expected price increases, the MPC felt it was appropriate to impact on inflation expectations before an inflationary spiral set in.

Figure 8 The repo and short-term interest rates



By the time the MPC met on 13 and 14 March 2002, it was apparent that the adverse exchange rate developments during late 2001 were having a significant impact on the CPIX as well as the PPI, as discussed earlier. The MPC felt that a further tightening of the monetary policy stance was justified to reinforce the January increase, so as to prevent second-round price increases. Therefore the MPC decided to increase the repo rate by 100 basis points to 11,5 per cent per annum from 15 March 2002.

There were a number of factors influencing this decision. As was the case at the time of the January meeting, there was further evidence of a rise in inflationary expectations, as reflected in the Bureau for Economic Research survey, and other financial market indicators (discussed more fully below). It was felt that a tightening of the monetary policy stance at this stage, if successful in dampening wage and price increases, would avoid the need for more drastic increases in future.

A further factor was that domestic spending had begun to exceed national income. Although the resultant deficits on the current account in the third and fourth quarters were relatively small, the Bank's projections indicate that the current account is likely to remain in deficit for most of 2002. In addition, money supply growth and domestic credit extension also became a cause for concern. As seen above, credit extension by banks to the private sector increased at an annualised rate of 17,9 per cent in the fourth quarter of 2001 and all of the monetary aggregates, including the narrowest ones, increased at a high rate. Although the MPC felt that the money supply developments, particularly with respect to the narrower aggregates, could indicate a preference for liquid precautionary balances at a time of general economic uncertainty, these balances could accommodate increased spending in the future.

Finally, there was also a concern that there was a change in the trend of unit labour cost. Over the past two years, unit labour cost increases had been low, and along with low levels of capacity utilisation, helped to reduce domestic pressures on inflation. As discussed, unit labour cost increased during 2001, and although the average increase of 4,3 per cent was still below the upper end of the inflation target, the direction of the trend contributed to the decision to tighten the stance of monetary policy.

The Bank's forecasts show that the tightened monetary policy stance should enable the target of a 3-6 per cent increase in CPIX to be achieved in 2003. Although it was acknowledged that the higher interest rates could have a negative short-term impact on domestic economic growth, this would be offset in part by the positive impact of the more competitive exchange rate and the tax relief granted in the recent Budget. In addition it was felt that a decisive move was important, not only in the interest of higher sustainable long-term growth, but also because the quick containment of a possible inflation spiral would avoid the need for even higher increases in the future.

The outlook for inflation

As seen in the forecast below, it is expected that CPIX inflation will continue to rise over the next few months as recent events filter through, but this trend is expected to reverse later on in the year. The outlook, risk and uncertainties relating to some of the factors that determine the forecast are discussed below.

The international context

In the wake of the September 11 attacks on the United States, the IMF revised downwards its forecasts of world growth. Table 6 shows the original and revised forecasts. It can be seen that in all cases the forecasts were revised downwards, although to differing degrees. Implicit in the IMF forecast is that the US recovery will begin in the course of this year.

Table 6 IMF projections of world growth and inflation for 2002
Per cent

	Real GDP		Inflation	
	Original	Revised	Original	Revised
World.....	3,5	2,4	3,5	3,4
Advanced economies.....	2,1	0,8	1,7	1,3
USA.....	2,2	0,7	2,2	1,6
Japan.....	0,2	-1,0	-0,7	-1,0
Euro area.....	2,2	1,2	1,7	1,4
United Kingdom.....	2,4	1,8	2,4	2,4
Developing countries.....	5,3	4,4	5,1	5,3
Africa.....	4,4	3,5	8,0	8,3
Asia.....	6,2	5,6	3,3	3,0
Western hemisphere.....	3,6	1,7	4,9	5,2
Countries in transition.....	4,1	3,6	10,7	11,0

Source: *IMF World Economic Outlook*, December 2001

There are signs that the upswing in the US has already begun. Fourth-quarter growth in 2001 was higher than expected at 1,4 per cent, the inventory cycle has bottomed out, consumer confidence and industrial production have picked up,

unemployment is beginning to decline and the US stock markets have rebounded significantly. Although there is general agreement that the recovery is imminent, there are uncertainties about the strength of the recovery. Some analysts foresee a strong recovery, but others, including the US Federal Reserve, caution that the fact that consumer expenditure held up so well during the downturn may preclude strong consumption expenditure growth and therefore result in a weak recovery. Others are even more pessimistic and see the accumulated debt of US consumers putting a brake on the recovery.

There are also signs that the cycle has bottomed out in the euro area and some of the emerging-market economies. Although the euro area is expected to follow the US, the recovery is likely to be weaker than that of the US. A number of Asian economies which are particularly dependent on exports to the OECD had already shown signs of recovery by the fourth quarter of 2001 and growth in this region is expected to be strong.

The one area where uncertainties persist is Japan, where deflationary trends have continued and essential reforms to the banking system have yet to take place. The picture in Latin America is also mixed, as crises in Argentina, Venezuela and Ecuador are casting uncertainties over the region. However, it is expected that the contagion effects of the Argentine economic crisis will be limited, although there is a risk that this may change.

As the recovery proceeds, it will have a positive impact on commodity prices, benefiting commodity producers such as South Africa. Export volumes which have been negatively affected by the world recession, will also improve. How strongly commodity prices and export volumes recover will depend to a large extent on the strength and sustainability of the recovery in the industrialised economies.

The implication of the above is that the world has probably seen an end to the downward trend in the interest rate cycle. It is clear that the aggressive reductions in interest rates in the US and the UK have ended. We are likely to see a period of stable interest rates until the extent of the recovery is clearer. At present the major central banks do not see inflation as an imminent threat, although the monetary stimulation in 2001 is likely to have some impact during the course of the recovery. At present there appear to be few inflationary pressures internationally. Even during the previous boom it was clear that the world had entered a generally more favourable inflation environment. This means that the threat of a resurgence of world inflation during the recovery is fairly limited and is only likely to occur once the recovery is well under way.

The oil price, which in the past has been an important factor in imported inflation, is expected to remain relatively stable around current levels with a possible upward bias. As the international recovery gets into full swing, demand for oil will increase, although this will partly be offset by the fact that the northern hemisphere winter is nearly over. The OPEC output quota reductions in the course of 2001 mean that there could be pressure within the cartel to increase output as pressure on prices rises. This could therefore have a moderating impact on price increases. The downside risk to the oil price depends on the OPEC cartel's ability to prevent 'cheating' not only among its own members, but more significantly among non-members that voluntarily restricted output. This is particularly true in the case of Russia which has not as yet committed itself to maintaining output at lower levels.

Outlook for domestic demand and supply

The outlook for exports is becoming more favourable. Apart from the benefits to exporters from the real depreciation of the rand, export volumes and prices are expected to improve as world demand improves with the general recovery. This will help keep the current account at manageable levels, particularly if import demands are constrained by the tighter monetary policy stance.

Domestic expenditure has held up relatively well throughout 2001, although it rose at a slower pace in the fourth quarter. Higher interest rates are expected to dampen consumption expenditure and credit demand. Domestic consumption expenditure is also likely to be negatively affected by the depreciation of the rand. Mitigating this are the tax cuts provided for in the latest Budget and the mildly stimulatory fiscal policy. Although a rise in domestic expenditure is not seen to be the main threat to inflation, there is a danger that the recent higher trend in inflation could result in higher wage demands and pressure on unit labour cost. It is hoped, however, that the monetary policy actions could have pre-empted this. Output growth is expected to be buoyed by rising fixed capital formation and export growth, and should not run into supply bottlenecks since capacity utilisation is at fairly low levels.

As usual it is the exchange rate that is the most difficult to forecast. The rand's depreciation in November and December was clearly overdone, and the rand has recovered some of its lost ground. Barring unforeseen circumstances, further significant weakening is not expected, particularly if the current account improves strongly and capital flows to emerging markets increase. Given the international climate, increased flows to emerging markets may be forthcoming although developments in the region, particularly in Zimbabwe, will be critical in determining the extent to which South Africa will benefit.

Surveys of inflation expectations

The Bureau for Economic Research (BER) at the University of Stellenbosch conducts quarterly surveys of inflation expectations in the South African economy which are regularly reported in this *Review*. The findings of these surveys of expected CPIX inflation for 2001 undertaken since the third quarter of 2000, are reproduced in Table 7. The results suggest that respondents' expectations were on average above the actual CPIX inflation outcome of 6,6 per cent for 2001. The table suggests that the expectations of business sector and labour respondents were higher than the actual outcome, whereas those of financial sector analysts were generally accurate.

Table 7 CPIX inflation expectations for 2001
Per cent

Survey	Analysts	Business	Labour	Average
2000: 3rd quarter	6,6	7,7	7,0	7,1
4th quarter	6,7	7,8	8,0	7,5
2001: 1st quarter	6,1	7,9	7,9	7,3
2nd quarter	6,6	7,9	8,0	7,5
3rd quarter	6,6	7,8	7,3	7,2
4th quarter	6,6	7,8	7,4	7,3

Source: Bureau for Economic Research, University of Stellenbosch

The findings of the latest survey of CPIX inflation expectations, undertaken in the first quarter of 2002, are reported in Table 8. The average expectation for 2002 inflation is 7,5 per cent, with business sector expectations being the highest at 7,8 per cent and those of labour the lowest at 7,1 per cent. This average is above the 7,1 per cent expected in the survey undertaken in the fourth quarter of last year. Looking further ahead, the average expectation is that CPIX inflation will decline to 7,1 per cent in 2003 and to 6,8 per cent in 2004.

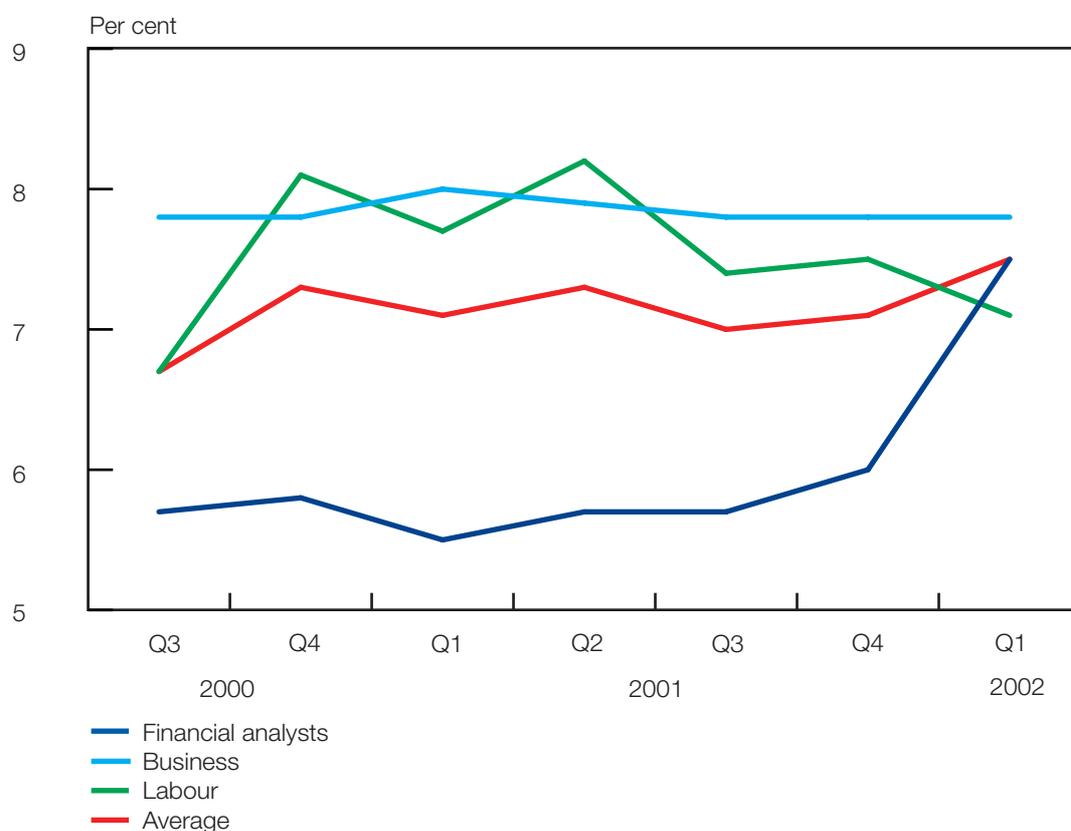
Table 8 BER survey of CPIX inflation expectations (1st quarter 2002)
Per cent

	2002	2003	2004
1. Finance	7,5	6,5	5,8
2. Business	7,8	7,7	7,5
3. Labour	7,1	7,2	7,1
Average 1 - 3.....	7,5	7,1	6,8

Source: Bureau for Economic Research, University of Stellenbosch

The findings of this survey reflect respondents' changed expectations following the large depreciation of the rand in the last quarter of 2001 and the increases in agricultural prices. As Figure 9 shows, this has resulted in a sharp upward revision in the expectations of the financial sector analysts. Whereas they previously expected CPIX inflation to fall within the 3-6 per cent inflation target range, they now expect the target to be missed in 2002.

Figure 9 CPIX inflation expectations for 2002 surveyed quarterly



Source: Bureau for Economic Research, University of Stellenbosch

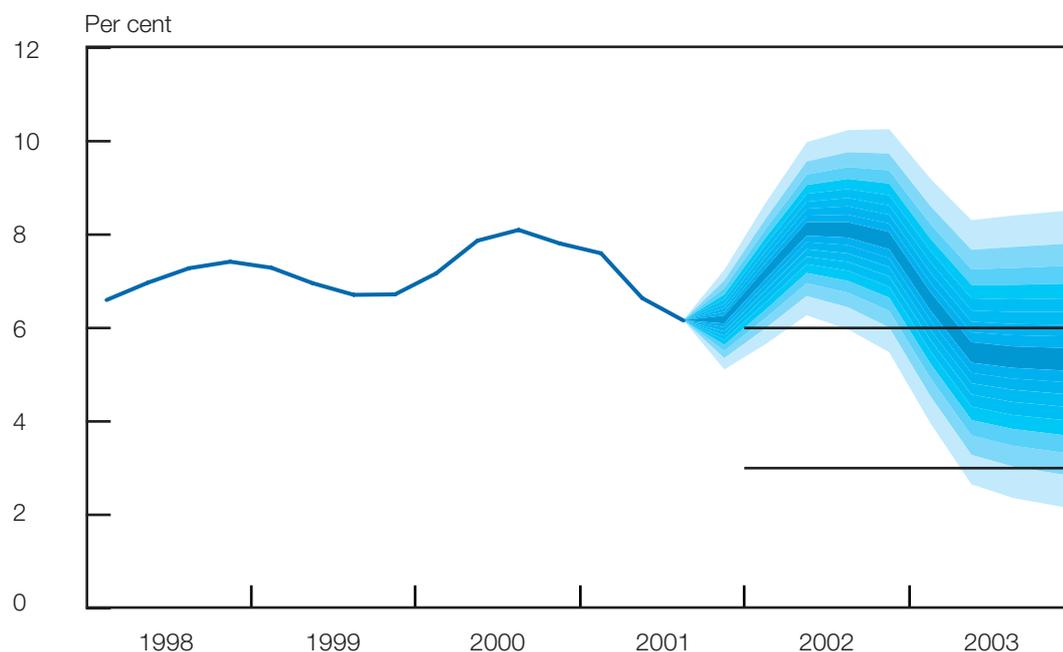
The BER-surveyed inflation expectations of the financial sector are confirmed by the consensus forecast produced from the Reuters monthly survey of long-term forecasts for the South African economy. The average forecast for CPIX inflation in 2002 increased from 7,4 per cent in the December survey to 7,6 per cent in January and 7,8 per cent in February. The February forecast is the mean of 11 individual forecasts ranging between 7,2 per cent and 9,1 per cent. The consensus forecast is that CPIX inflation will then decline to marginally below 6 per cent in 2003, and further to 5,6 per cent in 2004.

Other indicators of inflation expectations confirm the trends indicated by these surveys. The recent increase in the monthly average implied or break-even inflation rate, which equates the nominal return on government's conventional long-term bonds with the real yield on inflation-linked bonds, and the higher and steeper yield curve are both relevant in this regard.

The Reserve Bank inflation forecast

The Reserve Bank's latest projection for CPIX inflation over the forecast period from 2002 to 2003 is presented in Figure 10. This forecast again employs the fan chart technique to indicate the uncertainties surrounding the central projection. The forecast also assumes an unchanged monetary policy stance.

Figure 10 CPIX forecast



Note: The fan chart uses confidence bands to depict varying degrees of certainty. The darkest band of the fan chart covers the most likely 10 per cent of probable outcomes foreseen for CPIX inflation, including the central projection. Each successive band, shaded slightly lighter and added on either side of the central band, adds a further 10 per cent to the probability until the whole shaded area depicts a 90 per cent confidence interval (see Box 4 'Understanding the fan chart' on p 27 of the March 2001 *Monetary Policy Review*).

The Bank's forecast shows that the annual average rate of CPIX inflation may exceed the 3-6 per cent target range in 2002, but that it is likely to decline sufficiently to fall within the target range in 2003. Figure 10 shows that the central projection for CPIX inflation peaks during the second quarter of 2002 and remains at this level for most of the remainder of this year. However, the forecast suggests that CPIX rates of inflation could decline to below the upper limit of the target range by as early as the second quarter of 2003. The major difference between the fan chart shown in this *Review* and that published in the October *Review* is that it now incorporates the large depreciation of the rand that took place towards the end of 2001. The other significant difference is that the current forecast incorporates the monetary policy actions taken in January and March 2002.

As is always the case with any forecast, there are many risks (both foreseen and unforeseen) that could cause the actual rate of CPIX inflation to miss the central projection on either side of the spectrum. Factors contributing to inflation being below the central projection include the possibility that the expected economic recovery in the USA and the rest of the world might be less robust than assumed, and the possibility that the exchange rate of the rand might perform more strongly than expected. By contrast, detrimental factors such as higher-than-expected oil prices, a further strong depreciation of the currency, and the emergence of second-round inflationary pressures from the decline in the value of the rand could cause the actual outcome of CPIX inflation to exceed the central projection forecast.

Assessment and conclusion

The reversal of the downward trend in CPIX inflation and the rise in inflation expectations made a change in the monetary policy stance inevitable. Since the beginning of 2002 the MPC has raised the repo rate by 200 basis points in an effort to bring inflation back to within the target range of 3-6 per cent. It is sometimes argued that much of South Africa's inflation is of a cost-push variety and that there is little monetary policy can do to influence the inflation rate. Even if it is true that cost-push factors dominate, monetary policy nevertheless has an important role to play in preventing an inflation spiral from setting in. For example, monetary policy can help to moderate inflation expectations and prevent the first-round effects of a currency depreciation from feeding through to wage demands and pricing behaviour that result in higher inflation.

The international recovery could have important implications for the inflation outlook. On the one hand, oil prices have already started on an upward trend although the extent of this is likely to be limited. In addition, international interest rates are likely to resume an upward trend once the recovery is well under way. On the other hand, higher exports and more favourable commodity prices will benefit the rand, which could help mitigate the effects of imported inflation.

Monetary policy developments over the next few months will be determined by the extent to which wages and prices respond to the recent monetary policy actions. To the extent that inflation expectations and wage-setting and price-setting behaviour are moderated, a further tightening of monetary policy could be avoided. Indeed, the decisive monetary policy actions taken recently are aimed at avoiding more drastic action in future. However, if inflationary pressures continue to intensify, a further tightening cannot be ruled out.